## *Table A-1. Requirements by Release*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| DADS0010 | DADS0010 | Each DADS shall receive updated metadata for products that have been QA'd. | essential | test | A |
| DADS0020 | DADS0020 | Each DADS shall, upon receipt of updated metadata for products which have been QA'd , store the metadata in its inventory. | essential | demo | A |
| DADS0070 | DADS0070 | Each DADS shall provide the capability of scanning or digitizing hardcopy input for the purpose of archiving documents. | fulfillment | test | A |
| DADS0100 | DADS0100 | Each DADS shall receive management directives from the SMC . | essential | test | A |
| DADS0110 | DADS0110-a | Each DADS shall receive from the IMS, at a minimum, the following: a.Documents | essential | test | A |
| | DADS0110-b | Each DADS shall receive from the IMS, at a minimum, the following: b.Product status dialog | essential | test | A |
| | DADS0110-c | Each DADS shall receive from the IMS, at a minimum, the following: c.Product orders | essential | test | A |
| DADS0120 | DADS0120-a | Each DADS shall receive from the PGS, at a minimum, the following: a.L1-4 products | essential | test | IR1 |
| | DADS0120-b | Each DADS shall receive from the PGS, at a minimum, the following: b.Quick-look products | essential | test | A |
| | DADS0120-c | Each DADS shall receive from the PGS, at a minimum, the following: c.Metadata | essential | test | A |
| | DADS0120-d | Each DADS shall receive from the PGS, at a minimum, the following: d.Calibration | essential | test | A |
| | DADS0120-e | Each DADS shall receive from the PGS, at a minimum, the following: e.Algorithms | essential | test | IR1 |
| | DADS0120-f | Each DADS shall receive from the PGS, at a minimum, the following: f.Schedule | essential | test | A |
| | DADS0120-g | Each DADS shall receive from the PGS, at a minimum, the following: g.Status | essential | test | IR1 |
| DADS0130 | DADS0130-a | Each DADS shall receive from the EDOS and SDPF, at a minimum, the following: a.Production data (L0) | essential | test | IR1 |
| | DADS0130-b | Each DADS shall receive from the EDOS and SDPF, at a minimum, the following: b.Quick-look data | essential | test | IR1 |
| DADS0140 | DADS0140-a | Each DADS shall receive from other DAACs, at a minimum, the following for the purpose of product generation: a.L0-L4 | essential | test | A |
| | DADS0140-b | Each DADS shall receive from other DAACs, at a minimum, the following for the purpose of product generation: b.Metadata | essential | test | A |
| | DADS0140-c | Each DADS shall receive from other DAACs, at a minimum, the following for the purpose of product generation: c.Ancillary data | essential | test | A |
| | DADS0140-d | Each DADS shall receive from other DAACs, at a minimum, the following for the purpose of product generation: d.Calibration data | essential | test | A |
| | DADS0140-e | Each DADS shall receive from other DAACs, at a minimum, the following for the purpose of product generation: e.Correlative data | essential | test | A |
| | DADS0140-f | Each DADS shall receive from other DAACs, at a minimum, the following for the purpose of product generation: f.Documents | essential | test | A |
| | DADS0140-g | Each DADS shall receive from other DAACs, at a minimum, the following for the purpose of product generation: g.Algorithms | essential | test | A |
| DADS0145 | DADS0145-a | Each DADS shall be capable of receiving from the ADCs, at a minimum, the following for the purpose of product generation: a.L0-L4 equivalent data sets | essential | test | A |
| | DADS0145-b | DADS shall be capable of receiving from the ADCs, at a minimum, the following for the purpose of product generation: b.Metadata | essential | test | A |
| | DADS0145-c | Each DADS shall be capable of receiving from the ADCs, at a minimum, the following for the purpose of product generation: c.Ancillary data | essential | test | A |
| | DADS0145-d | Each DADS shall be capable of receiving from the ADCs, at a minimum, the following for the purpose of product generation: d.Calibration data | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | DADS0145-e | Each DADS shall be capable of receiving from the ADCs, at a minimum, the following for the purpose of product generation: e.Correlative data | essential | test | A |
| | DADS0145-f | Each DADS shall be capable of receiving from the ADCs, at a minimum, the following for the purpose of product generation: f.Documents | essential | test | A |
| | DADS0145-g | Each DADS shall be capable of receiving from the ADCs, at a minimum, the following for the purpose of product generation: g.Algorithms | essential | test | A |
| DADS0150 | DADS0150-a | Designated DADS shall receive from the ICC, at a minimum, the following: a.Instrument history log (or subset of history log) | essential | test | A |
| | DADS0150-b | Designated DADS shall receive from the ICC, at a minimum, the following: b. Associated Metadata | essential | test | A |
| DADS0160 | DADS0160-a | A designated DADS shall receive from the EOC, at a minimum, the following: a.Spacecraft history log (or subset of history log) | essential | test | A |
| | DADS0160-b | A designated DADS shall receive from the EOC, at a minimum, the following: b. Associated Metadata | essential | test | A |
| DADS0170 | DADS0170-a-1 | Each DADS shall be capable of receiving from designated EPDSs at a minimum, the following: a.L0-L4 data sets | essential | test | A |
| | DADS0170-b-1 | Each DADS shall be capable of receiving from designated EPDSs at a minimum, the following: b.Metadata | essential | test | A |
| | DADS0170-c-1 | Each DADS shall be capable of receiving from designated EPDSs at a minimum, the following: c.Ancillary data | essential | test | A |
| | DADS0170-d-1 | Each DADS shall be capable of receiving from designated EPDSs and ODCs, at a minimum, the following: d.Calibration data | essential | test | A |
| | DADS0170-e-1 | Each DADS shall be capable of receiving from designated EPDSs and ODCs, at a minimum, the following: e.Correlative data | essential | test | A |
| | DADS0170-f-1 | Each DADS shall be capable of receiving from designated EPDSs at a minimum, the following: f.Documents | essential | test | A |
| | DADS0170-g-1 | Each DADS shall be capable of receiving from designated EPDSs at a minimum, the following: g.Algorithms | essential | test | A |
| | DADS0170-a-2 | Each DADS shall be capable of receiving from designated ODCs, at a minimum, the following: a.L0-L4 data sets | essential | test | A |
| | DADS0170-b-2 | Each DADS shall be capable of receiving from designated ODCs, at a minimum, the following: b.Metadata | essential | test | A |
| | DADS0170-c-2 | Each DADS shall be capable of receiving from designated ODCs, at a minimum, the following: c.Ancillary data | essential | test | A |
| | DADS0170-d-2 | Each DADS shall be capable of receiving from designated ODCs, at a minimum, the following: d.Calibration data | essential | test | A |
| | DADS0170-e-2 | Each DADS shall be capable of receiving from designated ODCs, at a minimum, the following: e.Correlative data | essential | test | A |
| | DADS0170-f-2 | Each DADS shall be capable of receiving from designated ODCs, at a minimum, the following: f.Documents | essential | test | A |
| | DADS0170-g-2 | Each DADS shall be capable of receiving from designated ODCs, at a minimum, the following: g.Algorithms | essential | test | A |
| DADS0175 | DADS0175-a | The GSFC DADS shall receive from FDF, at a minimum : a.Orbit data | essential | test | A |
| | DADS0175-b | The GSFC DADS shall receive from FDF, at a minimum : b.Attitude data | essential | test | A |
| | DADS0175-c | The GSFC DADS shall receive from FDF, at a minimum : c.Metadata | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| DADS0180 | DADS0180-a | Each DADS shall receive from the users, at a minimum, the following: a.Metadata | essential | test | A |
| | DADS0180-b | Each DADS shall receive from the users, at a minimum, the following: b.Correlative data | essential | test | A |
| | DADS0180-c | Each DADS shall receive from the users, at a minimum, the following: c.Documents | essential | test | A |
| | DADS0180-d | Each DADS shall receive from the users, at a minimum, the following: d.New derived data sets | essential | test | A |
| DADS0190 | DADS0190-a | Each DADS shall receive from the SCF, at a minimum, the following: a.Special products (L1-L4) | essential | test | A |
| | DADS0190-b | Each DADS shall receive from the SCF, at a minimum, the following: b.Metadata | essential | test | A |
| | DADS0190-c | ach DADS shall receive from the SCF, at a minimum, the following: c.Ancillary data | essential | test | A |
| | DADS0190-d | Each DADS shall receive from the SCF, at a minimum, the following: d.Calibration data | essential | test | A |
| | DADS0190-e | Each DADS shall receive from the SCF, at a minimum, the following: e.Correlative data | essential | test | A |
| | DADS0190-f | Each DADS shall receive from the SCF, at a minimum, the following: f.Documents | essential | test | A |
| | DADS0190-g | Each DADS shall receive from the SCF, at a minimum, the following: g.Algorithms | essential | test | A |
| DADS0200 | DADS0200-a | Each DADS shall receive from the IPs at a minimum, the following: a.L0-L4 data products | essential | test | A |
| | DADS0200-b | Each DADS shall receive from the IPs at a minimum, the following: b.Orbit/attitude data | essential | test | A |
| | DADS0200-c | Each DADS shall receive from the IPs at a minimum, the following: c.Metadata associated with data sets | essential | test | A |
| | DADS0200-d | Each DADS shall receive from the IPs at a minimum, the following: d.Ancillary data | essential | test | A |
| | DADS0200-e | Each DADS shall receive from the IPs at a minimum, the following: e.Calibration data | essential | test | A |
| | DADS0200-f | Each DADS shall receive from the IPs at a minimum, the following: f.Correlative data | essential | test | A |
| | DADS0200-g | Each DADS shall receive from the IPs at a minimum, the following: g.Documents | essential | test | A |
| | DADS0200-h | Each DADS shall receive from the IPs at a minimum, the following: h.Algorithms | essential | test | A |
| DADS0210 | DADS0210-a | Each DADS shall be capable of receiving, at a minimum, the following types of EOS instrument data in support of pre-launch checkout of the ground system: a.Real EOS instrument data | essential | test | B |
| | DADS0210-b | Each DADS shall be capable of receiving, at a minimum, the following types of EOS instrument data in support of pre-launch checkout of the ground system: b.Simulated EOS instrument data | essential | test | B |
| DADS0220 | DADS0220-a | Each DADS shall accept, at a minimum, the following data types in support of development of initial calibration: a.Instrument calibration data | essential | test | B |
| | DADS0220-b | Each DADS shall accept, at a minimum, the following data types in support of development of initial calibration: b.Scientific calibration | essential | test | B |
| DADS0240 | DADS0240 | Each DADS shall accept from the SMC, at a minimum, detailed science plans. | essential | test | A |
| DADS0250 | DADS0250-a | Each DADS shall receive, at a minimum, data in the following forms: a.Physical electronic media | essential | test | A |
| | DADS0250-b | Each DADS shall receive, at a minimum, data in the following forms: b.Electronic communications network | essential | test | A |
| | DADS0250-c | Each DADS shall receive, at a minimum, data in the following forms: c.Hardcopy media | essential | test | A |
| DADS0260 | DADS0260-1 | Each DADS shall receive non-EOS correlative digital data. | essential | test | A |
| | DADS0260-2 | Each DADS shall receive non-EOS ancillary digital data. | essential | test | A |
| DADS0281 | DADS0281-a | Each DADS shall be capable of ingesting data to support the instrument science team(s) in: a.Pre-launch checkout of their instruments | essential | test | B |
| | DADS0281-b | Each DADS shall be capable of ingesting data to support the instrument science team(s) in: b.Pre-launch science checkout | essential | test | B |
| | DADS0281-c | Each DADS shall be capable of ingesting data to support the instrument science team(s) in: c.Development of initial calibration information. | essential | test | B |
| DADS0282 | DADS0282-1 | Each DADS shall be capable of storage of real EOS instrument data in support of pre-launch checkout of the ground system. | essential | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | DADS0282-2 | Each DADS shall be capable of storage of simulated EOS instrument data in support of pre-launch checkout of the ground system. | essential | test | B |
| | DADS0282-3 | Each DADS shall be capable of retrieval of real EOS instrument data in support of pre-launch checkout of the ground system. | essential | test | B |
| | DADS0282-4 | Each DADS shall be capable of retrieval of simulated EOS instrument data in support of pre-launch checkout of the ground system. | essential | test | B |
| DADS0290 | DADS0290-1 | Each DADS shall check all metadata and data it receives. For each type of data described by the metadata, the data shall be checked for the presence of required fields. | essential | test | A |
| | DADS0290-2 | Each DADS shall check all metadata and data it receives. For each type of data described by the metadata, the data shall be checked for error-free input. | essential | test | A |
| | DADS0290-3 | Each DADS shall check all metadata and data it receives. For each type of data described by the metadata, the data shall be checked for correctness of the data set granule size. | essential | test | A |
| | DADS0290-4 | Each DADS shall check all metadata and data it receives. For each type of data described by the metadata, the data shall be checked for other checks as required. | essential | test | A |
| DADS0300 | DADS0300 | Each DADS shall generate status indicating the success or failure of metadata and data consistency checks. | essential | test | A |
| DADS0310 | DADS0310 | Each DADS shall verify that data received came from an approved/ authorized source. | essential | test | A |
| DADS0320 | DADS0320-1 | Each DADS shall verify compliance of scientist provided data with EOSDIS defined standards for metadata. | essential | test | A |
| | DADS0320-2 | Each DADS shall verify compliance of scientist provided data with EOSDIS defined standards for file content (not scientific content). | essential | test | A |
| DADS0350 | DADS0350-a | Each DADS shall generate the following metadata items, at a minimum: a.Unique Granule Id for L0 | essential | test | A |
| | DADS0350-b | Each DADS shall generate the following metadata items, at a minimum: b.Date and time of storage | essential | test | A |
| | DADS0350-c | Each DADS shall generate the following metadata items, at a minimum: c.Physical location | essential | test | A |
| | DADS0350-d | Each DADS shall generate the following metadata items, at a minimum: d. Data check status | essential | test | A |
| | DADS0350-e | Each DADS shall generate the following metadata items, at a minimum: e.Unique format identifiers | essential | test | A |
| DADS0360 | DADS0360 | Each DADS shall augment PGS-generated metadata with DADS-generated metadata. | essential | test | A |
| DADS0370 | DADS0370 | Each DADS shall provide the IMS with metadata on newly stored data granules. | essential | test | A |
| DADS0405 | DADS0405 | Each DADS shall provide the capability to archive multiple versions of selected archive data. | essential | test | A |
| DADS0410 | DADS0410 | Each DADS shall archive the current version of a product, making the preceding version of a product eligible for deletion. | essential | test | A |
| DADS0412 | DADS0412 | Each DADS shall notify users when a product becomes eligible for deletion. The product eligible for deletion shall be deleted after six months unless the DADS is directed otherwise by appropriate authority. | essential | test | A |
| DADS0425 | DADS0425 | Archive and backup media at each DADS shall have a rated shelf life of at least 10 years as determined by the National Archives and Records Administration (NARA), National Institute for Standards and Technology (NIST), NASA, or a professional or industry organization such as ANSI, the Society of Motion Picture and Television Engineers (SMPTE) or the National Association of Broadcasters (NAB). | essential | test | A |
| DADS0430 | DADS0430 | Each DADS shall provide its operations personnel the capability to manually alter the routing of data sets to physical storage locations. | essential | test | A |
| DADS0435 | DADS0435 | At each DADS operations personnel shall be able to add new physical volumes and eject physical volumes from the archive for off-line or off-site permanent storage. | essential | test | A |
| DADS0440 | DADS0440-a | Each DADS shall provide storage, at a minimum, for the following EOS data: a.Standard Products | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | DADS0440-b | Each DADS shall provide storage, at a minimum, for the following EOS data: b.Associated correlative data sets | essential | test | A |
| | DADS0440-c | Each DADS shall provide storage, at a minimum, for the following EOS data: c.Associated ancillary data sets | essential | test | A |
| | DADS0440-d | Each DADS shall provide storage, at a minimum, for the following EOS data: d.Associated calibration data sets | essential | test | A |
| | DADS0440-e | Each DADS shall provide storage, at a minimum, for the following EOS data: e.Associated metadata | essential | test | A |
| | DADS0440-f | Each DADS shall provide storage, at a minimum, for the following EOS data: f.Documents | essential | test | A |
| | DADS0440-g | Each DADS shall provide storage, at a minimum, for the following EOS data: g.Algorithms | essential | test | A |
| | DADS0440-h | Each DADS shall provide storage, at a minimum, for the following EOS data: h. Format descriptions (e.g. HDF spec) | essential | test | A |
| DADS0450 | DADS0450-a | Each DADS shall provide storage, at a minimum, for the following scientist provided data: a.Special data products | essential | test | A |
| | DADS0450-b | Each DADS shall provide storage, at a minimum, for the following scientist provided data: b.Associated correlative data sets | essential | test | A |
| | DADS0450-c | Each DADS shall provide storage, at a minimum, for the following scientist provided data: c.Associated ancillary data sets | essential | test | A |
| | DADS0450-d | Each DADS shall provide storage, at a minimum, for the following scientist provided data: d.Associated calibration data sets | essential | test | A |
| | DADS0450-e | Each DADS shall provide storage, at a minimum, for the following scientist provided data: e.Research results (articles, algorithms, data sets, software) | essential | test | A |
| | DADS0450-f | Each DADS shall provide storage, at a minimum, for the following scientist provided data: f.Instrument characterization data sets | essential | test | A |
| | DADS0450-g | Each DADS shall provide storage, at a minimum, for the following scientist provided data: g.Associated Metadata | essential | test | A |
| DADS0460 | DADS0460 | Each DADS shall provide storage at a minimum, for non-EOS data required for Standard Product production by the PGS. | essential | test | A |
| DADS0465 | DADS0465-a | The DADS shall provide storage for the following Version 0 data: a.Standard products | essential | test | A |
| | DADS0465-b | The DADS shall provide storage for the following Version 0 data: b.Associated correlative data sets | essential | test | A |
| | DADS0465-c | The DADS shall provide storage for the following Version 0 data: c.Associated ancillary data sets | essential | test | A |
| | DADS0465-d | The DADS shall provide storage for the following Version 0 data: d.Associated calibration data sets | essential | test | A |
| | DADS0465-e | The DADS shall provide storage for the following Version 0 data: e.Associated metadata | essential | test | A |
| | DADS0465-f | The DADS shall provide storage for the following Version 0 data: f.Documents | essential | test | A |
| | DADS0465-g | The DADS shall provide storage for the following Version 0 data: g.Algorithms. | essential | test | A |
| DADS0470 | DADS0470 | The EDC DADS shall store non-browse Landsat-7 data products for a duration of thirty days from the time of receipt. | essential | test | IR1 |
| DADS0475 | DADS0475-a | The DADS shall provide storage for the following TRMM data: a.L0-L4 equivalent data products | essential | test | IR1 |
| | DADS0475-b | The DADS shall provide storage for the following TRMM data: b.Associated correlative data sets | essential | test | IR1 |
| | DADS0475-c | The DADS shall provide storage for the following TRMM data: c.Associated ancillary data sets | essential | test | IR1 |
| | DADS0475-d | The DADS shall provide storage for the following TRMM data: d.Associated calibration data sets | essential | test | IR1 |
| | DADS0475-e | The DADS shall provide storage for the following TRMM data: e.Associated metadata | essential | test | A |
| | DADS0475-f | The DADS shall provide storage for the following TRMM data: f.Documents | essential | test | A |
| | DADS0475-g | The DADS shall provide storage for the following TRMM data: g.Algorithms. | essential | test | IR1 |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| DADS0487 | DADS0487 | DADS shall be capable of storing EDOS production data sets (Level 0) for at least one year from the date they are ingested. | critical | inspect. | B |
| DADS0488 | DADS0488 | Each DADS shall archive the EDOS production data sets (Level 0) received from EDOS, or the equivalent Level 1A data. | essential | test | A |
| DADS0490 | DADS0490 | Each DADS shall archive Level 1B - Level 4 data products. | essential | test | A |
| DADS0498 | DADS0498-1 | Each designated DADS shall receive standing product orders from the IMS. | essential | test | A |
| | DADS0498-2 | Each designated DADS shall receive retrospective product orders from the IMS. | essential | test | A |
| DADS0500 | DADS0500 | Each DADS shall receive changes to standing orders from the IMS | essential | test | A |
| DADS0520 | DADS0520 | Each DADS shall accept requests for data needed for Standard Product production. | essential | test | A |
| DADS0525 | DADS0525-1 | Each DADS shall accept updates of data order requests . | essential | test | A |
| | DADS0525-2 | Each DADS shall accept cancellations of data order requests . | essential | test | A |
| DADS0540 | DADS0540 | Each DADS shall notify the PGS of the receipt of non-EOS data sets required for Standard Product production. | essential | test | A |
| DADS0550 | DADS0550 | h DADS shall notify the PGS of the receipt of EOS data sets required for Standard Product production (e.g., data received from non-collocated DADS). | essential | test | A |
| DADS0570 | DADS0570 | Each DADS shall verify product orders from the IMS. | essential | test | A |
| DADS0590 | DADS0590-1 | Each DADS shall support the capability for subsetting data products ordered via the IMS. | essential | test | B |
| | DADS0590-2 | Each DADS shall support the capability for subsampling data products ordered via the IMS. | essential | test | B |
| DADS0600 | DADS0600 | Each DADS shall accept requests from the IMS to distribute data archived in the DADS to requesting users. | essential | test | A |
| DADS0610 | DADS0610 | Each DADS shall support reprocessing. | essential | test | A |
| DADS0660 | DADS0660-1 | Each DADS shall access a database of orders which shall include at a minimum: priorities necessary to process orders including standing orders. | essential | test | A |
| | DADS0660-2 | Each DADS shall access a database of orders which shall include at a minimum: priorities necessary to process orders including multi-DADS orders. \\651,625,876\\ | essential | test | A |
| | DADS0660-3 | Each DADS shall access a database of orders which shall include at a minimum: distribution directions necessary to process orders including standing orders. | essential | test | A |
| | DADS0660-4 | Each DADS shall access a database of orders which shall include at a minimum: distribution directions necessary to process orders including multi-DADS orders. | essential | test | A |
| | DADS0660-5 | Each DADS shall access a database of orders which shall include at a minimum: all other details necessary to process orders including standing orders. | essential | test | A |
| | DADS0660-6 | Each DADS shall access a database of orders which shall include at a minimum: all other details necessary to process orders including multi-DADS orders. | essential | test | A |
| DADS0680 | DADS0680-1 | Each DADS shall have the capability to support all required requests. | essential | test | A |
| | DADS0680-2 | Each DADS shall have the capability to grow as demand expands. | essential | test | A |
| DADS0690 | DADS0690 | Each DADS shall support the prioritized retrieval and delivery of data based on the priority information specified in the data retrieval request. | essential | test | A |
| DADS0700 | DADS0700-1 | Each DADS shall be capable of reacting to data transfer cancellation notifications . | essential | test | A |
| | DADS0700-2 | Each DADS shall be capable of reacting to data tranfer delay notifications . | essential | test | A |
| DADS0740 | DADS0740-a-1 | Each DADS shall provide the capability to subset within a granule based on defined criteria to include: a.Geographic location (x, y, z) (spatial with rectangular boundaries) | essential | test | B |
| | DADS0740-a-2 | Each DADS shall provide the capability to subsample data within a granule based on defined criteria to include: a.Geographic location (x, y, z) (spatial with rectangular boundaries) | essential | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | DADS0740-a-3 | Each DADS shall provide the capability to average data within a granule based on defined criteria to include: a.Geographic location (x, y, z) (spatial with rectangular boundaries) | essential | test | B |
| | DADS0740-b-1 | Each DADS shall provide the capability to subset data within a granule based on defined criteria to include: b.Spectral band | essential | test | B |
| | DADS0740-b-2 | Each DADS shall provide the capability to subsample data within a granule based on defined criteria to include: b.Spectral band | essential | test | B |
| | DADS0740-b-3 | Each DADS shall provide the capability to average data within a granule based on defined criteria to include: b.Spectral band | essential | test | B |
| | DADS0740-c-1 | Each DADS shall provide the capability to subset data within a granule based on defined criteria to include: c.Time | essential | test | B |
| | DADS0740-c-2 | Each DADS shall provide the capability to subsample data within a granule based on defined criteria to include: c.Time | essential | test | B |
| | DADS0740-c-3 | Each DADS shall provide the capability to average data within a granule based on defined criteria to include: c.Time | essential | test | B |
| DADS0760 | DADS0760 | The DADS shall distribute data in approved standard formats including HDF. | essential | test | A |
| DADS0770 | DADS0770 | The DADS shall reformat data sets in one of the approved standard formats including HDF. | essential | test | A |
| DADS0780 | DADS0780-1 | Each DADS shall have the capability to incorporate new ingest formats. | fulfillment | test | B |
| | DADS0780-2 | Each DADS shall have the capability to incorporate new data distribution formats. | fulfillment | test | B |
| | DADS0780-3 | Each DADS shall have the capability to incorporate new conversion software. | fulfillment | test | B |
| DADS0800 | DADS0800 | Each DADS shall provide the capability to translate input data to the internal ECS format including HDF. | essential | test | A |
| DADS0880 | DADS0880 | For data which it has distributed, each DADS, via the LSM, shall generate required accounting information. | essential | test | A |
| DADS0890 | DADS0890-a | Each DADS shall generate resource utilization statistics (accounting data) as input to the billing process. The statistics include at a minimum: a.Standing order / data distribution request number | essential | test | A |
| | DADS0890-b | Each DADS shall generate resource utilization statistics (accounting data) as input to the billing process. The statistics include at a minimum: b.Media cost | essential | test | A |
| | DADS0890-c | Each DADS shall generate resource utilization statistics (accounting data) as input to the billing process. The statistics include at a minimum: c.CPU utilization | essential | test | A |
| | DADS0890-d | Each DADS shall generate resource utilization statistics (accounting data) as input to the billing process. The statistics include at a minimum: d.I/O utilization | essential | test | A |
| | DADS0890-e | Each DADS shall generate resource utilization statistics (accounting data) as input to the billing process. The statistics include at a minimum: e.Personnel costs | essential | test | A |
| | DADS0890-f | Each DADS shall generate resource utilization statistics (accounting data) as input to the billing process. The statistics include at a minimum: f.Shipping/handling | essential | test | A |
| | DADS0890-g | Each DADS shall generate resource utilization statistics (accounting data) as input to the billing process. The statistics include at a minimum: g.Networking cost | essential | test | A |
| | DADS0890-h | Each DADS shall generate resource utilization statistics (accounting data) as input to the billing process. The statistics include at a minimum: h.Archival storage cost | essential | test | A |
| DADS0901 | DADS0901-a | The DADS element shall collect the management data used to support the following system management functions: a.Fault Management | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | DADS0901-b | The DADS element shall collect the management data used to support the following system management functions: b.Configuration Management | essential | test | A |
| | DADS0901-c | The DADS element shall collect the management data used to support the following system management functions: c.Accounting Management | essential | test | A |
| | DADS0901-d | The DADS element shall collect the management data used to support the following system management functions: d.Accountability Management | essential | test | A |
| | DADS0901-e | The DADS element shall collect the management data used to support the following system management functions: e.Performance Management | essential | test | A |
| | DADS0901-f | The DADS element shall collect the management data used to support the following system management functions: f.Security Management | essential | test | A |
| | DADS0901-g | The DADS element shall collect the management data used to support the following system management functions: g.Scheduling Management. | essential | test | A |
| DADS0910 | DADS0910-1 | Each DADS shall notify the SMC in the event that data required in connection with an on-demand request does not arrive. | essential | test | A |
| | DADS0910-2 | Each DADS shall notify the IMS in the event that data required in connection with an on-demand request does not arrive. | essential | test | A |
| DADS0925 | DADS0925 | Each DADS shall, in the event of noncompliance (e.g., non-arrival of scheduled data) forward a description of noncompliance to the SMC. | essential | test | A |
| DADS0927 | DADS0927-1 | Each DADS shall generate to SMC reports of the status of the distribution of data. | fulfillment | test | B |
| | DADS0927-2 | Each DADS shall send to SMC reports of the status of the distribution of data. | essential | test | A |
| DADS0930 | DADS0930-1 | Each DADS shall provide the IMS an estimate of the staging delay before subsetted data sets are available. | fulfillment | test | B |
| | DADS0930-2 | Each DADS shall provide the IMS an estimate of the staging delay before subsampled data sets are available. | fulfillment | test | B |
| | DADS0930-3 | Each DADS shall provide the IMS an estimate of the staging delay before summary data sets are available. | fulfillment | test | B |
| DADS0940 | DADS0940 | Each DADS shall send distribution status to the IMS in response to distribution status requests from the IMS. | essential | test | A |
| DADS0960 | DADS0960 | Each DADS shall automatically send data distribution status to the IMS upon completion of the distribution process. | essential | test | A |
| DADS1000 | DADS1000 | The DADS shall receive distribution status requests from the collocated PGS. | essential | test | A |
| DADS1010 | DADS1010-1 | Each DADS shall send to the PGS staging status of requests for retrieval of data products. | essential | test | A |
| | DADS1010-2 | Each DADS shall send to the IMS, staging status of requests for retrieval of data products | essential | test | A |
| DADS1020 | DADS1020-1 | Each DADS shall generate data retrieval status to acknowledge the receipt of a product order. The data retrieval status shall indicate the acceptance of the request. | essential | test | A |
| | DADS1020-2 | Each DADS shall generate data retrieval status to acknowledge the receipt of a product order. The data retrieval status shall indicate the rejection of the request. In the event of rejection, the status shall contain an indication of the reason for rejection (. e.g. , distribution parameters missing, data not present or unreadable). | essential | test | A |
| DADS1030 | DADS1030 | Each DADS shall generate data distribution status to monitor the progress of the distribution process. | essential | test | A |
| DADS1070 | DADS1070-1 | The DADS shall send data check status to the provider of ingest data. | essential | test | IR1 |
| | DADS1070-2 | The DADS shall send storage status to the provider of ingest data. | essential | test | IR1 |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| DADS1080 | DADS1080 | Each DADS shall maintain a data receipt log | essential | test | A |
| DADS1085 | DADS1085 | Each DADS shall maintain a data access log | essential | test | A |
| DADS1100 | DADS1100-1 | Each DADS shall maintain a log of all updates to the local inventory. | essential | test | A |
| | DADS1100-2 | Each DADS shall maintain a log of all updates to the local inventory. The log shall be used to generate status reports . | essential | test | A |
| | DADS1100-3 | Each DADS shall maintain a log of all updates to the local inventory. The log shall be used in conjunction with the inventory backup, to recreate the local inventory in the event of catastrophic failure. | essential | test | A |
| DADS1110 | DADS1110 | Each DADS shall maintain a data distribution log. | essential | test | A |
| DADS1114 | DADS1114 | Each DADS shall maintain a log of staging activity. | essential | test | A |
| DADS1160 | DADS1114 | Each DADS shall provide the IMS with metadata reflecting changes as a result of: a.Purges | essential | test | A |
| | DADS1114-b | Each DADS shall provide the IMS with metadata reflecting changes as a result of: b.Transfers to other site(s) | essential | test | A |
| | DADS1114-c | ach DADS shall provide the IMS with metadata reflecting changes as a result of: c.Unexpected loss | essential | test | A |
| | DADS1114-d | Each DADS shall provide the IMS with metadata reflecting changes as a result of: d.Updates | essential | test | A |
| DADS1180 | DADS1180-1 | Each DADS shall provide the collocated PGS with data storage capabilities. | essential | test | A |
| | DADS1180-2 | Each DADS shall provide the collocated PGS with data retrieval capabilities | essential | test | A |
| DADS1210 | DADS1210 | Each DADS shall prepare, for output to the collocated PGS, data availability notices. \\507\\ | essential | test | A |
| DADS1230 | DADS1230 | Each DADS shall be capable of providing temporary storage for a collocated PGS. | essential | test | A |
| DADS1250 | DADS1250 | Each DADS shall, in response to a QA product request from SCF, transmit the specified products and associated metadata to the SCF for QA approval. | essential | test | A |
| DADS1300 | DADS1300 | Each DADS shall display, all faults to the system operators. | essential | test | IR1 |
| DADS1310 | DADS1310 | Each DADS shall track and report to the SMC problems such as missing or corrupted files requiring restoration or regeneration of data. | essential | test | A |
| DADS1320 | DADS1320-1 | Each DADS shall provide fault isolation information at the system level to the SMC. | essential | test | A |
| | DADS1320-2 | Each DADS shall provide fault isolation information at the subsystem level to the SMC. | essential | test | A |
| DADS1330 | DADS1330-1 | Each DADS shall provide information to support fault isolation between the DADS and other ECS-unique elements and external interfaces to the LSM. | essential | test | A |
| | DADS1330-2 | Each DADS shall provideinformation to support fault isolation between the DADS and external interfaces to the LSM. | essential | test | A |
| DADS1340 | DADS1340 | Each DADS shall use tools to analyze system performance. | essential | test | A |
| DADS1350 | DADS1350 | Each DADS shall manage its storage media to eliminate data loss due to long or short term media degradation adhering to applicable guidelines, recommendations, and standards of NARA, NIST, and NASA, or other professional or industry organizations such as ANSI, the Soceity of Motion Picture and Television Engineers (SMPTE) or the National Association of Broadcasters (NAB). | essential | test | A |
| DADS1360 | DADS1360-1 | Each DADS shall monitor the status of all storage systems used. | essential | test | A |
| | DADS1360-2 | Each DADS shall monitor the cost of all storage systems used. | essential | test | B |
| | DADS1360-3 | Each DADS shall monitor the performance of all storage systems used. | essential | test | B |
| DADS1370 | DADS1370-1 | Each DADS shall provide a mechanism for statistically monitoring the raw bit error rate (BER) of storage media in the archive. | essential | test | B |
| | DADS1370-2 | Each DADS shall provide a mechanism for statistically monitoring the corrected bit error rate (BER) of storage media in the archive. \\1340\\ | essential | test | B |
| DADS1375 | DADS1375 | Each DADS shall provide automatic management and copying/refresh of archive media. | essential | test | B |
| DADS1380 | DADS1380 | Each DADS shall monitor data transfer between external (non- ECS) elements and the DADS. | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| DADS1390 | DADS1390 | Each DADS shall monitor data transfer between elements of the ECS and the DADS. | essential | test | A |
| DADS1400 | DADS1400 | Each DADS shall notify the originating source of the need to retransmit data in the event of trans difficulties. | essential | test | A |
| DADS1450 | DADS1450-1 | Each DADS shall be capable of screening its archive holdings of Level 1A or Level 0 data, and if a product(s) is found to be lost or unreadable, generate a request for a replacement product from EDOS. | critical | test | B |
| | DADS1450-2 | Each DADS shall be capable of screening its archive holdings of Level 1A or Level 0 data, and if a product(s) is found to be lost or unreadable, dispatch a request for a replacement product from EDOS. | critical | test | B |
| | DADS1450-3 | Each DADS shall be capable of screening its archive holdings of Level 1A or Level 0 data, and if a product(s) is found to be lost or unreadable ingest the replacement product from EDOS. | critical | test | B |
| DADS1470 | DADS1470 | Each DADS shall manage element resource utilization. | essential | demo | A |
| DADS1472 | DADS1472-1 | Each DADS shall contain the appropriate capacity to respond to contingencies. | critical | demo | A |
| | DADS1472-2 | Each DADS shall contain the appropriate capacity to respond to scheduling problems. | critical | demo | A |
| | DADS1472-3 | Each DADS shall contain the appropriate capacity to respond to peak loads. | critical | demo | A |
| DADS1475 | DADS1475-a | Each DADS shall provide tools to the users to perform: a.Format conversion of EOS data | fulfillment | demo | C |
| | DADS1475-b | Each DADS shall provide tools to the users to perform: b.Subsetting | fulfillment | demo | C |
| | DADS1475-c | Each DADS shall provide tools to the users to perform: c.Compression (lossy, lossless) | fulfillment | demo | C |
| | DADS1475-d | Each DADS shall provide tools to the users to perform: d.Data transformation | fulfillment | demo | C |
| | DADS1475-e | Each DADS shall provide tools to the users to perform: e.Subsampling | fulfillment | demo | C |
| DADS1510 | DADS1510 | Each DADS shall ensure that IMS acknowledges receipt of metadata on all products stored in the DADS. | essential | demo | A |
| DADS1520 | DADS1520 | Each DADS shall provide an FSMS. Storage shall be based on a hierarchy of devices and media, with location-transparent access to the files. | essential | demo | A |
| DADS1530 | DADS1530 | Each DADS shall maintain a file directory of all files under its control. | essential | demo | IR1 |
| DADS1540 | DADS1540-1 | In case of corruption , capabilities for recovering the file directory shall be provided. | essential | demo | IR1 |
| | DADS1540-2 | In case of catastrophic failure, capabilities for recovering the file directory shall be provided. | essential | demo | IR1 |
| DADS1550 | DADS1550-1 | Operations/systems personnel shall be able to access the contents of the file directory in a special privileged mode. | essential | demo | IR1 |
| | DADS1550-2 | Operations/systems personnel shall be able to list the contents of the file directory in a special privileged mode. | essential | demo | IR1 |
| | DADS1550-3 | Operations/systems personnel shall be able to modify the contents of the file directory in a special privileged mode. | essential | demo | IR1 |
| DADS1610 | DADS1610-1 | The FSMS shall provide for continued performance, albeit in a degraded mode, when a device (e.g., disk ) fails. | essential | demo | A |
| | DADS1610-2 | The FSMS shall provide for continued performance, albeit in a degraded mode, when a device (e.g. cartridge drive) fails. | essential | demo | A |
| | DADS1610-3 | The FSMS shall provide for continued performance, albeit in a degraded mode, when a device (e.g. operators console) fails. | essential | demo | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| DADS1620 | DADS1620-1 | At each DADS tools shall be available for operations/ systems/ maintenance personnel to monitor performance. | essential | demo | A |
| | DADS1620-2 | At each DADS tools shall be available for operations/ systems/ maintenance personnel to carry out maintenance. | essential | demo | A |
| | DADS1620-3 | At each DADS tools shall be available for operations/ systems/ maintenance personnel to alter operating parameters. | essential | demo | A |
| DADS1630 | DADS1630-1 | At each DADS tools shall be provided for recovery of data from failed media . | essential | demo | A |
| | DADS1630-2 | At each DADS tools shall be provided for recovery of data from failed devices. | essential | demo | A |
| DADS1640 | DADS1640-1 | The DADS shall support the number of files derivable from Appendix C. | essential | demo | A |
| | DADS1640-2 | The DADS shall support the number of files derivable from Appendix C, with the ability to expand to match growth. | essential | demo | A |
| DADS1700 | DADS1700 | Where appropriate, the DADS, shall comply with the evolving guidelines and standards emerging from the IEEE-CS MSS Reference Model. | fulfillment | demo | A |
| DADS1710 | DADS1710-1 | The DADS shall comply with evolving guidlelines and standards in such areas as file storage where appropriate. | fulfillment | demo | A |
| | DADS1710-2 | The DADS shall comply with evolving guidlelines and standards in such areas as storage management where appropriate. | fulfillment | demo | A |
| | DADS1710-3 | The DADS shall comply with evolving guidlelines and standards in such areas as backup where appropriate. | fulfillment | demo | A |
| DADS1720 | DADS1720-1 | The FSMS at each DADS shall be based on published and open architectures which fully describe the physical organization of files. | essential | demo | A |
| | DADS1720-2 | The FSMS at each DADS shall be based on published and open architectures which fully describe the structures of files. | essential | demo | A |
| DADS1730 | DADS1730 | The DADS shall be developed using file storage management systems that have configuration-controlled application programming interfaces (APIs) that will allow the development of DAAC-unique file storage management services operated independently of the delivered ECS DADS services. | essential | demo | B |
| DADS1780 | DADS1780 | Each DADS shall provide the capability to store as a single entity logically grouped sets of data. | essential | demo | A |
| DADS1790 | DADS1790 | Each DADS shall periodically verify that all data sets are present and accounted for. | essential | demo | A |
| DADS1791 | DADS1791 | Each DADS shall have the capability to mount archival media via automated means. | essential | demo | A |
| DADS1795 | DADS1795 | Each DADS shall update internal file directories with the unique Data set ID . | essential | demo | A |
| DADS1800 | DADS1800 | Each DADS shall maintain data storage inventories defining the physical location of files. | essential | demo | A |
| DADS1805 | DADS1805-a | The DADS shall provide an inventory system capable, at a minimum, of the following: a.Accepting the number of new inventory entries, one per granule, for the number of granules per day as specified in Appendix C | essential | demo | A |
| | DADS1805-b | The DADS shall provide an inventory system capable, at a minimum, of the following: b.Uniquely identifying each data granule | essential | demo | A |
| | DADS1805-c | The DADS shall provide an inventory system capable, at a minimum, of the following: c.Tracking the physical location of each data granule. | essential | demo | A |
| DADS1806 | DADS1806 | Each DADS shall provide the capability of retrieving any data granule stored in the archives | essential | demo | A |
| DADS1850 | DADS1850 | Each DADS shall utilize the configuration management toolkit provided by the SMC. | essential | demo | A |
| DADS1860 | DADS1860 | Each DADS shall provide configuration management for its internal resources. | essential | demo | A |
| DADS1950 | DADS1950 | Each DADS shall access, via the system database at the SMC, the allocation of ground event functions and capabilities to each site/element. | essential | demo | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| DADS1960 | DADS1960 | Each DADS shall access, from the SMC via the system database, the priorities used in scheduling ground events. | essential | demo | A |
| DADS1970 | DADS1970-1 | Each DADS shall access from the SMC, via the system database, the product thread information for each standard product generated by EOSDIS. | essential | demo | A |
| | DADS1970-2 | Each DADS shall access from the SMC, via the system database, the product thread information for each quick-look product generated by EOSDIS. | essential | demo | A |
| DADS1980 | DADS1980-1 | Each DADS shall receive from the SMC scheduling directives for system level activities. | essential | demo | A |
| | DADS1980-2 | Each DADS shall receive from the SMC scheduling directives for site/element-to-site/element activities. | essential | demo | A |
| | DADS1980-3 | ach DADS shall receive from the SMC scheduling directives for testing activities. | essential | demo | A |
| | DADS1980-4 | Each DADS shall receive from the SMC scheduling directives for simulation activities. | essential | demo | A |
| DADS2000 | DADS20000 | Each DADS shall receive from the SMC scheduling directives in response to emergency situations. | critical | demo | A |
| DADS2010 | DADS2010 | Each DADS shall receive from the SMC schedule adjudication directives. | essential | demo | A |
| DADS2020 | DADS2020-a | Each DADS shall have the capability to receive data availability schedules at a minimum, from: a.EDOS | essential | demo | A |
| | DADS2020-b | Each DADS shall have the capability to receive data availability schedules at a minimum, from: b.IPs | essential | demo | A |
| | DADS2020-c | Each DADS shall have the capability to receive data availability schedules at a minimum, from: c.ADCs | essential | demo | A |
| | DADS2020-d | Each DADS shall have the capability to receive data availability schedules at a minimum, from: d.ODCs | essential | demo | A |
| | DADS2020-e | ach DADS shall have the capability to receive data availability schedules at a minimum, from: e.Other DADS | essential | demo | A |
| DADS2030 | DADS2030 | Each DADS shall maintain a list/schedule of data to be received from EDOS. | critical | demo | A |
| DADS2040 | DADS2040-1 | Each DADS shall insure that data sent by EDOS and SDPF has been received . | essential | demo | IR1 |
| | DADS2040-2 | Each DADS shall insure that data sent by EDOS has been validated. | essential | demo | IR1 |
| | DADS2040-3 | Each DADS shall insure that data sent by SDPF has been received . | essential | demo | IR1 |
| | DADS2040-4 | Each DADS shall insure that data sent by SDPF has been validated. | essential | demo | IR1 |
| DADS2060 | DADS2060 | Each DADS shall communicate with the EDOS to indicate its readiness to accept data. | essential | demo | A |
| DADS2070 | DADS2070-1 | Each DADS shall interact with EDOS to resolve schedule conflicts. | critical | demo | A |
| | DADS2070-2 | Each DADS shall interact with SDPF to resolve schedule conflicts. | critical | demo | A |
| | DADS2070-3 | Each DADS shall interact with SMC to resolve schedule conflicts. | critical | demo | A |
| DADS2090 | DADS2090 | Each DADS shall reevaluate its schedule after receiving new orders from the IMS. | essential | demo | A |
| DADS2100 | DADS2100 | Each DADS shall receive time windows requested by the user for incorporation into and modi_cation of its schedule. | essential | demo | A |
| | DADS2100-2 | Each DADS shall receive priorities requested by the user for incorporation into and modi_cation of its schedule. | essential | demo | A |
| DADS2110 | DADS2110 | The DADS shall provide scheduling information to the SMC. | essential | demo | A |
| DADS2120 | DADS2120 | The DADS shall have access to the system wide scheduling information. Such information includes, at a minimum, ESDIS Policies and Procedures regarding instrument and ground event scheduling, other element plans and schedules, element allocations of ground event functions and capabilities, product thread information, and scheduling directives for testing, maintenance, and emergency situations. | essential | demo | A |
| DADS2160 | DADS2160-1 | Each DADS shall maintain a list of standing orders. | essential | demo | A |
| | DADS2160-2 | Each DADS shall maintain a schedule of standing orders. | essential | demo | A |
| DADS2170 | DADS2170-1 | Each DADS shall maintain a list of retrospective orders. | essential | demo | A |
| | DADS2170-2 | Each DADS shall maintain a schedule of retrospective orders. | essential | demo | A |
| DADS2180 | DADS2180-1 | Each DADS shall maintain a schedule of reprocessed data. | essential | demo | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | DADS2180-2 | Each DADS shall maintain a list of reprocessed data. | essential | demo | A |
| DADS2190 | DADS2190 | Each DADS shall maintain a list of products which could not be delivered electronically (e.g., workstation off-line). | essential | demo | A |
| DADS2200 | DADS2200 | Each DADS shall maintain a list of data which requires some form of data manipulation such as subsetting. | essential | demo | A |
| DADS2210 | DADS2210-1 | Each DADS shall provide tools for the creation of its plans. | essential | demo | A |
| | DADS2210-2 | ach DADS shall provide tools for the manipulation of its plans. | essential | demo | A |
| | DADS2210-3 | Each DADS shall provide tools for the creation of its schedules. | essential | demo | A |
| | DADS2210-4 | Each DADS shall provide tools for the manipulation of its schedules. | essential | demo | A |
| DADS2220 | DADS2220 | Each DADS shall provide tools for manually overriding any of its schedules with other elements. | essential | demo | A |
| DADS2230 | DADS2230 | Each DADS shall inform the collocated PGS of any anticipated resource availability conflicts. | essential | demo | A |
| DADS2270 | DADS2270-1 | Each DADS shall provide an off-site backup copy of all EOS data which would be impossible or difficult to recover in case of loss (e.g., ancillary data). | critical | demo | A |
| | DADS2270-2 | Each DADS shall provide an off-site backup copy of all EOS data which would be impossible or difficult to recover in case of loss (e.g., metadata). | critical | demo | A |
| | DADS2270-3 | Each DADS shall provide an off-site backup copy of all EOS data which would be impossible or difficult to recover in case of loss (e.g., command history). | critical | demo | A |
| | DADS2270-4 | Each DADS shall provide an off-site backup copy of all EOS data which would be impossible or difficult to recover in case of loss (e.g., algorithms). | critical | demo | A |
| | DADS2270-5 | Each DADS shall provide an off-site backup copy of all EOS data which would be impossible or difficult to recover in case of loss (e.g., engineering data). | critical | demo | A |
| | DADS2270-6 | Each DADS shall provide an off-site backup copy of all EOS data which would be impossible or difficult to recover in case of loss (e.g., calibration data). | critical | demo | A |
| | DADS2270-7 | Each DADS shall provide an off-site backup copy of all EOS data which would be impossible or difficult to recover in case of loss (e.g., systems and applications software). | critical | demo | A |
| | DADS2270-8 | Each DADS shall provide an off-site backup copy of all EOS data which would be impossible or difficult to recover in case of loss (e.g., selected data products). | critical | demo | A |
| | DADS2270-9 | Each DADS shall provide an off-site backup copy of all EOS data which would be impossible or difficult to recover in case of loss (e.g., depending on need). | critical | demo | A |
| DADS2276 | DADS2276 | Each DADS shall have the capability to restore its archive by storing a backup copy of EOS data or backup copy of information required to regenerate the data. | critical | demo | A |
| DADS2300 | DADS2300-1 | Each DADS shall provide a capability for local backup of system files. | critical | demo | A |
| | DADS2300-2 | Each DADS shall provide a capability for local restore of system files. | critical | demo | A |
| | DADS2300-3 | Each DADS shall provide a capability for offsite restore of system files. | critical | demo | A |
| | DADS2300-4 | Each DADS shall provide a capability for offsite backup of system files. | critical | demo | A |
| DADS2302 | DADS2302-1 | Offsite media shall be based on published formats which fully describe the physical organization of files. / | essential | demo | B |
| | DADS2302-2 | Offsite media shall be based on open formats which fully describe the physical organization of files. \ | essential | demo | B |
| | DADS2302-3 | Offsite media shall be based on non-proprietary formats which fully describe the structure of files. | essential | demo | B |
| | DADS2302-4 | Offsite media shall be based on published formats which fully describe the physical organization of files. | essential | demo | B |
| | DADS2302-5 | Offsite media shall be based on open formats which fully describe the physical organization of files. | essential | demo | B |
| | DADS2302-6 | Offsite media shall be based on non- proprietary formats which fully describe the physical organization of files. | essential | demo | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | DADS2302-7 | Local backup media shall be based on published formats which fully describe the structure of files. | essential | demo | B |
| | DADS2302-8 | Local backup media shall be based on open formats which fully describe the structure of files. | essential | demo | B |
| | DADS2302-9 | Local backup media shall be based on non- proprietary formats which fully describe the structure of files. | essential | demo | B |
| | DADS2302-10 | Local backup media shall be based on published formats which fully describe the physical organization of files. | essential | demo | B |
| | DADS2302-11 | Local backup media shall be based on open formats which fully describe the physical organization of files. | essential | demo | B |
| | DADS2302-12 | Local backup media shall be based on non- proprietary formats which fully describe the physical organization of files. | essential | demo | B |
| DADS2307 | DADS2307 | DADS shall fulfill requests for L0 data from EDOS with L0 or L1A data, as available. | critical | demo | C |
| DADS2315 | DADS2315 | Each DADS shall be capable of providing access to data to support the instrument science team(s) in: a.Pre-launch checkout of their instruments | critical | demo | B |
| | DADS2315-b | Each DADS shall be capable of providing access to data to support the instrument science team(s) in: b.Pre-launch science checkout | critical | demo | B |
| | DADS2315-c | Each DADS shall be capable of providing access to data to support the instrument science team(s) in: c.Development of initial calibration information. | critical | demo | B |
| DADS2320 | DADS2320-a | Each DADS shall send to the IMS, at a minimum, the following: a.Metadata | essential | demo | A |
| | DADS2320-b | Each DADS shall send to the IMS, at a minimum, the following: b.Documentation | essential | demo | A |
| | DADS2320-c | Each DADS shall send to the IMS, at a minimum, the following: c.Product status dialog | essential | demo | A |
| DADS2330 | DADS2330-a | Each DADS shall send to the PGS, at a minimum, the following: a.Production data (L0) received from EDOS | essential | demo | A |
| | DADS2330-b | Each DADS shall send to the PGS, at a minimum, the following: b.L0-L4 | essential | demo | IR1 |
| | DADS2330-c | Each DADS shall send to the PGS, at a minimum, the following: c.Quick-look data | essential | demo | IR1 |
| | DADS2330-d | Each DADS shall send to the PGS, at a minimum, the following: d.Metadata | essential | demo | IR1 |
| | DADS2330-e | Each DADS shall send to the PGS, at a minimum, the following: e.Ancillary data | essential | demo | IR1 |
| | DADS2330-f | Each DADS shall send to the PGS, at a minimum, the following: f.Calibration data | essential | demo | IR1 |
| | DADS2330-g | Each DADS shall send to the PGS, at a minimum, the following: g.Algorithms | essential | demo | IR1 |
| | DADS2330-h | Each DADS shall send to the PGS, at a minimum, the following: h.Schedules | essential | demo | A |
| | DADS2330-i | Each DADS shall send to the PGS, at a minimum, the following: i.Status | essential | demo | IR1 |
| | DADS2330-j | Each DADS shall send to the PGS, at a minimum, the following: j.Spacecraft and instrument logs | essential | demo | IR1 |
| | DADS2330-k | Each DADS shall send to the PGS, at a minimum, the following: k.Special data sets | essential | demo | A |
| | DADS2330-l | Each DADS shall send to the PGS, at a minimum, the following: l.Non-EOS science data from ADCs/ODCs | essential | demo | A |
| DADS2340 | DADS2340-a | Each DADS shall send to remote DAACs, at a minimum, the following: a.L0-L4 | essential | demo | A |
| | DADS2340-b | Each DADS shall send to remote DAACs, at a minimum, the following: b.Metadata | essential | demo | A |
| | DADS2340-c | Each DADS shall send to remote DAACs, at a minimum, the following: c.Ancillary data | essential | demo | A |
| | DADS2340-d | Each DADS shall send to remote DAACs, at a minimum, the following: d.Calibration data | essential | demo | A |
| | DADS2340-e | Each DADS shall send to remote DAACs, at a minimum, the following: e.Correlative data | essential | demo | A |
| | DADS2340-f | Each DADS shall send to remote DAACs, at a minimum, the following: f.Documents | essential | demo | A |
| | DADS2340-g | Each DADS shall send to remote DAACs, at a minimum, the following: g.Algorithms | essential | demo | A |
| | DADS2340-h | Each DADS shall send to remote DAACs, at a minimum, the following: h.Spacecraft and instrument logs | essential | demo | A |
| DADS2345 | DADS2345-a | Each DADS shall send to ADCs, at a minimum, the following: a.L0-L4 | essential | demo | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | DADS2345-b | Each DADS shall send to ADCs, at a minimum, the following: b.Metadata | essential | demo | A |
| | DADS2345-c | Each DADS shall send to ADCs, at a minimum, the following: c.Ancillary data | essential | demo | A |
| | DADS2345-d | ach DADS shall send to ADCs, at a minimum, the following: d.Calibration data | essential | demo | A |
| | DADS2345-e | ach DADS shall send to ADCs, at a minimum, the following: e.Correlative data | essential | demo | A |
| | DADS2345-f | Each DADS shall send to ADCs, at a minimum, the following: f.Documents | essential | demo | A |
| | DADS2345-g | Each DADS shall send to ADCs, at a minimum, the following: g.Algorithms | essential | demo | A |
| | DADS2345-h | Each DADS shall send to ADCs, at a minimum, the following: h.Spacecraft and instrument logs | essential | demo | A |
| DADS2350 | DADS2350 | Each DADS shall send to the ICC, at a minimum, processed quick-look products. | essential | demo | A |
| DADS2360 | DADS236-a | Each DADS shall send to the ODCs, at a minimum, the following: a.L0-L4 | essential | demo | A |
| | DADS236-b | Each DADS shall send to the ODCs, at a minimum, the following: b.Special products (L1-L4) | essential | demo | A |
| | DADS236-c | Each DADS shall send to the ODCs, at a minimum, the following: c.Metadata | essential | demo | A |
| | DADS236-d | Each DADS shall send to the ODCs, at a minimum, the following: d.Ancillary data | essential | demo | A |
| | DADS236-e | Each DADS shall send to the ODCs, at a minimum, the following: e.Calibration data | essential | demo | A |
| | DADS236-f | Each DADS shall send to the ODCs, at a minimum, the following: f.Correlative data | essential | demo | A |
| | DADS236-g | Each DADS shall send to the ODCs, at a minimum, the following: g.Documents | essential | demo | A |
| | DADS236-h | Each DADS shall send to the ODCs, at a minimum, the following: h.Algorithms | essential | demo | A |
| DADS2370 | DADS2370-a | Each DADS shall send to the user, at a minimum, the following: a.L0-L4 | essential | demo | A |
| | DADS2370-b | Each DADS shall send to the user, at a minimum, the following: b.Special products (L1-L4) | essential | demo | A |
| | DADS2370-c | Each DADS shall send to the user, at a minimum, the following: c.Metadata | essential | demo | A |
| | DADS2370-d | Each DADS shall send to the user, at a minimum, the following: d.Ancillary data | essential | demo | A |
| | DADS2370-e | Each DADS shall send to the user, at a minimum, the following: e.Calibration data | essential | demo | A |
| | DADS2370-f | Each DADS shall send to the user, at a minimum, the following: f.Correlative data | essential | demo | A |
| | DADS2370-g | Each DADS shall send to the user, at a minimum, the following: g.Documents | essential | demo | A |
| | DADS2370-h | Each DADS shall send to the user, at a minimum, the following: h.Algorithms | essential | demo | A |
| | DADS2370-i | Each DADS shall send to the user, at a minimum, the following: i.Planning and scheduling information | essential | demo | A |
| DADS2380 | DADS2380-a | Each DADS shall send to the SCF, at a minimum, the following: a.L0-L4 | essential | demo | A |
| | DADS2380-b | Each DADS shall send to the SCF, at a minimum, the following: b.Special products (L1-L4) | essential | demo | A |
| | DADS2380-c | Each DADS shall send to the SCF, at a minimum, the following: c.Metadata | essential | demo | A |
| | DADS2380-d | Each DADS shall send to the SCF, at a minimum, the following: d.Ancillary data | essential | demo | A |
| | DADS2380-e | Each DADS shall send to the SCF, at a minimum, the following: e.Calibration data | essential | demo | A |
| | DADS2380-f | Each DADS shall send to the SCF, at a minimum, the following: f.Correlative data | essential | demo | A |
| | DADS2380-g | Each DADS shall send to the SCF, at a minimum, the following: g.Documents | essential | demo | A |
| | DADS2380-h | Each DADS shall send to the SCF, at a minimum, the following: h.Algorithms | essential | demo | A |
| DADS2390 | DADS2390-a | Each DADS shall send to the IPs, at a minimum, the following: a.L0-L4 | essential | demo | B |
| | DADS2390-b | Each DADS shall send to the IPs, at a minimum, the following: b.Metadata | essential | demo | B |
| | DADS2390-c | Each DADS shall send to the IPs, at a minimum, the following: c.Ancillary data | essential | demo | B |
| | DADS2390-d | Each DADS shall send to the IPs, at a minimum, the following: d.Calibration data | essential | demo | B |
| | DADS2390-e | Each DADS shall send to the IPs, at a minimum, the following: e.Correlative data | essential | demo | B |
| | DADS2390-f | Each DADS shall send to the IPs, at a minimum, the following: f.Documents | essential | demo | B |
| DADS2410 | DADS2410 | Each DADS shall distribute data from the archive in response to receipt of a product order from the IMS. | essential | demo | A |
| DADS2430 | DADS2430 | Each DADS shall be capable of distributing any data granule stored in the archive. | essential | demo | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| DADS2440 | DADS2440-a | Each DADS shall distribute data under a multi-level priority system. For example: a.Quick-look data | essential | demo | A |
| | DADS2440-b | Each DADS shall distribute data under a multi-level priority system. For example: b.QA data | essential | demo | A |
| | DADS2440-c | Each DADS shall distribute data under a multi-level priority system. For example: c.Data products requested by standing order | essential | demo | A |
| | DADS2440-d | Each DADS shall distribute data under a multi-level priority system. For example: d.Data products requested retrospectively. | essential | demo | A |
| DADS2450 | DADS2450-1 | Each DADS shall distribute data to elements of EOSDIS data destinations. | essential | demo | A |
| | DADS2450-2 | Each DADS shall distribute data to elements of approved non- EOSDIS data destinations. | essential | demo | A |
| DADS2460 | DADS2460 | Each DADS shall have a manual override function capable of altering the priority of a distribution request. | essential | demo | A |
| DADS2470 | DADS2470-1 | Each DADS shall transfer Standard Products to the requester. | essential | demo | A |
| | DADS2470-2 | Each DADS shall transfer subsetted data to the requester. | essential | demo | B |
| | DADS2470-3 | Each DADS shall transfer subsampled data to the requester. | essential | demo | B |
| | DADS2470-4 | Each DADS shall transfer summary data to the requester. | essential | demo | B |
| DADS2480 | DADS2480-1 | Each DADS shall distribute data based upon entries in the standing order distribution list. | essential | demo | A |
| | DADS2480-2 | Each DADS shall distribute data based upon entries in the retrospective order distribution list. | essential | demo | A |
| DADS2490 | DADS2490-a | Each DADS shall distribute data using a variety of approved high density storage media such as : a.8 mm tape | essential | demo | A |
| | DADS2490-b | Each DADS shall distribute data using a variety of approved high density storage media such as : \\876,1402\\ b.4 mm DAT | essential | demo | A |
| | DADS2490-c | Each DADS shall distribute data using a variety of approved high density storage media such as : c.3480/3490 tape | essential | demo | A |
| | DADS2490-d | Each DADS shall distribute data using a variety of approved high density storage media such as : \\876,1402\\ d.CD ROM | essential | demo | A |
| | DADS2490-e | Each DADS shall distribute data using a variety of approved high density storage media such as : e.6250 tape | essential | demo | A |
| DADS2510 | DADS2510 | Each DADS shall copy data to the class of physical media specified in the product order from the IMS. | essential | demo | A |
| DADS2530 | DADS2530 | The DADS shall be capable of distributing by physical media to meet user demand. | essential | demo | A |
| DADS2580 | DADS2580-1 | Each DADS shall distribute data electronically using a variety of networks and methods. | essential | demo | A |
| | DADS2580-2 | Each DADS shall distribute data electronically using FAX. | essential | demo | A |
| DADS2675 | DADS2675-1 | Each DADS shall maintain a log of all trans problems . | essential | demo | A |
| | DADS2675-2 | Each DADS shall take internal corrective action when network performance begins to impact distribution effort adversely. | essential | demo | A |
| | DADS2675-3 | Each DADS shall notify SMC when network performance begins to impact distribution effort adversely. | essential | demo | A |
| DADS2770 | DADS2770 | Upon receipt and approval of a request, the designated DADS shall make stored data products available for delivery to the requestor within 24 hours for data distributed on physical media. | fulfillment | demo | A |
| DADS2778 | DADS2778-1 | Each DADS shall be capable of receiving three days worth of data (see Appendix C) in any given day. | essential | demo | A |
| | DADS2778-2 | Each DADS shall be capable of archiving three days worth of data (see Appendix C) in any given day. | essential | demo | A |
| DADS2780 | DADS2780 | Each DADS shall be capable of ingesting data at the maximum output bandwidth of the EDOS. | essential | demo | A |
| DADS2900 | DADS2900 | Each DADS shall provide archival capacity for current volume requirements plus one year. Volume requirements are specified in Appendix C. | essential | demo | A |
| DADS2910 | DADS2910 | Archival storage at each DADS shall be field-expandable. | essential | demo | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| DADS2950 | DADS2950 | In case of failure of the automated system, archive media must be capable of being manually mounted at each DADS. | critical | demo | A |
| DADS3000 | DADS3000 | To support archival data integrity, the bit error rate after correction shall be less than 1 in 10 to the 12th. | essential | demo | A |
| DADS3010 | DADS 3010 | Archival and backup media at each DADS shall have a manufacture-rated shelf life of at least 10 years when stored in a controlled environment. | essential | inspect. | B |
| DADS3040 | DADS 3040 | At each DADS backup media shall be removable from the DADS site (e.g., for safe off-site storage). | essential | inspect. | B |
| DADS3055 | DADS 3055-1 | At each DADS all backup media shall be capable of being mounted automatically where appropriate. | essential | demo | B |
| | DADS 3055-2 | At each DADS all backup media shall be capable of being mounted with the provision for manual failover. | essential | demo | B |
| DADS3090 | DADS 3090-1 | Each DADS shall be capable of 200% expansion in throughput without architecture or design change. This expansion capacity shall apply to the total of the at-launch requirement plus the yearly growth requirement specified in Appendix C. | fulfillment | analysis | A |
| | DADS 3090-2 | Each DADS shall be capable of 200% expansion archive capacity without architecture or design change. This expansion capacity shall apply to the total of the at-launch requirement plus the yearly growth requirement specified in Appendix C. | fulfillment | analysis | A |
| DADS3100 | DADS 3100-1 | Each DADS shall be capable of transmitting data over communications network in support of data production requests at the data rate specified in Appendix C. | essential | test | A |
| | DADS 3100-2 | Each DADS shall be capable of transmitting data over communications network in support of data distribution requests at a rate equivalent to daily product volume (L1-L4). | essential | test | A |
| DADS3110 | DADS 3110 | Each DADS shall be capable of distributing data via physical media at a rate equivalent to the rate data are ingested (L0) at that DADS. | essential | demo | A |
| DADS3115 | DADS 3115 | Each DADS shall be capable of making quick-look products available for distribution within 1 minute of receipt from the PGS. | fulfillment | demo | B |
| DADS3120 | DADS 3120 | Each DADS shall distribute product QA data produced at the collocated PGS within 1 hour from the time it is ready. | fulfillment | demo | A |
| DADS3125 | DADS 3125 | Each DADS shall make archive data, associated with a pre-defined ECS standard format, that is requested for communications network delivery available to the network in that ECS standard format within an average of 2 minutes after the receipt of a request for that data. | fulfillment | demo | A |
| DADS3126 | DADS 3126 | Each DADS shall make archive data, associated with a pre-defined ECS standard format, that is requested for communications network delivery available to the network in a different ECS standard format within an average of 5 minutes after the request for that data. | fulfillment | demo | A |
| DADS3135 | DADS 3135 | The DADS shall have the capability to support the transaction rate as specified in Table 7-4. | essential | demo | A |
| DADS3140 | DADS 3140 | The DADS shall be developed with configuration-controlled application programming interfaces (APIs) that will be capable of supporting development of DAAC-unique data ingest services operated independently of the delivered ECS DADS services. | essential | demo | A |
| DADS3150 | DADS3150 | The DADS shall be developed with configuration-controlled application programming interfaces (APIs) that will be capable of supporting development of DAAC-unique data distribution services operated independently of the delivered ECS DADS services. | fulfillment | demo | B |
| DADS3160 | DADS3160 | The DADS shall be developed with configuration-controlled application programming interfaces (APIs) that will be capable of supporting development of an operator interface that may bypass the delivered DADS operator interface. | fulfillment | demo | B |
| EOC-0030 | EOC-0030-1 | The EOC shall receive the LTSP from the SMC. | critical | demo | B |
| | EOC-0030-2 | The EOC shall receive the LTIP from the SMC. | critical | demo | B |
| EOC-0040 | EOC-0040 | The EOC shall interface with EDOS for coordinating EDOS-provided services required by the EOC . | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| EOC-1005 | EOC-1005 | The EOC shall provide the IMS with spacecraft information, including at a minimum orbit information, for use in DAR generation. | critical | demo | B |
| EOC-2010 | EOC-2010-a-1 | The EOC shall accept from the FDF planning and scheduling information for the EOS spacecraft which includes, at a minimum, the following: a.Predicted orbit data including predicted ground track | critical | test | B |
| | EOC-2010-a-2 | The EOC shall accept from the FDF planning and scheduling information for the EOS instruments which includes, at a minimum, the following: a.Predicted orbit data including predicted ground track. | critical | test | B |
| | EOC-2010-b-1 | The EOC shall accept from the FDF planning and scheduling information for the EOS spacecraft which includes, at a minimum, the following: b.EOS spacecraft UAV data | critical | test | B |
| | EOC-2010-b-2 | The EOC shall accept from the FDF planning and scheduling information for the EOS instruments which includes, at a minimum, the following: b.EOS spacecraft UAV data. | critical | test | B |
| | EOC-2010-c-1 | The EOC shall accept from the FDF planning and scheduling information for the EOS spacecraft which includes, at a minimum, the following: c.PSATs. | critical | test | B |
| | EOC-2010-c-2 | The EOC shall accept from the FDF planning and scheduling information for the EOS instruments which includes, at a minimum, the following: c.PSATs | critical | test | B |
| | EOC-2010-d-1 | The EOC shall accept from the FDF planning and scheduling information for the EOS spacecraft which includes, at a minimum, the following: d. Spacecraft maneuver information | critical | test | B |
| | EOC-2010-d-2 | The EOC shall accept from the FDF planning and scheduling information for the EOS instruments, which includes, at a minimum, the following: d. Spacecraft maneuver information | critical | test | B |
| EOC-2020 | EOC-2020 | The EOC shall generate the long-term spacecraft operations plan, based upon the LTSP and LTIPs from the IWG. | critical | test | B |
| EOC-2030 | EOC-2030-a | The EOC shall store and maintain EOS planning and scheduling information, which includes, at a minimum, the following: a.IWG science guidelines, as specified in the LTSP and LTIP | critical | demo | B |
| | EOC-2030-b | The EOC shall store and maintain EOS planning and scheduling information, which includes, at a minimum, the following: b.Long-term spacecraft operations plan | critical | demo | B |
| | EOC-2030-c | The EOC shall store and maintain EOS planning and scheduling information, which includes, at a minimum, the following: c.Predicted availability of the spacecraft resources | critical | demo | B |
| | EOC-2025 | The EOC shall store and maintain EOS planning and scheduling information, which includes, at a minimum, the following: d.Baseline activity profile for each applicable instrument | critical | test | B |
| | EOC-2030-e | The EOC shall store and maintain EOS planning and scheduling information, which includes, at a minimum, the following: e.Planning and scheduling information received from the FDF | critical | demo | B |
| | EOC-2030-d | The EOC shall store and maintain EOS planning and scheduling information, which includes, at a minimum, the following: d.Baseline activity profile for each applicable instrument | critical | demo | B |
| | EOC-2030-f | The EOC shall store and maintain EOS planning and scheduling information, which includes, at a minimum, the following: f. Preliminary resource schedules, including TDRSS contact times | critical | demo | B |
| | EOC-2030-g | The EOC shall store and maintain EOS planning and scheduling information, which includes, at a minimum, the following: g. Detailed activity schedules, including TDRSS contact times | critical | demo | B |
| EOC-2040 | EOC-2040 | The EOC shall provide to any authorized users (including the ICCs) read-only access to EOS planning and scheduling information. | essential | inspect. | A |
| EOC-2045 | EOC-2045-1 | The EOC shall provide to any authorized users (including the ICCs) a common set of capabilities for formulating requests for formulating requests of EOS planning and scheduling information . | essential | demo | A |
| | EOC-2045-2 | The EOC shall provide to any authorized users (including the ICCs) a common set of capabilities for visualizing EOS planning and scheduling information . | essential | demo | A |
| EOC-2070 | EOC-2070-a | The EOC shall provide the capability to generate a spacecraft subsystem resource profile, based, at a minimum, on the following: a.Spacecraft orbit maintenance needs | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOC-2070-b | The EOC shall provide the capability to generate a spacecraft subsystem resource profile, based, at a minimum, on the following: b.Spacecraft navigation needs | critical | test | B |
| | EOC-2070-c | The EOC shall provide the capability to generate a spacecraft subsystem resource profile, based, at a minimum, on the following: c.Spacecraft subsystem maintenance needs | critical | test | B |
| EOC-2160 | EOC-2160-1 | The EOC shall provide plans to the IMS. | critical | test | A |
| | EOC-2160-2 | The EOC shall provide schedules to the IMS | critical | test | A |
| EOC-2170 | EOC-2170-1-1 | The EOC shall be capable of planning observations for which time may be specified in fixed terms ( i.e., to occur at a specific time). | critical | demo | B |
| | EOC-2170-1-2 | The EOC shall be capable of planning observations for which time may be specified within a time window. | critical | demo | B |
| | EOC-2170-1-3 | The EOC shall be capable of planning and scheduling observations for which time may be specified relative to the occurrence of a specified event. | critical | demo | B |
| | EOC-2170-2-1 | The EOC shall be capable of scheduling observations may be specified in fixed terms ( i.e., to occur at a specific time). | critical | demo | B |
| | EOC-2170-2-2 | The EOC shall be capable of scheduling observations for which time may be specified within a time window. | critical | demo | B |
| | EOC-2170-2-3 | The EOC shall be capable of scheduling observations for which time may be specified relative to the occurence of a specified event. | critical | demo | B |
| EOC-2180 | EOC-2180-1-1 | The EOC shall be capable of planning observations for those EOS instruments whose operations may be periodic. | critical | demo | A |
| | EOC-2180-1-2 | The EOC shall be capable of planning observations for those EOS instruments whose operations may be intermittent. | critical | demo | A |
| | EOC-2180-1-3 | The EOC shall be capable of planning observations for those EOS instruments whose operations may be continuous. | critical | demo | B |
| | EOC-2180-2-1 | The EOC shall be capable of scheduling observations for those EOS instruments whose operations may be periodic. | critical | demo | B |
| | EOC-2180-2-2 | The EOC shall be capable of scheduling observations for those EOS instruments whose operations may be intermittent. | critical | demo | B |
| | EOC-2180-2-3 | The EOC shall be capable of scheduling observations for those EOS instruments whose operations may be continuous. | critical | demo | B |
| EOC-2190 | EOC-2190-1 | The EOC shall be capable of planning coordinated observations involving multiple instruments. | critical | demo | B |
| | EOC-2190-2 | The EOC shall be capable of scheduling coordinated observations involving multiple instruments. | critical | demo | B |
| EOC-2200 | EOC-2200-a-1 | The EOC shall plan the management of spacecraft resources that include, at a minimum, the following: a.Spacecraft recorder | critical | demo | B |
| | EOC-2200-a-2 | The EOC shall schedule the management of spacecraft resources that include, at a minimum, the following: a.Spacecraft recorder | critical | demo | B |
| | EOC-2200-b-1 | The EOC shall plan the management of spacecraft resources that include, at a minimum, the following: b.Communications subsystems | critical | demo | B |
| | EOC-2200-b-2 | he EOC shall schedule the management of spacecraft resources that include, at a minimum, the following: b.Communications subsystems | critical | demo | B |
| | EOC-2200-c-1 | The EOC shall plan the management of spacecraft resources that include, at a minimum, the following: c.Thermal and power subsystems | critical | demo | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOC-2200-c-2 | The EOC shall schedule the management of spacecraft resources that include, at a minimum, the following: c.Thermal and power subsystems | critical | demo | B |
| EOC-2210 | EOC-2210-1-1 | The EOC shall have the capability to generate plans in human readable form. | critical | inspect. | A |
| | EOC-2210-1-2 | The EOC shall have the capability to generate plans in machine usable form. | critical | inspect. | A |
| | EOC-2210-2-1 | The EOC shall have the capability to generate schedules in human readable form. | critical | inspect. | A |
| | EOC-2210-2-2 | The EOC shall have the capability to generate schedules in machine usable form. | critical | inspect. | A |
| EOC-2220 | EOC-2220-a-1 | The EOC shall identify conflicts based on, at a minimum, the following: a.Resources needed for each observation or instrument support activity | critical | demo | B |
| | EOC-2220-a-2 | The EOC shall resolve conflicts based on, at a minimum, the following: a.Resources needed for each observation or instrument support activity | critical | demo | B |
| | EOC-2220-b-1 | The EOC shall identify conflicts based on, at a minimum, the following: b.Resources needed for each spacecraft core activity, if applicable | critical | test | B |
| | EOC-2220-b-2 | The EOC shall resolve conflicts based on, at a minimum, the following: b.Resources needed for each spacecraft core activity, if applicable | critical | test | B |
| | EOC-2220-c-1 | The EOC shall identify conflicts based on, at a minimum, the following: c.Inter-instrument dependency | critical | test | B |
| | EOC-2220-c-2 | The EOC shall resolve conflicts based on, at a minimum, the following: c.Inter-instrument dependency | critical | test | B |
| | EOC-2220-d-1 | The EOC shall identify conflicts based on, at a minimum, the following: d.In situ observation dependency | critical | test | B |
| | EOC-2220-d-2 | The EOC shall resolve conflicts based on, at a minimum, the following: d.In situ observation dependenc | critical | test | B |
| | EOC-2220-e-1 | The EOC shall identify conflicts based on, at a minimum, the following: e.Priorities set by the LTSP | critical | test | B |
| | EOC-2220-e-2 | The EOC shall resolve conflicts based on, at a minimum, the following: e.Priorities set by the LTSP | critical | test | B |
| EOC-2230 | EOC-2230-1 | If conflicts cannot be resolved in EOS planning and scheduling, the EOC shall make a choice between competing activities based on negotiations with and between the ICCs . | critical | demo | B |
| | EOC-2230-2 | If conflicts cannot be resolved in EOS planning and scheduling, the EOC shall make a choice between competing activities based on a decision by the Project Scientist or his designee. | critical | demo | B |
| EOC-2240 | EOC-2240 | The EOC shall reintroduce applicable requested activities in its planning and scheduling function when the activity did not occur due to a deviation from the schedule. | critical | test | A |
| EOC-2250 | EOC-2250-1 | The EOC shall be capable of performing its planning and scheduling function in batch mode. | critical | demo | A |
| | EOC-2250-2 | The EOC shall be capable of performing its planning and scheduling function in incremental interactive-user mode. | critical | demo | A |
| EOC-2260 | EOC-2260-1 | The EOC shall provide what-if capabilities for planning and scheduling analysis, | critical | demo | A |
| | EOC-2260-2 | The EOC shall provide what-if planning and scheduling analysis capabilities to authorized users, including the ICCs. | critical | demo | A |
| EOC-2270 | EOC-2270-1 | The EOC shall accept an instrument resource profile or instrument resource deviation list (when a resource profile exists for the instrument) from each ICC. | critical | demo | A |
| | EOC-2270-2 | The EOC shall accept an instrument resource deviation list (when a resource profile exists for the instrument) from each ICC. | critical | demo | A |
| EOC-2272 | EOC-2272 | For the instruments that have resource deviations lists, the EOC shall build instrument resource profiles by combining the resource deviation lists with the respective baseline resource profiles. | critical | test | A |
| EOC-2280 | EOC-2280 | At least once each week, the EOC shall generate for each spacecraft a preliminary resource schedule that describes all operations currently planned for the following target week. | critical | test | A |
| EOC-2290 | EOC-2290-1 | Whenever the ICC's instrument resource profile cannot be integrated into a preliminary resource schedule, the EOC shall provide the ICC with a notification that includes, at a minimum, an identification of the conflicting activities | critical | demo | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOC-2290-2 | Whenever the ICCÕs instrument resource profile cannot be integrated into a preliminary resource schedule, the EOC shall provide the ICC with a notification that includes, at a minimum, the source of conflict. | critical | demo | B |
| EOC-2300 | EOC-2300-a-1 | The EOC shall build the preliminary resource schedule based on the following, at a minimum: a.Existing preliminary resource schedules, if any | critical | test | A |
| | EOC-2300-a-2 | The EOC shall update the preliminary resource schedule based on the following, at a minimum: a.Existing preliminary resource schedules, if any | critical | test | A |
| | EOC-2300-b-1 | The EOC shall build the preliminary resource schedule based on the following, at a minimum: b. Instrument resource profiles | critical | test | A |
| | EOC-2300-b-2 | The EOC shall update the preliminary resource schedule based on the following, at a minimum: b. Instrument resource profiles | critical | test | A |
| | EOC-2300-c-1 | The EOC shall build the preliminary resource schedule based on the following, at a minimum: c.Spacecraft subsystems resource profile | critical | test | A |
| | EOC-2300-c-2 | The EOC shall update the preliminary resource schedule based on the following, at a minimum: c.Spacecraft subsystems resource profile | critical | test | A |
| | EOC-2300-d-1 | The EOC shall build or the preliminary resource schedule based on the following, at a minimum: d.Science guidelines | critical | test | B |
| | EOC-2300-d-2 | The EOC shall update the preliminary resource schedule based on the following, at a minimum: d.Science guidelines | critical | test | B |
| | EOC-2300-e-1 | The EOC shall build the preliminary resource schedule based on the following, at a minimum: e. Spacecraft operations constraints | critical | test | A |
| | EOC-2300-e-2 | The EOC shall update the preliminary resource schedule based on the following, at a minimum: e. Spacecraft operations constraints | critical | test | A |
| | EOC-2300-f-1 | The EOC shall build the preliminary resource schedule based on the following, at a minimum: f.TDRSS schedule | critical | test | A |
| | EOC-2300-f-2 | The EOC shall update the preliminary resource schedule based on the following, at a minimum: f.TDRSS schedule | critical | test | A |
| EOC-2310 | EOC-2310-a | The EOC shall build a preliminary resource schedule by performing the following: a.Integrating the spacecraft subsystems resource profile and individual instrument resource profiles | critical | test | A |
| | EOC-2310-b | The EOC shall build a preliminary resource schedule by performing the following: b.Determining if required resources, including SN resources, are within limits | critical | test | A |
| | EOC-2310-c | The EOC shall build a preliminary resource schedule by performing the following: c.Using guidelines established by the LTSP | critical | test | A |
| | EOC-2310-d | The EOC shall build a preliminary resource schedule by performing the following: d.Resolving conflicts between the proposed activities | critical | test | A |
| EOC-2320 | EOC-2320-a | The preliminary resource schedule shall include, at a minimum, the following: a.Activity or DAR identifiers | critical | inspect. | A |
| | EOC-2320-b | The preliminary resource schedule shall include, at a minimum, the following: b.Resource availability and usage requirements | critical | inspect. | A |
| | EOC-2320-c | The preliminary resource schedule shall include, at a minimum, the following: c.Time constraints and alternatives for planned activities | critical | inspect. | A |
| | EOC-2320-d | The preliminary resource schedule shall include, at a minimum, the following: d. TDRSS schedule | critical | inspect. | A |
| EOC-2350 | EOC-2350 | The EOC shall provide the preliminary resource schedule to the ICCs upon generation. | critical | demo | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| EOC-2370 | EOC-2370-1 | The EOC shall generate TDRSS schedule requests based on the data rate profiles of all the instruments. | critical | test | A |
| | EOC-2370-2 | The EOC shall generate TDRSS schedule requests based on spacecraft subsystems | critical | test | A |
| EOC-2400 | EOC-2400 | The EOC shall submit the TDRSS schedule requests to the NCC. | critical | demo | A |
| EOC-2405 | EOC-2405 | The EOC shall accept the forecast TDRSS schedule from the NCC. | critical | demo | A |
| EOC-2410 | EOC-2410-1 | The EOC shall accept from the NCC notification of rejection along with the reason for rejection, when all of the TDRSS schedule request cannot be accommodated. | critical | test | B |
| | EOC-2410-2 | The EOC shall accept from the NCC notification of rejection along with the reason for rejection, when a portion of the TDRSS schedule request cannot be accommodated. | critical | test | B |
| EOC-2420 | EOC-2420 | In response to the rejection of a TDRSS schedule request, the EOC shall have the capability to modify the request for resub to the NCC. | critical | demo | A |
| EOC-2430 | EOC-2430 | The EOC shall, in 95 percent of all cases, generate a preliminary resource schedule for one spacecraft within 2 hours after all required inputs are available. | critical | demo | B |
| EOC-2460 | EOC-2460-a-1 | The EOC shall be capable of generating a spacecraft subsystem activity list based on at a minimum the following: a.Existing detailed activity schedule | critical | test | A |
| | EOC-2460-a-2 | The EOC shall be capable of updating a spacecraft subsystem activity list based on at a minimum the following: a.Existing detailed activity schedule | critical | test | A |
| | EOC-2460-b-1 | The EOC shall be capable of generating a spacecraft subsystem activity list based on at a minimum the following: b. Preliminary resource schedule | critical | test | A |
| | EOC-2460-b-2 | The EOC shall be capable of updating a spacecraft subsystem activity list based on at a minimum the following: b. Preliminary resource schedule | critical | test | A |
| | EOC-2460-c-1 | The EOC shall be capable of generating a spacecraft subsystem activity list based on at a minimum the following: c.Spacecraft subsystem activities identified after the preliminary resource schedule has been generated | critical | test | A |
| | EOC-2460-c-2 | The EOC shall be capable of updating a spacecraft subsystem activity list based on at a minimum the following: c.Spacecraft subsystem activities identified after the preliminary resource schedule has been generated | critical | test | A |
| | EOC-2460-d-1 | The EOC shall be capable of generating a spacecraft subsystem activity list based on at a minimum the following: d.Current predicted orbit data and related information | critical | test | B |
| | EOC-2460-d-2 | The EOC shall be capable of updating a spacecraft subsystem activity list based on at a minimum the following: d.Current predicted orbit data and related information | critical | test | B |
| | EOC-2460-e-1 | The EOC shall be capable of generating a spacecraft subsystem activity list based on at a minimum the following: e.Responses to emergency/contingency situations | critical | test | B |
| | EOC-2460-e-2 | The EOC shall be capable of updating a spacecraft subsystem activity list based on at a minimum the following: e.Responses to emergency/contingency situations | critical | test | B |
| EOC-2480 | EOC-2480-1-1 | The EOC shall accept from each ICC an instrument activity list | critical | demo | A |
| | EOC-2480-1-2 | The EOC shall accept from each ICC updates to the instrument activity list. | critical | demo | A |
| | EOC-2480-2-1 | The EOC shall accept from each ICC an instrument activity deviation list when an activity profile exists for the instrument. | critical | demo | A |
| | EOC-2480-2-2 | he EOC shall accept updates to an instrument activity deviation list (when an activity profile exists for the instrument). | critical | demo | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| EOC-2482 | EOC-2482 | For the instruments that have instrument activity deviation lists, the EOC shall build the instrument activity lists by combining the instrument activity deviation lists with the respective baseline activity profiles. | critical | test | A |
| EOC-2490 | EOC-2490-1-1 | The EOC shall be capable of generating once each day a detailed activity schedule for each spacecraft nominally covering the next 7 days. | critical | test | A |
| | EOC-2490-1-2 | The EOC shall be capable of generating once each day a detailed activity schedule for each spacecraft's instruments, nominally covering the next 7 days. | critical | test | A |
| | EOC-2490-2-1 | The EOC shall be capable of updating once each day a detailed activity schedule for each spacecraft nominally covering the next 7 days. | critical | test | A |
| | EOC-2490-2-2 | The EOC shall be capable of updating once each day a detailed activity schedule for each spacecraft's instruments, nominally covering the next 7 days. | critical | test | A |
| EOC-2510 | EOC-2510-a | The EOC shall generate a detailed activity schedule for the spacecraft and its instruments by: a.Integrating the spacecraft subsystem activity list and individual instrument activity lists | critical | test | A |
| | EOC-2510-b | The EOC shall generate a detailed activity schedule for the spacecraft and its instruments by: b.Determining if the aggregate resource requirements are within limits | critical | test | A |
| | EOC-2510-c | The EOC shall generate a detailed activity schedule for the spacecraft and its instruments by: c.Identifying and resolving conflicts among the proposed activities | critical | test | A |
| | EOC-2510-d | The EOC shall generate a detailed activity schedule for the spacecraft and its instruments by: d.Ensuring that all the sequencing constraints among the proposed activities are respected | critical | test | A |
| | EOC-2510-e | The EOC shall generate a detailed activity schedule for the spacecraft and its instruments by: e.Scheduling the spacecraft recorder, direct downlink, and communication subsystem operations | critical | test | A |
| EOC-2520 | EOC-2520-1 | If additional TDRSS schedule needs are identified while generating a detailed activity schedule , the EOC shall make a request to the NCC for additional TDRSS services. | critical | test | B |
| | EOC-2520-2 | If additional TDRSS schedule needs are identified while updating a detailed activity schedule , the EOC shall make a request to the NCC for additional TDRSS services. | critical | test | B |
| EOC-2530 | EOC-2530-1 | If the request to the NCC for additional SN services is denied, the EOC shall regenerate a detailed activity schedule to account for the TDRSS service availability constraints. | critical | test | B |
| | EOC-2530-2 | If the request to the NCC for additional SN services is denied, the EOC shall modify a detailed activity schedule to account for the TDRSS service availability constraints. | critical | test | B |
| EOC-2535 | EOC-2535-1 | The EOC shall be capable of scheduling the use of the DSN in the event of an emergency or contingency that prevents communication through the TDRSS. | critical | test | B |
| | EOC-2535-2 | The EOC shall be capable of scheduling the use of the GN in the event of an emergency or contingency that prevents communication through the TDRSS. | critical | test | B |
| | EOC-2535-3 | The EOC shall be capable of scheduling the use of the WOTS in the event of an emergency or contingency that prevents communication through the TDRSS. | critical | test | B |
| EOC-2540 | EOC-2540 | The EOC shall notify the ICC of any instrument activities that cannot be integrated into a detailed activity schedule. | critical | test | A |
| EOC-2550 | EOC-2550-a | The detailed activity schedule shall include, at a minimum, the following: a. Instrument activities | critical | test | A |
| | EOC-2550-b | The detailed activity schedule shall include, at a minimum, the following: b. Spacecraft activities necessary to support all instrument activities | critical | test | A |
| | EOC-2550-c | The detailed activity schedule shall include, at a minimum, the following: c. All spacecraft activities necessary for the spacecraft subsystem maintenance | critical | test | B |
| | EOC-2550-d | The detailed activity schedule shall include, at a minimum, the following: d.Spacecraft resource requirements for each activity | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOC-2550-e | The detailed activity schedule shall include, at a minimum, the following: e.Traceability of instrument activities to DARs, | critical | test | B |
| EOC-2555 | EOC-2555-1 | The EOC shall evaluate the impact of a TOO observation on other previously scheduled activities. | critical | test | B |
| | EOC-2555-2 | The EOC shall evaluate the impact of a change to a scheduled observation, on other previously scheduled activities. | critical | test | B |
| EOC-2560 | EOC-2560 | he EOC shall modify the detailed activity schedule within 24 hours of issuance of unscheduled commands to reconcile the detailed activity schedule with the unscheduled commanding for historical purposes. | critical | test | B |
| EOC-2570 | EOC-2570-1-1-1 | In support of a TOO observation the EOC shall update the detailed activity schedule within 1 hour after receipt of the update to the corresponding instrument activity list if the update does not affect existing detailed activity schedule events. | critical | test | B |
| | EOC-2570-1-1-2 | In support of a TOO observation the EOC shall update the detailed activity schedule within 1 hour after receipt of the update to the corresponding instrument activity list if the update does not create new conflicts. | critical | test | B |
| | EOC-2570-1-2-1 | In support of a TOO observation or late change, the EOC shall update the detailed activity schedule within 1 hour after receipt of the update to the corresponding instrument activity deviation list (when an activity profile exists for the instrument), if the update does not affect existing detailed activity schedule events. | critical | test | B |
| | EOC-2570-1-2-2 | In support of a TOO observation or late change, the EOC shall update the detailed activity schedule within 1 hour after receipt of the update to the corresponding instrument activity deviation list (when an activity profile exists for the instrument), if the update does not create new conflicts. | critical | test | B |
| | EOC-2570-2-1-1 | In support of a late change the EOC shall update the detailed activity schedule within 1 hour after receipt of the update to the corresponding instrument activity list if the update does not affect existing detailed activity schedule events. | critical | test | B |
| | EOC-2570-2-1-2 | In support of late change, the EOC shall update the detailed activity schedule within 1 hour after receipt of the update to the corresponding instrument activity list if the update does not create new conflicts. | critical | test | B |
| | EOC-2570-2-2-1 | In support of a late change, the EOC shall update the detailed activity schedule within 1 hour after receipt of the update to the corresponding instrument activity deviation list (when an activity profile exists for the instrument), if the update does not affect existing detailed activity schedule events. | critical | test | B |
| | EOC-2570-2-2-2 | In support late change, the EOC shall update the detailed activity schedule within 1 hour after receipt of the update to the corresponding instrument activity deviation list (when an activity profile exists for the instrument), if the update does not create new conflicts. | critical | test | B |
| EOC-2590 | EOC-2590-1-1-1 | In support of a TOO observation , the EOC shall update the detailed activity schedule within 10 hours after the receipt of the update of the corresponding instrument activity list if the update affects existing detailed activity schedule events | critical | test | B |
| | EOC-2590-1-1-2 | In support of a TOO observation the EOC shall update the detailed activity schedule within 10 hours after the receipt of the update of the corresponding instrument activity list if the update creates new conflicts. | critical | test | B |
| | EOC-2590-1-2-1 | In support of a TOO observation the EOC shall update the detailed activity schedule within 10 hours after the receipt of the update of the corresponding instrument activity deviation list, if the update affects existing detailed activity schedule events | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOC-2590-1-2-2 | In support of a TOO observation the EOC shall update the detailed activity schedule within 10 hours after the receipt of the update of the corresponding instrument activity deviation list, if the update creates new conflicts. | critical | test | B |
| | EOC-2590-2-1-1 | In support of a late change, the EOC shall update the detailed activity schedule within 10 hours after the receipt of the update of the corresponding instrument activity list if the update affects existing detailed activity schedule events | critical | test | B |
| | EOC-2590-2-1-2 | In support of a late change the EOC shall update the detailed activity schedule within 10 hours after the receipt of the update of the corresponding instrument activity list , if the update creates new conflicts. | critical | test | B |
| | EOC-2590-2-2-1 | In support of a late change, the EOC shall update the detailed activity schedule within 10 hours after the receipt of the update of the corresponding instrument activity deviation list if the update affects existing detailed activity schedule events. | critical | test | B |
| | EOC-2590-2-2-2 | In support of a late change, the EOC shall update the detailed activity schedule within 10 hours after the receipt of the update of the corresponding instrument activity deviation list if the update creates new conflicts. | critical | test | B |
| EOC-2620 | EOC-2620-1 | The EOC shall provide the ICC with the detailed activity schedule and any updates upon generation. | critical | test | A |
| | EOC-2620-2 | The EOC shall provide the ICC with the detailed activity schedule updates upon generation. | critical | test | A |
| EOC-2630 | EOC-2630 | The EOC shall, in 95 percent of all cases, generate a detailed activity schedule for the spacecraft within 2 hours after all required inputs are available | critical | analysis | B |
| EOC-3015 | EOC-3015 | The EOC shall accept SCC flight software updates from the SDVF | critical | demo | B |
| EOC-3017 | EOC-3017-a | The EOC shall accept from the FDF parameters necessary for spacecraft command data generation, including the following: a.Navigational operations parameters | critical | test | B |
| | EOC-3017-b | The EOC shall accept from the FDF parameters necessary for spacecraft command data generation, including the following: b.Spacecraft maneuver parameters | critical | test | B |
| EOC-3020 | EOC-3020-a-1 | The EOC shall accept from the ICC instrument loads and associated information that includes at a minimum the following: a.Instrument identifier | critical | test | A |
| | EOC-3020-a-2 | The EOC shall accept from the ICC SCC-stored instrument commands and associated information that includes at a minimum the following: a.Instrument identifier | critical | test | A |
| | EOC-3020-a-3 | The EOC shall accept from the ICC SCC-stored instrument tables as well as the associated information that includes at a minimum the following: a.Instrument identifier | critical | test | A |
| | EOC-3020-b-1 | The EOC shall accept from the ICC instrument loads, and the associated information that includes at a minimum the following: b.Schedule identifier, if applicable | critical | test | A |
| | EOC-3020-b-2 | The EOC shall accept from the ICC SCC-stored instrument commands, and the associated information that includes at a minimum the following: b.Schedule identifier, if applicable | critical | test | A |
| | EOC-3020-b-3 | The EOC shall accept from the ICC SCC-stored instrument tables and associated information that includes at a minimum the following: b.Schedule identifier, if applicable | critical | test | A |
| | EOC-3020-c-1-1 | The EOC shall accept from the ICC instrument loads and the associated information that includes at a minimum the following: c.Identification of commands that could impact spacecraft safety | critical | test | A |
| | EOC-3020-c-1-2 | The EOC shall accept from the ICC instrument loads and the associated information that includes at a minimum the following: c.Identification of commands that could impact instrument safety | critical | test | A |
| | EOC-3020-c-2-1 | The EOC shall accept from the ICC SCC-stored instrument commands, and associated information that includes at a minimum the following: c.Identification of commands that could impact spacecraft safety | critical | test | A |
| | EOC-3020-c-2-2 | The EOC shall accept from the ICC SCC-stored instrument commands and the associated information that includes at a minimum the following: c.Identification of commands that could impact instrument safety | critical | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOC-3020-c-3-1 | The EOC shall accept from the ICC SCC-stored instrument tables and associated information that includes at a minimum the following: c.Identification of commands that could impact spacecraft safety | critical | test | A |
| | EOC-3020-c-3-2 | The EOC shall accept from the ICC SCC-stored instrument tables and associated information that includes at a minimum the following: c.Identification of commands that could impact instrument safety | critical | test | A |
| EOC-3024 | EOC-3024 | The EOC shall validate the expected resource usage. | critical | test | B |
| EOC-3030 | EOC-3030 | The EOC shall authenticate the originator of command information from the ICCs. | critical | test | B |
| EOC-3050 | EOC-3050-1 | At least once per day, the EOC shall generate SCC-stored spacecraft commands based on the detailed activity schedule. | critical | test | B |
| | EOC-3050-2 | At least once per day, the EOC shall generate SCC-stored spacecraft tables based on the detailed activity schedule . | critical | test | B |
| EOC-3070 | EOC-3070-1 | The EOC shall generate SCC-stored spacecraft commands for 24 hours of spacecraft operations in less than 1 hour. | critical | test | B |
| | EOC-3070-2 | The EOC shall generate SCC-stored spacecraft tables for 24 hours of spacecraft operations in less than 1 hour. | critical | test | B |
| EOC-3080 | EOC-3080-1 | The EOC shall generate spacecraft commands for later use in emergency situations to protect the health and safety of the spacecraft. | critical | test | A |
| | EOC-3080-2 | The EOC shall validate preplanned spacecraft commands for later use in emergency situations to protect the health and safety of the spacecraft. | critical | test | B |
| | EOC-3080-3 | The EOC shall store preplanned spacecraft commands for later use in emergency situations to protect the health and safety of the spacecraft. | critical | test | B |
| EOC-3086 | EOC-3086 | The EOC shall generate a command-to-memory location map for SCC-stored command loads. | critical | test | B |
| EOC-3090 | EOC-3090-a | As frequently as necessitated by the detailed activity schedule, the EOC shall build a spacecraft and instrument memory load , which includes as many of the following as needed: a. SCC-stored spacecraft and instrument commands | critical | test | B |
| | EOC-3090-b | As frequently as necessitated by the detailed activity schedule, the EOC shall build a spacecraft and instrument memory load , which includes as many of the following as needed: b. SCC-stored spacecraft and instrument tables | critical | test | B |
| | EOC-3090-c | As frequently as necessitated by the detailed activity schedule, the EOC shall build a spacecraft and instrument memory load , which includes as many of the following as needed: c.Instrument loads | critical | test | B |
| | EOC-3090-d | As frequently as necessitated by the detailed activity schedule, the EOC shall build a spacecraft and instrument memory load , which includes as many of the following as needed: d. SCC software updates | critical | test | B |
| EOC-3160 | EOC-3160-a | The EOC shall generate operational reports including, at a minimum, the following: a.SCC-stored command load report | critical | demo | B |
| | EOC-3160-b | The EOC shall generate operational reports including, at a minimum, the following: b.Integrated report having orbital events, command execution times, and TDRS contacts with candidate loads. | critical | demo | B |
| EOC-3200 | EOC-3200-1 | The EOC shall accept from the ICC instrument preplanned command groups for issuance by the EOC to ensure the health and safety of the spacecraft . | critical | demo | B |
| | EOC-3200-2 | The EOC shall accept from the ICC instrument preplanned command groups for issuance by the EOC to ensure the health and safety of all instruments. | critical | demo | B |
| EOC-3210 | EOC-3210-1 | The EOC shall store preplanned instrument commands for all instruments on the spacecraft. | critical | demo | B |
| | EOC-3210-2 | The EOC shall maintain preplanned instrument commands for all instruments on the spacecraft. | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| EOC-3225 | EOC-3225-1-1-1 | In support of a TOO observation the EOC shall prepare the corresponding integrated load within 15 minutes of receipt of the SCC-stored instrument commands if the observation does not impact previously scheduled activities. | critical | test | B |
| | EOC-3225-1-1-2 | In support of a TOO observation the EOC shall prepare the corresponding integrated load within 15 minutes of receipt of the SCC-stored instrument tables from the ICC, if the observation does not impact previously scheduled activities. | critical | test | B |
| | EOC-3225-1-1-3 | pport of a TOO observation the EOC shall prepare the corresponding integrated load within 15 minutes of receipt of the instrument load from the ICC, if the observation does not impact previously scheduled activities. | critical | test | B |
| | EOC-3225-1-2-1 | In support of a TOO observation or late change, the EOC shall prepare the real- time instrument command set within 15 minutes of receipt of the SCC-stored instrument commands, from the ICC, if the observation does not impact previously scheduled activities. | critical | test | B |
| | EOC-3225-1-2-2 | In support of a TOO observation the EOC shall prepare the corresponding real- time instrument command set within 15 minutes of receipt of the SCC-stored instrument tables from the ICC, if the observation does not impact previously scheduled activities. | critical | test | B |
| | EOC-3225-1-2-3 | In support of a TOO observation the EOC shall prepare the corresponding real- time instrument command set within 15 minutes of receipt of the instrument load from the ICC, if the observation does not impact previously scheduled activities. | critical | test | B |
| | EOC-3225-1-3-1 | In support of a TOO observation the EOC shall prepare the corresponding integrated load and real-time instrument command set within 15 minutes of receipt of the SCC-stored instrument commands from the ICC, if the observation does not impact previously scheduled activities. | critical | test | B |
| | EOC-3225-1-3-2 | In support of a TOO observation the EOC shall prepare the corresponding integrated load and real-time instrument command set within 15 minutes of receipt of the SCC-stored instrument tables from the ICC, if the observation does not impact previously scheduled activities. | critical | test | B |
| | EOC-3225-1-3-3 | In support of a TOO observation the EOC shall prepare the corresponding integrated load and real-time instrument command set within 15 minutes of receipt of the instrument load from the ICC, if the observation does not impact previously scheduled activities. | critical | test | B |
| | EOC-3225-2-1-1 | In support of a late change, the EOC shall prepare the corresponding integrated load within 15 minutes of receipt of the SCC-stored instrument commands from the ICC, if the observation does not impact previously scheduled activities. | critical | test | B |
| | EOC-3225-2-1-2 | In support of a late change, the EOC shall prepare the corresponding integrated load within 15 minutes of receipt of the SCC-stored instrument tables from the ICC, if the observation does not impact previously scheduled activities. | critical | test | B |
| | EOC-3225-2-1-3 | In support of a late change, the EOC shall prepare the corresponding integrated load set within 15 minutes of receipt of the instrument load from the ICC, if the observation does not impact previously scheduled activities. | critical | test | B |
| | EOC-3225-2-2-1 | In support of a late change, the EOC shall prepare the corresponding real- time instrument command set within 15 minutes of receipt of the SCC-stored instrument commands from the ICC, if the observation does not impact previously scheduled activities. | critical | test | B |
| | EOC-3225-2-2-2 | In support of a late change, the EOC shall prepare the corresponding real- time instrument command set within 15 minutes of receipt of the SCC-stored instrument tables from the ICC, if the observation does not impact previously scheduled activities. | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOC-3225-2-2-3 | In support of a TOO observation the EOC shall prepare the corresponding real- time instrument command set within 15 minutes of receipt of the instrument load from the ICC, if the observation does not impact previously scheduled activities. | critical | test | B |
| | EOC-3225-2-3-1 | In support of a late change, the EOC shall prepare the corresponding integrated load and real- time instrument command set within 15 minutes of receipt of the SCC-stored instrument commands from the ICC, if the observation does not impact previously scheduled activities | critical | test | B |
| | EOC-3225-2-3-2 | In support of a late change, the EOC shall prepare the corresponding integrated load and real- time instrument command set within 15 minutes of receipt of the SCC-stored instrument tables from the ICC, if the observation does not impact previously scheduled activities. | critical | test | B |
| | EOC-3225-2-3-3 | In support of a late change, the EOC shall prepare the corresponding integrated load and real- time instrument command set within 15 minutes of receipt of the instrument load from the ICC, if the observation does not impact previously scheduled activities. | critical | test | B |
| EOC-3226 | EOC-3226-1-1-1 | In support of a TOO observation the EOC shall prepare the corresponding integrated load within 1 hour of receipt of the SCC-stored instrument commands from the ICC, if the observation impacts previously scheduled activities. | critical | test | B |
| | EOC-3226-1-1-2 | In support of a TOO observation the EOC shall prepare the corresponding integrated load within 1 hour of receipt of the SCC-stored instrument tables from the ICC, if the observation impacts previously scheduled activities. | critical | test | B |
| | EOC-3226-1-1-3 | In support of a TOO observation the EOC shall prepare the corresponding integrated load within 1 hour of receipt of the instrument load from the ICC, if the observation impacts previously scheduled activities. | critical | test | B |
| | EOC-3226-1-2-1 | In support of a TOO observation or late change, the EOC shall prepare the corresponding real-time instrument command set within 1 hour of receipt of the SCC-stored instrument commands from the ICC, if the observation impacts previously scheduled activities. | critical | test | B |
| | EOC-3226-1-2-2 | In support of a TOO observation the EOC shall prepare the corresponding real-time instrument command set within 1 hour of receipt of the SCC-stored instrument tables from the ICC, if the observation impacts previously scheduled activities. | critical | test | B |
| | EOC-3226-1-2-3 | In support of a TOO observation the EOC shall prepare the corresponding integrated real-time instrument command set within 1 hour of receipt of the instrument load from the ICC, if the observation impacts previously scheduled activities. | critical | test | B |
| | EOC-3226-1-3-1 | In support of a TOO observation the EOC shall prepare the corresponding integrated load and real-time instrument command set within 1 hour of receipt of the SCC-stored instrument commands from the ICC, if the observation impacts previously scheduled activities. | critical | test | B |
| | EOC-3226-1-3-2 | In support of a TOO observation the EOC shall prepare the corresponding integrated load and real-time instrument command set within 1 hour of receipt of the SCC-stored instrument tables from the ICC, if the observation impacts previously scheduled activities. | critical | test | B |
| | EOC-3226-1-3-3 | In support of a TOO observation the EOC shall prepare the corresponding integrated load and real-time instrument command set within 1 hour of receipt of the instrument load from the ICC, if the observation impacts previously scheduled activities. | critical | test | B |
| | EOC-3226-2-1-1 | In support of a late change, the EOC shall prepare the corresponding integrated load within 1 hour of receipt of the SCC-stored instrument commands from the ICC if the observation impacts previously scheduled activities. | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOC-3226-2-1-2 | In support of a late change, the EOC shall prepare the corresponding integrated load within 1 hour of receipt of the SCC-stored instrument tables from the ICC, if the observation impacts previously scheduled activities. | critical | test | B |
| | EOC-3226-2-1-3 | In support of a late change, the EOC shall prepare the corresponding integrated load within 1 hour of receipt of the instrument load from the ICC, if the observation impacts previously scheduled activities. | critical | test | B |
| | EOC-3226-2-2-1 | In support of a late change, the EOC shall prepare the corresponding real-time instrument command set within 1 hour of receipt of the SCC-stored instrument commands from the ICC, if the observation impacts previously scheduled activities. | critical | test | B |
| | EOC-3226-2-2-2 | In support of a late change, the EOC shall prepare the corresponding real-time instrument command set within 1 hour of receipt of the SCC-stored instrument tables from the ICC, if the observation impacts previously scheduled activities. | critical | test | B |
| | EOC-3226-2-2-3 | In support of a late change, the EOC shall prepare the corresponding real-time instrument command set within 1 hour of receipt of the instrument load from the ICC, if the observation impacts previously scheduled activities. | critical | test | B |
| | EOC-3226-2-3-1 | In support of a late change, the EOC shall prepare the corresponding integrated load and real-time instrument command set within 1 hour of receipt of the SCC-stored instrument commands from the ICC, if the observation impacts previously scheduled activities. | critical | test | B |
| | EOC-3226-2-3-2 | In support of a late change, the EOC shall prepare the corresponding integrated load and real-time instrument command set within 1 hour of receipt of the SCC-stored instrument tables from the ICC, if the observation impacts previously scheduled activities. | critical | test | B |
| | EOC-3226-2-3-3 | In support of a late change, the EOC shall prepare the corresponding integrated load and real-time instrument command set within 1 hour of receipt of the instrument load from the ICC, if the observation impacts previously scheduled activities. | critical | test | B |
| EOC-3238 | EOC-3228-1 | Within 1 minute of detecting a predefined emergency/contingency situation, the EOC shall prepare spacecraft commands for trans to EDOS | critical | test | B |
| | EOC-3228-2 | Within 1 minute of detecting a predefined emergency/contingency situation, the EOC shall prepare instrument commands for trans to EDOS | critical | test | B |
| EOC-3240 | EOC-3240 | The EOC shall be capable of producing spacecraft and instrument memory loads covering 24 hours of spacecraft operation in less than 1 hour. | critical | test | B |
| EOC-4005 | EOC-4005-a | The EOC shall be capable of transmitting commands to the EOS spacecraft via EDOS using the: a.SN | critical | test | A |
| | EOC-4005-b | The EOC shall be capable of transmitting commands to the EOS spacecraft via EDOS using the: b.GN, DSN, WOTS (for contingency or emergency operations) | critical | test | A |
| EOC-4008 | EOC-4008 | The EOC shall be capable of transmitting commands via Ecom. | critical | test | A |
| EOC-4010 | EOC-4010-1 | For each spacecraft the EOC shall prepare uplink data that conform to the CCSDS Telecommand Standard. | critical | analysis | A |
| | EOC-4010-2 | For each spacecraft's instruments, the EOC shall prepare uplink data that conform to the CCSDS Telecommand Standard. | critical | analysis | A |
| EOC-4015 | EOC-4015-1 | The EOC shall provide the capability to build real-time commands based on operator input. | critical | test | A |
| | EOC-4015-2 | The EOC shall provide the capability to validate the generated real-time commands. | critical | test | A |
| EOC-4017 | EOC-4017 | The EOC shall receive from the ICC instrument real-time command groups destined for the EOS spacecraft and instruments. | critical | demo | A |
| EOC-4018 | EOC-4018 | The EOC shall validate instrument real-time command groups. | critical | demo | A |
| EOC-4020 | EOC-4020 | The EOC shall merge the real-time commands supplied by the spacecraft operator, command groups, and the spacecraft and instrument memory loads into one uplink stream. | critical | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| EOC-4060 | EOC-4060-1 | The EOC shall provide the capability to exchange messages with the NCC, which include at a minimum status messages. | critical | test | A |
| | EOC-4060-2 | The EOC shall provide the capability to exchange messages with the NCC, which include at a minimum reconfiguration messages. | critical | test | A |
| EOC-4100 | EOC-4100 | The EOC shall provide the capability to control the uplink of critical commands by requiring a second positive response from the operator. | critical | demo | B |
| EOC-4120 | EOC-4120-1 | The EOC shall provide the capability to verify via telemetry the successful receipt of all commands by the spacecraft. | critical | test | B |
| | EOC-4120-2 | The EOC shall provide the capability to verify via telemetry the successful receipt of all commands by the spacecraft's instruments. | critical | test | B |
| EOC-4125 | EOC-4125 | The EOC shall provide the capability to verify via telemetry the successful execution of spacecraft commands. | critical | test | B |
| EOC-4130 | EOC-4130-1 | The EOC shall provide the capability to receive command trans status information from EDOS. | critical | demo | A |
| | EOC-4130-2 | The EOC shall provide the capability to evaluate command trans status information from EDOS. | critical | demo | A |
| EOC-4140 | EOC-4140-a-1 | The EOC shall generate command-related event messages for display to include: a.Command uplink status | critical | demo | A |
| | EOC-4140-b-1 | The EOC shall generate command-related event messages for display to include: b.Command verification status | critical | demo | B |
| | EOC-4140-a-2 | The EOC shall generate command-related event messages for history logging to include: a.Command uplink status | critical | demo | A |
| | EOC-4140-b-2 | The EOC shall generate command-related event messages for history logging to include: b.Command verification status | critical | demo | B |
| EOC-4160 | EOC-4160-1 | The EOC shall maintain a record of the uplink status of all spacecraft memory loads. | critical | demo | B |
| | EOC-4160-2 | The EOC shall maintain a record of the uplink status of all instrument memory loads | critical | demo | B |
| | EOC-4160-3 | The EOC shall maintain a record of the uplink status of all real-time commands. | critical | demo | A |
| EOC-4166 | EOC-4166-a | The EOC shall provide the ICC with instrument uplink status, which includes at a minimum the following: a.Receipt at the EOC | critical | test | A |
| | EOC-4166-b | The EOC shall provide the ICC with instrument uplink status, which includes at a minimum the following b.Validation status | critical | test | A |
| | EOC-4166-c | The EOC shall provide the ICC with instrument uplink status, which includes at a minimum the following: c.Receipt at the spacecraft and instrument | critical | test | A |
| EOC-4168 | EOC-4168 | The EOC shall provide the ICCs with instrument command notification messages, when emergency/contingency instrument commands are issued. | critical | demo | A |
| EOC-4200 | EOC-4200-a | The EOC shall support several uplink rates to the spacecraft, which include at a minimum the following: a. 10 kilobits per second (kbps) (SSA uplink) | critical | test | B |
| | EOC-4200-b | The EOC shall support several uplink rates to the spacecraft, which include at a minimum the following: b. 1 kbps (SMA uplink) | critical | test | B |
| | EOC-4200-c | The EOC shall support several uplink rates to the spacecraft, which include at a minimum the following: c.125 bits per second (bps) (SSA uplink during contingency operations) | critical | test | B |
| | EOC-4200-d | The EOC shall support several uplink rates to the spacecraft, which include at a minimum the following: d.2 kbps (emergency operations via S-band DSN link) | critical | test | B |
| EOC-4210 | EOC-4210 | The EOC shall process and output a single real-time emergency command request within 500 milliseconds of receiving the request from an ICC. | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| EOC-5010 | EOC-5010-a | The EOC shall receive from EDOS the following telemetry data types in CCSDS packets containing: a.Real-time spacecraft and instrument housekeeping data | critical | analysis | A |
| | EOC-5010-b | The EOC shall receive from EDOS the following telemetry data types in CCSDS packets containing: b. Spacecraft recorder spacecraft and instrument housekeeping data | critical | analysis | B |
| | EOC-5010-c | The EOC shall receive from EDOS the following telemetry data types in CCSDS packets containing: c. SCC memory dump data | critical | analysis | A |
| EOC-5012 | EOC-5012 | The EOC shall be capable of processing spacecraft recorder data for all periods of time during which real time data was not received. | critical | test | B |
| EOC-5015 | EOC-5015 | The EOC shall be capable of simultaneously receiving all EOS telemetry data types. | critical | test | B |
| EOC-5020 | EOC-5020 | The EOC shall receive and process spacecraft telemetry data during spacecraft launch. | critical | test | B |
| EOC-5030 | EOC-5030-a-1 | The EOC shall provide the capability to receive non-telemetry data, which includes at a minimum the following: a.Messages from the NCC | critical | test | A |
| | EOC-5030-b-1 | The EOC shall provide the capability to receive non-telemetry data, which includes at a minimum the following: b.Monitor blocks from the DSN, GN, and WOTS | critical | test | A |
| | EOC-5030-c-1 | The EOC shall provide the capability to receive non-telemetry data, which includes at a minimum the following: c.Status messages from EDOS | critical | test | A |
| | EOC-5030-a-2 | The EOC shall provide the capability to process, non-telemetry data, which includes at a minimum the following: a.Messages from the NCC | critical | test | B |
| | EOC-5030-b-2 | The EOC shall provide the capability to receive and process, non-telemetry data, which includes at a minimum the following: b.Monitor blocks from the DSN, GN, and WOTS | critical | test | B |
| | EOC-5030-c-2 | The EOC shall provide the capability to receive and process, non-telemetry data, which includes at a minimum the following: c.Status messages from EDOS | critical | test | B |
| EOC-5045 | EOC-5045-1 | The EOC shall be capable of supporting all EOS telemetry formats for spacecraft housekeeping data. | critical | test | A |
| | EOC-5045-2 | The EOC shall be capable of supporting all EOS telemetry formats for instrument housekeeping data. | critical | test | A |
| EOC-5050 | EOC-5050-1 | The EOC shall provide the capability to receive data quality information with the incoming CCSDS packets as provided by EDOS. | critical | test | A |
| | EOC-5050-2 | The EOC shall provide the capability to report data quality information with the incoming CCSDS packets as provided by EDOS | critical | test | A |
| EOC-5070 | EOC-5070-1 | The EOC shall provide the capability to detect gaps in the telemetry data it receives. | critical | test | A |
| | EOC-5070-2 | The EOC shall provide the capability to report gaps in the telemetry data it receives. | critical | test | A |
| EOC-5080 | EOC-5080-1 | The EOC shall provide the capability to decommutate spacecraft housekeeping data. | critical | test | A |
| | EOC-5080-2 | The EOC shall provide the capability to decommutate instrument housekeeping data. | critical | test | A |
| EOC-5090 | EOC-5090-1 | The EOC shall perform the necessary engineering unit conversion on the decommutated housekeeping data. | critical | test | A |
| | EOC-5090-2 | The EOC shall perform the necessary derived parameter generation on the decommutated housekeeping data. | critical | test | B |
| | EOC-5090-3 | The EOC shall perform the necessary digital state determination on the decommutated housekeeping data. | critical | test | A |
| | EOC-5090-4 | The EOC shall perform the necessary discrete state determination on the decommutated housekeeping data. | critical | test | A |
| EOC-5100 | EOC-5100-1 | The EOC shall provide the capability to perform limit checking on all non discrete parameters within the real-time telemetry. | critical | test | A |
| | EOC-5100-2 | The EOC shall provide the capability to flag all parameters that have limit violations. | critical | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| EOC-5105 | EOC-5105-1 | The EOC shall support the definition of multiple sets of boundary limits for each non-discrete parameter, with each set including definitions one upper and lower boundary. | critical | test | B |
| | EOC-5105-2 | The EOC shall support the definition of multiple sets of boundary limits for each non-discrete parameter, with each set including more than one upper and lower boundary. | critical | test | B |
| EOC-5110 | EOC-5110 | The EOC shall provide the capability to generate an event message whenever a predetermined number of limit violations for a parameter is detected. | critical | test | A |
| EOC-5120 | EOC-5120-1 | The EOC shall provide the capability to accept temporary changes to limit definitions. | critical | test | B |
| | EOC-5120-2 | The EOC shall provide the capability to accept permanent changes to limit definitions. | critical | test | B |
| EOC-5130 | EOC-5130 | The EOC shall determine the best estimate for SCC memory contents. | critical | test | B |
| EOC-5180 | EOC-5180 | The EOC shall provide the capability to extract specified subsets of the telemetry stream. | critical | test | B |
| EOC-5185 | EOC-5185-a | The EOC shall provide the FDF with a subset of telemetry stream , which includes the following: a.Attitude sensor data | critical | test | B |
| | EOC-5185-b | The EOC shall provide the FDF with a subset of telemetry stream , which includes the following: b.Navigation telemetry data | critical | test | B |
| | EOC-5185-c | The EOC shall provide the FDF with a subset of telemetry stream , which includes the following: c.Spacecraft maneuver telemetry data | critical | test | B |
| EOC-5187 | EOC-5187 | The EOC shall have the capability to determine the spacecraft clock time bias required for synchronizing the spacecraft clock relative to Coordinated Universal Time (UTC). | critical | test | B |
| EOC-5190 | EOC-5190 | The EOC shall provide the capability to store spacecraft recorder telemetry data as they are received from EDOS in CCSDS packets. | critical | analysis | B |
| EOC-5200 | EOC-5200 | The EOC shall provide the capability to process stored telemetry data at an operator- selectable rate. | essential | test | B |
| EOC-5220 | EOC-5220 | The EOC shall be able to process real-time data at rates up to 50 kbps per spacecraft | critical | test | B |
| EOC-5230 | EOC-5230-1 | The EOC shall be able to receive spacecraft recorder data at rates up to 1.544 Mbps. | critical | test | B |
| | EOC-5230-2 | The EOC shall be able to record spacecraft recorder data at rates up to 1.544 Mbps. | critical | test | B |
| EOC-5240 | EOC-5240-1 | The EOC shall be able to process history spacecraft recorder data at rates up to 150 kbps. | critical | test | B |
| | EOC-5240-2 | The EOC shall be able to process archived spacecraft recorder data at rates up to 150 kbps. | critical | test | B |
| EOC-6010 | EOC-6010-1 | The EOC shall provide the capability to perform analysis on real-time data. | critical | test | B |
| | EOC-6010-2 | The EOC shall provide the capability to perform analysis on spacecraft recorder data, | critical | test | B |
| | EOC-6010-3 | The EOC shall provide the capability to perform analysis on data from the EOC history log. | critical | test | A |
| EOC-6020 | EOC-6020 | The EOC shall accept instrument status data from each ICC. | critical | demo | B |
| EOC-6050 | EOC-6050-a | The EOC shall provide the capability to determine, for specified parameters over a specified time interval, at a minimum the following: a.Minimum valuue | critical | test | B |
| | EOC-6050-b | The EOC shall provide the capability to determine, for specified parameters over a specified time interval, at a minimum the following: b.Maximum value | critical | test | B |
| | EOC-6050-c | The EOC shall provide the capability to determine, for specified parameters over a specified time interval, at a minimum the following: c.Mean value | critical | test | B |
| | EOC-6050-d | The EOC shall provide the capability to determine, for specified parameters over a specified time interval, at a minimum the following: d.Standard deviation of the parameter | critical | test | B |
| | EOC-6050-e | The EOC shall provide the capability to determine, for specified parameters over a specified time interval, at a minimum the following: e.Time and duration of limit violations | critical | test | B |
| EOC-6060 | EOC-6060-a | The EOC shall provide the capability to plot a specified parameter against another parameter. | critical | test | B |
| | EOC-6060-b | The EOC shall provide the capability to plot a specified parameter against time. | critical | test | B |
| EOC-6070 | EOC-6070 | The EOC shall provide the capability to time-correlate related spacecraft parameters. | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| EOC-6080 | EOC-6080-1 | The EOC shall provide the capability to define spacecraft operations procedures. | critical | demo | B |
| | EOC-6080-2 | The EOC shall provide the capability to check spacecraft operations procedures. | critical | test | B |
| | EOC-6080-3 | The EOC shall provide the capability to manage spacecraft operations procedures. | critical | test | B |
| EOC-6100 | EOC-6100-1 | The EOC shall provide the capability to perform trend analysis on spacecraft housekeeping parameters | critical | test | B |
| | EOC-6100-2 | The EOC shall provide the capability to perform trend analysis on instrument housekeeping parameters | critical | test | B |
| EOC-6110 | EOC-6110-a-1-1 | The EOC shall provide the capability to monitor the spacecraft functions including at a minimum the following: a.Stored command processing | critical | demo | B |
| | EOC-6110-b-1-1 | The EOC shall provide the capability to monitor the spacecraft functions including at a minimum the following: b. Spacecraft recorders | critical | demo | B |
| | EOC-6110-c-1-1 | The EOC shall provide the capability to monitor the spacecraft functions including at a minimum the following: c.Safe mode processes | critical | demo | B |
| | EOC-6110-d-1-1 | The EOC shall provide the capability to monitor the spacecraft functions including at a minimum the following: d.Electrical power subsystem | critical | demo | B |
| | EOC-6110-e-1-1 | The EOC shall provide the capability to monitor the spacecraft functions, including at a minimum the following: e.Propulsion subsystem | critical | demo | B |
| | EOC-6110-a-1-2 | The EOC shall provide the capability to monitor the spacecraft resources including at a minimum the following: a.Stored command processing | critical | demo | B |
| | EOC-6110-b-1-2 | The EOC shall provide the capability to monitor the spacecraft resources, and performance, including at a minimum the following: b. Spacecraft recorders | critical | demo | B |
| | EOC-6110-c-1-2 | The EOC shall provide the capability to monitor the spacecraft resources, including at a minimum the following: c.Safe mode processes | critical | demo | B |
| | EOC-6110-d-1-2 | The EOC shall provide the capability to monitor the spacecraft resources including at a minimum the following: d.Electrical power subsystem | critical | demo | B |
| | EOC-6110-e-1-2 | The EOC shall provide the capability to monitor the spacecraft resources including at a minimum the following: e.Propulsion subsystem | critical | demo | B |
| | EOC-6110-a-1-3 | he EOC shall provide the capability to monitor the spacecraft performance, including at a minimum the following: a.Stored command processing | critical | demo | B |
| | EOC-6110-b-1-3 | The EOC shall provide the capability to monitor the spacecraft performance, including at a minimum the following: b. Spacecraft recorders | critical | demo | B |
| | EOC-6110-c-1-3 | The EOC shall provide the capability to monitor the spacecraft performance, including at a minimum the following: c.Safe mode processes | critical | demo | B |
| | EOC-6110-d-1-3 | The EOC shall provide the capability to monitor the spacecraft performance, including at a minimum the following: d.Electrical power subsystem | critical | demo | B |
| | EOC-6110-e-1-3 | The EOC shall provide the capability to monitor the spacecraft performance, including at a minimum the following: e.Propulsion subsystem | critical | demo | B |
| | EOC-6110-a-2-1 | The EOC shall provide the capability to evaluate the spacecraft functions, including at a minimum the following: a.Stored command processing | critical | test | B |
| | EOC-6110-b-2-1 | The EOC shall provide the capability to evaluate the spacecraft functions including at a minimum the following: b. Spacecraft recorders | critical | test | B |
| | EOC-6110-c-2-1 | The EOC shall provide the capability to evaluate the spacecraft functions including at a minimum the following: c.Safe mode processes | critical | test | B |
| | EOC-6110-d-2-1 | The EOC shall provide the capability to evaluate the spacecraft functions including at a minimum the following: d.Electrical power subsystem | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOC-6110-e-2-1 | The EOC shall provide the capability to evaluate the spacecraft functions including at a minimum the following: e.Propulsion subsystem | critical | test | B |
| | EOC-6110-a-2-2 | The EOC shall provide the capability to evaluate the spacecraft resources including at a minimum the following: a.Stored command processing | critical | test | B |
| | EOC-6110-b-2-2 | The EOC shall provide the capability to evaluate the spacecraft resources including at a minimum the following: b. Spacecraft recorders | critical | test | B |
| | EOC-6110-c-2-2 | The EOC shall provide the capability to evaluate the spacecraft resources including at a minimum the following: c.Safe mode processes | critical | test | B |
| | EOC-6110-d-2-2 | The EOC shall provide the capability to evaluate the spacecraft resources including at a minimum the following: d.Electrical power subsystem | critical | test | B |
| | EOC-6110-e-2-2 | The EOC shall provide the capability to evaluate the spacecraft resources including at a minimum the following: e.Propulsion subsystem | critical | test | B |
| | EOC-6110-a-2-3 | The EOC shall provide the capability to evaluate the spacecraft performance, including at a minimum the following: a.Stored command processing | critical | test | B |
| | EOC-6110-b-2-3 | The EOC shall provide the capability to evaluate the spacecraft performance, including at a minimum the following: b. Spacecraft recorders | critical | test | B |
| | EOC-6110-c-2-3 | The EOC shall provide the capability to evaluate the spacecraft performance, including at a minimum the following: c.Safe mode processes | critical | test | B |
| | EOC-6110-d-2-3 | The EOC shall provide the capability to evaluate the spacecraft performance, including at a minimum the following: d.Electrical power subsystem | critical | test | B |
| | EOC-6110-e-2-3 | The EOC shall provide the capability to evaluate the spacecraft performance, including at a minimum the following: e.Propulsion subsystem | critical | test | B |
| EOC-6130 | EOC-6130-1 | The EOC shall monitor the configuration of the spacecraft. | critical | demo | B |
| | EOC-6130-2 | The EOC shall monitor the configuration of the instruments. | critical | demo | B |
| EOC-6135 | EOC-6135 | The EOC shall have the capability to recommend spacecraft reconfigurations. | critical | demo | B |
| EOC-6140 | EOC-6140-1 | The EOC shall provide the capability to maintain a record of the spacecraft including the state of all spacecraft subsystems. | critical | test | B |
| | EOC-6140-2 | The EOC shall provide the capability to maintain a record of the intrument configuration, including the state of all instruments. | critical | test | B |
| EOC-6150 | EOC-6150 | The EOC shall provide the capability to maintain a master ground image of the SCC spacecraft memory. | critical | test | B |
| EOC-6160 | EOC-6160 | The EOC shall provide the capability to compare the master ground image and the SCC memory dump | critical | test | B |
| EOC-6195 | EOC-6195-1-1-1 | The EOC shall provide the capability to detect failures at the spacecraft subsystem level, | critical | test | B |
| | EOC-6195-1-1-2 | The EOC shall provide the capability to detect, isolate, and report failures and anomalies at the spacecraft level. | critical | test | A |
| | EOC-6195-1-2-1 | The EOC shall provide the capability to detect anomalies at the spacecraft subsystem level, | critical | test | B |
| | EOC-6195-1-2-2 | The EOC shall provide the capability to detect anomalies at the spacecraft level. | critical | test | A |
| | EOC-6195-2-1-1 | The EOC shall provide the capability to isolate failures at the spacecraft subsystem level. | critical | test | B |
| | EOC-6195-2-1-2 | The EOC shall provide the capability to isolate failures at the spacecraft level. | critical | test | B |
| | EOC-6195-2-2-1 | The EOC shall provide the capability to isolate anomalies at the spacecraft subsystem level. | critical | test | B |
| | EOC-6195-2-2-2 | The EOC shall provide the capability to isolate anomalies at the spacecraft level. | critical | test | B |
| | EOC-6195-3-1-1 | The EOC shall provide the capability to report failures at the spacecraft subsystem level. | critical | test | B |
| | EOC-6195-3-1-2 | The EOC shall provide the capability to report failures at the spacecraft level | critical | test | A |
| | EOC-6195-3-2-1 | The EOC shall provide the capability to report anomalies at the spacecraft subsystem. | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOC-6195-3-2-2 | The EOC shall provide the capability to report anomalies at the spacecraft level. | critical | test | A |
| EOC-6200 | EOC-6200-1-1-1 | The EOC shall detect failures involving the spacecraft. ft. | critical | test | A |
| | EOC-6200-1-1-2 | The EOC shall detect failures involving the instruments. | critical | test | B |
| | EOC-6200-1-1-3 | The EOC shall detect falures involving communications with the spacecraft. | critical | test | B |
| | EOC-6210-1-1-4 | The EOC shall detect failures involving ground operations support of the spacecraft. | critical | test | B |
| | EOC-6200-1-2-1 | The EOC shall detect anomalies involving the spacecraft. | critical | test | A |
| | EOC-6200-1-2-2 | The EOC shall detect anomalies involving the instruments. | critical | test | B |
| | EOC-6200-1-2-3 | The EOC shall detect anomalies involving communications with the spacecraft. | critical | test | B |
| | EOC-6200-1-2-4 | The EOC shall detect anomalies involving ground operations support of the spacecraft. | critical | test | B |
| | EOC-6200-2-1-1 | The EOC shall isolate failures involving the spacecraft. | critical | test | B |
| | EOC-6200-2-1-2 | The EOC shall isolate failures involving the instruments. | critical | test | B |
| | EOC-6200-2-1-3 | The EOC shall isolate failures involving communications with the spacecraft. | critical | test | B |
| | EOC-6200-2-1-4 | The EOC shall isolate failures involving ground operations support of the spacecraft. | critical | test | B |
| | EOC-6200-2-2-1 | The EOC shall isolate anomalies involving the spacecraft. | critical | test | B |
| | EOC-6200-2-2-2 | The EOC shall isolate anomalies involving the instruments. | critical | test | B |
| | EOC-6200-2-2-3 | The EOC shall isolate anomalies involving communications with the spacecraft. | critical | test | B |
| | EOC-6200-2-2-4 | The EOC shall isolate anomalies involving ground operations support of the spacecraft. | critical | test | B |
| | EOC-6200-3-1-1 | The EOC shall participate in the resolution of failures involving the spacecraft . | critical | test | B |
| | EOC-6200-3-1-2 | The EOC shall participate in the resolution of failures involving the instruments. | critical | test | B |
| | EOC-6200-3-1-3 | he EOC shall participate in the resolution of failures involving communications with the spacecraft,. | critical | test | B |
| | EOC-6200-3-1-4 | The EOC shall participate in the resolution of failures involving ground operations support of the spacecraft. | critical | test | B |
| | EOC-6200-3-2-1 | The EOC shall participate in the resolution of anomalies involving the spacecraft. | critical | test | B |
| | EOC-6200-3-2-2 | The EOC shall participate in the resolution of anomalies involving the instruments. | critical | test | B |
| | EOC-6200-3-2-3 | The EOC shall participate in the resolution of anomalies involving communications with the spacecraft. | critical | test | B |
| | EOC-6210-3-2-4 | The EOC shall participate in the resolution of anomalies involving ground operations support of the spacecraft. | critical | test | B |
| | EOC-6200-1-1-4 | The EOC shall detect failures involving the ground operations support of the spacecraft. | critical | test | B |
| | EOC-6200-3-2-4 | The EOC shall participate in the resolution of anomalies involving ground operations support of the spacecraft. | critical | test | B |
| EOC-6210 | EOC-6210 | The EOC shall be capable of providing recommended courses of actions for selected contingency situations. | critical | analysis | B |
| EOC-7010 | EOC-7010-a | The EOS Spacecraft Data Base (SDB) shall include at a minimum the following: a.Housekeeping data formats | critical | demo | A |
| | EOC-7010-b | The EOS Spacecraft Data Base (SDB) shall include at a minimum the following: b.Housekeeping data parameter descriptions | critical | demo | A |
| | EOC-7010-c | The EOS Spacecraft Data Base (SDB) shall include at a minimum the following: c.Command descriptions | critical | demo | A |
| | EOC-7010-d | The EOS Spacecraft Data Base (SDB) shall include at a minimum the following: d.Syntactical rules for commands and operator directives | critical | demo | A |
| | EOC-7010-e | The EOS Spacecraft Data Base (SDB) shall include at a minimum the following: e.Operator directives | critical | demo | B |
| | EOC-7010-f | The EOS Spacecraft Data Base (SDB) shall include at a minimum the following: f.Display formats | critical | demo | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOC-7010-g-1 | The EOS Spacecraft Data Base (SDB) shall include at a minimum the following: g.Planning and scheduling definitions | critical | demo | A |
| | EOC-7010-g-2 | The EOS Spacecraft Data Base (SDB) shall include at a minimum the following: g.Planning and scheduling constraints | critical | demo | B |
| | EOC-7010-h | The EOS Spacecraft Data Base (SDB) shall include at a minimum the following: h.Analysis algorithms | critical | demo | B |
| | EOC-7010-i | The EOS Spacecraft Data Base (SDB) shall include at a minimum the following: i.Report formats | critical | demo | B |
| | EOC-7010-j | The EOS Spacecraft Data Base (SDB) shall include at a minimum the following: j.NCC configuration codes | critical | demo | A |
| | EOC-7010-k | The EOS Spacecraft Data Base (SDB) shall include at a minimum the following: k.Derived telemetry parameter equations | critical | demo | B |
| | EOC-7010-l | The EOS Spacecraft Data Base (SDB) shall include at a minimum the following: l.Telemetry parameter limits | critical | demo | A |
| | EOC-7010-m-1 | The EOS Spacecraft Data Base (SDB) shall include at a minimum the following: m.Characteristics of spacecraft. | critical | demo | B |
| | EOC-7010-m-2 | The EOS Spacecraft Data Base (SDB) shall include at a minimum the following: m.Characteristics of the spacecraft's instruments | critical | demo | B |
| | EOC-7010-n | The EOS Spacecraft Data Base (SDB) shall include at a minimum the following: n.Command validation parameters | critical | demo | B |
| | EOC-7010-o | The EOS Spacecraft Data Base (SDB) shall include at a minimum the following: o.Operations procedures | critical | demo | B |
| EOC-7015 | EOC-7015-1 | The EOC shall receive from the ICCs instrument-specific portion of the SDB. | critical | test | B |
| | EOC-7015-2 | The EOC shall receive from the ICCs any updates to the instrument-specific portion of the SDB . | critical | test | B |
| EOC-7020 | EOC-7020 | he EOC shall maintain the latest two versions of the SDB. | critical | demo | B |
| EOC-7025 | EOC-7025-1 | The EOC shall provide the capability to generate the SDB. | critical | test | A |
| | EOC-7025-2 | The EOC shall provide the capability to modify the SDB. | critical | test | B |
| EOC-7030 | EOC-7030-1 | The EOC shall be capable of syntax checking of the SDB. | critical | test | A |
| | EOC-7030-2 | The EOC shall be capable of structure checking of the SDB. | critical | test | A |
| EOC-7040 | EOC-7040 | The EOC shall provide accounting information on the contents of the SDB | essential | test | B |
| EOC-7045 | EOC-7045 | The EOC shall generate a report identifying any problems with the contents of the SDB. | critical | test | B |
| EOC-7060 | EOC-7060-a-1-1 | The EOC shall maintain a history log for the spacecraft for the most recent 7 days, including at a minimum the following: a.All messages sent | critical | test | A |
| | EOC-7060-a-1-2 | The EOC shall maintain a history log for the spacecraft for the most recent 7 days, including at a minimum the following: a.All messages received | critical | test | A |
| | EOC-7060-b-1 | The EOC shall maintain a history log for the spacecraft for the most recent 7 days, including at a minimum the following: b.Telemetry data | critical | test | A |
| | EOC-7060-c-1-1 | The EOC shall maintain a history log for the spacecraft for the most recent 7 days, including at a minimum the following: c.Operator requests | critical | test | A |
| | EOC-7060-c-1-2 | The EOC shall maintain a history log for the spacecraft for the most recent 7 days, including at a minimum the following: c.Operator directives | critical | test | A |
| | EOC-7060-d-1 | The EOC shall maintain a history log for the spacecraft for the most recent 7 days, including at a minimum the following: d.Real-time commands | critical | test | A |
| | EOC-7060-e-1 | The EOC shall maintain a history log for the spacecraft for the most recent 7 days, including at a minimum the following: e.Stored command loads | critical | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOC-7060-f-1-1 | The EOC shall maintain a history log for the spacecraft for the most recent 7 days, including at a minimum the following: f.Memory loads | critical | test | B |
| | EOC-7060-f-1-2 | The EOC shall maintain a history log for the spacecraft for the most recent 7 days, including at a minimum the following: f.Memory dumps | critical | test | B |
| | EOC-7060-g-1 | The EOC shall maintain a history log for the spacecraft for the most recent 7 days, including at a minimum the following: g.Limits violations | critical | test | A |
| | EOC-7060-h-1 | The EOC shall maintain a history log for the spacecraft for the most recent 7 days, including at a minimum the following: h.Error conditions | critical | test | A |
| | EOC-7060-i-1 | The EOC shall maintain a history log for the spacecraft for the most recent 7 days, including at a minimum the following: i.Warnings | critical | test | A |
| | EOC-7060-j-1 | The EOC shall maintain a history log for the spacecraft and instruments for the most recent 7 days, including at a minimum the following: a.All messages sent and received b.Telemetry data c.Operator requests/directives d.Real-time commands e.Stored command loads f.Memory loads and dumps g.Limits violations h.Error conditions i.Warnings j.Alarms | critical | test | A |
| | EOC-7060-k-1-1 | The EOC shall maintain a history log for the spacecraft for the most recent 7 days, including at a minimum the following: k. Spacecraft status information | critical | test | B |
| | EOC-7060-k-1-2 | The EOC shall maintain a history log for the spacecraft for the most recent 7 days, including at a minimum the following: k. Instrument status information | critical | test | B |
| | EOC-7060-l-1 | The EOC shall maintain a history log for the spacecraft for the most recent 7 days, including at a minimum the following: l.Executed schedules | critical | test | B |
| | EOC-7060-m-1 | The EOC shall maintain a history log for the spacecraft for the most recent 7 days, including at a minimum the following: m.Analysis results | critical | test | B |
| | EOC-7060-n-1 | The EOC shall maintain a history log for the spacecraft for the most recent 7 days, including at a minimum the following: n.Responses to operator requests | critical | test | A |
| | EOC-7060-p-1 | The EOC shall maintain a history log for the spacecraft for the most recent 7 days, including at a minimum the following: p.EOC reconfiguration information | critical | test | B |
| | EOC-7060-q-1 | The EOC shall maintain a history log for the spacecraft for the most recent 7 days, including at a minimum the following: q.Master ground image | critical | test | B |
| | EOC-7060-a-2-1 | The EOC shall maintain a history log for the instruments for the most recent 7 days, including at a minimum the following: a.All messages sent | critical | test | A |
| | EOC-7060-a-2-2 | The EOC shall maintain a history log for the instruments for the most recent 7 days, including at a minimum the following: a.All messages received | critical | test | A |
| | EOC-7060-b-2 | The EOC shall maintain a history log for the instruments for the most recent 7 days, including at a minimum the following: b.Telemetry Data | critical | test | A |
| | EOC-7060-c-2-1 | The EOC shall maintain a history log for the instruments for the most recent 7 days, including at a minimum the following: c.Operator requests | critical | test | A |
| | EOC-7060-c-2-2 | The EOC shall maintain a history log for the instruments for the most recent 7 days, including at a minimum the following: c.Operator directives | critical | test | A |
| | EOC-7060-d-2 | The EOC shall maintain a history log for the instruments for the most recent 7 days, including at a minimum the following: d.Real-time commands | critical | test | A |
| | EOC-7060-e-2 | The EOC shall maintain a history log for the instruments for the most recent 7 days, including at a minimum the following: e.Stored command loads | critical | test | B |
| | EOC-7060-f-2-1 | The EOC shall maintain a history log for the instruments for the most recent 7 days, including at a minimum the following: f.Memory loads | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOC-7060-f-2-2 | The EOC shall maintain a history log for the instruments for the most recent 7 days, including at a minimum the following: f.Memory dumps | critical | test | B |
| | EOC-7060-g-2 | The EOC shall maintain a history log for the instruments for the most recent 7 days, including at a minimum the following: g.Limits violations | critical | test | A |
| | EOC-7060-h-2 | The EOC shall maintain a history log for the instruments for the most recent 7 days, including at a minimum the following: h.Error conditions | critical | test | A |
| | EOC-7060-i-2 | The EOC shall maintain a history log for the instruments for the most recent 7 days, including at a minimum the following: i.Warnings | critical | test | B |
| | EOC-7060-j-2 | The EOC shall maintain a history log for the instruments for the most recent 7 days, including at a minimum the following: j.Alarms | critical | test | B |
| | EOC-7060-k-2-1 | The EOC shall maintain a history log for the instruments for the most recent 7 days, including at a minimum the following: k. Spacecraft status information | critical | test | B |
| | EOC-7060-k-2-2 | The EOC shall maintain a history log for the instruments for the most recent 7 days, including at a minimum the following: k. Instrument status information | critical | test | B |
| | EOC-7060-l-2 | The EOC shall maintain a history log for the instruments for the most recent 7 days, including at a minimum the following: l.Executed schedules | critical | test | B |
| | EOC-7060-m-2 | he EOC shall maintain a history log for the instruments for the most recent 7 days, including at a minimum the following: m.Analysis results | critical | test | B |
| | EOC-7060-n-2 | The EOC shall maintain a history log for the instruments for the most recent 7 days, including at a minimum the following: n.Responses to operator requests | critical | test | B |
| | EOC-7060-o-2 | The EOC shall maintain a history log for the instruments for the most recent 7 days, including at a minimum the following: o.User interface language procedures as they were executed | critical | test | B |
| | EOC-7060-p-2 | The EOC shall maintain a history log for the instruments for the most recent 7 days, including at a minimum the following: p.EOC reconfiguration information | critical | test | B |
| | EOC-7060-q-2 | The EOC shall maintain a history log for the instruments for the most recent 7 days, including at a minimum the following: q.Master ground image | critical | test | B |
| | EOC-7060-o-2 | The EOC shall maintain a history log for the spacecraft for the most recent 7 days, including at a minimum the following: o.User interface language procedures as they were executed | critical | test | B |
| EOC-7110 | EOC-7110-1 | The EOC shall provide the capability to send the complete history log with associated metadata to a designated DADS. | essential | demo | B |
| | EOC-7110-2 | The EOC shall provide the capability to send a subset of the history log with associated metadata to a designated DADS. | essential | demo | B |
| EOC-7115 | EOC-7115-1 | The EOC shall accept storage status, indicating the success of the storage of the history data, from the DADS. | essential | test | A |
| | EOC-7115-2 | The EOC shall accept storage status, indicating the failure of the storage of the history data, from the DADS. | essential | test | A |
| EOC-7116 | EOC-7116 | The EOC shall maintain the history log until the DADS has notified the EOC of successful storage | essential | test | A |
| EOC-7120 | EOC-7120-1 | The EOC shall be capable of extracting data sets from the history log by specifying time and data type to include as a minimum: telemetry. | critical | demo | B |
| | EOC-7120-2 | The EOC shall be capable of extracting data sets from the history log by specifying time and data type to include as a minimum: command. | critical | demo | B |
| | EOC-7120-3 | he EOC shall be capable of extracting data sets from the history log by specifying time and data type to include as a minimum: non-telemetry . | critical | demo | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOC-7120-4 | he EOC shall be capable of extracting data sets from the history log by specifying time and data type to include as a minimum: operator directives. | critical | demo | B |
| | EOC-7120-5 | he EOC shall be capable of extracting data sets from the history log by specifying time and data type to include as a minimum: events. | critical | demo | B |
| | EOC-7120-6 | he EOC shall be capable of extracting data sets from the history log by specifying time and data type to include as a minimum: limits violations | critical | demo | B |
| EOC-7125 | EOC-7125 | The EOC shall provide spacecraft status data to an ICC. | critical | test | B |
| EOC-7130 | EOC-7130 | The EOC shall be capable of maintaining a subset of history data in support of long term analysis. | essential | demo | B |
| EOC-7140 | EOC-7140-a | The EOC shall be capable of storing documentation on-line for operator support, including at a minimum the following: a.Operator guides | fulfillment | inspect. | B |
| | EOC-7140-b | The EOC shall be capable of storing documentation on-line for operator support, including at a minimum the following: b.Operational procedures | fulfillment | inspect. | B |
| EOC-7150 | EOC-7150-1 | The EOC shall store the technical documentation of the spacecraft hardware from before launch through the end of spacecraft operation. | fulfillment | inspect. | B |
| | EOC-7150-2 | The EOC shall store the technical documentation of the spacecraft software from before launch through the end of spacecraft operation. | fulfillment | inspect. | B |
| EOC-7160 | EOC-7160 | The EOC shall be capable of updating the spacecraft technical documentation. | fulfillment | demo | B |
| EOC-8010 | EOC-8010-1-1 | The EOC shall have the capability to schedule its systems that are used for multiple spacecraft and operations. | critical | demo | B |
| | EOC-8010-1-2 | The EOC shall have the capability to schedule its systems used for multiple instrument operations. | critical | demo | B |
| | EOC-8010-1-3 | The EOC shall have the capability to schedule its systems for maintenance operations. | critical | demo | B |
| | EOC-8010-1-4 | The EOC shall have the capability to schedule its systems for upgrade operations. | critical | demo | B |
| | EOC-8010-1-5 | The EOC shall have the capability to schedule its systems that are used for sustaining engineering. | critical | demo | B |
| | EOC-8010-1-7 | The EOC shall have the capability to schedule its systems that are used for training. | critical | demo | B |
| | EOC-8010-1-6 | The EOC shall have the capability to schedule its systems for testing operations. | critical | demo | B |
| | EOC-8010-2-1 | The EOC shall have the capability to schedule its communications interfaces that are used for multiple spacecraft operations. | critical | demo | B |
| | EOC-8010-2-2 | The EOC shall have the capability to schedule its communications interfaces that are used for multiple instrument operations. | critical | demo | B |
| | EOC-8010-2-3 | The EOC shall have the capability to schedule its communications interfaces that are used for maintenance operations. | critical | demo | B |
| | EOC-8010-2-4 | The EOC shall have the capability to schedule its communications interfaces that are used for upgrade operations. | critical | demo | B |
| | EOC-8010-2-5 | The EOC shall have the capability to schedule its communications interfaces that are used for sustaining engineering operations. | critical | demo | B |
| | EOC-8010-2-6 | The EOC shall have the capability to schedule its communications interfaces that are used for testing operations. | critical | demo | B |
| | EOC-8010-2-7 | The EOC shall have the capability to schedule its communications interfaces that are used for training operations. | critical | demo | B |
| EOC-8020 | EOC-8020-1-1 | The EOC shall participate in the scheduling of interface tests with the external elements involved, including the ICCs. | critical | inspect. | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOC-8020-1-2 | The EOC shall participate in the scheduling of interface tests with the external elements involved, including the spacecraft simulator(s). | critical | inspect. | A |
| | EOC-8020-1-3 | The EOC shall participate in the scheduling of interface tests with the external elements involved, including the SMC for other EOS elements. | critical | inspect. | A |
| | EOC-8020-1-4 | The EOC shall participate in the scheduling of interface tests with the external elements involved, including EDOS for MO&DSD data delivery systems. | critical | inspect. | A |
| | EOC-8020-2-1 | The EOC shall participate in the scheduling of end-to-end tests with the external elements involved, including the ICCs. | critical | inspect. | A |
| | EOC-8020-2-2 | The EOC shall participate in the scheduling of end-to-end tests with the external elements involved, including the the spacecraft simulator(s). | critical | inspect. | A |
| | EOC-8020-2-3 | The EOC shall participate in the scheduling of end-to-end tests with the external elements involved, including the SMC for other EOS elements. | critical | inspect. | A |
| | EOC-8020-2-4 | The EOC shall participate in the scheduling of end-to-end tests with the external elements involved, including EDOS for MO&DSD data delivery systems. | critical | inspect. | A |
| EOC-8090 | EOC-8090-1-1 | The EOC shall establish its configuration, including functional connectivity within the EOC for multiple spacecraft operations. | critical | test | A |
| | EOC-8090-1-2 | The EOC shall establish its configuration, including functional connectivity within the EOC for multiple instrument operations. | critical | test | A |
| | EOC-8090-1-3 | The EOC shall establish its configuration, including functional connectivity within the EOC for tests. | critical | test | A |
| | EOC-8090-1-4 | The EOC shall establish its configuration, including functional connectivity within the EOC for maintenance . | critical | test | A |
| | EOC-8090-2-1 | The EOC shall establish its configuration, including functional connectivity between the EOC and external interfaces, for multiple spacecraft operations. | critical | test | A |
| | EOC-8090-2-2 | The EOC shall establish its configuration including functional connectivity between the EOC and external interfaces, for multiple instrument operations . | critical | test | A |
| | EOC-8090-2-3 | The EOC shall establish its configuration, including functional connectivity between the EOC and external interfaces, for tests. | critical | test | A |
| | EOC-8090-2-4 | The EOC shall establish its configuration, including functional connectivity between the EOC and external interfaces, for maintenance . | critical | test | A |
| EOC-8100 | EOC-8100-1 | The EOC shall perform prepass operational readiness tests on the EOC (via test messages). | critical | test | A |
| | EOC-8100-2 | The EOC shall perform prepass operational readiness tests between the EOC and external interfaces (via test messages). | critical | test | A |
| EOC-8110 | EOC-8110-1 | he EOC shall support reconfiguration to work around faults without interrupting other ongoing operations. | critical | demo | B |
| | EOC-8110-2 | he EOC shall support reconfiguration to work around anomalies without interrupting other ongoing operations. | critical | demo | B |
| EOC-8130 | EOC-8130 | The EOC shall allow operator override for reconfiguration requests that violate operational constraints. | critical | test | B |
| EOC-8140 | EOC-8140-1 | he EOC shall manage initialization of EOC functions. | critical | test | A |
| | EOC-8140-2 | The EOC shall manage shutdown of EOC functions | critical | test | A |
| EOC-8150 | EOC-8150-a-1 | The EOC shall provide the capability to analyze its internal performance at a minimum for the following: a.CPU utilization | essential | test | B |
| | EOC-8150-b-1-1 | The EOC shall provide the capability to analyze its internal performance at a minimum for the following: b. Processing throughput for plans. | essential | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOC-8150-b-1-2 | The EOC shall provide the capability to analyze its internal performance at a minimum for the following: b. Processing throughput for schedules. | essential | test | B |
| | EOC-8150-b-1-3 | The EOC shall provide the capability to analyze its internal performance at a minimum for the following: b. Processing throughput for commands | essential | test | B |
| | EOC-8150-c-1 | he EOC shall provide the capability to analyze its internal performance at a minimum for the following: c.Equipment downtime | essential | test | B |
| | EOC-8150-d-1 | The EOC shall provide the capability to analyze its internal performance at a minimum for the following: d.Mass storage utilization | essential | test | B |
| | EOC-8150-e-1 | The EOC shall provide the capability to analyze its internal performance at a minimum for the following: e.Communication resource utilization | essential | test | B |
| | EOC-8150-f-1 | The EOC shall provide the capability to analyze its internal performance at a minimum for the following: f.Data accounting | essential | test | B |
| | EOC-8150-a-2 | The EOC shall provide the capability to report its internal performance at a minimum for the following: a.CPU utilization | essential | test | B |
| | EOC-8150-b-2-1 | The EOC shall provide the capability to report its internal performance at a minimum for the following: b. Processing throughput for plans. | essential | test | B |
| | EOC-8150-b-2-2 | The EOC shall provide the capability to analyze and report its internal performance at a minimum for the following: b. Processing throughput for schedules. | essential | test | B |
| | EOC-8150-b-2-3 | The EOC shall provide the capability to report its internal performance at a minimum for the following: b. Processing throughput for commands. | essential | test | B |
| | EOC-8150-c-2 | The EOC shall provide the capability to report its internal performance at a minimum for the following: c.Equipment downtime | essential | test | B |
| | EOC-8150-d-2 | The EOC shall provide the capability to analyze and report its internal performance at a minimum for the following: d.Mass storage utilization | essential | test | B |
| | EOC-8150-e-2 | The EOC shall provide the capability to report its internal performance at a minimum for the following: e.Communication resource utilization | essential | test | B |
| | EOC-8150-f-2 | The EOC shall provide the capability to report its internal performance at a minimum for the following: f.Data accounting | essential | test | B |
| EOC-8160 | EOC-8160-1 | The EOC shall alert the operator when its status changes. | critical | test | B |
| | EOC-8160-2 | The EOC shall alert the operator when data errors exceed operator-specified levels. | critical | test | B |
| EOC-8220 | EOC-8220-a-1 | The EOC shall manage its faults including at a minimum the following: a.Fault identification. | critical | test | A |
| | EOC-8220-a-2 | The EOC shall manage its faults including at a minimum the following: a.Fault reporting | critical | test | A |
| | EOC-8220-b | The EOC shall manage its faults including at a minimum the following: b.Identification of recommended solutions | critical | test | B |
| | EOC-8220-c | The EOC shall manage its faults including at a minimum the following: c.Log of fault activities through resolution | critical | test | B |
| EOC-8230 | EOC-8230-1-1 | The EOC shall analyze the configuration information received from EOC components. | fulfillment | test | A |
| | EOC-8230-1-2 | The EOC shall analyze and report the status information received from EOC components. | fulfillment | test | A |
| | EOC-8230-1-3 | The EOC shall analyze accounting information received from EOC components. | fulfillment | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOC-8230-1-4 | The EOC shall analyze performance information received from EOC components. | fulfillment | test | A |
| | EOC-8230-2-1 | The EOC shall report the configuration information received from EOC components. | fulfillment | test | A |
| | EOC-8230-2-2 | The EOC shall report the status information received from EOC components. | fulfillment | test | A |
| | EOC-8230-2-3 | The EOC shall report the accounting information received from EOC components. | fulfillment | test | A |
| | EOC-8230-2-4 | The EOC shall report the performance information received from EOC components. | fulfillment | test | A |
| EOC-8240 | EOC-8240-1 | The EOC shall be capable of initiating diagnostics to aid in isolating internal faults. | critical | test | B |
| | EOC-8240-2 | The EOC shall be capable of using safeguards to prevent their operations from affecting other operations. | critical | test | B |
| EOC-8250 | EOC-8250-1 | The EOC shall participate in the resolution of failures involving the interfaces of the EOC. | critical | test | B |
| | EOC-8250-2 | The EOC shall participate in the resolution of anomalies involving the interfaces of the EOC. | critical | test | B |
| EOC-8260 | EOC-8260-1-1 | The EOC shall provide tests for validating capabilities for EOC functions after the EOC has been repaired or upgraded. | critical | test | B |
| | EOC-8260-1-2 | The EOC shall provide tests for validating performance for EOC functions after the EOC has been repaired or upgraded. | critical | test | B |
| | EOC-8260-2-1 | The EOC shall provide tests for verifying functional capabilities for EOC functions after the EOC has been repaired or upgraded. | critical | test | B |
| | EOC-8260-2-2 | The EOC shall provide tests for verifying performance for EOC functions after the EOC has been repaired or upgraded. | critical | test | B |
| | EOC-8260-3-1 | The EOC shall provide tests for checking functional capabilities for EOC functions after the EOC has been repaired or upgraded. | critical | test | B |
| | EOC-8260-3-2 | The EOC shall provide tests for checking performance for EOC functions after the EOC has been repaired or upgraded. | critical | test | B |
| EOC-8270 | EOC-8270 | The EOC shall provide standard test data sets to be used in the validation of EOC functions. | essential | inspect. | B |
| EOC-8285 | EOC-8285 | The EOC shall support instrument integration activities associated with the spacecraft prior to launch. | critical | demo | B |
| EOC-8290 | EOC-8290-1 | The EOC shall use simulation functions of the spacecraft simulator(s) to check out the EOC functions. | critical | demo | B |
| | EOC-8290-2 | The EOC shall use test functions of the spacecraft simulator(s) to check out the EOC functions. | critical | demo | B |
| EOC-8320 | EOC-8320-1-1 | The EOC shall support spacecraf tests at the integration site. | critical | inspect. | B |
| | EOC-8320-1-2 | The EOC shall support spacecraft tests at the launch site. | critical | inspect. | B |
| | EOC-8320-2-1 | The EOC shall support instrument tests at the integration site. | critical | inspect. | B |
| | EOC-8320-2-2 | The EOC shall support instrument tests at the launch site. | critical | inspect. | B |
| EOC-8330 | EOC-8330-a-1 | The EOC shall provide the capabilities: a.To test nominal operations paths. | essential | inspect. | A |
| | EOC-8330-a-2 | The EOC shall provide the capabilities: a.To test failure paths | essential | inspect. | A |
| | EOC-8330-b-1 | The EOC shall provide the capabilities: b.To log test activities. | essential | inspect. | A |
| | EOC-8330-b-2 | The EOC shall provide the capabilities: b.To log test test configuration | essential | inspect. | A |
| | EOC-8330-c-1 | The EOC shall provide the capabilities: c.To support analysis of test data. | essential | inspect. | A |
| | EOC-8330-c-2 | The EOC shall provide the capabilities: c.To support analysis of test results | essential | inspect. | A |
| | EOC-8330-d-1 | The EOC shall provide the capabilities: d.To maintain test procedures | essential | inspect. | A |
| | EOC-8330-d-2 | The EOC shall provide the capabilities: d.To maintain test results | essential | inspect. | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| EOC-8370 | EOC-8370-a | The EOC shall generate at a minimum the following: a.Security audit log | essential | demo | B |
| | EOC-8370-b | The EOC shall generate at a minimum the following: b.EOC resource utilization report | essential | demo | B |
| | EOC-8370-c | The EOC shall generate at a minimum the following: c.EOC status report | essential | demo | B |
| | EOC-8370-d-1 | The EOC shall generate at a minimum the following: dEOC hardware configuration history | essential | demo | B |
| | EOC-8370-d-2 | The EOC shall generate at a minimum the following: dEOC software configuration history | essential | demo | B |
| EOC-8372 | EOC-8372 | The EOC shall be capable of accessing ICC reports. | essential | demo | B |
| EOC-8375 | EOC-8375-a | The EOC status report shall include at a minimum the following: a.DAR statistics | essential | demo | B |
| | EOC-8375-b-1 | The EOC status report shall include at a minimum the following: b.Compliance with the LTSP | essential | demo | B |
| | EOC-8375-b-2 | The EOC status report shall include at a minimum the following: b.Compliance with the LTIP | essential | demo | B |
| | EOC-8375-c | The EOC status report shall include at a minimum the following: c.Anomaly reports | essential | demo | B |
| | EOC-8375-d | The EOC status report shall include at a minimum the following: d.Maintenance report | essential | demo | B |
| | EOC-8375-e | The EOC status report shall include at a minimum the following: e.ICC status report information | essential | demo | B |
| EOC-9010 | EOC-9010-1 | The EOC shall provide the capability for the operator to control the EOC functions utilizing a combination of input devices. | critical | demo | A |
| | EOC-9010-2 | The EOC shall provide the capability for the operator to control the EOC components, utilizing a combination of input devices. | critical | demo | B |
| EOC-9020 | EOC-9020-1-1-1 | The EOC shall provide the capability for the operator to send to displays spacecraft information used by each EOC function. | critical | demo | A |
| | EOC-9020-1-1-2 | The EOC shall provide the capability for the operator to send to displays spacecraft information generated by each EOC function. | critical | demo | B |
| | EOC-9020-1-2-1 | The EOC shall provide the capability for the operator to send to displays instrument information used by each EOC function. | critical | demo | A |
| | EOC-9020-1-2-2 | The EOC shall provide the capability for the operator to send to displays instrument information generated by each EOC function. | critical | demo | B |
| | EOC-9020-1-3-1 | The EOC shall provide the capability for the operator to send to displays ground system information used by each EOC function. | critical | demo | A |
| | EOC-9020-1-3-2 | The EOC shall provide the capability for the operator to send to displays ground system information generated by each EOC function. | critical | demo | B |
| | EOC-9020-2-1-1 | The EOC shall provide the capability for the operator to send to printers spacecraft information used or generated by each EOC function. | critical | demo | A |
| | EOC-9020-2-1-2 | The EOC shall provide the capability for the operator to send to printers spacecraft information generated by each EOC function. | critical | demo | B |
| | EOC-9020-2-2-1 | The EOC shall provide the capability for the operator to send to printers instrument information used by each EOC function. | critical | demo | A |
| | EOC-9020-2-2-2 | The EOC shall provide the capability for the operator to printers instrument information generated by each EOC function. | critical | demo | B |
| | EOC-9020-2-3-1 | The EOC shall provide the capability for the operator to send to printers ground system information used by each EOC function. | critical | demo | A |
| | EOC-9020-2-3-2 | The EOC shall provide the capability for the operator to send to printers ground system information generated by each EOC function | critical | demo | B |
| | EOC-9020-3-1-1 | The EOC shall provide the capability for the operator to send to files spacecraft information usedby each EOC function | critical | demo | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOC-9020-3-1-2 | The EOC shall provide the capability for the operator to send to files spacecraft information generated by each EOC function. | critical | demo | B |
| | EOC-9020-3-2-1 | The EOC shall provide the capability for the operator to send to files instrument information used by each EOC function. | critical | demo | A |
| | EOC-9020-3-2-2 | The EOC shall provide the capability for the operator to send to files instrument information generated by each EOC function. | critical | demo | B |
| | EOC-9020-3-3-1 | The EOC shall provide the capability for the operator to send to files ground system information used by each EOC function. | critical | demo | A |
| | EOC-9020-3-3-2 | The EOC shall provide the capability for the operator to send to files ground system information generated by each EOC function. | critical | demo | B |
| EOC-9025 | EOC-9025-1 | The EOC shall provide the capability to notify the operator events. | critical | test | A |
| | EOC-9025-2 | The EOC shall provide the capability to notify the operator of alarms. | critical | test | A |
| EOC-9040 | EOC-9040-a-1 | The EOC shall support the use of a high-level interactive control language, which consists of a set of directives and programming-like language capabilities, including at a minimum the following: a.Evaluate algebraic expressions | critical | test | A |
| | EOC-9040-a-2 | The EOC shall support the use of a high-level interactive control language, which consists of a set of directives and programming-like language capabilities, including at a minimum the following: a.Evaluate logical expressions | critical | test | A |
| | EOC-9040-b | The EOC shall support the use of a high-level interactive control language, which consists of a set of directives and programming-like language capabilities, including at a minimum the following: b.Exercise decision logic (IF statements) | critical | test | A |
| | EOC-9040-c | The EOC shall support the use of a high-level interactive control language, which consists of a set of directives and programming-like language capabilities, including at a minimum the following: c.Automated execution of a set of multiple directives (i.e., user interface language procedure) | critical | test | B |
| | EOC-9040-d | The EOC shall support the use of a high-level interactive control language, which consists of a set of directives and programming-like language capabilities, including at a minimum the following: d.Internally branch to other parts of the user interface language procedure | critical | test | B |
| | EOC-9040-e | The EOC shall support the use of a high-level interactive control language, which consists of a set of directives and programming-like language capabilities, including at a minimum the following: e.Nest user interface language procedures within procedures | critical | test | B |
| | EOC-9040-f | The EOC shall support the use of a high-level interactive control language, which consists of a set of directives and programming-like language capabilities, including at a minimum the following: f.Initiate other EOC applications | critical | test | B |
| EOC-9080 | EOC-9080-1 | The EOC shall provide the operator with the capability to create user interface language procedures. | critical | test | A |
| | EOC-9080-2 | The EOC shall provide the operator with the capability to modify user interface language procedures. | critical | test | B |
| | EOC-9080-3 | The EOC shall provide the operator with the capability to delete user interface language procedures. | critical | test | A |
| EOC-9090 | EOC-9090-1-1 | The EOC shall provide the capability for the operator to define the format of text displays | essential | test | B |
| | EOC-9090-1-2 | The EOC shall provide the capability for the operator to define the format of graphics displays | essential | test | B |
| | EOC-9090-2-1 | The EOC shall provide the capability for the operator to define the contents of text displays | essential | test | B |
| | EOC-9090-2-2 | The EOC shall provide the capability for the operator to define the contents of graphics displays. | essential | test | B |
| EOC-9110 | EOC-9110 | The EOC shall respond to operator inputs within 0.5 seconds. | critical | demo | B |
| EOC-9130 | EOC-9130 | The EOC shall be capable of updating displays of rapidly changing information at rates of up to once per second. | essential | demo | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| EOC-9510 | EOC-9510-a | The EOC shall support the following simultaneous activities: a.Performing coordination, planning, scheduling, monitoring, and commanding of the U.S. spacecraft and instruments as listed in Table D-1. | critical | demo | B |
| | EOC-9510-b | The EOC shall support the following simultaneous activities: b.At least two of the following: test activities, EOC system upgrades, training, and/or maintenance. | critical | demo | B |
| EOC-9520 | EOC-9520-1 | The EOC computer hardware shall be able to grow without redesign to twice the processing capacities estimated for full system operation. | essential | analysis | B |
| | EOC-9520-2 | The EOC computer hardware shall be able to grow without redesign to twice the storage capacities estimated for full system operation. | essential | analysis | B |
| | EOC-9520-3 | The EOC computer hardware shall be able to grow without redesign to twice the communications capacities estimated for full system operation. | essential | analysis | B |
| EOC-9570 | EOC-9570-1 | The EOC computer processing capacity utilization shall be less than 50 percent at turnover for operations. | essential | analysis | B |
| | EOC-9570-2 | The EOC computer storage capacity utilization shall be less than 50 percent at turnover for operations. | essential | analysis | B |
| | EOC-9570-3 | The EOC computer communications capacity utilization shall be less than 50 percent at turnover for operations. | essential | analysis | B |
| EOC-9580 | EOC-9580 | The EOC architecture shall be capable of growing to support additional spacecraft without major redesign. | essential | analysis | B |
| EOSD0010 | EOSD0010-1 | ECS shall use and support the Space Network (SN), via the EDOS/Ecom interface, to obtain the forward link data communications needed to achieve full end-to-end ECS functionality. | essential | test | IR1 |
| | EOSD0010-2 | ECS shall use and support the Space Network (SN), via the EDOS/Ecom interface, to obtain the return link data communications needed to achieve full end-to-end ECS functionality. | essential | test | IR1 |
| EOSD0015 | EOSD0015-1-1 | ECS shall use and support the Deep Space Network (DSN), via the EDOS/Ecom/ Nascom interface, as backup of the SN, to obtain forward link data communications. | critical | test | A |
| | EOSD0015-1-2 | ECS shall use and support the Deep Space Network (DSN), via the EDOS/Ecom/ Nascom interface, as backup of the SN, to obtain return link data communications. | critical | test | A |
| | EOSD0015-2-1 | ECS shall use and support the Ground Network (GN), via the EDOS/Ecom/ Nascom interface, as backup of the SN, to obtain forward link data communications. | critical | test | A |
| | EOSD0015-2-2 | ECS shall use and support the the Ground Network (GN), via the EDOS/Ecom/ Nascom interface, as backup of the SN, to obtain return link data communications. | critical | test | A |
| | EOSD0015-3-1 | ECS shall use and support the Wallops Orbital Tracking Station (WOTS), via the EDOS/Ecom/Nascom interface, as backup of the SN, to obtain forward link data communications. | critical | test | A |
| | EOSD0015-3-2 | ECS shall use and support the Wallops Orbital Tracking Station (WOTS), via the EDOS/Ecom/Nascom interface, as backup of the SN, to obtain return link data communications. | critical | test | A |
| EOSD0020 | EOSD0020-1 | ECS shall use and support the EDOS/Ecom interface to obtain the data capture services needed to achieve full end-to-end ECS functionality. | critical | test | A |
| | EOSD0020-2 | ECS shall use and support the EDOS/Ecom interface to obtain the data archival services needed to achieve full end-to-end ECS functionality. | critical | test | A |
| | EOSD0020-3 | ECS shall use and support the EDOS/Ecom interface to obtain the data distribution services needed to achieve full end-to-end ECS functionality. | critical | test | A |
| EOSD0025 | EOSD0025 | ECS shall use Ecom for flight operations data transfers. | essential | test | IR1 |
| EOSD0030 | EOSD0030-1-1 | ECS shall, during its lifetime, archive EOS data. | essential | test | IR1 |
| | EOSD0030-1-2 | ECS shall, during its lifetime, archive EOS products. | essential | test | IR1 |
| | EOSD0030-2-1 | ECS shall, during its lifetime, archive EOS-related non-EOS data. | essential | test | IR1 |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOSD0030-2-2 | ECS shall, during its lifetime, archive EOS-related non-EOS products. | essential | test | IR1 |
| EOSD0040 | EOSD0040-1 | ECS shall provide users without prior approved accounts access to the system for descriptive information about ECS. | fulfillment | test | A |
| | EOSD0040-2 | ECS shall provide users without prior approved accounts access to the system for descriptive information about the types of data ECS contains. | fulfillment | test | A |
| EOSD0500 | EOSD0500-a | ECS shall perform the following major functions: a.EOS Planning and Scheduling | critical | test | A |
| | EOSD0500-b | ECS shall perform the following major functions: b.EOS Operations | critical | test | A |
| | EOSD0500-c | ECS shall perform the following major functions: c.Command and Control | critical | test | A |
| | EOSD0500-d | ECS shall perform the following major functions: d.Communications and Networking | essential | test | A |
| | EOSD0500-e | ECS shall perform the following major functions: e.Data Input | essential | test | A |
| | EOSD0500-f | ECS shall perform the following major functions: f.Data Processing | essential | test | A |
| | EOSD0500-g | ECS shall perform the following major functions: g.Data Storage | essential | test | A |
| | EOSD0500-h | ECS shall perform the following major functions: h.Data Distribution | essential | test | A |
| | EOSD0500-i | ECS shall perform the following major functions: i.Information Management | essential | test | A |
| | EOSD0500-j | ECS shall perform the following major functions: j.End-to-End Fault Management | critical | test | A |
| | EOSD0500-k | ECS shall perform the following major functions: k.System Management | essential | test | A |
| EOSD0502 | EOSD0502-a | ECS shall provide the following integrated set of toolkits consisting of software tools for each ECS element: a.PGS Toolkits, which support algorithm development | essential | demo | IR1 |
| | EOSD0502-b | ECS shall provide the following integrated set of toolkits consisting of software tools for each ECS element: b.IMS Toolkits, which provide a user interface for accessing information | essential | demo | A |
| | EOSD0502-c | ECS shall provide the following integrated set of toolkits consisting of software tools for each ECS element: c.IST toolkits | essential | demo | A |
| | EOSD0502-d | ECS shall provide the following integrated set of toolkits consisting of software tools for each ECS element: d.Field Support Terminal (FST) Toolkits, which can be employed at field investigation sites to provide information access. | essential | demo | A |
| | EOSD0502-e | ECS shall provide the following integrated set of toolkits consisting of software tools for each ECS element: e.Earth Probe Data System (EPDS) Toolkits, which provide information access. | essential | demo | A |
| | EOSD0502-f | ECS shall provide the following integrated set of toolkits consisting of software tools for each ECS element: f.User Toolkits, which provide information access | essential | demo | A |
| EOSD0510 | EOSD0510-1 | ECS shall be capable of being tested during all phases of its development. | essential | test | IR1 |
| | EOSD0510-2 | ECS shall be capable of being tested during all phases of its flight operations. | essential | test | IR1 |
| EOSD0540 | EOSD0540-1-1 | ECS elements shall be expandable to facilitate updates in instrument data products, particularly with respect to storage capacity. | fulfillment | analysis | A |
| | EOSD0540-1-2 | ECS elements shall be expandable to facilitate updates in instrument data products, particularly with respect to processing capability. | fulfillment | analysis | A |
| | EOSD0540-2-1 | ECS elements shall be expandable to facilitate updates in algorithms, particularly with respect to storage capacity. | fulfillment | analysis | A |
| | EOSD0540-2-2 | ECS elements shall be expandable to facilitate updates in algorithms, particularly with respect to processing capability. | fulfillment | analysis | A |
| EOSD0545 | EOSD0545-1 | ECS shall be able to accommodate growth (e.g., capacity) in all of its functions. | fulfillment | analysis | A |
| | EOSD0545-2 | ECS shall be able to accommodate the addition of new functions. | fulfillment | analysis | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| EOSD0560 | EOSD0560-1-1 | ECS benchmark tests shall be defined for system verification. | essential | test | A |
| | EOSD0560-1-2 | ECS benchmark tests shall be defined for data quality evaluation. | essential | test | A |
| | EOSD0560-2-1 | ECS test data sets shall be defined for system verification. | essential | test | A |
| | EOSD0560-2-2 | ECS test data sets shall be defined for data quality evaluation. | essential | test | A |
| EOSD0630 | EOSD0630-1 | ECS shall be capable of simultaneously supporting the Independent Verification and Validation (IV&V) activities and ECS development activities before flight operations begin. | essential | demo | A |
| | EOSD0630-2 | ECS shall be capable of simultaneously supporting the Independent Verification and Validation (IV&V) activities and ECS development activities after flight operations begin. | essential | demo | A |
| EOSD0700 | EOSD0700-a | Each ECS element shall provide the following, to be used in the revalidation of its functional performance: a.Benchmark test(s) | essential | demo | A |
| | EOSD0700-b | Each ECS element shall provide the following, to be used in the revalidation of its functional performance: b.Standard test data sets. | essential | demo | A |
| EOSD0710 | EOSD0710-a | Each ECS element shall provide access to the following items used in the checkout and verification process: a.Stored test data sets | essential | demo | A |
| | EOSD0710-b | Each ECS element shall provide access to the following items used in the checkout and verification process: b.Stored test plans | fulfillment | demo | A |
| | EOSD0710-c | Each ECS element shall provide access to the following items used in the checkout and verification process: c.Stored test procedures. | fulfillment | demo | A |
| EOSD0720 | EOSD0720 | Each ECS element shall be able to validate at any time during the life-time of the ECS that the ECS element primary functional performance is consistent with pre- defined operational benchmark tests. | critical | test | A |
| EOSD0730 | EOSD0730-a | Each ECS element shall be capable of verifying the fidelity of the ECS element interface to: a.Other ECS elements at any time during the lifetime of the ECS | critical | test | A |
| | EOSD0730-b | Each ECS element shall be capable of verifying the fidelity of the ECS element interface to: b.Entities external to ECS at any time during the lifetime of the ECS | critical | test | A |
| EOSD0740 | EOSD0740-a | Each ECS element shall provide a set of real or simulated functional capabilities for use in the following types of test: a.Subsystem (components of an ECS element) | fulfillment | demo | B |
| | EOSD0740-b | Each ECS element shall provide a set of real or simulated functional capabilities for use in the following types of test: b.Element (fully integrated element) | fulfillment | demo | B |
| | EOSD0740-c | Each ECS element shall provide a set of real or simulated functional capabilities for use in the following types of test: c.ECS System (Integration of ECS elements) | fulfillment | demo | B |
| EOSD0750 | EOSD0750-a-1 | Each ECS element shall provide a set of real or simulated functions which interfaces with its ECS internal entities for use in the following types of test: a.Subsystem (components of an ECS element) | fulfillment | demo | B |
| | EOSD0750-a-2 | Each ECS element shall provide a set of real or simulated functions which interfaces with its ECS external entities for use in the following types of test: a.Subsystem (components of an ECS element) | fulfillment | demo | B |
| | EOSD0750-b-1 | Each ECS element shall provide a set of real or simulated functions which interfaces with its ECS internal entities for use in the following types of test: b.Element (fully integrated element) | fulfillment | demo | B |
| | EOSD0750-b-2 | Each ECS element shall provide a set of real or simulated functions which interfaces with its ECS external entities for use in the following types of test: b.Element (fully integrated element) | fulfillment | demo | B |
| | EOSD0750-c-1 | Each ECS element shall provide a set of real or simulated functions which interfaces with its ECS internal entities for use in the following types of test: c.EOSDIS System (Integration of EOSDIS elements) | fulfillment | demo | B |
| | EOSD0750-c-2 | Each ECS element shall provide a set of real or simulated functions which interfaces with its ECS external entities for use in the following types of test: c.EOSDIS System (Integration of EOSDIS elements) | fulfillment | demo | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| EOSD0760 | EOSD0760-1 | Each ECS element shall support end-to-end EOS system testing. | critical | demo | A |
| | EOSD0760-2 | Each ECS element shall support fault isolation. | critical | demo | A |
| EOSD0780 | EOSD0780 | Each ECS element shall be capable of being monitored during testing. | fulfillment | demo | B |
| EOSD0800 | EOSD0800-1 | Each ECS element shall be capable of supporting end-to-end test and verification activities of the EOS program including during the pre-launch phase. | critical | demo | A |
| | EOSD0800-2 | Each ECS element shall be capable of supporting end-to-end test and verification activities of the EOS program including during the spacecraft verification phase. | critical | demo | A |
| | EOSD0800-3 | Each ECS element shall be capable of supporting end-to-end test and verification activities of the EOS program including during the instrument verification phase. | critical | demo | A |
| EOSD1000 | EOSD1000 | ECS elements shall contribute a loop delay of not greater than 2.5 seconds of the total system delay of five (5) seconds for emergency real-time commands, not including the time needed for command execution. The loop delay is measured from the originator to the spacecraft/instrument and back and only applies when a Tracking and Data Relay Satellite System (TDRSS) link is available for contact to the spacecraft. | critical | test | A |
| EOSD1030 | EOSD1030 | ECS shall have the capacity to accept a daily average of five (5) per cent of the daily data throughput as quick-look data for use in operations. | essential | test | A |
| EOSD1040 | EOSD1040 | ECS shall provide sufficient capacity to permit the reprocessing of all EOS science data at twice the incoming data rate at a minimum, concurrently with processing of new data. | essential | analysis | A |
| EOSD1050 | EOSD1050-1 | ECS shall generate Level 1 Standard Products within 24 hours after the availability to ECS of all necessary input data sets. | fulfillment | analysis | IR1 |
| | EOSD1050-2 | ECS shall make available to the users Level 1 Standard Products within 24 hours after the availability to ECS of all necessary input data sets. | fulfillment | analysis | IR1 |
| EOSD1060 | EOSD1060-1 | ECS shall generate Level 2 Standard Products within 24 hours after the availability to ECS of all necessary Level 1 and other input data sets. | fulfillment | analysis | IR1 |
| | EOSD1060-2 | ECS shall make available to the users Level 2 Standard Products within 24 hours after the availability to ECS of all necessary Level 1 and other input data sets. | fulfillment | analysis | IR1 |
| EOSD1070 | EOSD1070-1 | ECS shall generate Level 3 Standard Products within 24 hours after the availability to ECS of all necessary Level 2 and other input data sets. | fulfillment | analysis | IR1 |
| | EOSD1070-2 | ECS shall make available to the users Level 3 Standard Products within 24 hours after the availability to ECS of all necessary Level 2 and other input data sets. | fulfillment | analysis | IR1 |
| EOSD1080 | EOSD1080-1 | ECS shall generate Level 4 Standard Products within one week after the availability to ECS of all necessary Level 3 and other input data sets. | fulfillment | analysis | IR1 |
| | EOSD1080-2 | ECS shall make available to the users Level 4 Standard Products within one week after the availability to ECS of all necessary Level 3 and other input data sets. | fulfillment | analysis | IR1 |
| EOSD1140 | EOSD1140 | ECS shall allocate 10% of development resources (the ECS Sustaining Engineering Facility at GFSC), including processing, storage, and networks, for the IV&V activity. | fulfillment | analysis | A |
| EOSD1480 | EOSD1480-1 | ECS shall receive from the resident EOS Project Scientist the IWGs Long Term Science Plan (LTSP). | critical | demo | A |
| | EOSD1480-2 | ECS shall receive from the resident EOS Project Scientist updates to the IWGs Long Term Science Plan (LTSP) as required. | critical | demo | A |
| EOSD1490 | EOSD1490 | ECS elements shall interface with the resident EOS Project Scientist for resolution of conflicts between observations of equal priority. | essential | demo | A |
| EOSD1500 | EOSD1500-1-1 | ECS shall interface with the EOS spacecraft in order to perform operations, including the planning function. | critical | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOSD1500-1-2 | ECS shall interface with the EOS spacecraft in order to perform operations, including the scheduling function. | critical | test | A |
| | EOSD1500-1-3 | ECS shall interface with the EOS spacecraft in order to perform operations, including the commanding function. | critical | test | A |
| | EOSD1500-1-4 | ECS shall interface with the EOS spacecraft in order to perform operations, including the monitoring function. | critical | test | A |
| | EOSD1500-2-1 | ECS shall interface with the EOS instruments in order to perform operations, including the planning function. | critical | test | A |
| | EOSD1500-2-2 | ECS shall interface with the EOS instruments in order to perform operations, including scheduling function. | critical | test | A |
| | EOSD1500-2-3 | ECS shall interface with the EOS instruments in order to perform operations, including the commanding function. | critical | test | A |
| | EOSD1500-2-4 | ECS shall interface with the EOS instruments in order to perform operations, including the monitoring function. | critical | test | A |
| EOSD1502 | EOSD1502-a | ECS elements shall use Ecom for data communications for the following type of data: a.Production data sets (Level 0 data) | essential | demo | IR1 |
| | EOSD1502-b | ECS elements shall use Ecom for data communications for the following type of data: b.Quick-look production data sets | essential | demo | IR1 |
| | EOSD1502-c | ECS elements shall use Ecom for data communications for the following type of data: c.Real-time data (for health and safety) | essential | demo | IR1 |
| | EOSD1502-d | ECS elements shall use Ecom for data communications for the following type of data: d.Command data | critical | demo | A |
| | EOSD1502-e | ECS elements shall use Ecom for data communications for the following type of data: e.Data requested from back-up archive | essential | demo | IR1 |
| | EOSD1502-f | ECS elements shall use Ecom for data communications for the following type of data: f.TDRSS schedule requests | critical | demo | A |
| | EOSD1502-g | ECS elements shall use Ecom for data communications for the following type of data: g.Data exchange with the FDF | critical | demo | A |
| EOSD1505 | EOSD1505-1 | ECS elements shall receive EOS spacecraft predicted orbit data from the FDF. | critical | test | A |
| | EOSD1505-2 | ECS elements shall receive EOS spacecraft post pass ephemeris determination data from the FDF. | critical | test | A |
| EOSD1510 | EOSD1510-1 | ECS elements shall provide the FDF with subsets of spacecraft housekeeping data related to the on-board attitude system. | critical | test | A |
| | EOSD1510-2 | ECS elements shall provide the FDF with subsets of spacecraft housekeeping data related to the on-board orbit system. | critical | test | A |
| EOSD1520 | EOSD1520 | ECS elements shall receive TDRSS schedules from the Network Control Center (NCC). | critical | test | A |
| EOSD1530 | EOSD1530 | ECS elements shall submit TDRSS schedule requests to the NCC. | critical | test | A |
| EOSD1600 | EOSD1600 | The ECS elements that interface with EDOS elements shall exchange element level status data with EDOS. | essential | test | B |
| EOSD1605 | EOSD1605-1-1 | ECS elements shall receive from EDOS telemetry data, including housekeeping data from EOS instruments. | critical | test | B |
| | EOSD1605-1-2 | ECS elements shall receive from EDOS telemetry data, including housekeeping data from EOS spacecraft. | critical | test | B |
| | EOSD1605-2-1 | ECS elements shall receive from EDOS telemetry data, including engineering data from EOS instruments. | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOSD1605-2-2 | ECS elements shall receive from EDOS telemetry data, including engineering data from EOS spacecraft. | critical | test | B |
| | EOSD1605-3-1 | ECS elements shall receive from EDOS telemetry data, including ancillary data from EOS instruments. | critical | test | B |
| | EOSD1605-3-2 | ECS elements shall receive from EDOS telemetry data, including ancillary data from EOS spacecraft. | critical | test | B |
| | EOSD1605-4-1 | ECS elements shall receive from EDOS telemetry data, including science data from EOS instruments. | critical | test | B |
| | EOSD1605-4-2 | ECS elements shall receive from EDOS telemetry data, including science data from EOS spacecraft. | critical | test | B |
| EOSD1607 | EOSD1607-a-1 | ECS shall receive data from near term Earth Probe missions to include the following as a minimum: a) TRMM data for archive | essential | test | IR1 |
| | EOSD1607-a-2 | ECS shall receive data from near term Earth Probe missions to include the following as a minimum: a) TRMM data for distribution | essential | test | IR1 |
| | EOSD1607-b | ECS shall receive data from near term Earth Probe missions to include the following as a minimum: b) Landsat 7 data for distribution. | essential | test | IR1 |
| EOSD1608 | EOSD1608-a | ECS elements shall receive from EPDSs the following at a minimum: a.Data products | essential | test | A |
| | EOSD1608-b | ECS elements shall receive from EPDSs the following at a minimum: b.Ancillary data | essential | test | A |
| | EOSD1608-c | ECS elements shall receive from EPDSs the following at a minimum: c.Calibration data | essential | test | A |
| | EOSD1608-d | ECS elements shall receive from EPDSs the following at a minimum: d.Correlative data | essential | test | A |
| | EOSD1608-e | ECS elements shall receive from EPDSs the following at a minimum: e.Metadata | essential | test | A |
| | EOSD1608-f | ECS elements shall receive from EPDSs the following at a minimum: f.Data information | essential | test | A |
| EOSD1680 | EOSD1680-1 | ECS elements shall receive simulated spacecraft telemetry from the EOS spacecraft simulator. | essential | test | A |
| | EOSD1680-2 | ECS elements shall receive simulated instrument telemetry from the EOS spacecraft simulator. | essential | test | A |
| | EOSD1680-3 | ECS elements shall receive simulated spacecraft flight software loads from the EOS spacecraft simulator. | essential | test | A |
| EOSD1690 | EOSD1690 | ECS elements shall provide commands to the EOS spacecraft simulators. | essential | test | A |
| EOSD1695 | EOSD1695 | The ECS shall provide 2-way interoperability with the V0 system. | fulfillment | test | A |
| EOSD1703 | EOSD1703-a | ECS shall provide maintenance and operations interfaces to the DAACs to support the function of: a) System Management | essential | demo | A |
| | EOSD1703-b | ECS shall provide maintenance and operations interfaces to the DAACs to support the function of: b) Science Algorithm Integration | essential | demo | A |
| | EOSD1703-c | ECS shall provide maintenance and operations interfaces to the DAACs to support the function of: c) Product Generation | essential | demo | A |
| | EOSD1703-d-1 | ECS shall provide maintenance and operations interfaces to the DAACs to support the function of: d) Data Archive | essential | demo | A |
| | EOSD1703-d-2 | ECS shall provide maintenance and operations interfaces to the DAACs to support the function of: d) Data Distribution | essential | demo | A |
| | EOSD1703-e | ECS shall provide maintenance and operations interfaces to the DAACs to ECS shall provide maintenance and operations interfaces to the DAACs to support the function of: e) User Support Services | essential | demo | A |
| | EOSD1703-f | ECS shall provide maintenance and operations interfaces to the DAACs to support the function of: f) System Maintenance | essential | demo | A |
| EOSD1705 | EOSD1705-1 | ECS shall support interfaces to DAAC-unique components at GSFC. | fulfillment | analysis | A |
| | EOSD1705-2 | ECS shall support interfaces to DAAC-unique components at LaRC. | fulfillment | analysis | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOSD1705-3 | ECS shall support interfaces to DAAC-unique components at MSFC. | fulfillment | analysis | A |
| | EOSD1705-4 | ECS shall support interfaces to DAAC-unique components at EDC. | fulfillment | analysis | A |
| | EOSD1705-5 | ECS shall support interfaces to DAAC-unique components at NSIDC. | fulfillment | analysis | A |
| | EOSD1705-6 | ECS shall support interfaces to DAAC-unique components at JPL. | fulfillment | analysis | A |
| | EOSD1705-7 | ECS shall support interfaces to DAAC-unique components at ASF. | fulfillment | analysis | A |
| | EOSD1705-8 | ECS shall support interfaces to DAAC-unique components at ORNL. | fulfillment | analysis | A |
| EOSD1710 | EOSD1710-a | ECS elements shall exchange with ADCs/ODCs, such as NOAA and other data processing and archiving facilities, information including the following: a.Directories | fulfillment | demo | A |
| | EOSD1710-b | ECS elements shall exchange with ADCs/ODCs, such as NOAA and other data processing and archiving facilities, information including the following: b.Product Orders | fulfillment | demo | A |
| | EOSD1710-c | ECS elements shall exchange with ADCs/ODCs, such as NOAA and other data processing and archiving facilities, information including the following: c.Order Status | fulfillment | demo | A |
| | EOSD1710-d | ECS elements shall exchange with ADCs/ODCs, such as NOAA and other data processing and archiving facilities, information including the following: d.Science Data | fulfillment | demo | A |
| | EOSD1710-e | ECS elements shall exchange with ADCs/ODCs, such as NOAA and other data processing and archiving facilities, information including the following: e.Management Data | fulfillment | demo | A |
| EOSD1720 | EOSD1720-a | ECS elements shall receive from the ECS user community the following type of data requests at a minimum: a.Data Acquisition Requests | essential | demo | A |
| | EOSD1720-b | ECS elements shall receive from the ECS user community the following types of data requests at a minimum: b.Data Distribution Requests | essential | demo | A |
| | EOSD1720-c | ECS elements shall receive from the ECS user community the following types of data requests at a minimum: c.Reprocessing Requests | essential | demo | A |
| EOSD1730 | EOSD1730-1 | ECS elements shall receive from the ECS user community Special Products produced from EOS data. | fulfillment | demo | A |
| | EOSD1730-2 | ECS elements shall receive from the ECS user community research results produced from EOS data. | fulfillment | demo | A |
| | EOSD1730-3 | ECS elements shall receive from the ECS user community new derived data sets produced from EOS data. | fulfillment | demo | A |
| EOSD1740 | EOSD1740-a | ECS elements shall send the following type of data at a minimum to the ECS user community: a.Metadata | essential | test | A |
| | EOSD1740-b | ECS elements shall send the following type of data at a minimum to the ECS user community: b.Browse data | essential | test | A |
| | EOSD1740-c | ECS elements shall send the following type of data at a minimum to the ECS user community: c.Science data | essential | test | A |
| EOSD1750 | EOSD1750-a | ECS elements shall receive data including the following type of supporting information from the ECS science community (TLs, TMs, PIs, and Co-Is): a.Algorithms | essential | demo | A |
| | EOSD1750-b | ECS elements shall receive data including the following types of supporting information from the ECS science community (TLs, TMs, PIs, and Co-Is): b.Software fixes | essential | demo | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOSD1750-c | ECS elements shall receive data including the following type of supporting information from the ECS science community (TLs, TMs, PIs, and Co-Is): c.Instrument calibration data | essential | demo | A |
| | EOSD1750-d | ECS elements shall receive data including the following type of supporting information from the ECS science community (TLs, TMs, PIs, and Co-Is): d.Integration support requests | essential | demo | A |
| | EOSD1750-e | ECS elements shall receive data including the following type of supporting information from the ECS science community (TLs, TMs, PIs, and Co-Is): e.Metadata for Special Products archiving | essential | demo | A |
| | EOSD1750-f | ECS elements shall receive data including the following type of supporting information from the ECS science community (TLs, TMs, PIs, and Co-Is): f.Data transfer requests (inventories, directories, and browse) | essential | demo | A |
| | EOSD1750-g-1 | ECS elements shall receive data including the following types of supporting information from the ECS science community (TLs, TMs, PIs, and Co-Is): g.Data Quality/Instrument assessment | essential | demo | A |
| | EOSD1750-g-2 | ECS elements shall receive data including the following type of supporting information from the ECS science community (TLs, TMs, PIs, and Co-Is): g.Instrument assessment | essential | demo | A |
| | EOSD1750-h | ECS elements shall receive data including the following type of supporting information from the ECS science community (TLs, TMs, PIs, and Co-Is): h.Instrument operations information | essential | demo | A |
| | EOSD1750-i | ECS elements shall receive data including the following type of supporting information from the ECS science community (TLs, TMs, PIs, and Co-Is): i.Ancillary data | essential | demo | A |
| EOSD1760 | EOSD1760-a | The ECS elements shall send the following type of data at a minimum to the ECS science community (TLs, TMs, PIs, and Co-Is): a.Software Problem Reports | fulfillment | demo | B |
| | EOSD1760-b | The ECS elements shall send the following type of data at a minimum to the ECS science community (TLs, TMs, PIs, and Co-Is): b.Documentation | fulfillment | demo | A |
| | EOSD1760-c | The ECS elements shall send the following type of data at a minimum to the ECS science community (TLs, TMs, PIs, and Co-Is): c.Metadata (copies of inventories) | essential | test | A |
| | EOSD1760-d | The ECS elements shall send the following type of data at a minimum to the ECS science community (TLs, TMs, PIs, and Co-Is): d.Browse data | essential | test | A |
| | EOSD1760-e | The ECS elements shall send the following type of data at a minimum to the ECS science community (TLs, TMs, PIs, and Co-Is): e.Archived data | essential | test | A |
| | EOSD1760-f | The ECS elements shall send the following types of data at a minimum to the ECS science community (TLs, TMs, PIs, and Co-Is): f.Accounting information | fulfillment | test | A |
| EOSD1770 | EOSD1770-a | ECS elements shall exchange the following type of data at a minimum with the IPs: a.Instrument command loads | essential | test | A |
| | EOSD1770-b | ECS elements shall exchange the following type of data at a minimum with the IPs: b.Science data | essential | test | A |
| | EOSD1770-c-1 | ECS elements shall exchange the following type of data at a minimum with the IPs: c.Planning data | essential | test | A |
| | EOSD1770-c-2 | ECS elements shall exchange the following types of data at a minimum with the IPs: c.Scheduling data | essential | test | A |
| | EOSD1770-d | ECS elements shall exchange the following types of data at a minimum with the IPs: d.Directories | essential | test | A |
| | EOSD1770-e | ECS elements shall exchange the following type of data at a minimum with the IPs: e.Product Orders | essential | test | A |
| EOSD1990 | EOSD1990-a | The ECS system and elements shall employ security measures and techniques for all applicable security disciplines which are identified in the following document. This document shall provide part of the basis for the ECS security policy. a.National Computer Systems Laboratory (NCSL) Bulletin, Guidance to Federal Agencies on the Use of Trusted Systems Technology, July 1990. | essential | analysis | A |
| | EOSD1990-b | The ECS system and elements shall employ security measures and techniques for all applicable security disciplines which are identified in the following document. This document shall provide part of the basis for the ECS security policy. b.NMI 2410.7A, Assuring the Security and Integrity of NASA Automated Information Resources, July 8, 1988. | essential | analysis | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOSD1990-c | The ECS system and elements shall employ security measures and techniques for all applicable security disciplines which are identified in the following document. This document shall provide part of the basis for the ECS security policy. c.NHB 2410.9, Automated Information Security, Volume I, September 1990. | essential | analysis | A |
| | EOSD1990-d | The ECS system and elements shall employ security measures and techniques for all applicable security disciplines which are identified in the following document. This document shall provide part of the basis for the ECS security policy. d.NHB 2410.1D (as amended) Chapter 3, Privacy and Security for Automated Information Processing Resources, April 1985. | essential | analysis | A |
| | EOSD1990-e | The ECS system and elements shall employ security measures and techniques for all applicable security disciplines which are identified in the following document. This document shall provide part of the basis for the ECS security policy. e.NMI 8610.22, National Resource Protection (NRP) Program, December 5, 1989. | essential | analysis | A |
| EOSD2100 | EOSD2100-a | The ECS technical security policy planning shall be comprehensive and shall cover at least the following areas: a.Applicability of the C2 Level of Trustedness as defined by the National Security Agency (NSA) | essential | inspect. | A |
| | EOSD2100-b | The ECS technical security policy planning shall be comprehensive and shall cover at least the following areas: b.Applicability of the C2 Object Reuse capability | essential | inspect. | A |
| | EOSD2100-c-1 | The ECS technical security policy planning shall be comprehensive and shall cover at least the following areas: c.Discretionary control of user access | essential | inspect. | A |
| | EOSD2100-c-2 | The ECS technical security policy planning shall be comprehensive and shall cover at least the following areas: c.Discretionary monitoring of user access | essential | inspect. | A |
| | EOSD2100-d-1 | The ECS technical security policy planning shall be comprehensive and shall cover at least the following areas: d.ECS communications | essential | inspect. | A |
| | EOSD2100-d-2 | The ECS technical security policy planning shall be comprehensive and shall cover at least the following areas: d.ECS network access | essential | inspect. | A |
| | EOSD2100-d-3 | The ECS technical security policy planning shall be comprehensive and shall cover at least the following areas: d.ECS network control | essential | inspect. | A |
| | EOSD2100-d-4 | The ECS technical security policy planning shall be comprehensive and shall cover at least the following areas: d.ECS network monitoring | essential | inspect. | A |
| | EOSD2100-e-1 | The ECS technical security policy planning shall be comprehensive and shall cover at least the following areas: e.Computer system "virus" monitoring | essential | inspect. | A |
| | EOSD2100-e-2 | The ECS technical security policy planning shall be comprehensive and shall cover at least the following areas: e.Computer system "virus" detection | essential | inspect. | A |
| | EOSD2100-e-3 | The ECS technical security policy planning shall be comprehensive and shall cover at least the following areas: e.Computer system "virus" remedy | essential | inspect. | A |
| | EOSD2100-f | The ECS technical security policy planning shall be comprehensive and shall cover at least the following areas: f.Data protection controls | essential | inspect. | A |
| | EOSD2100-g-1 | The ECS technical security policy planning shall be comprehensive and shall cover at least the following areas: g.Account management | essential | inspect. | A |
| | EOSD2100-g-2 | The ECS technical security policy planning shall be comprehensive and shall cover at least the following areas: g.Privilege management | essential | inspect. | A |
| | EOSD2100-g-3 | The ECS technical security policy planning shall be comprehensive and shall cover at least the following areas: g.User session tailoring | essential | inspect. | A |
| | EOSD2100-h-1 | The ECS technical security policy planning shall be comprehensive and shall cover at least the following areas: h.Restart | essential | inspect. | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOSD2100-h-2 | The ECS technical security policy planning shall be comprehensive and shall cover at least the following areas: h.Recovery | essential | inspect. | A |
| | EOSD2100-i | The ECS technical security policy planning shall be comprehensive and shall cover at least the following areas: i.Security audit trail generation | essential | inspect. | A |
| | EOSD2100-j-1 | The ECS technical security policy planning shall be comprehensive and shall cover at least the following areas: j.Security analysis | essential | inspect. | A |
| | EOSD2100-j-2 | The ECS technical security policy planning shall be comprehensive and shall cover at least the following areas: j.Security reporting | essential | inspect. | A |
| | EOSD2100-k | The ECS technical security policy planning shall be comprehensive and shall cover at least the following areas: k.Risk analysis | essential | inspect. | A |
| EOSD2200 | EOSD2200 | Selection criteria meeting overall ECS security policies and system requirements shall be applied when selecting hardware. | essential | analysis | A |
| | EOSD2200-1 | Selection criteria meeting overall ECS security policies shall be applied when selecting hardware. | essential | inspect. | A |
| | EOSD2200-2 | Selection criteria meeting overall ECS system requirements shall be applied when selecting hardware. | essential | inspect. | A |
| EOSD2400 | EOSD2400 | ECS shall provide multiple categories of data protection based on the sensitivity levels of ECS data, as defined in NHB 2410.9. | essential | test | A |
| EOSD2430 | EOSD2430-1-1 | Data base access shall accommodate control of user access of security controlled data. | critical | test | A |
| | EOSD2430-1-2 | Data base access shall accommodate control of user update of security controlled data. | critical | test | A |
| | EOSD2430-2-1 | Data base manipulation shall accommodate control of user access of security controlled data. | critical | test | A |
| | EOSD2430-2-2 | Data base manipulation shall accommodate control of user update of security controlled data. | critical | test | A |
| EOSD2440 | EOSD2440-1 | Data base integrity including prevention of data loss shall be maintained. | critical | test | A |
| | EOSD2440-2 | Data base integrity including prevention of data corruption shall be maintained. | critical | test | A |
| EOSD2480 | EOSD2480 | ECS elements shall require unique sessions when security controlled data are being manipulated. | essential | test | A |
| EOSD2510 | EOSD2510-a | ECS elements shall maintain an audit trail of: a. All accesses to the element security controlled data | critical | demo | A |
| | EOSD2510-b-1 | ECS elements shall maintain an audit trail of: b.Users requesting access to element security controlled data | critical | demo | A |
| | EOSD2510-b-2 | ECS elements shall maintain an audit trail of: b.Processes requesting access to element security controlled data | critical | demo | A |
| | EOSD2510-b-3 | ECS elements shall maintain an audit trail of: b.Elements requesting access to element security controlled data | critical | demo | A |
| | EOSD2510-c-1 | ECS elements shall maintain an audit trail of: c.Data access operations performed on security controlled data | critical | demo | A |
| | EOSD2510-c-2 | ECS elements shall maintain an audit trail of: c.Data manipulation operations performed on security controlled data | critical | demo | A |
| | EOSD2510-d-1 | ECS elements shall maintain an audit trail of: d.Date of access to security controlled data | critical | demo | A |
| | EOSD2510-d-2 | ECS elements shall maintain an audit trail of: d.Time of access to security controlled data | critical | demo | A |
| | EOSD2510-e-1 | ECS elements shall maintain an audit trail of: e.Unsuccessful access attempt to the element security controlled data by unauthorized users | critical | demo | A |
| | EOSD2510-e-2 | ECS elements shall maintain an audit trail of: e.Unsuccessful access attempt to the element security controlled data by unauthorized elements | critical | demo | A |
| | EOSD2510-e-3 | ECS elements shall maintain an audit trail of: e.Unsuccessful access attempt to the element security controlled data by unauthorized processes | critical | demo | A |
| | EOSD2510-f-1 | ECS elements shall maintain an audit trail of: f.Detected computer system viruses | critical | demo | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOSD2510-f-2 | ECS elements shall maintain an audit trail of: f.Detected computer system worms | critical | demo | A |
| | EOSD2510-g-1 | ECS elements shall maintain an audit trail of: g.Actions taken to contain a virus | critical | demo | A |
| | EOSD2510-g-2 | ECS elements shall maintain an audit trail of: g.Actions taken to destroy a virus | critical | demo | A |
| EOSD2550 | EOSD2550 | The ECS elements shall limit use of master passwords or use of a single password for large organizations requiring access to a mix of security controlled and non-sensitive data. | critical | test | A |
| EOSD2640 | EOSD2640 | ECS elements shall relinquish a connection between the element and a user when the user has not been active for a configurable period of time. | essential | test | A |
| EOSD2650 | EOSD2650 | ECS elements shall report detected security violations to the SMC. | essential | test | A |
| EOSD2660 | EOSD2660-1 | ECS elements shall at all times maintain the security directives issued by the SMC. | essential | inspect. | A |
| | EOSD2660-2 | ECS elements shall at all times comply with the security directives issued by the SMC. | essential | demo | A |
| EOSD2710 | EOSD2710-1 | ECS elements shall report all detected computer viruses to the SMC. | essential | demo | A |
| | EOSD2710-2 | ECS elements shall report, to the SMC, actions taken on detected computer viruses. | essential | demo | A |
| EOSD2990 | EOSD2990-1 | The ECS elements shall support the recovery from a system failure due to a loss in the integrity of the ECS data. | critical | demo | A |
| | EOSD2990-2 | The ECS elements shall support the recovery from a system failure due to a catastrophic violation of the security system. | critical | demo | A |
| EOSD3000 | EOSD3000-1 | The ECS shall provide for security safeguards to cover unscheduled system shutdown (aborts) and subsequent restarts. | critical | demo | A |
| | EOSD3000-2 | The ECS shall provide for security safeguards to cover scheduled system shutdown and operational startup. | critical | demo | A |
| EOSD3200 | EOSD3200-1 | A minimum of one backup which is maintained in a separate physical location (i.e., different building) shall be maintained for ECS software. | critical | inspect. | A |
| | EOSD3200-2 | A minimum of one backup which is maintained in a separate physical location (i.e., different building) shall be maintained for key data items (including security audit trails and logs). | critical | inspect. | A |
| EOSD3220 | EOSD3220-1 | All media shall be handled and stored in protected areas with environmental procedures applied. | critical | inspect. | A |
| | EOSD3220-2 | All media shall be handled and stored in protected areas with accounting procedures applied. | critical | inspect. | A |
| EOSD3490 | EOSD3490-1-1 | Reliability statistics for ECS shall be collected using the Mean Time Between Maintenance (MTBM) for each component. | fulfillment | test | A |
| | EOSD3490-1-2 | Reliability statistics for ECS shall be collected using the Mean Time Between Maintenance (MTBM) for each operational capability. | fulfillment | test | A |
| | EOSD3490-2-1 | Reliability statistics for ECS shall be monitored using the Mean Time Between Maintenance (MTBM) for each component. | fulfillment | test | A |
| | EOSD3490-2-2 | Reliability statistics for ECS shall be monitored using the Mean Time Between Maintenance (MTBM) for each operational capability. | fulfillment | demo | A |
| EOSD3492 | EOSD3492 | RMA data shall be maintained in a repository accessible for logistics analysis and other purposes. | fulfillment | inspect. | A |
| EOSD3500 | EOSD3500 | The ECS RMA Program shall adhere to GSFC 420-05-03, Performance Assurance Requirements for the EOSDIS. | essential | demo | A |
| EOSD3510 | EOSD3510 | Reliability predictions shall be calculated in accordance with the parts count analysis method, Appendix A, of MIL-HDBK-217F, Reliability Prediction of Electronic Equipment. | fulfillment | test | A |
| EOSD3600 | EOSD3600 | Maintainability shall be predicted in accordance with MIL-HDBK-472, Maintainability Prediction, Procedure IV. | fulfillment | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| EOSD3610 | EOSD3610-1 | The Maintainability Status Report shall be based on MIL-STD-470A, Maintainability Program for Systems and Equipment, Task 104. | fulfillment | inspect. | A |
| | EOSD3610-2 | The Maintainability Status Report shall include any changes in the MTBM predictions. | fulfillment | test | A |
| EOSD3615 | EOSD3615 | The Maintainability Status Report shall also include data on items specified for maintainability reporting in GSFC 420-05-03. | fulfillment | inspect. | A |
| EOSD3620 | EOSD3620-1 | ECS shall predict maintainability. | fulfillment | test | A |
| | EOSD3620-2 | ECS shall periodically assess maintainability by measuring the actual MDT and comparing to the required MDT. | fulfillment | test | A |
| EOSD3625 | EOSD3625 | For ECS functions with a backup capability, ECS shall use switchover time to the backup capability in measuring maintainability, rather than down time, when the component goes down. | fulfillment | test | A |
| EOSD3630 | EOSD3630 | The maximum down time shall not exceed twice the required MDT in 99 percent of failure occurrences. | essential | analysis | A |
| EOSD3700 | EOSD3700-1 | ECS functions shall have an operational availability of 0.96 at a minimum (.998 design goal). | essential | analysis | A |
| | EOSD3700-2 | ECS functions shall have a MDT of four (4) hours or less (1.5 hour design goal), unless otherwise specified. | essential | analysis | A |
| EOSD3710 | EOSD3710-1 | The ECS shall have no single point of failure for functions associated with real- time operations of the spacecraft. | critical | test | A |
| | EOSD3710-2 | The ECS shall have no single point of failure for functions associated with real- time operations of the instruments. | critical | test | A |
| EOSD3800 | EOSD3700-a-1 | The FOS shall have an operational availability of 0.9998 at a minimum (.99997 design goal) for critical real-time functions that support: a.Launch | critical | analysis | A |
| | EOSD3700-a-2 | The FOS shall have an MDT of one (1) minute or less (0.5 minute design goal) for critical real-time functions that support: a.Launch | critical | analysis | A |
| | EOSD3700-b-1 | The FOS shall have an operational availability of 0.9998 at a minimum (.99997 design goal) for critical real-time functions that support: b.Early orbit checkout | critical | analysis | A |
| | EOSD3700-b-2 | The FOS shall have an MDT of one (1) minute or less (0.5 minute design goal) for critical real-time functions that support: b.Early orbit checkout | critical | analysis | A |
| | EOSD3700-c-1 | The FOS shall have an operational availability of 0.9998 at a minimum (.99997 design goal) for critical real-time functions that support: c.Disposal | critical | analysis | A |
| | EOSD3700-c-2 | The FOS shall have an MDT of one (1) minute or less (0.5 minute design goal) for critical real-time functions that support: c.Disposal | critical | analysis | A |
| | EOSD3700-d-1 | The FOS shall have an operational availability of 0.9998 at a minimum (.99997 design goal) for critical real-time functions that support: d.Orbit adjustment | critical | analysis | A |
| | EOSD3700-d-2 | The FOS shall have an MDT of one (1) minute or less (0.5 minute design goal) for critical real-time functions that support: d.Orbit adjustment | critical | analysis | A |
| | EOSD3700-e-1 | The FOS shall have an operational availability of 0.9998 at a minimum (.99997 design goal) for critical real-time functions that support: e.Anomaly investigation | critical | analysis | A |
| | EOSD3700-e-2 | The FOS shall have an MDT of one (1) minute or less (0.5 minute design goal) for critical real-time functions that support: e.Anomaly investigation | critical | analysis | A |
| | EOSD3700-f-1 | The FOS shall have an operational availability of 0.9998 at a minimum (.99997 design goal) for critical real-time functions that support: f.Recovery from safe mode | critical | analysis | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOSD3700-f-2 | The FOS shall have an MDT of one (1) minute or less (0.5 minute design goal) for critical real-time functions that support: f.Recovery from safe mode | critical | analysis | A |
| | EOSD3700-g-1 | The FOS shall have an operational availability of 0.9998 at a minimum (.99997 design goal) for critical real-time functions that support: g.Routine real-time commanding and associated monitoring for spacecraft | critical | analysis | A |
| | EOSD3700-g-2 | The FOS shall have an MDT of one (1) minute or less (0.5 minute design goal) for critical real-time functions that support: g.Routine real-time commanding and associated monitoring for spacecraft | critical | analysis | A |
| EOSD3810 | EOSD3810-1 | The FOS shall have an operational availability of 0.99925 at a minimum (.99997 design goal) for non-critical real-time functions. | essential | analysis | A |
| | EOSD3810-2 | The FOS shall have an MDT of five (5) minutes or less (0.5 minute design goal) for non-critical real-time functions. | essential | analysis | A |
| EOSD3820 | EOSD3820-1 | The FOS shall have an operational availability of 0.992 at a minimum (.99997 design goal) for functions associated with Targets Of Opportunity (TOOs). | critical | analysis | A |
| | EOSD3820-2 | The FOS shall have an MDT of one (1) hour or less (0.5 minute design goal) for functions associated with Targets Of Opportunity (TOOs). | critical | analysis | A |
| EOSD3900 | EOSD3900-1 | The SDPS function of receiving science data shall have an operational availability of 0.999 at a minimum (.99995 design goal). | critical | analysis | A |
| | EOSD3900-2 | The SDPS function of receiving science data shall have an MDT of two (2) hours or less (8 minutes design goal). | critical | analysis | A |
| EOSD3910 | EOSD3910 | The switchover time from the primary science data receipt capability to a backup capability shall be 15 minutes or less (10 minutes design goal). | critical | test | A |
| EOSD3920 | EOSD3920-1 | The SDPS function of archiving and distributing data shall have an operational availability of 0.98 at a minimum (.999999 design goal). | essential | analysis | A |
| | EOSD3920-2 | The SDPS function of archiving and distributing data shall have an MDT of two (2) hours or less (9 minutes design goal). | essential | analysis | A |
| EOSD3930 | EOSD3930-1 | The user interfaces to Information Management System (IMS) services at individual Distributed Active Archive Center (DAAC) sites shall have an operational availability of 0.993 at a minimum (.9997 design goal). | essential | analysis | A |
| | EOSD3930-2 | The user interfaces to Information Management System (IMS) services at individual Distributed Active Archive Center (DAAC) sites shall have an MDT of two (2) hours or less (1.6 hour design goal). | essential | analysis | A |
| EOSD3940 | EOSD3940-1 | The SDPS function of Information Searches on the ECS Directory shall have an operational availability of 0.993 at a minimum (.9997 design goal). | essential | analysis | A |
| | EOSD3940-2 | The SDPS function of Information Searches on the ECS Directory shall have an MDT of two (2) hours or less (1.4 hour design goal). | essential | analysis | A |
| EOSD3950 | EOSD3950-1 | The SDPS function of Data Acquisition Request (DAR) Submittal including TOOs shall have an operational availability of 0.993 at a minimum (.999999 design goal). | essential | analysis | A |
| | EOSD3950-2 | The SDPS function of Data Acquisition Request (DAR) Submittal including TOOs shall have an MDT of two (2) hours or less (6 minutes design goal). | essential | analysis | A |
| EOSD3960 | EOSD3960-1 | The SDPS function of Metadata Ingest and Update shall have an operational availability of 0.96 at a minimum (.999999 design goal). | essential | analysis | A |
| | EOSD3960-2 | The SDPS function of Metadata Ingest and Update shall have an MDT of four (4) hours or less (6 minutes design goal). | essential | analysis | A |
| EOSD3970 | EOSD3970-1 | The SDPS function of Information Searches on Local Holdings shall have an operational availability of 0.96 at a minimum (.999999 design goal). | essential | analysis | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOSD3970-2 | The SDPS function of Information Searches on Local Holdings shall have an MDT of four (4) hours or less (6 minutes design goal). | essential | analysis | A |
| EOSD3980 | EOSD3980-1 | The SDPS function of Local Data Order Sub shall have an operational availability of 0.96 at a minimum (.999999 design goal). | essential | analysis | A |
| | EOSD3980-2 | The SDPS function of Local Data Order Sub shall have an MDT of four (4) hours or less (6 minutes design goal). | essential | analysis | A |
| EOSD3990 | EOSD3990-1 | The SDPS function of Data Order Sub Across DAACs shall have an operational availability of 0.96 at a minimum (.999999 design goal). | essential | analysis | A |
| | EOSD3990-2 | The SDPS function of Data Order Sub Across DAACs shall have an MDT of four (4) hours or less (6 minutes design goal). | essential | analysis | A |
| EOSD4000 | EOSD4000-1 | The SDPS function of IMS Data Base Management and Maintenance Interface shall have an operational availability of 0.96 at a minimum (.999999 design goal). | essential | analysis | A |
| | EOSD4000-2 | The SDPS function of IMS Data Base Management and Maintenance Interface shall have an MDT of four (4) hours or less (6 minutes design goal). | essential | analysis | A |
| EOSD4010 | EOSD4010 | Each computer providing product generation shall have an operational availability of 0.95 at a minimum (.9995 design goal). | essential | analysis | A |
| EOSD4020 | EOSD4020 | At each DAAC site, the product generation functional capabilities shall be spread across multiple product generation computers thereby providing a "failsoft" environment. | essential | inspect. | A |
| EOSD4030 | EOSD4030-1 | The SMC function of gathering and disseminating system management information shall have an operational availability of .998 at a minimum (.999998 design goal) for critical services. | critical | analysis | B |
| | EOSD4030-2 | The SMC function of gathering and disseminating system management information shall have an MDT of 20 minutes or less (5 minutes design goal), for critical services. | critical | analysis | B |
| EOSD4035 | EOSD4035-1 | The ESN shall have no single point of failure for functions associated with network databases. | critical | test | A |
| | EOSD4035-2 | The ESN shall have no single point of failure for functions associated with configuration data. | critical | test | A |
| EOSD4036 | EOSD4036 | The operational availability of individual ESN segments shall be consistent with the specified operational availability of the supported ECS functions. | critical | analysis | A |
| EOSD4100 | EOSD4100-1-1 | The ECS segments, elements, and components shall include the on-line (operational mode) fault detection capabilities required to achieve the specified operational availability requirements. | essential | analysis | A |
| | EOSD4100-1-2 | The ECS segments, elements, and components shall include the on-line (operational mode) fault isolation capabilities required to achieve the specified operational availability requirements. | essential | analysis | A |
| | EOSD4100-2-1 | The ECS segments, elements, and components shall include the off-line (test mode) fault detection capabilities required to achieve the specified operational availability requirements. | essential | test | A |
| | EOSD4100-2-2 | The ECS segments, elements, and components shall include the off-line (test mode) fault isolation capabilities required to achieve the specified operational availability requirements. | essential | test | A |
| EOSD5000 | EOSD5000-1 | ECS shall enable the addition of other data providers, e.g. DAACs, SCFs, ADCs, ODCs, which may: -provide heterogeneous services, i.e. services in support of EOS which may be less than or different than ECS services. | fulfillment | analysis | A |
| | EOSD5000-2 | ECS shall enable the addition of other data providers, e.g. DAACs, SCFs, ADCs, ODCs, which may: -be connected with varying topologies. | fulfillment | analysis | A |
| | EOSD5000-3 | ECS shall enable the addition of other data providers, e.g. DAACs, SCFs, ADCs, ODCs, which may: -have variable levels of reliability or operational availability. | fulfillment | analysis | A |
| EOSD5010 | PGS-1015-1-1-a | ECS shall enable extended provider support, i.e. client access of data and services at SCFs and DAACs, as authorized, without distinction to the client. | essential | test | IR1 |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| EOSD5020 | EOSD5020-1 | ECS software shall enable transparent portability across heterogeneous site architectures, i.e. performing the same function at different ECS sites that may have different hardware implementations. | fulfillment | analysis | A |
| | EOSD5020-2 | ECS hardware shall enable transparent portability across heterogeneous site architectures, i.e. performing the same function at different ECS sites that may have different hardware implementations. | fulfillment | analysis | A |
| | EOSD5020-3 | ECS interfaces shall enable transparent portability across heterogeneous site architectures, i.e. performing the same function at different ECS sites that may have different hardware implementations. | fulfillment | analysis | A |
| EOSD5030 | EOSD5030 | ECS shall enable the addition of information search and retrieval services, e.g. WAIS, WWW. | fulfillment | demo | A |
| EOSD5040 | EOSD5040 | ECS shall enable the combination of services from ECS and other data providers in arbitrary, i.e. non-predefined, ways as needed by users to conduct EOS science. | fulfillment | analysis | A |
| EOSD5060 | EOSD5060-a-1 | ECS shall enable interoperability with equivalent International systems, e.g. European systems, to support the following: a)Browse services | essential | demo | A |
| | EOSD5060-a-2 | ECS shall enable interoperability with equivalent International systems, e.g. Japanese systems, to support the following: a)Browse services | essential | demo | A |
| | EOSD5060-b-1 | ECS shall enable interoperability with equivalent International systems, e.g. European systems, to support the following: b)Data retrieval services. | essential | demo | A |
| | EOSD5060-b-2 | ECS shall enable interoperability with equivalent International systems, e.g. Japanese systems, to support the following: b)Data retrieval services. | essential | demo | A |
| EOSD5070 | EOSD5070 | ECS shall enable expansion to GByte networks including the ability to provide increased volume of data distribution/access. | fulfillment | analysis | A |
| EOSD5100 | EOSD5100 | ECS shall enable evolution of ECS to be a federated unit within GCDIS, e.g. GCDIS data centers should not have to negotiate different interfaces with each DAAC. | fulfillment | analysis | A |
| EOSD5110 | EOSD5110-1 | ECS shall enable the separate use of data management software components by a GCDIS data center. The GCDIS data centers will have full responsibility for integration of those components within their environment. Interfaces between the components must be developed to serve the of EOSDIS, but be made available for a GCDIS data center. | fulfillment | analysis | A |
| | EOSD5110-2 | ECS shall enable the separate use of data processing software components by a GCDIS data center. The GCDIS data centers will have full responsibility for integration of those components within their environment. Interfaces between the components must be developed to serve the of EOSDIS, but be made available for a GCDIS data center. | fulfillment | analysis | A |
| | EOSD5110-3 | ECS shall enable the separate use of data archive software components by a GCDIS data center. The GCDIS data centers will have full responsibility for integration of those components within their environment. Interfaces between the components must be developed to serve the of EOSDIS, but be made available for a GCDIS data center. | fulfillment | analysis | A |
| | EOSD5110-4 | ECS shall enable the separate use of data distribution software components by a GCDIS data center. The GCDIS data centers will have full responsibility for integration of those components within their environment. Interfaces between the components must be developed to serve the of EOSDIS, but be made available for a GCDIS data center. | fulfillment | analysis | A |
| EOSD5200 | EOSD5200-1 | ECS shall enable the addition of the following as required for discipline specific user support: unique fields to metadata. These activities shall not require software changes to ECS. | fulfillment | analysis | A |
| | EOSD5200-2 | ECS shall enable the addition of the following as required for discipline specific user support: unique products for browse. These activities shall not require software changes to ECS. | fulfillment | analysis | A |
| | EOSD5200-3 | ECS shall enable the addition of the following as required for discipline specific user support: unique documents for data products guides. These activities shall not require software changes to ECS. | fulfillment | analysis | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| EOSD5210 | EOSD5210-1-1 | ECS shall enable development of a local user interface that accesses the core metadata server, bypassing the delivered "core" user interface. This server interface shall be configuration controlled. | fulfillment | analysis | A |
| | EOSD5210-1-2 | ECS shall enable development of a local user interface that accesses the core metadata server, bypassing the delivered "core" user interface. This server interface shall be documented for the programmers' use. | fulfillment | analysis | A |
| | EOSD5210-2-1 | ECS shall enable development of a local user interface that accesses the core browse data base server, bypassing the delivered "core" user interface. This server interface shall be configuration controlled. | fulfillment | analysis | A |
| | EOSD5210-2-2 | ECS shall enable development of a local user interface that accesses the core browse data base servers, bypassing the delivered "core" user interface. This server interface shall be documented for the programmers' use. | fulfillment | analysis | A |
| EOSD5220 | EOSD5220-1-1 | ECS shall enable addition of new storage devices, if required, to serve discipline- unique archiving needs. An applications programming interface that permits the DAACs to integrate this addition to the DAAC shall be developed. | fulfillment | analysis | A |
| | EOSD5220-1-2 | ECS shall enable addition of new storage devices, if required, to serve discipline- unique archiving needs. An applications programming interface that permits the DAACs to integrate this addition to the DAAC shall be configuration controlled. | fulfillment | analysis | A |
| | EOSD5220-2-1 | ECS shall enable addition of new storage devices, if required, to serve site-unique archiving needs. An applications programming interface that permits the DAACs to integrate this addition to the DAAC shall be developed. | fulfillment | analysis | A |
| | EOSD5220-2-2 | ECS shall enable addition of new storage devices, if required, to serve site-unique archiving needs. An applications programming interface that permits the DAACs to integrate this addition to the DAAC shall be configuration controlled. | fulfillment | analysis | A |
| EOSD5230 | EOSD5230 | ECS shall enable the addition of new data types similar to previous types with minimal changes to the software of the core system. | fulfillment | analysis | A |
| EOSD5240 | EOSD5240 | ECS shall enable addition of new data types significantly different from previous types with minimal changes to the core architecture. | fulfillment | analysis | A |
| EOSD5250 | EOSD5250-a | ECS shall enable access to configuration controlled applications programming interfaces that permit development of DAAC-unique value added services and products where DAAC-unique value added services may consist of the following type of development: a.Visualization utilities and products | fulfillment | analysis | A |
| | EOSD5250-b-1 | ECS shall enable access to configuration controlled applications programming interfaces that permit development of DAAC-unique value added services and products where DAAC-unique value added services may consist of the following type of development: b.Data sets | fulfillment | analysis | A |
| | EOSD5250-b-2 | ECS shall enable access to configuration controlled applications programming interfaces that permit development of DAAC-unique value added services and products where DAAC-unique value added services may consist of one or more of the following types of developments: b.Inter-data set usability utilities and products | fulfillment | analysis | A |
| | EOSD5250-c | ECS shall enable access to configuration controlled applications programming interfaces that permit development of DAAC-unique value added services and products where DAAC-unique value added services may consist of the following type of development: c.Data analysis utilities | fulfillment | analysis | A |
| | EOSD5250-d | ECS shall enable access to configuration controlled applications programming interfaces that permit development of DAAC-unique value added services and products where DAAC-unique value added services may consist of the following type of development: d.Special subsetting capabilities (e.g. dynamic) | fulfillment | analysis | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | EOSD5250-e | ECS shall enable access to configuration controlled applications programming interfaces that permit development of DAAC-unique value added services and products where DAAC-unique value added services may consist of the following type of development: e.On-line analysis functions | fulfillment | analysis | A |
| | EOSD5250-f | ECS shall enable access to configuration controlled applications programming interfaces that permit development of DAAC-unique value added services and products where DAAC-unique value added services may consist of the following type of development: f.New search techniques | fulfillment | analysis | B |
| | EOSD5250-g-1 | ECS shall enable access to configuration controlled applications programming interfaces that permit development of DAAC-unique value added services and products where DAAC-unique value added services may consist of the following type of development: g.Data acquisition planning | fulfillment | analysis | A |
| | EOSD5250-g-2 | ECS shall enable access to configuration controlled applications programming interfaces that permit development of DAAC-unique value added services and products where DAAC-unique value added services may consist of the following type of development: g.Data acquisition utilities | fulfillment | analysis | A |
| | EOSD5250-h | ECS shall enable access to configuration controlled applications programming interfaces that permit development of DAAC-unique value added services and products where DAAC-unique value added services may consist of the following type of development: h.Experimental QA techniques | fulfillment | analysis | B |
| | EOSD5250-i-1 | ECS shall enable access to configuration controlled applications programming interfaces that permit development of DAAC-unique value added services and products where DAAC-unique value added services may consist of the following type of development: i.Non-digital data utilities | fulfillment | analysis | A |
| | EOSD5250-i-2 | ECS shall enable access to configuration controlled applications programming interfaces that permit development of DAAC-unique value added services and products where DAAC-unique value added services may consist of the following type of development: i.Non-digital data products | fulfillment | analysis | A |
| | EOSD5250-j | ECS shall enable access to configuration controlled applications programming interfaces that permit development of DAAC-unique value added services and products where DAAC-unique value added services may consist of the following type of development: j.System Management Functions | fulfillment | analysis | A |
| EOSD5300 | EOSD5300-1-1 | ECS shall provide APIs for science user extensions. | fulfillment | demo | A |
| | EOSD5300-1-2 | ECS shall provide APIs and infrastructure for direct access to data. | fulfillment | demo | A |
| | EOSD5300-2-1 | ECS shall provide infrastructure for science user extensions. | fulfillment | demo | A |
| | EOSD5300-2-2 | ECS shall provide infrastructure for direct access to data. | fulfillment | demo | A |
| EOSD5310 | EOSD5310-1 | ECS shall support science user development of new search methods that dynamically browse the data. These methods shall be developed at the scientists facility. | fulfillment | analysis | A |
| | EOSD5310-2 | ECS shall support science user development of new search methods that dynamically browse the metadata. These methods shall be developed at the scientists facility. | fulfillment | analysis | A |
| EOSD5320 | EOSD5320 | ECS shall be able to interactively insert new search methods developed by science users. | fulfillment | analysis | A |
| EOSD5400 | EOSD5400 | ECS shall enable the existence of additional ICCs. | essential | demo | A |
| EOSD5410 | EOSD5410 | ECS shall enable the existence of additional ISTs if desired by the PI/TL to accommodate Co-Investigators and Team Members, who may be at geographically separate locations. | essential | demo | A |
| ESN-0003 | ESN-0003-1 | The ESN shall enable researchers on existing networks (TCP/IP and GOSIP) to gain access to data in a transparent manner to the underlying differences between the networks. | essential | analysis | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ESN-0003-2 | The ESN shall enable researchers on existing networks (TCP/IP and GOSIP) to gain access to ECS services in a transparent manner to the underlying differences between the networks. | essential | analysis | A |
| ESN-0005 | ESN-0005 | The ESN internal networks shall be dedicated networks linking ECS facilities for internal ECS operations (e.g., scheduling, product generation, QA validation). | critical | analysis | B |
| ESN-0006 | ESN-0006-1 | ESN shall interface with NSI to reach external non-ECS network-attached facilities. | essential | analysis | B |
| | ESN-0006-2 | ESN shall interface with NSI to reach science users. | essential | analysis | B |
| ESN-0007 | ESN-0007 | The ESN shall restrict the use of ECS inter-DAAC wide area network for data trans between ECS DAACs and other facilities that are directly attached to the ECS internal network. | critical | test | A |
| ESN-0010 | ESN-0010-a | ESN shall provide the following standard services: a.Data Transfer and Management Services | essential | test | B |
| | ESN-0010-b | ESN shall provide the following standard services: b.Electronic Messaging Service | essential | test | B |
| | ESN-0010-c | ESN shall provide the following standard services: c.Remote Terminal Service | essential | test | B |
| | ESN-0010-d | ESN shall provide the following standard services: d.Process to Process Communication Service | essential | test | B |
| | ESN-0010-e | ESN shall provide the following standard services: e.Directory and User Access Control Service | essential | test | B |
| | ESN-0010-f | ESN shall provide the following standard services: f.Network Management Service | essential | test | B |
| | ESN-0010-g | ESN shall provide the following standard services: g.Network Security and Access Control Service | essential | test | B |
| | ESN-0010-h | ESN shall provide the following standard services: h.Internetwork Interface Services | essential | test | B |
| | ESN-0010-i | ESN shall provide the following standard services: i.Bulletin Board Service | essential | test | B |
| ESN-0070 | ESN-0070 | The ESN shall support the elements data flow requirements identified in this specification. | critical | test | B |
| ESN-0080 | ESN-0080-a | The ESN shall provide internal communications interfaces to GFP circuits provided by PSCN which link to: a.Specified ADCs | essential | test | B |
| | ESN-0080-b | The ESN shall provide internal communications interfaces to GFE circuits which link to: b.Selected SCFs | essential | test | B |
| | ESN-0080-c | The ESN shall provide internal communications interfaces to GFE circuits which link to: c.Selected EPDSs (Landsat-7, TRMM) | essential | test | B |
| | ESN-0080-d | The ESN shall provide internal communications interfaces to GFE circuits which link to: d.Selected ISTs | essential | test | A |
| ESN-0180 | ESN-0180 | The ESN shall connect with the International partners designated pickup points. | essential | test | B |
| ESN-0210 | ESN-0210 | The ESN management function shall have a capability to obtain status on specific data flows, such as quick-look data products, to assure the successful operation of ESN. | critical | test | B |
| ESN-0240 | ESN-0240 | The ESN shall be extensible in its design to provide capability for growth and enhancement. | essential | analysis | IR1 |
| ESN-0250 | ESN-0250 | The ESN shall provide a help service to assist users with communication questions and problems. | essential | demo | A |
| ESN-0280 | ESN-0280-a | The ESN shall provide file transfer and management service and as a minimum shall include the capability to transfer the following data types. a.Unstructured Text | critical | test | A |
| | ESN-0280-b | The ESN shall provide file transfer and management service and as a minimum shall include the capability to transfer the following data types. b.Binary Unstructured | critical | test | A |
| | ESN-0280-c | The ESN shall provide file transfer and management service and as a minimum shall include the capability to transfer the following data types. c.Binary Sequential | critical | test | A |
| | ESN-0280-d | The ESN shall provide file transfer and management service and as a minimum shall include the capability to transfer the following data types: d.Sequential Text | critical | test | A |
| ESN-0290 | ESN-0290 | The file transfer and management service shall be available in interactive and non- interactive services. | critical | test | A |
| ESN-0300 | ESN-0300 | The file transfer and management non-interactive services shall be able to be scheduled. | critical | test | B |
| ESN-0340 | ESN-0340 | The ESN shall interoperate and exchange messages and data with external SMTP and X.400 mail systems. | essential | test | A |
| ESN-0345 | ESN-0345 | The ESN shall be capable of transparently transmitting Multi-purpose Internet Mail Extensions (MIME) messages. | essential | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| ESN-0350 | ESN-0350 | The Electronic Messaging Service, shall be capable of exchanging binary data. | essential | test | A |
| ESN-0370 | ESN-0370 | The ESN shall provide interactive virtual terminal services. | essential | test | A |
| ESN-0450 | ESN-0450 | The ESN shall provide process-to-process communication service. | critical | test | B |
| ESN-0490 | ESN-0490 | The ESN shall provide a name-to-attribute mapping Directory Service at a minimum. | critical | test | A |
| ESN-0510 | ESN-0510 | The directory function shall be able to respond to requests for information concerning named objects, either physical or logical, so as to support communications with those objects. | critical | test | A |
| ESN-0590 | ESN-0590 | The ESN Directory Service shall be protected by access control capabilities. | critical | test | A |
| ESN-0600 | ESN-0600-1 | The ESN Directory service shall include services and supporting mechanisms to authenticate the credentials of a user for the purpose of granting access rights. | critical | test | A |
| | ESN-0600-2 | The ESN Directory service shall include services and supporting mechanisms to authenticate the credentials of a user for the purpose of authorizing requested operations. | critical | test | A |
| ESN-0610 | ESN-0610 | The ESN shall include multiple Directory Service Agents (DSAs) which shall be collectively responsible for holding or retrieving all directory information which is needed by ECS. | critical | test | B |
| ESN-0620 | ESN-0620-1 | The ESN shall include a network management function to monitor the ESN. | critical | test | B |
| | ESN-0620-2 | The ESN shall include a network management function to control the ESN. | critical | test | B |
| ESN-0640 | ESN-0640-1 | The ESN shall include management functions at each ECS element within the ESN. | critical | test | B |
| | ESN-0640-2 | The ESN shall include management functions at each ECS equipment within the ESN. | critical | test | B |
| | ESN-0640-3 | The ESN shall include management functions at each ECS gateway within the ESN. | critical | test | B |
| ESN-0650 | ESN-0650-1-a | The ESN shall perform the following network management functions for each protocol stack implemented in any ECS element: a.Network Configuration Management | critical | test | B |
| | ESN-0650-2-a | The ESN shall perform the following network management functions for each protocol stack implemented in each communications facility: a.Network Configuration Management | critical | test | B |
| | ESN-0650-1-b | The ESN shall perform the following network management functions for each protocol stack implemented in any ECS element: b.Network Fault Management | critical | test | B |
| | ESN-0650-2-b | The ESN shall perform the following network management functions for each protocol stack implemented in each communications facility: b.Network Fault Management | critical | test | B |
| | ESN-0650-1-c | The ESN shall perform the following network management functions for each protocol stack implemented in any ECS element: c.Network Performance Management | critical | test | B |
| | ESN-0650-2-c | The ESN shall perform the following network management functions for each protocol stack implemented in each communications facility: c.Network Performance Management | critical | test | B |
| | ESN-0650-1-d | The ESN shall perform the following network management functions for each protocol stack implemented in any ECS element: d.Network Security Management | critical | test | B |
| | ESN-0650-2-d | The ESN shall perform the following network management functions for each protocol stack implemented in each communications facility: d.Network Security Management | critical | test | B |
| ESN-0690 | ESN-0690 | The ESN shall be capable of reconfiguration transparent to network users. | critical | test | B |
| ESN-0700 | ESN-0700 | The ESN management architecture shall be consistent with the architecture defined in the OSI Management Framework (ISO 7498-4) and the OSI Systems Management Overview (ISO DIS 10040). | essential | analysis | A |
| ESN-0740 | ESN-0740-1-1 | The ESN network management service shall retrieve performance data about ESN protocol stacks. | essential | test | B |
| | ESN-0740-1-2 | The ESN network management service shall retrieve performance data about ESN equipment. | essential | test | B |
| | ESN-0740-2-1 | The ESN network management service shall retrieve fault data about ESN protocol stacks. | essential | test | B |
| | ESN-0740-2-2 | The ESN network management service shall retrieve fault data about ESN equipment. | essential | test | B |
| ESN-0750 | ESN-0750-1 | The ESN shall provide statistical processing capabilities to allow extraction of network performance data. | essential | test | C |
| | ESN-0750-2 | The ESN shall provide statistical processing capabilities to allow tabulation of network performance data. | essential | test | C |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| ESN-0760 | ESN-0760-1 | The ESN report generation function shall provide on an interactive and scheduled basis, accounting management information. | essential | test | B |
| | ESN-0760-2 | The ESN report generation function shall provide on an interactive and scheduled basis, network configuration management information. | essential | test | B |
| | ESN-0760-3 | The ESN report generation function shall provide on an interactive and scheduled basis, fault management information. | essential | test | B |
| | ESN-0760-4 | The ESN report generation function shall provide on an interactive and scheduled basis, performance management information. | essential | test | B |
| ESN-0770 | ESN-0770-1 | The ESN query capability shall generate ad hoc statistics based on parameters entered. | essential | test | B |
| | ESN-0770-2 | The ESN query capability shall generate ad hoc reports based on parameters entered. | essential | test | B |
| ESN-0775 | ESN-0775-1 | The ESN management service shall have the capability to redirect its reports to different devices such as a console. | essential | test | A |
| | ESN-0775-2 | The ESN management service shall have the capability to redirect its reports to different devices such as a disk. | essential | test | A |
| | ESN-0775-3 | The ESN management service shall have the capability to redirect its reports to different devices such as a printer. | essential | test | A |
| ESN-0780 | ESN-0780-1-a | The network elements including the Internet interfaces shall have the capability to report, periodically, network statistics to the ESN network management function, including the following information: a.Network round trip delay | essential | test | B |
| | ESN-0780-2-a | The network elements including the Internet interfaces shall have the capability to report, on an interactive basis, network statistics to the ESN network management function, including the following information: a.Network round trip delay | essential | test | B |
| | ESN-0780-1-b | The network elements including the Internet interfaces shall have the capability to report, periodically, network statistics to the ESN network management function, including the following information: b.Network reset and restart indications | essential | test | B |
| | ESN-0780-2-b | The network elements including the Internet interfaces shall have the capability to report, on an interactive basis , network statistics to the ESN network management function, including the following information: b.Network reset and restart indications | essential | test | B |
| | ESN-0780-1-c | The network elements including the Internet interfaces shall have the capability to report, periodically, network statistics to the ESN network management function, including the following information: c.Outages and CRC errors | critical | test | B |
| | ESN-0780-2-c | The network elements including the Internet interfaces shall have the capability to report, on an interactive basis, network statistics to the ESN network management function, including the following information: c.Outages and CRC errors | critical | test | B |
| | ESN-0780-d-1 | The network elements including the Internet interfaces shall have the capability to report, periodically , network statistics to the ESN network management function, including the following information: d.Performance statistics | essential | test | B |
| | ESN-0780-d-2 | The network elements including the Internet interfaces shall have the capability to report, on an interactive basis, network statistics to the ESN network management function, including the following information: d.Performance statistics | essential | test | B |
| ESN-0790 | ESN-0790-a | The ESN shall include the following configuration management functions at a minimum: a.collect information describing the state of the network subsystem and its communications resources | essential | test | A |
| | ESN-0790-b-1 | The ESN shall include the following configuration management functions at a minimum: b.exercise control over the configuration of the subsystem | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ESN-0790-b-2 | The ESN shall include the following configuration management functions at a minimum: b.exercise control over the parameters of the subsystem | essential | test | A |
| | ESN-0790-b-3 | The ESN shall include the following configuration management functions at a minimum: b.exercise control over the resources of the subsystem | essential | test | A |
| | ESN-0790-b-4 | The ESN shall include the following configuration management functions at a minimum: b.exercise control over the information collected | essential | test | A |
| | ESN-0790-c | The ESN shall include the following configuration management functions at a minimum: c.store the configuration information collected | essential | test | A |
| | ESN-0790-d | The ESN shall include the following configuration management functions at a minimum: d.display the configuration information | essential | test | A |
| ESN-0800 | ESN-0800-1 | The ESN shall be capable of displaying the local network configuration status related to each system locally. | essential | test | A |
| | ESN-0800-2 | The ESN shall be capable of displaying the network configuration status for all systems at the ESN network management facility. | essential | test | A |
| ESN-0810 | ESN-0810-a | ESN shall provide the following fault management functions at a minimum: a.detect the occurrence of faults | essential | test | B |
| | ESN-0810-b | ESN shall provide the following fault management functions at a minimum: b.control the collection of fault information | essential | test | B |
| | ESN-0810-c | ESN shall provide the following fault management functions at a minimum: c.diagnose the probable cause of a detected fault | essential | test | B |
| ESN-0815 | ESN-0815-1-1 | Network simulation capability shall be provided to troubleshoot network problems. | essential | analysis | B |
| | ESN-0815-1-2 | Network simulation capability shall be provided to use in network planning. | essential | analysis | B |
| | ESN-0815-2-1 | Traffic modeling capability shall be provided to troubleshoot network problems. | essential | analysis | B |
| | ESN-0815-2-2 | Traffic modeling capability shall be provided to use in network planning. | essential | analysis | B |
| ESN-0830 | ESN-0830-1-1-1 | The ESN shall have the capability to detect communications related errors locally. | critical | test | C |
| | ESN-0830-1-1-2 | The ESN shall have the capability to detect communications related errors at the ESN network management facility. | critical | test | C |
| | ESN-0830-1-2-1 | The ESN shall have the capability to detect communications related events locally. | critical | test | C |
| | ESN-0830-1-2-2 | The ESN shall have the capability to detect communications related events at the ESN network management facility. | critical | test | C |
| | ESN-0830-2-1-1 | The ESN shall have the capability to report communications related errors locally. | critical | test | C |
| | ESN-0830-2-1-2 | The ESN shall have the capability to report communications related errors at the ESN network management facility. | critical | test | C |
| | ESN-0830-2-2-1 | The ESN shall have the capability to report communications related events locally. | critical | test | C |
| | ESN-0830-2-2-2 | The ESN shall have the capability to report communications related events at the ESN network management facility. | critical | test | C |
| ESN-0840 | ESN-0840-1 | The ESN shall have error reporting. | critical | test | B |
| | ESN-0840-2 | The ESN shall have event logging. | critical | test | B |
| | ESN-0840-3 | The ESN shall have generation of alerts. | critical | test | B |
| ESN-0900 | ESN-0900-a | Errors and events to be detected shall include at least: a.communications software version or configuration errors | critical | test | B |
| | ESN-0900-b | Errors and events to be detected shall include at least: b.communications hardware errors | critical | test | B |
| | ESN-0900-c | Errors and events to be detected shall include at least: c.protocol errors | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ESN-0900-d | Errors and events to be detected shall include at least: d.performance degradation conditions | critical | test | B |
| | ESN-0900-e | Errors and events to be detected shall include at least: e.telecommunications errors and failures | critical | test | B |
| ESN-0910 | ESN-0910-1-a-1 | The ESN fault management shall provide the capability to perform the following functions locally, at a minimum: a.set alert threshold values | essential | test | C |
| | ESN-0910-1-a-2 | The ESN fault management shall provide the capability to perform the following functions locally, at a minimum: a.view alert threshold values | essential | test | C |
| | ESN-0910-1-a-3 | The ESN fault management shall provide the capability to perform the following functions locally, at a minimum: a.change alert threshold values | essential | test | C |
| | ESN-0910-2-a-1 | The ESN fault management shall provide the capability to perform the following functions at the ESN network management facility, at a minimum: a.set alert threshold values | essential | test | C |
| | ESN-0910-2-a-2 | The ESN fault management shall provide the capability to perform the following functions at the ESN network management facility, at a minimum: a.view alert threshold values | essential | test | C |
| | ESN-0910-2-a-3 | The ESN fault management shall provide the capability to perform the following functions at the ESN network management facility, at a minimum: a.change alert threshold values | essential | test | C |
| | ESN-0910-1-b-1 | The ESN fault management shall provide the capability to perform the following functions locally, at a minimum: b.enable alert notifications (alarms) within a system | essential | test | C |
| | ESN-0910-1-b-2 | The ESN fault management shall provide the capability to perform the following functions locally, at a minimum: b.disable alert notifications (alarms) within a system | essential | test | C |
| | ESN-0910-2-b-1 | The ESN fault management shall provide the capability to perform the following functions at the ESN network management facility at a minimum: b.enable alert notifications (alarms) within a system | essential | test | C |
| | ESN-0910-2-b-2 | The ESN fault management shall provide the capability to perform the following functions at the ESN network management facility, at a minimum: b.disable alert notifications (alarms) within a system | essential | test | C |
| | ESN-0910-1-c-1 | The ESN fault management shall provide the capability to perform the following functions locally, at a minimum: c.enable event reports within a system | essential | test | C |
| | ESN-0910-1-c-2 | The ESN fault management shall provide the capability to perform the following functions locally, at a minimum: c.disable event reports within a system | essential | test | C |
| | ESN-0910-2-c-1 | The ESN fault management shall provide the capability to perform the following functions at the ESN network management facility, at a minimum: c.enable event reports within a system | essential | test | C |
| | ESN-0910-2-c-2 | The ESN fault management shall provide the capability to perform the following functions at the ESN network management facility, at a minimum: c.disable event reports within a system | essential | test | C |
| | ESN-0910-1-d-1 | The ESN fault management shall provide the capability to perform the following functions locally, at a minimum: d.manage error logging files | essential | test | C |
| | ESN-0910-1-d-2 | The ESN fault management shall provide the capability to perform the following functions locally, at a minimum: d.manage event logging files | essential | test | C |
| | ESN-0910-2-d-1 | The ESN fault management shall provide the capability to perform the following functions at the ESN network management facility, at a minimum: d.manage error logging files | essential | test | C |
| | ESN-0910-2-d-2 | The ESN fault management shall provide the capability to perform the following functions at the ESN network management facility, at a minimum: d.manage event logging files | essential | test | C |
| ESN-0920 | ESN-0920-1 | The ESN shall provide a set of utilities to perform diagnostic functions for purposes of fault isolation. | critical | inspect. | B |
| | ESN-0920-2 | The ESN shall provide a set of utilities to perform testing functions for purposes of fault isolation. | critical | inspect. | B |
| ESN-1000 | ESN-1000-1 | The ESN network management function shall have the capability to build histories for different types of errors. | essential | test | C |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ESN-1000-2 | The ESN network management function shall have the capability to build histories for different types of events. | essential | test | C |
| | ESN-1000-3 | The ESN network management function shall have the capability to analyze errors and recommend corrective action wherever practical. | essential | test | C |
| ESN-1010 | ESN-1010 | The ESN shall provide, for selective use as a debugging aid, the capability to perform packet tracing of its supported protocols. | essential | test | A |
| ESN-1030 | ESN-1030 | The ESN shall perform periodic testing of alternate communication capabilities to verify that they are operational. | critical | demo | B |
| ESN-1060 | ESN-1060-1 | The ESN performance management function shall provide the capability to evaluate the performance of ESN resources. | essential | test | B |
| | ESN-1060-2 | The ESN performance management function shall provide the capability to evaluate the performance of ESN interconnection activities. | essential | test | B |
| ESN-1065 | ESN-1065-1 | The ESN performance management function shall include trend analysis for prediction of loading. | fulfillment | analysis | B |
| | ESN-1065-2 | The ESN performance management function shall include trend analysis for prediction of bottlenecks/delays. | fulfillment | analysis | B |
| ESN-1070 | ESN-1070-a-1 | The ESN shall provide the capability to perform the following functions, at a minimum: a.generate system statistics | essential | test | B |
| | ESN-1070-a-2 | The ESN shall provide the capability to perform the following functions, at a minimum: a.collect system statistics | essential | test | B |
| | ESN-1070-b-1 | The ESN shall provide the capability to perform the following functions, at a minimum: b.control generation of network statistics | essential | test | B |
| | ESN-1070-b-2 | The ESN shall provide the capability to perform the following functions, at a minimum: b.control collection of network statistics | essential | test | B |
| | ESN-1070-c-1 | The ESN shall provide the capability to perform the following functions, at a minimum: c.store system statistics | essential | test | B |
| | ESN-1070-c-2 | The ESN shall provide the capability to perform the following functions, at a minimum: c.store statistical histories | essential | test | B |
| | ESN-1070-d | The ESN shall provide the capability to perform the following functions, at a minimum: d.display the system statistics | essential | test | B |
| ESN-1090 | ESN-1090 | The ESN shall provide the capability to control the communications performance parameters of the network. | essential | test | A |
| ESN-1140 | ESN-1140-1 | The ESN shall provide protocol translation. | critical | test | A |
| | ESN-1140-2 | The ESN shall provide protocol termination. | critical | test | A |
| | ESN-1140-3 | The ESN shall provide protocol bridging. | critical | test | A |
| | ESN-1140-4 | The ESN shall provide protocol routing. | critical | test | A |
| ESN-1170 | ESN-1170-1 | The ESN shall provide necessary translation within supported file transfer services. | critical | test | A |
| | ESN-1170-2 | The ESN shall provide necessary translation within supported e-mail services. | critical | test | A |
| ESN-1180 | ESN-1180 | The ESN shall interoperate with NSI to provide user access to ECS. | critical | test | C |
| ESN-1181 | ESN-1181 | The ESN shall provide an ECS Bulletin Board capability. | essential | demo | B |
| ESN-1206 | ESN-1206-1 | The ESN capacity shall be consistent with the specified capacity requirements of the ECS functions. | critical | test | B |
| | ESN-1206-2 | The ESN performance shall be consistent with the specified performance requirements of the ECS functions. | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| ESN-1207 | ESN-1207-1 | The ESN capacity shall be capable of expansion to be consistent with the specified capacity growth requirements of the ECS elements and functions. | critical | analysis | B |
| | ESN-1207-2 | The ESN performance shall be capable of expansion to be consistent with the specified performance growth requirements of the ECS elements and functions. | critical | analysis | B |
| ESN-1330 | ESN-1330-1 | The ESN shall provide ISO/OSI data communications protocols specified in the GOSIP (see Figure 8-3) to external interfaces as required by the IRDs. | essential | analysis | B |
| | ESN-1330-2 | The ESN shall provide ISO/OSI data communications services specified in the GOSIP (see Figure 8-3) to external interfaces as required by the IRDs. | essential | analysis | B |
| ESN-1340 | ESN-1340-1 | The ESN shall provide support for TCP/IP communications protocols to external interfaces as required by the IRDs. | critical | analysis | A |
| | ESN-1340-2 | The ESN shall provide support for TCP/IP communications services to external interfaces as required by the IRDs. | critical | analysis | A |
| ESN-1350 | ESN-1350 | The ESN LANs shall provide physical devices and the corresponding medium access control (MAC) protocol compatible with ISO and ANSI standards. | critical | analysis | A |
| ESN-1360 | ESN-1360-1 | The ESN shall control access of processes through an authentication and authorization service that meets GNMP standards. | critical | test | B |
| | ESN-1360-2 | The ESN shall control access of users through an authentication and authorization service that meets GNMP standards. | critical | test | B |
| ESN-1365 | ESN-1365 | The ESN shall isolate FOS with secure interfaces. | critical | test | B |
| ESN-1367 | ESN-1367 | IST users not within FOS facilities shall communicate with secure interfaces only with the use of a data integrity service. | critical | test | B |
| ESN-1380 | ESN-1380-a | The ESN shall provide countermeasures for the following security threats related to data communications: a.modification of data (i.e., manipulation) while in transit over the network | critical | test | B |
| | ESN-1380-b | The ESN shall provide countermeasures for the following security threats related to data communications: b.disclosure of authentication information | critical | test | B |
| | ESN-1380-c-1 | The ESN shall provide countermeasures for the following security threats related to data communications: c.degradation in network resource performance through denial of service attack | critical | test | B |
| | ESN-1380-c-2 | The ESN shall provide countermeasures for the following security threats related to data communications: c.degradation in processing resource performance through denial of service attack | critical | test | B |
| | ESN-1380-d-1 | The ESN shall provide countermeasures for the following security threats related to data communications: d.Impersonation of authentication credentials | critical | test | B |
| | ESN-1380-d-2 | The ESN shall provide countermeasures for the following security threats related to data communications: d.Impersonation of authorization privileges. | critical | test | B |
| ESN-1400 | ESN-1400-a | The following security functions and services, at a minimum, shall be provided: a.authentication | critical | test | B |
| | ESN-1400-b | The following security functions and services, at a minimum, shall be provided: b.access (authorization) control | critical | test | B |
| | ESN-1400-c | The following security functions and services, at a minimum, shall be provided: c.data integrity | critical | test | B |
| | ESN-1400-d | The following security functions and services, at a minimum, shall be provided: d.data confidentiality | critical | test | B |
| ESN-1430 | ESN-1430-a | The ESN shall provide the following security event functions: a.Event detection | critical | test | B |
| | ESN-1430-b | The ESN shall provide the following security event functions: b.Event reporting | critical | test | B |
| | ESN-1430-c | The ESN shall provide the following security event functions: c.Event logging | critical | test | B |
| FOS-0020 | FOS-0020 | The FOS shall provide a training mode of operation for use during operator training and/or user training that does not interfere with ongoing operations. | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| FOS-0025 | FOS-0020-a-1-1 | The FOS shall provide a test mode of operation that does not interfere with ongoing operations, and which supports independent element and subsystem tests, occurring during at a minimum: a.Spacecraft integration and test | critical | demo | B |
| | FOS-0020-a-1-2 | The FOS shall provide a test mode of operation that does not interfere with ongoing operations, and which supports independent element and subsystem tests occurring during at a minimum: a.instrument integration and test | critical | demo | B |
| | FOS-0020-b-1 | The FOS shall provide a test mode of operation that does not interfere with ongoing operations, and which supports independent element and subsystem tests occurring during at a minimum: b.Pre-launch | critical | demo | B |
| | FOS-0020-c-1 | The FOS shall provide a test mode of operation that does not interfere with ongoing operations, and which supports independent element and subsystem tests occurring during at a minimum: c.Upgrades and enhancements | critical | demo | B |
| | FOS-0020-a-2-1 | The FOS shall provide a test mode of operation that does not interfere with ongoing operations, and which supports end-to-end tests occurring during at a minimum: a.Spacecraft integration and test | critical | demo | B |
| | FOS-0020-a-2-2 | The FOS shall provide a test mode of operation that does not interfere with ongoing operations, and which supports end-to-end tests occurring during at a minimum: a.Instrument integration and test | critical | demo | B |
| | FOS-0020-b-2 | The FOS shall provide a test mode of operation that does not interfere with ongoing operations, and which supports end-to-end tests occurring during at a minimum: b.Pre-launch | critical | demo | B |
| | FOS-0020-c-2 | The FOS shall provide a test mode of operation that does not interfere with ongoing operations, and which supports end-to-end tests, occurring during at a minimum: c.Upgrades and enhancements | critical | demo | B |
| | FOS-0020-a-3-1 | The FOS shall provide a test mode of operation that does not interfere with ongoing operations, and which supports integration and verification activities occurring during at a minimum: a.Spacecraft integration and test | critical | demo | B |
| | FOS-0020-a-3-2 | The FOS shall provide a test mode of operation that does not interfere with ongoing operations, and which supports integration and verification activities occurring during at a minimum: a. instrument integration and test | critical | demo | B |
| | FOS-0020-b-3 | The FOS shall provide a test mode of operation that does not interfere with ongoing operations, and which supports integration and verification activities occurring during at a minimum: b.Pre-launch | critical | demo | B |
| | FOS-0020-c-3 | The FOS shall provide a test mode of operation that does not interfere with ongoing operations, and which supports integration and verification activities occurring during at a minimum: c.Upgrades and enhancements | critical | demo | B |
| FOS-0030 | FOS-0030 | The FOS shall adopt an extensible general-purpose scheduling interface for communicating planning and scheduling information between FOS elements. | critical | test | B |
| FOS-0040 | FOS-0040-1 | The FOS shall be capable of supporting flight operations of the EOS spacecraft and as listed in Table D-1 that are controlled from GSFC. | critical | test | B |
| | FOS-0040-2 | The FOS shall be capable of supporting flight operations of the EOS instruments as listed in Table D-1 that are controlled from GSFC. | critical | test | B |
| FOS-0045 | FOS-0045 | The FOS shall be capable of being expanded to support the simultaneous flight operations of an EOS spacecraft and its replacement with no impact to the design. | critical | test | C |
| FOS-0050 | FOS-0050-1 | The FOS design shall include hooks to allow the FOS to support additional EOS spacecraft and U.S. instruments without major redesign. | critical | test | C |
| | FOS-0050-2 | The FOS design shall include hooks to allow the FOS to support additional EOS U.S. instruments without major redesign. | critical | test | C |
| ICC-0010 | ICC-0010-1 | The GSFC ICC shall be responsible planning the instruments allocated to GSFC in Table D-1, Instrument Manifest. | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| ICC-0020 | ICC-0020-1-1 | The ICC shall be capable of interfacing with one local IST for the instrument supported by the ICC. | critical | test | B |
| | ICC-0020-1-2 | The ICC shall be capable of interfacing with one local and remote IST for the instrument supported by the ICC. | critical | test | B |
| | ICC-0020-1-3 | The ICC shall be capable of interfacing with one remote IST for the instrument supported by the ICC. | critical | test | B |
| | ICC-0020-2-1 | The ICC shall be capable of interfacing with more than one local IST for the instrument supported by the ICC. | critical | test | B |
| | ICC-0020-2-2 | The ICC shall be capable of interfacing with more than one local and remote IST for the instrument supported by the ICC. | critical | test | B |
| | ICC-0020-2-3 | The ICC shall be capable of interfacing with more than 1 remote ISTs for the instrument supported by the ICC. | critical | test | B |
| ICC-0030 | ICC-0030-a | The ICC shall have the capability to notify the TL/instrument PI at the IST of, at a minimum, the following: a.Conflicts found in planning and scheduling | critical | test | B |
| | ICC-0030-b | The ICC shall have the capability to notify the TL/instrument PI at the IST of, at a minimum, the following: b.Arrival of instrument engineering data | critical | test | B |
| | ICC-0030-c | The ICC shall have the capability to notify the TL/instrument PI at the IST of, at a minimum, the following: c.Arrival of quick-look data | critical | test | B |
| | ICC-0030-d | The ICC shall have the capability to notify the TL/instrument PI at the IST of, at a minimum, the following: d.Instrument anomalies found during instrument monitoring | critical | test | B |
| ICC-0040 | ICC-0040-1 | The ICC shall receive the LTSP from the SMC. | essential | test | B |
| | ICC-0040-2 | The ICC shall receive the LTIP from the SMC. | essential | test | B |
| ICC-0050 | ICC-0050-a-1 | An ICC shall have the capability to interface electronically to facilitate, at a minimum, the following: a.Planning of coordinated operations | essential | demo | B |
| | ICC-0050-b-1 | An ICC shall have the capability to interface with other ICCs electronically to facilitate, at a minimum, the following: b.Resolution of conflicts | essential | demo | B |
| | ICC-0050-c-1 | An ICC shall have the capability to interface with other ICCs electronically to facilitate, at a minimum, the following: c.Exchange of instrument status | essential | demo | B |
| | ICC-0050-a-2 | An ICC shall have the capability to interface with other ICCs by voice to facilitate, at a minimum, the following: a.Planning of coordinated operations | essential | demo | B |
| | ICC-0050-b-2 | An ICC shall have the capability to interface with other ICCs by voice to facilitate, at a minimum, the following: b.Resolution of conflicts | essential | demo | B |
| | ICC-0050-c-2 | An ICC shall have the capability to interface with other ICCs by voice to facilitate, at a minimum, the following: c.Exchange of instrument status | essential | demo | B |
| ICC-0055 | ICC-0055 | The ICC shall interface with EDOS for coordinating EDOS-provided services | critical | test | B |
| ICC-0070 | ICC-0070-a-1 | The ICC shall be capable of accommodating instrument team-provided software to perform functions such as: a.DAR processing | critical | test | B |
| | ICC-0070-b-1 | The ICC shall be capable of accommodating instrument team-provided software to perform functions such as: b.Planning | critical | test | B |
| | ICC-0070-c-1 | The ICC shall be capable of accommodating instrument team-provided software to perform functions such as: c.Scheduling | critical | test | B |
| | ICC-0070-d-1 | The ICC shall be capable of accommodating instrument team-provided software to perform functions such as: d.Quick-look processing | critical | test | B |
| | ICC-0070-e-1 | The ICC shall be capable of accommodating instrument team-provided software to perform functions such as: e.Analysis | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ICC-0070-f-1 | The ICC shall be capable of accommodating instrument team-provided software to perform functions such as: f.Onboard microprocessor management | critical | test | B |
| | ICC-0070-a-2 | The ICC shall be capable of accommodating instrument team-provided hardware to perform functions such as: a.DAR processing | critical | test | B |
| | ICC-0070-b-2 | The ICC shall be capable of accommodating instrument team-provided hardware to perform functions such as: b.Planning | critical | test | B |
| | ICC-0070-c-2 | The ICC shall be capable of accommodating instrument team-provided hardware to perform functions such as: c.Scheduling | critical | test | B |
| | ICC-0070-d-2 | The ICC shall be capable of accommodating instrument team-provided hardware to perform functions such as: d.Quick-look processing | critical | test | B |
| | ICC-0070-e-2 | The ICC shall be capable of accommodating instrument team-provided software and/or hardware to perform functions such as: e.Analysis | critical | test | B |
| | ICC-0070-f-2 | The ICC shall be capable of accommodating instrument team-provided hardware to perform functions such as: f.Onboard microprocessor management | critical | test | B |
| | ICC-0070-a-3 | The ICC shall be capable of accommodating instrument team-provided software and/hardware to perform functions such as: a.DAR processing | critical | test | B |
| | ICC-0070-b-3 | The ICC shall be capable of accommodating instrument team-provided software and hardware to perform functions such as: b.Planning | critical | test | B |
| | ICC-0070-c-3 | The ICC shall be capable of accommodating instrument team-provided software and hardware to perform functions such as: c.Scheduling | critical | test | B |
| | ICC-0070-d-3 | The ICC shall be capable of accommodating instrument team-provided software and hardware to perform functions such as: d.Quick-look processing | critical | test | B |
| | ICC-0070-e-3 | The ICC shall be capable of accommodating instrument team-provided software and hardware to perform functions such as: e.Analysis | critical | test | B |
| | ICC-0070-f-3 | The ICC shall be capable of accommodating instrument team-provided software and hardware to perform functions such as: f.Onboard microprocessor management | critical | test | B |
| ICC-1010 | ICC-1010 | The ICC shall provide the IMS with instrument information needed by the IMS for DAR generation. | critical | test | D |
| ICC-1020 | ICC-1020-1 | The ICC shall be able to generate and submit DARs to the IMS. | critical | test | D |
| | ICC-1020-2 | The ICC shall be able to submit DARs to the IMS | critical | test | D |
| ICC-1040 | ICC-1040 | The ICC shall interface with the IMS to receive status of the DARs generated at the ICC. | critical | test | D |
| ICC-1041 | ICC-1041 | The ICC shall maintain the status of all DARs submitted to it from the IMS. | critical | test | D |
| ICC-1042 | ICC-1042 | The ICC shall accept a DAR, which requires the use of instruments on the EOS spacecraft, up to three weeks before the start of the target week. | critical | test | D |
| ICC-1044 | ICC-1044-1 | The ICC shall be able to accept a DAR which requires the use of instruments on the EOS spacecraft, between three weeks and one week before the start of the target week, subject to availability of resources left unallocated . | critical | test | D |
| | ICC-1044-2 | The ICC shall be able to accept a DAR modification, which requires the use of instruments on the EOS spacecraft, between three weeks and one week before the start of the target week, subject to availability of resources left unallocated . | critical | test | D |
| ICC-1050 | ICC-1050-1 | he ICC shall receive DARS from the IMS. | critical | test | D |
| | ICC-1050-2 | he ICC shall receive DAR updates from the IMS. | critical | test | D |
| ICC-1060 | ICC-1060 | The ICC shall be capable of processing a DAR that requires coordination with other observations. | critical | test | D |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| ICC-1070 | ICC-1070 | The ICC shall be capable of processing a DAR that specifies primary requests with alternatives in priority order. | critical | test | D |
| ICC-1080 | ICC-1080-a-1-1-1 | The ICC shall evaluate, and accept a DAR and notify the IMS on the basis of at a minimum the following: a.Completeness of the DAR | critical | test | D |
| | ICC-1080-a-1-1-2 | The ICC shall evaluate, and accept a DAR and notify the IMS on the basis of at a minimum the following: a.consistency of the DAR | critical | test | D |
| | ICC-1080-b-1-1-1 | The ICC shall evaluate, and accept a DAR and notify the IMS on the basis of at a minimum the following: b.Instrument capabilities | critical | test | D |
| | ICC-1080-b-1-1-2 | The ICC shall evaluate, and accept a DAR and notify the IMS on the basis of at a minimum the following: b.Instrument constraints | critical | test | D |
| | ICC-1080-c-1-1 | The ICC shall evaluate, and accept a DAR and notify the IMS on the basis of at a minimum the following: c. Priorities based on the LTSP | critical | test | D |
| | ICC-1080-d-1-1-1 | The ICC shall evaluate, and accept a DAR and notify the IMS on the basis of at a minimum the following: d.LTIP requirements | critical | test | D |
| | ICC-1080-d-1-1-2 | The ICC shall evaluate, and accept a DAR and notify the IMS on the basis of at a minimum the following: d.LTIP constraints | critical | test | D |
| | ICC-1080-e-1-1 | The ICC shall evaluate, and accept a DAR and notify the IMS on the basis of at a minimum the following: e.Availability of resources | critical | test | D |
| | ICC-1080-a-1-2-1 | The ICC shall evaluate, and accept a DAR update, and notify the IMS on the basis of at a minimum the following: a.Completeness of the DAR | critical | test | D |
| | ICC-1080-a-1-2-2 | The ICC shall evaluate, and accept a DAR update, and notify the IMS on the basis of at a minimum the following: a.consistency of the DAR | critical | test | D |
| | ICC-1080-b-1-2-1 | The ICC shall evaluate, and accept a DAR update, and notify the IMS on the basis of at a minimum the following: b.Instrument capabilities | critical | test | D |
| | ICC-1080-b-1-2-2 | The ICC shall evaluate, and accept a DAR update, and notify the IMS on the basis of at a minimum the following: b.Instrument constraints | critical | test | D |
| | ICC-1080-c-1-2 | The ICC shall evaluate, and accept a DAR update and notify the IMS on the basis of at a minimum the following: c. Priorities based on the LTSP | critical | test | D |
| | ICC-1080-d-1-2-1 | The ICC shall evaluate, and accept a DAR update, and notify the IMS on the basis of at a minimum the following: d.LTIP requirements | critical | test | D |
| | ICC-1080-d-1-2-2 | The ICC shall evaluate, and accept a DAR update, and notify the IMS on the basis of at a minimum the following: d.LTIP constraints | critical | test | D |
| | ICC-1080-e-1-2 | The ICC shall evaluate, and accept a DAR update, and notify the IMS on the basis of at a minimum the following: e.Availability of resources | critical | test | D |
| | ICC-1080-a-2-1-1 | The ICC shall evaluate, and reject and notify the IMS on the basis of at a minimum the following: a.Completeness of the DAR | critical | test | D |
| | ICC-1080-a-2-1-2 | The ICC shall evaluate, and reject a DAR and notify the IMS on the basis of at a minimum the following: a.consistency of the DAR | critical | test | D |
| | ICC-1080-b-2-1-1 | The ICC shall evaluate, and reject a DAR and notify the IMS on the basis of at a minimum the following: b.Instrument capabilities | critical | test | D |
| | ICC-1080-b-2-1-2 | The ICC shall evaluate, and reject a DAR and notify the IMS on the basis of at a minimum the following: b.Instrument constraints | critical | test | D |
| | ICC-1080-c-2-1 | The ICC shall evaluate, and reject a DAR and notify the IMS on the basis of at a minimum the following: c. Priorities based on the LTSP | critical | test | D |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ICC-1080-d-2-1-1 | The ICC shall evaluate, and accept a DAR and notify the IMS on the basis of at a minimum the following: d.LTIP requirements | critical | test | D |
| | ICC-1080-d-2-1-2 | The ICC shall evaluate, and reject a DAR and notify the IMS on the basis of at a minimum the following: d.LTIP constraints | critical | test | D |
| | ICC-1080-e-2-1 | The ICC shall evaluate, and reject a DAR and notify the IMS on the basis of at a minimum the following: e.Availability of resources | critical | test | D |
| | ICC-1080-a-2-2-1 | The ICC shall evaluate, and reject a DAR update, and notify the IMS on the basis of at a minimum the following: a.Completeness and consistency of the DAR | critical | test | D |
| | ICC-1080-a-2-2-2 | The ICC shall evaluate, and reject a DAR update, and notify the IMS on the basis of at a minimum the following: a.consistency of the DAR | critical | test | D |
| | ICC-1080-b-2-2-1 | The ICC shall evaluate, and reject a DAR update, and notify the IMS on the basis of at a minimum the following: b.Instrument capabilities | critical | test | D |
| | ICC-1080-b-2-2-2 | The ICC shall evaluate, and reject a DAR update, and notify the IMS on the basis of at a minimum the following: b.Instrument constraints | critical | test | D |
| | ICC-1080-c-2-2 | The ICC shall evaluate, and reject a DAR update, and notify the IMS on the basis of at a minimum the following: c. Priorities based on the LTSP | critical | test | D |
| | ICC-1080-d-2-2-1 | The ICC shall evaluate, and reject a DAR update, and notify the IMS on the basis of at a minimum the following: d.LTIP requirements | critical | test | D |
| | ICC-1080-d-2-2-2 | The ICC shall evaluate, and reject a DAR update, and notify the IMS on the basis of at a minimum the following: d.LTIP constraints | critical | test | D |
| | ICC-1080-e-2-2 | The ICC shall evaluate, and reject a DAR update, and notify the IMS on the basis of at a minimum the following: e.Availability of resources | critical | test | D |
| ICC-1082 | ICC-1082-1 | The ICC shall assign a priority to each DAR, based on a conformity check against the LTSP. | critical | test | D |
| | ICC-1082-2 | The ICC shall assign a priority to each DAR, based on a conformity check against the LTIP. | critical | test | D |
| ICC-1090 | ICC-1090 | The ICC shall have the capability to send a DAR evaluation request to the IST. | critical | test | D |
| ICC-1100 | ICC-1100-1 | The ICC shall accept from the IST DAR acceptance notification. | critical | test | D |
| | ICC-1100-2 | The ICC shall accept from the IST DAR acceptance notification with updates, if any. | critical | test | D |
| | ICC-1100-3 | The ICC shall accept from the IST - DAR rejection notification along with the reasons for rejection. | critical | test | D |
| ICC-1105 | ICC-1105-1 | The ICC shall have the capability to communicate with a DAR originator(s) for modification of DARs. | critical | test | D |
| | ICC-1105-2 | The ICC shall have the capability to communicate with a DAR originator(s) for clarification of DARs. | critical | test | D |
| ICC-1110 | ICC-1110-1 | The ICC shall be able to evaluate a DAR within 24 hours of receipt from the IMS. | critical | test | D |
| | ICC-1110-2 | The ICC shall be able to evaluate a DAR update within 24 hours of receipt from the IMS. | critical | test | D |
| ICC-1115 | ICC-1115 | The ICC shall accept a DAR for a TOO observation up to 6 hours before the actual observation. | critical | test | D |
| ICC-1130 | ICC-1130 | In support of a TOO observation, the ICC shall be able to evaluate the corresponding DAR received from the IMS within 30 minutes. | critical | test | D |
| ICC-1140 | ICC-1140-1 | The ICC shall be capable of processing a DAR that specifies observations in terms of times, | critical | test | D |
| | ICC-1140-2 | The ICC shall be capable of processing a DAR that specifies observations in terms of ttargets | critical | test | D |
| | ICC-1140-3 | The ICC shall be capable of processing a DAR that specifies observations in terms of both times, targets (geographical locations), | critical | test | D |
| ICC-1150 | ICC-1150 | The ICC shall be capable of using predicted orbit data and related information for the U.S. spacecraft, to determine the times during which specified targets will be within view of the specified instruments. | critical | test | D |
| ICC-1160 | ICC-1160-1 | The ICC shall provide the IMS with DAR status information upon initial determination of acceptance. | critical | test | D |
| | ICC-1160-2 | The ICC shall provide the IMS with DAR status information upon initial determination of rejection | critical | test | D |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ICC-1160-3 | The ICC shall provide the IMS with DAR status information upon initial request from the IMS | critical | test | D |
| | ICC-1160-4 | The ICC shall provide the IMS with DAR status information upon change to the DAR. | critical | test | D |
| | ICC-1160-5 | The ICC shall provide the IMS with DAR status information upon change to the DAR status. | critical | test | D |
| ICC-1170 | ICC-1170-1 | The ICC shall maintain a record of its approved DARs for inclusion in its plans. | critical | inspect. | D |
| | ICC-1170-2 | The ICC shall maintain a record of its approved DARs for inclusion in its schedules. | critical | inspect. | D |
| ICC-2010 | ICC-2010 | The ICC shall have the capability to access the EOC planning and scheduling information. | critical | test | A |
| | ICC-2010 | The ICC shall have the capability to access the EOC planning and scheduling information. | critical | demo | A |
| ICC-2015 | ICC-2015-1 | The ICC shall have the capability to access what-if functions for planning and scheduling analysis | critical | demo | B |
| | ICC-2015-2 | The ICC shall have the capability to execute EOC what-if functions for planning and scheduling analysis | critical | test | B |
| ICC-2017 | ICC-2017 | The IST shall provide the PI/TL the capability to access planning and scheduling functions. | essential | demo | A |
| ICC-2020 | ICC-2020-a-1 | Upon request from the PI/TL at the IST, the ICC shall provide the IST with planning and scheduling information, which includes, at a minimum, the following: a.LTSP. | essential | demo | B |
| | ICC-2020-a-2 | Upon request from the PI/TL at the IST, the ICC shall provide the IST with planning and scheduling information, which includes, at a minimum, the following: a.LTIP | essential | demo | B |
| | ICC-2020-b | Upon request from the PI/TL at the IST, the ICC shall provide the IST with planning and scheduling information, which includes, at a minimum, the following: b.Current resource availability information | essential | demo | B |
| | ICC-2020-c | Upon request from the PI/TL at the IST, the ICC shall provide the IST with planning and scheduling information, which includes, at a minimum, the following: c.Current predicted orbit data and related information | essential | demo | B |
| | ICC-2020-d-1 | Upon request from the PI/TL at the IST, the ICC shall provide the IST with planning and scheduling information, which includes, at a minimum, the following: d.Plans | essential | demo | B |
| | ICC-2020-d-2 | Upon request from the PI/TL at the IST, the ICC shall provide the IST with planning and scheduling information, which includes, at a minimum, the following: d.schedules | essential | demo | B |
| ICC-2050 | ICC-2050-a-1-1 | The ICC shall identify instrument planning and scheduling conflicts of its instrument based on, at a minimum, the following: a.Resource constraints | critical | test | B |
| | ICC-2050-b-1 | The ICC shall identify instrument planning and scheduling conflicts of its instrument based on, at a minimum, the following: b.In situ observation dependency | critical | test | B |
| | ICC-2050-c-1 | The ICC shall identify instrument planning and scheduling conflicts of its instrument based on, at a minimum, the following: c.Coordinated observation dependency among instruments | critical | test | B |
| | ICC-2050-a-1-2 | The ICC shall identify instrument planning and scheduling conflicts of its instrument based on, at a minimum, the following: a.time constraints | critical | test | B |
| | ICC-2050-d-1-1 | The ICC shall identify instrument planning and scheduling conflicts of its instrument based on, at a minimum, the following: d.Priorities set by the LTSP. | critical | test | B |
| | ICC-2050-d-1-2 | The ICC shall identify and resolve instrument planning and scheduling conflicts of its instrument based on, at a minimum, the following: d.Priorities set by the LTIP | critical | test | B |
| | ICC-2050-a-2-1 | The ICC shall resolve instrument planning and scheduling conflicts of its instrument based on, at a minimum, the following: a.Resource constraints | critical | test | B |
| | ICC-2050-a-2-2 | The ICC shall resolve instrument planning and scheduling conflicts of its instrument based on, at a minimum, the following: a.time constraints | critical | test | B |
| | ICC-2050-b-2 | The ICC shall resolve instrument planning and scheduling conflicts of its instrument based on, at a minimum, the following: b.In situ observation dependency | critical | test | B |
| | ICC-2050-c-2 | The ICC shall resolve instrument planning and scheduling conflicts of its instrument based on, at a minimum, the following: c.Coordinated observation dependency among instruments | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ICC-2050-d-2-1 | The ICC shall resolve instrument planning and scheduling conflicts of its instrument based on, at a minimum, the following: d.Priorities set by the LTSP | critical | test | B |
| | ICC-2050-d-2-2 | The ICC shall resolve instrument planning and scheduling conflicts of its instrument based on, at a minimum, the following: d.Priorities set by the LTIP | critical | test | B |
| ICC-2055 | ICC-2055-1 | The ICC shall notify the IMS of the planned observation times associated with each DAR including any subsequent changes to the times. | critical | test | B |
| | ICC-2055-2 | The ICC shall notify the IMS of the scheduled observation times associated with each DAR including any subsequent changes to the times. | critical | test | B |
| ICC-2060 | ICC-2060 | The ICC shall reintroduce applicable requested activities in its planning and scheduling function when the activity did not occur due to a deviation from the schedule. | critical | test | B |
| ICC-2110 | ICC-2110-1 | The ICC shall be capable of converting a DAR into scheduling directives suitable for inclusion in its plans. | critical | test | B |
| | ICC-2110-2 | The ICC shall be capable of converting a DAR into scheduling directives suitable for inclusion in its schedules. | critical | test | B |
| ICC-2115 | ICC-2115-1 | The ICC shall have the capability to plan instrument maintenance activities. | critical | test | A |
| | ICC-2115-2 | The ICC shall have the capability to schedule instrument maintenance activities. | critical | test | A |
| ICC-2120 | ICC-21120 | The ICC shall accept requests for instrument support activities from the IST. | essential | demo | B |
| ICC-2140 | ICC-2140-1 | At least once each week, the ICC shall build an instrument resource profile which includes a description of instrument operations currently planned for the target week. | critical | test | B |
| | ICC-2140-2 | At least once each week, the ICC shall build an instrument resource deviation list (when a baseline resource profile exists for the instrument), which includes a description of instrument operations currently planned for the target week. | critical | test | B |
| ICC-2150 | ICC-2150-1 | The ICC shall accept from the EOC a notification of rejection of its instrument activities proposed in the instrument resource profile or instrument resource deviation list. | critical | test | A |
| | ICC-2150-2 | The ICC shall accept from the EOC a notification of rejection of its instrument activities proposed in the instrument resource deviation list. | critical | test | A |
| ICC-2170 | ICC-2170-1-1 | When the ICC encounters a conflict while building an instrument resource profile and the ICC does not have sufficient information to resolve the conflict, the ICC shall forward a request for its resolution to the PI/TL at the IST. | essential | demo | B |
| | ICC-2170-1-2 | When the ICC encounters a conflict while building an instrument resource deviation list and the ICC does not have sufficient information to resolve the conflict, the ICC shall forward a request for its resolution to the PI/TL at the IST. | essential | demo | B |
| | ICC-2170-2-1 | When the ICC encounters a conflict while updating an instrument resource profile and the ICC does not have sufficient information to resolve the conflict, the ICC shall forward a request for its resolution to the PI/TL at the IST. | essential | demo | B |
| | ICC-2170-2-2 | When the ICC encounters a conflict while updating an instrument resource deviation list and the ICC does not have sufficient information to resolve the conflict, the ICC shall forward a request for its resolution to the PI/TL at the IST. | essential | demo | B |
| ICC-2180 | ICC-2180-1-1 | The ICC shall accept from the IST information regarding the resolution of conflicts encountered while building an instrument resource profile. | essential | demo | B |
| | ICC-2180-1-2 | The ICC shall accept from the IST information regarding the resolution of conflicts encountered while building an instrument resource deviation list. | essential | demo | B |
| | ICC-2180-2-2 | The ICC shall accept from the IST information regarding the resolution of conflicts encountered while updating an instrument resource deviation list. | essential | demo | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ICC-2180-2-1 | The ICC shall accept from the IST information regarding the resolution of conflicts encountered while updating an instrument resource profile. | essential | demo | B |
| ICC-2190 | ICC-2190-a-1-1-1 | The ICC shall build its instrument resource profile based, at a minimum, on the following: a.Accepted DARs (if any). | critical | test | B |
| | ICC-2190-a-1-1-2 | The ICC shall build its instrument resource profile based, at a minimum, on the following: a.anticipated observations | critical | test | B |
| | ICC-2190-a-1-1-3 | The ICC shall build or update its instrument resource profile, or when a resource profile exists, its instrument resource deviation list, based, at a minimum, on the following: a.Accepted DARs and anticipated observations | critical | test | B |
| | ICC-2190-b-1-1 | The ICC shall build its instrument resource profile based, at a minimum, on the following: b. Instrument support activities | critical | test | B |
| | ICC-2190-c-1-1-1 | The ICC shall build its instrument resource profile based, at a minimum, on the following: c.LTSP | critical | test | B |
| | ICC-2190-c-1-1-2 | The ICC shall build its instrument resource profile based at a minimum, on the following: c.LTIP | critical | test | B |
| | ICC-2190-d-1-1 | The ICC shall build or update its instrument resource profile, or when a resource profile exists, its instrument resource deviation list, based, at a minimum, on the following: d.Current resource availability | critical | test | B |
| | ICC-2190-e-1-1 | The ICC shall build its instrument resource profile based, at a minimum, on the following: e.Current predicted orbit data and related information | critical | test | B |
| | ICC-2190-f-1-1 | The ICC shall build its instrument resource profile based at a minimum on the following: f. Rejection notification from the EOC of activities that can not be accommodated in the preliminary resource schedule | critical | test | B |
| | ICC-2190-g-1-1 | The ICC shall build its instrument resource profile based, at a minimum, on the following: g.Existing preliminary resource schedule | critical | test | B |
| | ICC-2190-a-1-2-1 | The ICC shall build its instrument resource deviation list (when a resource profile exists) based, at a minimum, on the following: a.Accepted DARs (if any) . | critical | test | B |
| | ICC-2190-a-1-2-2 | The ICC shall build its its instrument resource deviation list (when a resource profile exists) based, at a minimum, on the following: a.anticipated observations | critical | test | B |
| | ICC-2190-a-1-2-3 | The ICC shall build its instrument resource deviation list (when a resource profile exists) based, at a minimum, on the following: a.Accepted DARs (if any) and anticipated observations | critical | test | B |
| | ICC-2190-b-1-2 | The ICC shall build its instrument resource deviation list (when a resource profile exists) based, at a minimum, on the following: b. Instrument support activities | critical | test | B |
| | ICC-2190-c-1-2-1 | The ICC shall build its instrument resource deviation list (when a resource profile exists), based, at a minimum, on the following: c. LTSP | critical | test | B |
| | ICC-2190-c-1-2-2 | The ICC shall build its instrument resource deviation list (when a resource profile exists), based, at a minimum, on the following: c. LTIP | critical | test | B |
| | ICC-2190-d-1-2 | The ICC shall build its its instrument resource deviation list (when a resource profile exists) based, at a minimum, on the following: d.Current resource availability | critical | test | B |
| | ICC-2190-e-1-2 | The ICC shall buildits its instrument resource deviation list (when a resource profile exists) based, at a minimum, on the following: e.Current predicted orbit data and related information | critical | test | B |
| | ICC-2190-f-1-2 | The ICC shall build its instrument resource deviation list (when a resource profile exists) , based, at a minimum, on the following: f. Rejection notification from the EOC of activities that can not be accommodated in the preliminary resource schedule | critical | test | B |
| | ICC-2190-g-1-2 | The ICC shall build its instrument resource deviation list (when a resource profile exists), based, at a minimum, on the following: g.Existing preliminary resource schedule | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ICC-2190-a-2-1-1 | The ICC shall update its instrument resource profile, based, at a minimum, on the following: a.Accepted DARs. | critical | test | B |
| | ICC-2190-a-2-1-2 | The ICC shall update its instrument resource profile based at a minimum, on the following: a.anticipated observations | critical | test | B |
| | ICC-2190-a-2-1-3 | The ICC shall build or update its instrument resource profile, or when a resource profile exists, its instrument resource deviation list, based, at a minimum, on the following: a.Accepted DARs (if any) and/or anticipated observations | critical | test | B |
| | ICC-2190-b-2-1 | The ICC shall update its instrument resource profile based at a minimum, on the following: b. Instrument support activities | critical | test | B |
| | ICC-2190-c-2-1-1 | The ICC shall update its instrument resource profile based at a minimum, on the following: c.LTSP | critical | test | B |
| | ICC-2190-c-2-1-2 | The ICC shall update its instrument resource profile based at a minimum on the following: c.LTIP | critical | test | B |
| | ICC-2190-d-2-1 | The ICC shall update its instrument resource profile based, at a minimum, on the following: d.Current resource availability | critical | test | B |
| | ICC-2190-e-2-1 | The ICC shall update its instrument resource profile based, at a minimum, on the following: e.Current predicted orbit data and related information | critical | test | B |
| | ICC-2190-f-2-1 | The ICC shall update its instrument resource profile based, at a minimum, on the following: f. Rejection notification from the EOC of activities that can not be accommodated in the preliminary resource schedule | critical | test | B |
| | ICC-2190-g-2-1 | The ICC shall update its instrument resource profile based, at a minimum, on the following: g.Existing preliminary resource schedule | critical | test | B |
| | ICC-2190-a-2-2-1 | The ICC shall update its instrument resource deviation list (when a resource profiles exists) based, at a minimum, on the following: a.Accepted DARs (if any). | critical | test | B |
| | ICC-2190-a-2-2-2 | The ICC shall update its instrument resource deviation list (when a resource profile exists) based, at a minimum, on the following: a.anticipated observations | critical | test | B |
| | ICC-2190-a-2-2-3 | The ICC shall update its instrument resource deviation list (when a resource profile exists) ,based, at a minimum, on the following: a.Accepted DARs (if any) and anticipated observations | critical | test | B |
| | ICC-2190-b-2-2 | The ICC shall update its instrument resource deviation list (when a resource profile exists), based, at a minimum, on the following: b. Instrument support activities | critical | test | B |
| | ICC-2190-c-2-2-1 | The ICC shall update its instrument resource deviation list (when a resource profile exists), based, at a minimum, on the following: c.LTSP | critical | test | B |
| | ICC-2190-c-2-2-2 | The ICC shall update its instrument resource deviation list (when a resource profile exists), based, at a minimum, on the following: c.LTIP | critical | test | B |
| | ICC-2190-d-2-2 | The ICC shall update its instrument resource deviation list (when a resource profile exists), based, at a minimum, on the following: d.Current resource availability | critical | test | B |
| | ICC-2190-e-2-2 | The ICC shall update its instrument resource deviation list (when a resource profile exists), based, at a minimum, on the following: e.Current predicted orbit data and related information | critical | test | B |
| | ICC-2190-f-2-2 | The ICC shall update its instrument resource deviation list (when a resource profile exists) based, at a minimum, on the following: f. Rejection notification from the EOC of activities that can not be accommodated in the preliminary resource schedule | critical | test | B |
| | ICC-2190-g-2-2 | The ICC shall update its instrument resource deviation list (when a resource profile exists), based, at a minimum, on the following: g.Existing preliminary resource schedule | critical | test | B |
| ICC-2210 | ICC-2210-1 | The ICC shall ensure that its instrument resource profile contains no internal conflicts. | critical | test | B |
| | ICC-2210-2 | The ICC shall ensure that its instrument resource deviation list contains no internal conflicts. | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| ICC-2220 | ICC-2220-1 | The ICC shall be able to generate the instrument resource profile in machine readable form. | critical | demo | A |
| | ICC-2220-2 | The ICC shall be able to generate the instrument resource profile in human readable forms. | critical | demo | A |
| ICC-2230 | ICC-2230-1 | When generated, the ICC shall provide the EOC with its instrument resource profile . | critical | test | A |
| | ICC-2230-2 | When generated, the ICC shall provide the EOC with its instrument resource deviation list when a resource profile exists. | critical | test | A |
| ICC-2250 | ICC-2250 | The ICC shall accept the preliminary resource schedule from the EOC. | critical | test | A |
| ICC-2270 | ICC-2270-1-1 | The ICC shall be capable of generating at least once each day, an instrument activity list nominally covering the next 7 days. | critical | test | B |
| | ICC-2270-1-2 | The ICC shall be capable of generating at least once each day an instrument activity deviation list (when an activity profile exists for the instrument) nominally covering the next 7 days. | critical | test | B |
| | ICC-2270-2-1 | The ICC shall be capable of updating, at least once each day, an instrument activity list nominally covering the next 7 days. | critical | test | B |
| | ICC-2270-2-2 | The ICC shall be capable of updating an instrument activity deviation list (when an activity profile exists for the instrument) nominally covering the next 7 days. | critical | test | B |
| ICC-2280 | ICC-2280-a-1-1 | The ICC shall generate the instrument activity list based, at a minimum, on the following: a.DARs | critical | test | A |
| | ICC-2280-b-1-1 | The ICC shall generate the instrument activity list based, at a minimum, on the following: b. Instrument support activities | critical | test | A |
| | ICC-2280-c-1-1 | The ICC shall generate the instrument activity list based, at a minimum, on the following: c.LTSP and LTIP | critical | test | A |
| | ICC-2280-d-1-1 | The ICC shall generate the instrument activity list based, at a minimum, on the following: d. Preliminary resource schedule | critical | test | A |
| | ICC-2280-e-1-1 | The ICC shall generate the instrument activity list based, at a minimum, on the following: e.Current resource availability information | critical | test | A |
| | ICC-2280-f-1-1 | The ICC shall generate the instrument activity list, based, at a minimum, on the following: f.Current predicted orbit data and related information | critical | test | A |
| | ICC-2280-g-1-1-1 | The ICC shall generate the instrument activity list based, at a minimum, on the following: g.Responses to contingency conditions | critical | test | A |
| | ICC-2280-g-1-1-2 | The ICC shall generate the instrument activity list based at a minimum on the following: g.Responses to emergency conditions | critical | test | A |
| | ICC-2280-h-1-1 | The ICC shall generate or update the instrument activity list, based, at a minimum, on the following: h.Rejection notification from the EOC of the activities that cannot be accommodated in the detailed activity schedule | critical | test | A |
| | ICC-2280-a-1-2 | The ICC shall generate (when an activity profile exists), the instrument activity deviation list, based, at a minimum, on the following: a.DARs | critical | test | A |
| | ICC-2280-b-1-2 | The ICC shall generate (when an activity profile exists), the instrument activity deviation list, based, at a minimum, on the following: b. Instrument support activities | critical | test | A |
| | ICC-2280-c-1-2 | The ICC shall generate (when an activity profile exists), the instrument activity deviation list, based, at a minimum, on the following: c.LTSP and LTIP | critical | test | A |
| | ICC-2280-d-1-2 | The ICC shall (when an activity profile exists), the instrument activity deviation list, based, at a minimum, on the following: d. Preliminary resource schedule | critical | test | A |
| | ICC-2280-e-1-2 | The ICC shall generate (when an activity profile exists), the instrument activity deviation list, based, at a minimum, on the following: e.Current resource availability information | critical | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ICC-2280-f-1-2 | The ICC shall generate (when an activity profile exists), the instrument activity deviation list, based, at a minimum, on the f.Current predicted orbit data and related information | critical | test | A |
| | ICC-2280-g-1-2-1 | The ICC shall generate (when an activity profile exists), the instrument activity deviation list, based, at a minimum, on the following: g.Responses to contingency conditions. | critical | test | A |
| | ICC-2280-g-1-2-2 | The ICC shall generate (when an activity profile exists), the instrument activity deviation list, based, at a minimum, on the following: g.Responses to emergency conditions | critical | test | A |
| | ICC-2280-h-1-2 | The ICC shall generate (when an activity profile exists), the instrument activity deviation list, based, at a minimum, on the following: h.Rejection notification from the EOC of the activities that cannot be accommodated in the detailed activity schedule | critical | test | A |
| | ICC-2280-a-2-1 | The ICC shall update the instrument activity list based, at a minimum, on the following: a.DARs | critical | test | A |
| | ICC-2280-b-2-1 | The ICC shall update the instrument activity list, based, at a minimum, on the following: b. Instrument support activities | critical | test | A |
| | ICC-2280-c-2-1 | The ICC shall update the instrument activity list, based, at a minimum, on the following: c.LTSP and LTIP | critical | test | A |
| | ICC-2280-d-2-1 | The ICC shall update the instrument activity list, based, at a minimum, on the following: d. Preliminary resource schedule | critical | test | A |
| | ICC-2280-e-2-1 | The ICC shall update the instrument activity list, based, at a minimum, on the following: e.Current resource availability information | critical | test | A |
| | ICC-2280-f-2-1 | The ICC shall update the instrument activity list, based, at a minimum, on the following: f.Current predicted orbit data and related information | critical | test | A |
| | ICC-2280-g-2-1-1 | The ICC shall update the instrument activity list, based, at a minimum, on the following: g.Responses to contingency conditions | critical | test | A |
| | ICC-2280-g-2-1-2 | he ICC shall update the instrument activity list, , based, at a minimum, on the following: g.emergency conditions | critical | test | A |
| | ICC-2280-h-2-1 | The ICC shall update the instrument activity list, based, at a minimum, on the following: h.Rejection notification from the EOC of the activities that cannot be accommodated in the detailed activity schedule | critical | test | A |
| | ICC-2280-a-2-2 | The ICC shall update (when an activity profile exists), the instrument activity deviation list, based, at a minimum, on the following: a.DARs | critical | test | A |
| | ICC-2280-b-2-2 | he ICC shall update (when an activity profile exists), the instrument activity deviation list, based, at a minimum, on the following: b. Instrument support activities | critical | test | A |
| | ICC-2280-c-2-2 | The ICC shall update (when an activity profile exists), the instrument activity deviation list, based, at a minimum, on the following: c.LTSP and LTIP | critical | test | A |
| | ICC-2280-d-2-2 | The ICC shall update (when an activity profile exists), the instrument activity deviation list, based, at a minimum, on the following: d. Preliminary resource schedule | critical | test | A |
| | ICC-2280-e-2-2 | The ICC shall update (when an activity profile exists), the instrument activity deviation list, based, at a minimum, on the following: e.Current resource availability information | critical | test | A |
| | ICC-2280-f-2-2 | The ICC shall update (when an activity profile exists), the instrument activity deviation list, based, at a minimum, on the following: f.Current predicted orbit data and related information | critical | test | A |
| | ICC-2280-g-2-2-1 | The ICC shall update (when an activity profile exists), the instrument activity deviation list, based, at a minimum, on the following: g.Responses to contingency conditions | critical | test | A |
| | ICC-2280-g-2-2-2 | The ICC shall update (when an activity profile exists), the instrument activity deviation list, based, at a minimum, on the following: g.Responses to emergency conditions | critical | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ICC-2280-h-2-2 | The ICC shall update (when an activity profile exists), the instrument activity deviation list, based, at a minimum, on the following: h.Rejection notification from the EOC of the activities that cannot be accommodated in the detailed activity schedule | critical | test | A |
| ICC-2290 | ICC-2290-a-1-1-1 | The ICC shall generate the instrument activity list in machine- usable form to describe for each activity: a. Activity identifier including traceability to DARs. | critical | test | B |
| | ICC-2290-a-1-1-2 | The ICC shall generate the instrument activity list in machine-usable form, to describe the following for each activity: a. instrument support activities | critical | test | B |
| | ICC-2290-a-1-1-3 | The ICC shall generate the instrument activity list in machine-usable form, to describe the following for each activity: a. Activity identifier including traceability to instrument support activities | critical | test | B |
| | ICC-2290-b-1-1 | The ICC shall generate the instrument activity list in machine- usable form, to describe the following for each activity: b.Objectives | critical | test | B |
| | ICC-2290-c-1-1 | The ICC shall generate the instrument activity list in machine-usable form, to describe the following for each activity: c. Resource requirements | critical | test | B |
| | ICC-2290-d-1-1-1 | The ICC shall generate the instrument activity list n machine-usable forms to describe the following for each activity: d.Start time constraints and duration | critical | test | B |
| | ICC-2290-d-1-1-1 | The ICC shall generate the instrument activity list in machine-usable form, to describe the following for each activity: d.Start time constraints | critical | test | B |
| | ICC-2290-d-1-1-2 | The ICC shall generate the instrument activity list in machine-usable form, to describe for each activity the following: d.Duration | critical | test | B |
| | ICC-2290-e-1-1 | The ICC shall generate the instrument activity list in machine-usable form, to describe for each activity, the following: e.Instrument modes as a function of time | critical | test | B |
| | ICC-2290-f-1-1-1 | The ICC shall generate the instrument activity list in machine usable form to describe for each activity, at a minimum, as many of the following that apply: f.Pointing angles | critical | test | B |
| | ICC-2290-f-1-1-2 | The ICC shall generate the instrument activity list in machine-usable form, to describe for each activity, the following: f.field of view (FOV) | critical | test | B |
| | ICC-2290-g-1-1 | The ICC shall generate the instrument activity list in machine- usable form, to describe for each activity, the following: g.Specified tolerance limits | critical | test | B |
| | ICC-2290-h-1-1 | The ICC shall generate the instrument activity list in machine-usable form, to describe for each activity, at a minimum, the following: h. Disturbances caused for each instrument mode | critical | test | B |
| | ICC-2290-a-1-2-1 | The ICC shall generate the instrument activity list in human- readable form, to describe for each activity the following: a. Activity identifier including traceability to DARs. | critical | test | B |
| | ICC-2290-a-1-2-2 | The ICC shall generate the instrument activity list in human readable orm to describe for each activity, the following: a. Activity identifier including traceability to instrument support activities | critical | test | B |
| | ICC-2290-a-1-2-3 | The ICC shall generate the instrument activity list in human-readable form, to describe for each activity, the following: a. Activity identifier including traceability to DARs and instrument support activity. | critical | test | B |
| | ICC-2290-b-1-2 | The ICC shall generate the instrument activity list in human-readable form, to describe for each activity the following: b.Objectives | critical | test | B |
| | ICC-2290-c-1-2 | The ICC shall generate the instrument activity list in human readable form, to describe for each activity, the following: c. Resource requirements | critical | test | B |
| | ICC-2290-d-1-2-1 | The ICC shall generate the instrument activity list in human-readable form, to describe for each activity, the following: d.Start time constraints | critical | test | B |
| | ICC-2290-d-1-2-2 | The ICC shall generate the instrument activity list in human-readable form, to describe for each activity, the following: d.duration | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ICC-2290-e-1-2 | The ICC shall generate the instrument activity list in human readable form, to describe for each activity, the following: e.Instrument modes as a function of time | critical | test | B |
| | ICC-2290-f-1-2-1 | The ICC shall generate the instrument activity list in human readable form, to describe for each activity, the following: f.Pointing angles | critical | test | B |
| | ICC-2290-f-1-2-2 | he ICC shall generate the instrument activity list in human-readable form, to describe for each activity, the following: f.field of view (FOV) | critical | test | B |
| | ICC-2290-g-1-2 | The ICC shall generate the instrument activity list in human-readable form, to describe for each activity, the following: g.Specified tolerance limits | critical | test | B |
| | ICC-2290-h-1-2 | The ICC shall generate the instrument activity list in human-readable form, to describe for each activity, the following: h. Disturbances caused for each instrument mode | critical | test | B |
| | ICC-2290-a-2-1-1 | The ICC shall generate the instrument activity deviation list (when an activity profile exists for the instrument) in machine-usable form, to describe for each activity, at a minimum, the following: a. Activity identifier including traceability to DARs. | critical | test | B |
| | ICC-2290-a-2-1-2 | The ICC shall generate the instrument activity deviation list (when an activity profile exists for the instrument) in machine-usable form, to describe for each activity, at a minimum, the following : a. Activity identifier including traceability instrument support activities | critical | test | B |
| | ICC-2290-a-2-1-3 | The ICC shall generate the instrument activity deviation list (when an activity profile exists for the instrument) in machine-usable form, to describe for each activity, the following: a. Activity identifier including traceability to DARs and instrument support activities | critical | test | B |
| | ICC-2290-b-2-1 | The ICC shall generate the instrument activity deviation list (when an activity profile exists for the instrument) in machine-usable form, to describe for each activity, the following: b.Objectives | critical | test | B |
| | ICC-2290-c-2-1 | The ICC shall generate the instrument activity deviation list (when an activity profile exists for the instrument) in machine-usable form, to describe for each activity, the following: c. Resource requirements | critical | test | B |
| | ICC-2290-d-2-1-1 | The ICC shall generate the instrument activity deviation list (when an activity profile exists for the instrument) in machine-usable form, to describe for each activity, the following: d.Start time constraints | critical | test | B |
| | ICC-2290-d-2-1-2 | The ICC shall generate the instrument activity deviation list (when an activity profile exists for the instrument) in machine-usable form, to describe for each activity, the following: d.duration | critical | test | B |
| | ICC-2290-e-2-1 | The ICC shall generate the instrument activity deviation list (when an activity profile exists for the instrument) in machine-usable form, to describe for each activity, the following: e.Instrument modes as a function of time | critical | test | B |
| | ICC-2290-f-2-1-1 | The ICC shall generate the instrument activity deviation list (when an activity profile exists for the instrument) in machine-usable form, to describe for each activity, the following: f.Pointing angles | critical | test | B |
| | ICC-2290-f-2-1-2 | The ICC shall generate the instrument activity deviation list (when an activity profile exists for the instrument) in machine-usable form, to describe for each activity, the following: f. field of view (FOV) | critical | test | B |
| | ICC-2290-g-2-1 | The ICC shall generate the instrument activity deviation list (when an activity profile exists for the instrument) in machine-usable form, to describe for each activity, the following: g.Specified tolerance limits | critical | test | B |
| | ICC-2290-h-2-1 | The ICC shall generate the instrument activity deviation list (when an activity profile exists for the instrument) in machine-usable form, to describe for each activity, the following: h. Disturbances caused for each instrument mode | critical | test | B |
| | ICC-2290-a-2-2-1 | The ICC shall generate the instrument activity deviation list (when an activity profile exists for the instrument) in human-readable form, to describe for each activity, the following: a. Activity identifier including traceability to DARs. | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ICC-2290-a-2-2-2 | The ICC shall generate the instrument activity deviation list (when an activity profile exists for the instrument) in human-readable form, to describe for each activity, the following: a. Activity identifier including traceability to instrument support activities | critical | test | B |
| | ICC-2290-a-2-2-3 | The ICC shall generate the instrument activity deviation list (when an activity profile exists for the instrument) in human-readable form, to describe for each activity, the following: a. Activity identifier including traceability to DARs and instrument support activities | critical | test | B |
| | ICC-2290-b-2-2 | The ICC shall generate the instrument activity deviation list (when an activity profile exists for the instrument) in human-readable forms, to describe for each activity, the following: b.Objectives | critical | test | B |
| | ICC-2290-c-2-2 | The ICC shall generate the instrument activity deviation list (when an activity profile exists for the instrument) in human-readable form, to describe for each activity, the following: c. Resource requirements | critical | test | B |
| | ICC-2290-d-2-2-1 | The ICC shall generate the instrument activity deviation list (when an activity profile exists for the instrument) inhuman-readable form, to describe for each activity, the following: d.Start time constraints | critical | test | B |
| | ICC-2290-d-2-2-2 | The ICC shall generate the instrument activity deviation list (when an activity profile exists for the instrument) in human-readable form, to describe for each activity, the following: d.duration | critical | test | B |
| | ICC-2290-e-2-2 | The ICC shall generate the instrument activity deviation list (when an activity profile exists for the instrument) in human-readable form, to describe for each activity, the following: e.Instrument modes as a function of time | critical | test | B |
| | ICC-2290-f-2-2-1 | The ICC shall generate the instrument activity deviation list (when an activity profile exists for the instrument) in human-readable form, to describe for each activity, the following: f.Pointing angles | critical | test | B |
| | ICC-2290-f-2-2-2 | The ICC shall generate the instrument activity deviation list (when an activity profile exists for the instrument) in human-readable form, to describe for each activity, the following: f.field of view (FOV) | critical | test | B |
| | ICC-2290-g-2-2 | The ICC shall generate the instrument activity deviation list (when an activity profile exists for the instrument) in human-readable forms, to describe for each activity, the following: g.Specified tolerance limits | critical | test | B |
| | ICC-2290-h-2-2 | The ICC shall generate the instrument activity deviation list (when an activity profile exists for the instrument) in human-readable form, to describe for each activity, the following: h.Disturbances caused for each instrument mode. | critical | test | B |
| ICC-2300 | ICC-2300 | The ICC shall accept from the EOC a notification of rejection of instrument activities. | critical | test | A |
| ICC-2350 | ICC-2350-1-1-1 | In support of a TOO observation the ICC shall update the instrument activity list within 8 hours, if the DAR affects existing instrument activities. | critical | analysis | B |
| | ICC-2350-1-1-2 | In support of a TOO observation, the ICC shall update the instrument activity list within 8 hours, if the DAR creates new conflicts. | critical | analysis | B |
| | ICC-2350-1-2-1 | In support of a TOO observation the ICC shall update the instrument activity deviation list (when an activity profile exists for the instrument) within 8 hours, if the DAR affects existing instrument activities. | critical | analysis | B |
| | ICC-2350-1-2-2 | In support of a TOO observation the ICC shall update the instrument activity deviation list (when an activity profile exists for the instrument) within 8 hours, if the DAR creates new conflicts. | critical | analysis | B |
| | ICC-2350-2-1-1 | In support of a late change, the ICC shall update the instrument activity list within 8 hours, if the DAR affects existing instrument activities. | critical | analysis | B |
| | ICC-2350-2-1-2 | In support of a late change, the ICC shall update the instrument activity list within 8 hours, if the DAR creates new conflicts. | critical | analysis | B |
| | ICC-2350-2-2-1 | In support of a late change, the ICC shall update the instrument activity deviation list (when an activity profile exists for the instrument) within 8 hours, if the DAR affects existing instrument activities. | critical | analysis | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ICC-2350-2-2-2 | In support of a late change, the ICC shall update the instrument activity deviation list (when an activity profile exists for the instrument) within 8 hours, if the DAR creates new conflicts. | critical | analysis | B |
| ICC-2370 | ICC-2370-1-1 | In support of a TOO observation, the ICC shall update the instrument activity list within 30 minutes, if the DAR does not affect existing instrument activities. | critical | test | B |
| | ICC-2370-1-1-2 | In support of a TOO observation, the ICC shall update the instrument activity list within 30 minutes, if the DAR does not create new conflicts. | critical | test | B |
| | ICC-2370-1-2-1 | In support of a TOO observation, the ICC shall update the instrument activity deviation list (when an activity profile exists for the instrument) within 30 minutes, if the DAR does not affect existing instrument activities. | critical | test | B |
| | ICC-2370-1-2-2 | In support of a TOO observation, the ICC shall update the instrument activity deviation list (when an activity profile exists for the instrument) within 30 minutes, if the DAR does not create new conflicts. | critical | test | B |
| ICC-2380 | ICC-2380-1 | In support of a late change , the ICC shall be capable of updating the instrument activity list within 75 minutes, if the request for instrument support activity does not affect existing instrument activity list events. | critical | test | B |
| | ICC-2380-2 | In support of a late change , the ICC shall be capable of updating the instrument activity list within 75 minutes, if the request for instrument support activity does not create new conflicts. | critical | test | B |
| ICC-2390 | ICC-2390-1 | The ICC shall provide the EOC with the instrument activity list and any updates thereto, when generated. | critical | test | A |
| | ICC-2390-2 | The ICC shall provide the EOC with the instrument activity deviation list (when an activity profile exists for the instrument) and any updates thereto, when generated. | critical | test | A |
| ICC-2400 | ICC-2400-1-1 | The ICC shall have the capability to update the instrument activity list in response to instrument malfunctions that affect the continuation of the existing schedule. | critical | test | B |
| | ICC-2400-1-2 | The ICC shall have the capability to update the instrument activity list in response to other special events that affect the continuation of the existing schedule. | critical | test | B |
| | ICC-2400-2-1 | The ICC shall have the capability to update the instrument activity deviation list (when an activity profile exists for the instrument) in response to instrument malfunctions that affect the continuation of the existing schedule. | critical | test | B |
| | ICC-2400-2-2 | The ICC shall have the capability to update the instrument activity deviation list (when an activity profile exists for the instrument) in response to other special events that affect the continuation of the existing schedule. | critical | test | B |
| ICC-2410 | ICC-2410-1 | The ICC shall update , for historical purposes, its instrument activity list within 24 hours of issuance of the unscheduled commands. | critical | analysis | B |
| | ICC-2410-2 | The ICC shall update , for historical purposes, its instrument activity deviation list) within 24 hours of issuance of the unscheduled commands. | critical | analysis | B |
| ICC-2420 | ICC-2420-1 | The ICC shall send to the IST the generated instrument activity list to be reviewed and/or approved by the PI/TL. | essential | test | B |
| | ICC-2420-2 | The ICC shall send to the IST the generated instrument activity deviation list) to be reviewed and/or approved by the PI/TL. | essential | test | B |
| ICC-2430 | ICC-2430-1-1 | The ICC shall notify the PI/TL at the IST of any problems encountered while building its instrument activity list . | essential | test | B |
| | ICC-2430-1-2 | The ICC shall notify the PI/TL at the IST of any problems encountered while building or updating its instrument activity deviation list. | essential | test | B |
| | ICC-2430-2-1 | The ICC shall notify the PI/TL at the IST of any problems encountered while updating its instrument activity list. | essential | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ICC-2430-2-2 | The ICC shall notify the PI/TL at the IST of any problems encountered while updating its instrument activity deviation list. | essential | test | B |
| ICC-2450 | ICC-2450-1 | The ICC shall accept from the IST notification of problem resolution regarding the instrument activity list. | essential | test | B |
| | ICC-2450-2 | The ICC shall accept from the IST notification of problem resolution regarding the instrument activity deviation list. | essential | test | B |
| ICC-3010 | ICC-3010-1 | The ICC shall validate instrument loads that are generated at the ICC. | critical | test | B |
| | ICC-3010-2 | The ICC shall validate SCC-stored instrument commands that are generated at the ICC. | critical | test | B |
| | ICC-3010-3 | The ICC shall validate SCC-stored instrument tables, as appropriate, that are generated at the ICC. | critical | test | B |
| | ICC-3010-4 | The ICC shall validate a combination of instrument loads, SCC-stored instrument commands, and SCC-stored instrument tables, as appropriate, that are generated at the ICC. | critical | test | B |
| ICC-3020 | ICC-3020-1 | The ICC shall accept the detailed activity schedule from the EOC. | critical | test | B |
| | ICC-3020-2 | The ICC shall accept the detailed activity schedule updates from the EOC. | critical | test | B |
| ICC-3040 | ICC-3040-1 | The ICC shall be capable of generating , at least once each day, instrument loads, based on the detailed activity schedule | critical | test | B |
| | ICC-3040-2 | The ICC shall be capable of generating , at least once each day, SCC-stored instrument commands based on the detailed activity schedule | critical | test | B |
| | ICC-3040-3 | The ICC shall be capable of generating , at least once each day, SCC-stored instrument tables based on the detailed activity schedule | critical | test | B |
| | ICC-3040-4 | The ICC shall be capable of generating , at least once each day, a combination of instrument loads, SCC-stored instrument commands, and SCC-stored instrument tables based on the detailed activity schedule | critical | test | B |
| ICC-3050 | ICC-3050 | The ICC shall be able to generate a command-to-memory location map for instrument-stored command loads. | critical | test | B |
| ICC-3060 | ICC-3060-1 | The ICC shall generate and validate, in less than 1 hour, the instrument loads, for 24 hours of operation of its instrument. | critical | analysis | B |
| | ICC-3060-2 | The ICC shall generate and validate, in less than 1 hour, the SCC-stored instrument commands for 24 hours of operation of its instrument. | critical | analysis | B |
| | ICC-3060-3 | The ICC shall generate and validate, in less than 1 hour, the SCC-stored instrument tables for 24 hours of operation of its instrument. | critical | analysis | B |
| | ICC-3060-4 | The ICC shall generate and validate, in less than 1 hour, a combination of the instrument loads, SCC-stored instrument commands, and SCC-stored instrument tables for 24 hours of operation of its instrument. | critical | analysis | B |
| ICC-3070 | ICC-3070-1 | In support of a TOO observation the ICC shall generate and validate the corresponding commands within 25 minutes of receiving an updated detailed activity schedule from the EOC, if the corresponding observation does not impact previously scheduled activities. | critical | analysis | B |
| | ICC-3070-2 | In support of a late change, the ICC shall generate and validate the corresponding commands within 25 minutes of receiving an updated detailed activity schedule from the EOC, if the corresponding observation does not impact previously scheduled activities. | critical | analysis | B |
| ICC-3071 | ICC-3071 | In support of a TOO observation, the ICC shall be capable of generating and validating the corresponding commands within 55 minutes of receiving an updated detailed activity schedule from the EOC, if the corresponding observation impacts previously scheduled activities. | critical | analysis | B |
| ICC-3085 | ICC-3085 | In support of a late change, the ICC shall be capable of generating and validating the corresponding commands within 115 minutes of receiving an updated detailed activity schedule from the EOC, if the corresponding activity impacts previously scheduled activities. | critical | analysis | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| ICC-3090 | ICC-3090-1 | The ICC shall generate as command groups, preplanned instrument commands for later use in emergency situations to protect the health and safety of its instrument. | critical | inspect. | B |
| | ICC-3090-2 | The ICC shall validate preplanned instrument commands for later use in emergency situations to protect the health and safety of its instrument. | critical | analysis | B |
| | ICC-3090-3 | The ICC shall store, as command groups, preplanned instrument commands for later use in emergency situations to protect the health and safety of its instrument. | critical | analysis | B |
| ICC-3100 | ICC-3100-1 | The ICC shall be able to generate preplanned contingency instrument commands to support specific TOO observations. | critical | inspect. | B |
| | ICC-3100-2 | The ICC shall be able to validate preplanned contingency instrument commands to support specific TOO observations. | critical | inspect. | B |
| | ICC-3100-3 | The ICC shall be able to store preplanned contingency instrument commands to support specific TOO observations. | critical | inspect. | B |
| ICC-3110 | ICC-3110-1 | The ICC shall be able to generate preplanned contingency instrument commands to be used in event of instrument anomalies. | critical | inspect. | B |
| | ICC-3110-2 | he ICC shall be able to validate preplanned contingency instrument commands to be used in event of instrument anomalies. | critical | inspect. | B |
| | ICC-3110-3 | he ICC shall be able to store preplanned contingency instrument commands to be used in event of instrument anomalies. | critical | inspect. | B |
| ICC-3150 | ICC-3150-1 | The ICC shall be able to accept from the PI/TL, via the IST, instrument memory loads, including software updates. | essential | test | B |
| | ICC-3150-2 | The ICC shall be able to accept from the PI/TL, via the IST, instrument memory loads, table updates. | essential | test | B |
| ICC-3160 | ICC-3160-a | Upon request from the PI/TL at the IST, the ICC shall provide the IST with at a minimum the following: a.Current detailed activity schedule | essential | test | B |
| | ICC-3160-b-1 | Upon request from the PI/TL at the IST, the ICC shall provide the IST with at a minimum the following: b.Instrument commands | essential | test | B |
| | ICC-3160-b-2 | Upon request from the PI/TL at the IST, the ICC shall provide the IST with at a minimum the following: b.Instrument tables | essential | test | B |
| | ICC-3160-b-3 | Upon request from the PI/TL at the IST, the ICC shall provide the IST with at a minimum the following: b.instrument loads | essential | test | B |
| | ICC-3160-c | Upon request from the PI/TL at the IST, the ICC shall provide the IST with at a minimum the following: c.Instrument command status information | essential | test | B |
| ICC-3210 | ICC-3210-a-1 | The ICC shall provide the EOC with instrument loads, and associated information that includes, at a minimum, the following: a.Instrument identifier | critical | inspect. | A |
| | ICC-3210-b-1 | The ICC shall provide the EOC with instrument loads, and associated information that includes, at a minimum, the following: b.Schedule identifier, if applicable | critical | inspect. | A |
| | ICC-3210-c-1 | The ICC shall provide the EOC with instrument loads, that include, at a minimum, the following: c.Critical command information | critical | inspect. | A |
| | ICC-3210-a-2 | The ICC shall provide the EOC with SCC-stored instrument commands that include, at a minimum, the following: a.Instrument identifier | critical | inspect. | A |
| | ICC-3210-b-2 | The ICC shall provide the EOC with SCC-stored instrument commands that include, at a minimum, the following: b.Schedule identifier, if applicable | critical | inspect. | A |
| | ICC-3210-c-2 | The ICC shall provide the EOC with SCC-stored instrument that include, at a minimum, the following: c.Critical command information | critical | inspect. | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ICC-3210-a-3 | The ICC shall provide the EOC with SCC-stored instrument tables,that include, at a minimum, the following: a.Instrument identifier | critical | inspect. | A |
| | ICC-3210-b-3 | The ICC shall provide the EOC with SCC-stored instrument tables, that include, at a minimum, the following: b.Schedule identifier, if applicable | critical | inspect. | A |
| | ICC-3210-c-3 | The ICC shall provide the EOC with SCC-stored instrument tables,that include, at a minimum, the following: c.Critical command information | critical | inspect. | A |
| | ICC-3210-a-4 | The ICC shall provide the EOC with preplanned real-time instrument commands that include, at a minimum, the following: a.Instrument identifier | critical | inspect. | A |
| | ICC-3210-b-4 | he ICC shall provide the EOC with preplanned real-time instrument commands that include, at a minimum, the following: b.Schedule identifier, if applicable | critical | inspect. | A |
| | ICC-3210-c-4 | The ICC shall provide the EOC with preplanned real-time instrument commands that include, at a minimum, the following: c.Critical command information | critical | inspect. | A |
| ICC-3220 | ICC-3220 | The ICC shall have the capability to accept, via the IST, an instrument command request from the PI/TL. | essential | test | B |
| ICC-3230 | ICC-3230 | The ICC shall evaluate a command request from the IST against the current detailed activity schedule to determine whether it can be met with the corresponding commands without impacting previously scheduled activities. | critical | test | B |
| ICC-3240 | ICC-3240-1 | The ICC shall generate a preplanned instrument command in response to an instrument command request from the t PI/TL at the IST. | essential | test | B |
| | ICC-3240-2 | The ICC shall validate a preplanned instrument command in response to an instrument command request from the t PI/TL at the IST. | essential | test | B |
| ICC-3250 | ICC-3250 | The ICC shall provide the EOC with a preplanned instrument command, in response to an instrument command request from the PI/TL at the IST, within 30 minutes of receiving the request. | essential | test | B |
| ICC-3262 | ICC-3262-1 | In support of a TOO observation the ICC shall transfer the corresponding command request to the EOC within 5 minutes of generation and validation of the commands. | critical | test | B |
| | ICC-3262-2 | In support of a late change, the ICC shall transfer the corresponding command request to the EOC within 5 minutes of generation and validation of the commands. | critical | test | B |
| ICC-3270 | ICC-3270-1-1 | The ICC shall be able to generate emergency instrument command groups in emergency situations. | critical | test | A |
| | ICC-3270-1-2 | The ICC shall be able to generate contingency instrument command groups in contingency situations. | critical | test | A |
| | ICC-3270-2-1 | The ICC shall be able to validate emergency instrument command groups in emergency situations. | critical | test | A |
| | ICC-3270-2-2 | The ICC shall be able to validate contingency instrument command groups in contingency situations. | critical | test | A |
| ICC-3280 | ICC-3280-1 | The ICC shall have the capability to provide the EOC with instrument command groups, within 1 minute of a predefined emergency situation. | critical | test | A |
| | ICC-3280-2 | The ICC shall have the capability to provide the EOC with instrument command groups, within 1 minute of a predefined contingency situation. | critical | test | A |
| ICC-3300 | ICC-3300 | The ICC shall be capable of retrieving validated and stored instrument command groups and initiating transfer to the EOC, within 1 second of operator initiation. | critical | demo | B |
| ICC-3360 | ICC-3360 | The ICC shall provide an instrument command group with a single emergency instrument command to the EOC within 200 milliseconds of operator initiation. | critical | demo | B |
| ICC-3370 | ICC-3370-1 | The ICC shall provide the capability to verify the successful receipt of instrument commands. | critical | demo | A |
| | ICC-3370-2 | The ICC shall provide the capability to verify the successful execution of instrument commands. | critical | demo | B |
| ICC-3380 | ICC-3380-a | The ICC shall accept from the EOC instrument uplink status, which includes at a minimum the following: a.Receipt at the EOC | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ICC-3380-b | The ICC shall accept from the EOC instrument uplink status, which includes at a minimum the following: b.Validation status as determined by the EOC | essential | test | A |
| | ICC-3380-c | The ICC shall accept from the EOC instrument uplink status, which includes at a minimum the following: c.Receipt at the spacecraft | essential | test | A |
| ICC-3400 | ICC-3400-a | Upon request from the PI/TL at the IST, the ICC shall provide the IST with instrument command status, which includes at a minimum the following: a.Receipt at the EOC | essential | test | B |
| | ICC-3400-b | Upon request from the PI/TL at the IST, the ICC shall provide the IST with instrument command status, which includes at a minimum the following: b.Validation status as determined by the EOC | essential | test | B |
| | ICC-3400-c | Upon request from the PI/TL at the IST, the ICC shall provide the IST with instrument command status, which includes at a minimum the following: c.Receipt at the spacecraft | essential | test | B |
| | ICC-3400-d | pon request from the PI/TL at the IST, the ICC shall provide the IST with instrument command status, which includes at a minimum the following: d.Execution at the instrument | essential | test | B |
| ICC-3420 | ICC-3420 | The ICC shall provide the IST with command request status, which includes the receipt of the command request at the ICC and the status of for the corresponding instrument command groups. | essential | test | B |
| ICC-3430 | ICC-3430-1 | The ICC shall accept from the EOC command notification messages when emergency instrument commands are issued by the EOC. | critical | inspect. | A |
| | ICC-3430-2 | The ICC shall accept from the EOC command notification messages when contingency instrument commands are issued by the EOC. | critical | inspect. | A |
| ICC-4010 | ICC-4010-a-1 | Upon request from the PI/TL, the ICC shall provide the IST with at a minimum the following: a.Instrument housekeeping data | essential | test | B |
| | ICC-4010-a-2 | Upon request from the PI/TL, the ICC shall provide the IST with at a minimum the following: a.Instrument engineering data | essential | test | B |
| | ICC-4010-b | Upon request from the PI/TL, the ICC shall provide the IST with at a minimum the following: b.Spacecraft housekeeping data | essential | test | B |
| | ICC-4010-c | Upon request from the PI/TL, the ICC shall provide the IST with at a minimum the following: c.Derived parameters for its instrument | essential | test | B |
| ICC-4020 | ICC-4020-a-1 | The ICC shall provide the capability to accept CCSDS packets from EDOS containing at a minimum the following data types: a.Spacecraft housekeeping data | critical | test | A |
| | ICC-4020-a-2 | The ICC shall provide the capability to accept CCSDS packets from EDOS containing at a minimum the following data types: a.instrument housekeeping data | critical | test | A |
| | ICC-4020-b-1 | The ICC shall provide the capability to accept CCSDS packets from EDOS containing at a minimum the following data types: b.Instrument engineering within which instrument engineering data is embedded | critical | test | B |
| | ICC-4020-b-2 | The ICC shall provide the capability to accept CCSDS packets from EDOS containing at a minimum the following data types: b.instrument science data within which instrument engineering data is embedded | critical | test | B |
| | ICC-4020-c | The ICC shall provide the capability to accept CCSDS packets from EDOS containing at a minimum the following data types: c.Instrument memory dump data | critical | test | A |
| ICC-4040 | ICC-4040 | The ICC shall be capable of simultaneously receiving real-time and spacecraft recorder data of all EOS telemetry data types | essential | test | B |
| ICC-4045 | ICC-4045-1-1 | The ICC shall provide the capability to extract instrument housekeeping data from the spacecraft housekeeping data stream. | critical | test | B |
| | ICC-4045-1-2 | The ICC shall provide the capability to extract instrument housekeeping data from the instrument housekeeping data stream. | critical | test | B |
| | ICC-4045-2-1 | The ICC shall provide the capability to extract relevant spacecraft parameters from the spacecraft housekeeping data stream. | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ICC-4045-2-2 | The ICC shall provide the capability to extract relevant spacecraft parameters from the instrument housekeeping data stream. | critical | test | B |
| ICC-4050 | ICC-4050 | The ICC shall be capable of extracting instrument engineering data from instrument science data. | critical | test | B |
| ICC-4060 | ICC-4060 | The ICC shall support all EOS telemetry formats for instrument engineering data. | critical | test | B |
| ICC-4070 | ICC-4070-1 | The ICC shall provide the capability to receive data quality information with the incoming CCSDS packets as provided by EDOS. | critical | test | A |
| | ICC-4070-2 | The ICC shall provide the capability to report data quality information with the incoming CCSDS packets as provided by EDOS. | critical | test | A |
| ICC-4090 | ICC-4090 | The ICC shall provide the capability to detect and report gaps in the telemetry data it receives. | critical | test | A |
| ICC-4095 | ICC-4095-a-1 | The ICC shall provide the capability to receive and process, non-telemetry data, which includes at a minimum the following: a.Monitor blocks from the DSN | critical | test | A |
| | ICC-4095-a-2 | The ICC shall provide the capability to receive and process, non-telemetry data, which includes at a minimum the following: a.Monitor blocks from the GN | critical | test | A |
| | ICC-4095-a-3 | The ICC shall provide the capability to receive and process, non-telemetry data, which includes at a minimum the following: a.Monitor blocks from WOTS | critical | test | A |
| | ICC-4095-b | The ICC shall provide the capability to receive and process, non-telemetry data, which includes at a minimum the following: b.Status messages from EDOS | critical | test | A |
| ICC-4100 | ICC-4100-a-1 | The ICC shall have the capability to perform instrument data processing, which includes at a minimum the following: a.Decommutation | critical | test | A |
| | ICC-4100-b-1 | The ICC shall have the capability to perform instrument housekeeping data processing, which includes at a minimum the following: b.Engineering unit conversion | critical | test | A |
| | ICC-4100-c-1 | The ICC shall have the capability to perform instrument housekeeping data processing, which includes at a minimum the following: c.Limit checking, flagging out-of-limit parameters | critical | test | A |
| | ICC-4100-d-1 | The ICC shall have the capability to perform instrument housekeeping data processing, which includes at a minimum the following: d.Derived parameter generation | critical | test | B |
| | ICC-4100-e-1-1 | The ICC shall have the capability to perform instrument housekeeping data processing, which includes at a minimum the following: e.Digital state determination | critical | test | A |
| | ICC-4100-e-1-2 | The ICC shall have the capability to perform instrument housekeeping data processing, which includes at a minimum the following: e.discrete state determination | critical | test | A |
| | ICC-4100-a-2 | The ICC shall have the capability to perform instrument engineering data processing, which includes at a minimum the following: a.Decommutation | critical | test | A |
| | ICC-4100-b-2 | The ICC shall have the capability to perform instrument engineering data processing, which includes at a minimum the following: b.Engineering unit conversion | critical | test | A |
| | ICC-4100-c-2 | The ICC shall have the capability to perform instrument engineering data processing, which includes at a minimum the following: c.Limit checking, flagging out-of-limit parameters | critical | test | A |
| | ICC-4100-d-2 | The ICC shall have the capability to perform instrument engineering data processing, which includes at a minimum the following: d.Derived parameter generation | critical | test | B |
| | ICC-4100-e-2-1 | The ICC shall have the capability to perform instrument engineering data processing, which includes at a minimum the following: e.Digital state determination | critical | test | A |
| | ICC-4100-e-2-2 | The ICC shall have the capability to perform instrument engineering data processing, which includes at a minimum the following: e.discrete state determination | critical | test | A |
| ICC-4110 | ICC-4110-1 | The ICC shall support the definition of multiple sets of boundary limits for each non-discrete parameter, with each set including definitions for one upper and lower boundary. | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ICC-4110-2 | The ICC shall support the definition of multiple sets of boundary limits for each non-discrete parameter, with each set including definitions for more than one upper and lower boundary. | critical | test | B |
| ICC-4120 | ICC-4120-1 | The ICC shall provide the capability to accept temporary changes to limit definitions. | critical | test | B |
| | ICC-4120-2 | The ICC shall provide the capability to accept permanent changes to limit definitions. | critical | test | B |
| ICC-4130 | ICC-4130-1 | The ICC shall have the capability to continuously process instrument housekeeping data in real time as it is being received. | critical | test | A |
| | ICC-4130-2 | The ICC shall have the capability to continuously process instrument engineering data in real time as it is being received. | critical | test | A |
| ICC-4150 | ICC-4150 | The ICC shall have the capability to provide event messages whenever a predetermined number of limit violations for a parameter is detected. | critical | test | A |
| ICC-4160 | ICC-4160-1 | The ICC shall have the capability to process spacecraft recorder instrument housekeeping data to determine instrument health and safety. | critical | test | B |
| | ICC-4160-2 | The ICC shall have the capability to process spacecraft recorder instrument engineering data to determine instrument health and safety. | critical | test | B |
| ICC-4170 | ICC-4170 | The ICC shall provide the capability to determine the best estimate for instrument memory contents. | critical | test | B |
| ICC-4180 | ICC-4180 | The ICC shall be able to process 24 hours of spacecraft recorder instrument housekeeping and engineering data within 2 hours. | essential | test | B |
| ICC-4190 | ICC-4190 | The ICC shall provide the capability to store spacecraft recorder telemetry data as it is being received. | essential | test | B |
| ICC-4200 | ICC-4200 | The ICC shall provide the capability to process stored telemetry data at an operator- selectable rate. | essential | test | B |
| ICC-4210 | ICC-4200 | The ICC shall be capable of extracting instrument engineering data from instrument science data. at science data rates up to 1.544 Mbps. | essential | test | B |
| ICC-4220 | ICC-4200-1 | The ICC shall be capable of receiving and processing real-time housekeeping data at rates up to 50 kbps | essential | test | B |
| | ICC-4200-2 | The ICC shall be capable of receiving and processing real-time engineering data at rates up to 50 kbps | essential | test | B |
| ICC-4230 | ICC-4230 | The ICC shall be capable of receiving and recording spacecraft recorder data at rates up to 1.544 Mbps. | essential | test | B |
| ICC-4410 | ICC-4410-1 | The ICC shall provide the capability to perform analysis on real-time data. | critical | test | B |
| | ICC-4410-2 | The ICC shall provide the capability to perform analysis on spacecraft recorder data, | critical | test | B |
| | ICC-4410-3 | The ICC shall provide the capability to perform analysis on data from the ICC history log. | critical | test | B |
| ICC-4412 | ICC-4412 | The ICC shall accept quick-look data sets from EDOS. | essential | test | B |
| ICC-4415 | ICC-4412 | The ICC shall accept and be capable of displaying processed quick-look products from the DADS | essential | test | B |
| ICC-4420 | ICC-4420 | The ICC shall receive spacecraft status data from the EOC. | critical | test | B |
| ICC-4435 | ICC-4435-1 | The ICC shall have the capability to process quick-look data. | critical | test | B |
| | ICC-4435-2 | The ICC shall have the capability to display quick-look data. | critical | test | B |
| ICC-4440 | ICC-4440-a | The ICC shall provide the capability to determine, for specified parameters over a specified time interval, at a minimum the following: a.Minimum value | critical | test | B |
| | ICC-4440-b | The ICC shall provide the capability to determine, for specified parameters over a specified time interval, at a minimum the following: b.Maximum value | critical | test | B |
| | ICC-4440-c | The ICC shall provide the capability to determine, for specified parameters over a specified time interval, at a minimum the following: c.Mean value | critical | test | B |
| | ICC-4440-d | The ICC shall provide the capability to determine, for specified parameters over a specified time interval, at a minimum the following: d.Standard deviation of the parameter | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ICC-4440-e-1 | The ICC shall provide the capability to determine, for specified parameters over a specified time interval, at a minimum the following: e.Time of limit violations | critical | test | B |
| | ICC-4440-e-2 | The ICC shall provide the capability to determine, for specified parameters over a specified time interval, at a minimum the following: e.duration of limit violations | critical | test | B |
| ICC-4450 | ICC-4450-1 | The ICC shall provide the capability to plot specified parameters against other specified parameters. | critical | test | B |
| | ICC-4450-2 | The ICC shall provide the capability to plot specified parameters against time. | critical | test | B |
| ICC-4460 | ICC-4460 | The ICC shall provide the capability to time-correlate related instrument parameters. | critical | test | B |
| ICC-4470 | ICC-4470-1 | The ICC shall provide the capability to define instrument-specific operations procedures. | critical | test | B |
| | ICC-4470-2 | The ICC shall provide the capability to check instrument-specific operations procedures. | critical | test | B |
| | ICC-4470-3 | The ICC shall provide the capability to manage instrument-specific operations procedures. | critical | test | B |
| ICC-4480 | ICC-4480-1 | The ICC shall have the capability to monitor instrument environmental parameters. | critical | inspect. | B |
| | ICC-4480-2 | The ICC shall have the capability to evaluate instrument environmental parameters. | critical | test | B |
| ICC-4490 | ICC-4490 | The ICC shall provide the capability for trend analysis of instrument parameters. | critical | test | B |
| ICC-4500 | ICC-4500-1 | The ICC shall provide the capability to generate instrument performance data based on the processing of quick-look data. | critical | test | B |
| | ICC-4500-2 | The ICC shall provide the capability to generate instrument performance data based on the processing of instrument housekeeping data. | critical | test | B |
| | ICC-4500-3 | The ICC shall provide the capability to generate instrument performance data based on the processing of instrument engineering data. | critical | test | B |
| ICC-4510 | ICC-4510 | The ICC shall have the capability to generate instrument status data based on instrument performance data and instrument anomaly data. | critical | test | B |
| ICC-4520 | ICC-4520-1 | The ICC shall provide instrument status data to the EOC periodically. | critical | test | B |
| | ICC-4520-2 | The ICC shall provide instrument status data to the EOC upon detection of anomalies. | critical | test | B |
| ICC-4540 | ICC-4540 | The ICC shall monitor the configuration of the instrument. | critical | demo | B |
| ICC-4545 | ICC-4545 | The ICC shall have the capability to recommend instrument reconfigurations. | critical | test | B |
| ICC-4550 | ICC-4550-a-1 | The ICC shall have the capability to compare selected instrument telemetry parameter values with the expected values based on, at a minimum the following: a.Scheduled instrument operational mode | critical | test | B |
| | ICC-4550-b-1 | The ICC shall have the capability to compare selected instrument telemetry parameter values with the expected values based on, at a minimum the following: b.Trend analysis | critical | test | B |
| | ICC-4550-c-1 | The ICC shall have the capability to compare selected instrument telemetry parameter values with the expected values based on, at a minimum the following: c.Instrument-specific telemetry information in the IDB | critical | test | B |
| | ICC-4550-a-2 | The ICC shall have the capability to display selected instrument telemetry parameter values with the expected values based on, at a minimum the following: a.Scheduled instrument operational mode | critical | test | B |
| | ICC-4550-b-2 | The ICC shall have the capability to display selected instrument telemetry parameter values with the expected values based on, at a minimum the following: b.Trend analysis | critical | test | B |
| | ICC-4550-c-2 | The ICC shall have the capability to display selected instrument telemetry parameter values with the expected values based on, at a minimum the following: c.Instrument-specific telemetry information in the IDB | critical | test | B |
| ICC-4560 | ICC-4560 | The ICC shall maintain a record of the instrument configuration, including the state of instrument subsystems | critical | test | B |
| ICC-4570 | ICC-4570 | The ICC shallprovide the capability to maintain a master ground image of the instrument memory. | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| ICC-4580 | ICC-4580 | The ICC shall provide the capability to compare the master ground image and the instrument memory dump. | critical | test | B |
| ICC-4590 | ICC-4590-1-1 | The ICC shall provide the capability to detect instrument failures. | critical | test | B |
| | ICC-4590-1-2 | The ICC shall provide the capability to detect instrument anomalies. | critical | test | B |
| | ICC-4590-2-1 | The ICC shall provide the capability to isolate instrument failures. | critical | test | B |
| | ICC-4590-2-2 | The ICC shall provide the capability to isolate, and resolve instrument anomalies. | critical | test | B |
| | ICC-4590-3-1 | The ICC shall provide the capability to resolve instrument failures. | critical | test | B |
| | ICC-4590-3-2 | The ICC shall provide the capability to resolve instrument anomalies. | critical | test | B |
| ICC-4600 | ICC-4600-a-1 | The ICC shall accept from the IST at a minimum the following: a.Instrument anomaly notifications. | essential | demo | B |
| | ICC-4600-a-2 | The ICC shall accept from the IST at a minimum the following: a.Instrument anomaly instructions | essential | demo | B |
| | ICC-4600-b | The ICC shall accept from the IST at a minimum the following: b. PI/TL analysis results | essential | demo | B |
| | ICC-4600-c | The ICC shall accept from the IST at a minimum the following: c.Calibration information | essential | demo | B |
| | ICC-4600-d | The ICC shall accept from the IST at a minimum the following: d.Performance data | essential | demo | B |
| ICC-4610 | ICC-4610-a | Upon request from the PI/TL, the ICC shall provide the IST with at a minimum the following: a.Instrument performance assessment data | essential | demo | B |
| | ICC-4610-b | Upon request from the PI/TL, the ICC shall provide the IST with at a minimum the following: b.Quick-look data | essential | demo | B |
| ICC-4710 | ICC-4710-a | The ICC Instrument Data Base (IDB) shall include at a minimum the following: a.Instrument housekeeping data formats | critical | inspect. | A |
| | ICC-4710-b | The ICC Instrument Data Base (IDB) shall include at a minimum the following: b.Instrument engineering data formats | critical | inspect. | B |
| | ICC-4710-c-1 | The ICC Instrument Data Base (IDB) shall include at a minimum the following: c.Housekeeping parameter descriptions | critical | inspect. | A |
| | ICC-4710-c-2 | The ICC Instrument Data Base (IDB) shall include at a minimum the following: c.engineering parameter descriptions | critical | inspect. | A |
| | ICC-4710-d | The ICC Instrument Data Base (IDB) shall include at a minimum the following: d.Command descriptions | critical | inspect. | A |
| | ICC-4710-e-1 | The ICC Instrument Data Base (IDB) shall include at a minimum the following: e.Syntactical rules for commands and operator directives | critical | inspect. | B |
| | ICC-4710-e-2 | The ICC Instrument Data Base (IDB) shall include at a minimum the following: e.Syntactical rules for operator directives | critical | inspect. | B |
| | ICC-4710-f | The ICC Instrument Data Base (IDB) shall include at a minimum the following: f.Operator directives | critical | inspect. | B |
| | ICC-4710-g | The ICC Instrument Data Base (IDB) shall include at a minimum the following: g.Display formats | critical | inspect. | B |
| | ICC-4710-h-1-1 | The ICC Instrument Data Base (IDB) shall include at a minimum the following: h.Planning definitions | critical | inspect. | B |
| | ICC-4710-h-1-2 | The ICC Instrument Data Base (IDB) shall include at a minimum the following: h.Planning constraints | critical | inspect. | B |
| | ICC-4710-h-2-1 | The ICC Instrument Data Base (IDB) shall include at a minimum the following: h.scheduling definitions | critical | inspect. | B |
| | ICC-4710-h-2-2 | The ICC Instrument Data Base (IDB) shall include at a minimum the following: h.scheduling constraints | critical | inspect. | B |
| | ICC-4710-i | The ICC Instrument Data Base (IDB) shall include at a minimum the following: i.Analysis algorithms | critical | inspect. | B |
| | ICC-4710-j | The ICC Instrument Data Base (IDB) shall include at a minimum the following: j.Report formats | critical | inspect. | B |
| | ICC-4710-k | The ICC Instrument Data Base (IDB) shall include at a minimum the following: k.Quick-look algorithms | critical | inspect. | B |
| | ICC-4710-l | The ICC Instrument Data Base (IDB) shall include at a minimum the following: l.Derived telemetry parameter equations | critical | inspect. | B |
| | ICC-4710-m | The ICC Instrument Data Base (IDB) shall include at a minimum the following: m.Parameter limits | critical | inspect. | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ICC-4710-n | The ICC Instrument Data Base (IDB) shall include at a minimum the following: n.Instrument characteristics | critical | inspect. | B |
| | ICC-4710-o | The ICC Instrument Data Base (IDB) shall include at a minimum the following: o.Command validation parameters | critical | inspect. | B |
| ICC-4720 | ICC-4720 | The ICC shall maintain the latest two versions of the IDB. | critical | inspect. | B |
| ICC-4730 | ICC-4730 | The ICC shall have the capability to modify records in the IDB | critical | test | B |
| ICC-4740 | ICC-4740-1 | The ICC shall provide syntax checking of the IDB. | critical | test | B |
| | ICC-4740-2 | The ICC shall provide structure checking of the IDB. | critical | test | B |
| ICC-4750 | ICC-4750 | The ICC shall provide accounting information on the contents of the IDB. | essential | inspect. | B |
| ICC-4760 | ICC-4760 | The ICC shall generate a report identifying any problems with the contents of the IDB. | critical | test | B |
| ICC-4765 | ICC-4765 | The ICC shall provide the PI/TL at the IST access to any data in the IDB. | essential | demo | B |
| ICC-4770 | ICC-4770 | The ICC shall accept updates to the IDB from the IST. | essential | test | B |
| ICC-4775 | ICC-4775-1 | The ICC shall provide the EOC with the instrument-specific portion of the SDB. | critical | demo | B |
| | ICC-4775-2 | The ICC shall provide the EOC with updates to the instrument-specific portion of the SDB. | critical | demo | B |
| | ICC-4775-3 | The ICC shall provide the EOC with the instrument-specific portion of the SDB and updates thereto. | critical | demo | B |
| ICC-4780 | ICC-4780-a-1 | The ICC shall maintain a history log of instrument and ICC activities for at least 7 days, including at a minimum the following: a.All messages sent | critical | test | B |
| | ICC-4780-a-2 | The ICC shall maintain a history log of instrument and ICC activities for at least 7 days, including at a minimum the following: a.All messages received | critical | test | B |
| | ICC-4780-b-1 | The ICC shall maintain a history log of instrument and ICC activities for at least 7 days, including at a minimum the following: b.Engineering data | critical | test | B |
| | ICC-4780-b-2 | The ICC shall maintain a history log of instrument and ICC activities for at least 7 days, including at a minimum the following: b.housekeeping data | critical | test | B |
| | ICC-4780-c-1 | The ICC shall maintain a history log of instrument and ICC activities for at least 7 days, including at a minimum the following: c.Operator requests/directives | critical | test | B |
| | ICC-4780-c-2 | The ICC shall maintain a history log of instrument and ICC activities for at least 7 days, including at a minimum the following: c.Operator responses | critical | test | B |
| | ICC-4780-d | The ICC shall maintain a history log of instrument and ICC activities for at least 7 days, including at a minimum the following: d.Commands | critical | test | B |
| | ICC-4780-e-1 | The ICC shall maintain a history log of instrument and ICC activities for at least 7 days, including at a minimum the following: e.Microprocessor loads | critical | test | B |
| | ICC-4780-e-2 | The ICC shall maintain a history log of instrument and ICC activities for at least 7 days, including at a minimum the following: e.Microprocessor dumps | critical | test | B |
| | ICC-4780-f | The ICC shall maintain a history log of instrument and ICC activities for at least 7 days, including at a minimum the following: f.Limits violations | critical | test | B |
| | ICC-4780-g | The ICC shall maintain a history log of instrument and ICC activities for at least 7 days, including at a minimum the following: g.Error conditions | critical | test | B |
| | ICC-4780-h | The ICC shall maintain a history log of instrument and ICC activities for at least 7 days, including at a minimum the following: h.Instrument status data | critical | test | B |
| | ICC-4780-i | The ICC shall maintain a history log of instrument and ICC activities for at least 7 days, including at a minimum the following: i.Executed schedules | critical | test | B |
| | ICC-4780-j | The ICC shall maintain a history log of instrument and ICC activities for at least 7 days, including at a minimum the following: j.Analysis results | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ICC-4780-k | The ICC shall maintain a history log of instrument and ICC activities for at least 7 days, including at a minimum the following: k.Instrument calibration parameters | critical | test | B |
| | ICC-4780-l | The ICC shall maintain a history log of instrument and ICC activities for at least 7 days, including at a minimum the following: l.Spacecraft status information | critical | test | B |
| | ICC-4780-m | The ICC shall maintain a history log of instrument and ICC activities for at least 7 days, including at a minimum the following: m.Quick-look data | critical | test | B |
| | ICC-4780-n | The ICC shall maintain a history log of instrument and ICC activities for at least 7 days, including at a minimum the following: n.ICC reconfiguration information | critical | test | B |
| ICC-4790 | ICC-4790 | The ICC shall be capable of extracting data sets from the history log by specifying time and data type. | critical | test | B |
| ICC-4800 | ICC-4800-1 | The ICC shall provide a designated DADS with the instrument history log and associated metadata. | essential | test | B |
| | ICC-4800-2 | The ICC shall provide a designated DADS with subsets of the history log and associated metadata. | essential | test | B |
| ICC-4810 | ICC-4810-1 | The ICC shall accept storage status from the DADS indicating the success of the storage of the history data. | essential | demo | B |
| | ICC-4810-2 | The ICC shall accept storage status from the DADS indicating the failure of the storage of the history data. | essential | demo | B |
| ICC-4820 | ICC-4820 | The ICC shall maintain the history log until the DADS has notified the ICC of successful storage. | essential | test | B |
| ICC-4830 | ICC-4830-a | The ICC shall be capable of storing documentation on-line for operator support, including at a minimum the following: a.Operator guides | essential | inspect. | B |
| | ICC-4830-b | The ICC shall be capable of storing documentation on-line for operator support, including at a minimum the following: b.Operational procedures | essential | inspect. | B |
| ICC-6005 | ICC-6005-1-1 | The ICC shall have the capability to schedule its systems interfaces that are used for its instrument operations activities. | critical | demo | B |
| | ICC-6005-1-2 | The ICC shall have the capability to schedule its systems interfaces that are used for its maintenance activities. | critical | demo | B |
| | ICC-6005-1-3 | The ICC shall have the capability to schedule its systems interfaces that are used for its upgrade activities. | critical | demo | B |
| | ICC-6005-1-4 | The ICC shall have the capability to schedule its systems interfaces that are used for its sustaining engineering activities. | critical | demo | B |
| | ICC-6005-1-5 | The ICC shall have the capability to schedule its systems interfaces that are used for testing. | critical | demo | B |
| | ICC-6005-1-6 | The ICC shall have the capability to schedule its systems interfaces that are used for training. | critical | demo | B |
| | ICC-6005-2-1 | The ICC shall have the capability to schedule its communications interfaces that are used for its instrument operations. | critical | demo | B |
| | ICC-6005-2-2 | The ICC shall have the capability to schedule its communications interfaces that are used for maintenance activities. | critical | demo | B |
| | ICC-6005-2-3 | The ICC shall have the capability to schedule its communications interfaces that are used for its upgrade activities. | critical | demo | B |
| | ICC-6005-2-4 | The ICC shall have the capability to schedule its communications interfaces for sustaining engineering activities. | critical | demo | B |
| | ICC-6005-2-5 | The ICC shall have the capability to schedule its communications interfaces that are used for testing activities. | critical | demo | B |
| | ICC-6005-2-6 | The ICC shall have the capability to schedule its communications interfaces that are used for its instrument training. | critical | demo | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| ICC-6010 | ICC-6010-1-1 | The ICC shall participate in the scheduling of interface tests with the external elements involved including the EOC. | critical | demo | B |
| | ICC-6010-1-2 | The ICC shall participate in the scheduling of interface tests with the external elements involved including the SMC for other EOS elements. | critical | demo | B |
| | ICC-6010-1-3 | The ICC shall participate in the scheduling of interface tests with the external elements involved including EDOS for MO&DSD data delivery systems. | critical | demo | B |
| | ICC-6010-2-1 | The ICC shall participate in the scheduling of end-to-end tests with the external elements involved including the EOC. | critical | demo | B |
| | ICC-6010-2-2 | The ICC shall participate in the scheduling of end-to-end tests with the external elements involved including the SMC for other EOS elements. | critical | demo | B |
| | ICC-6010-2-3 | The ICC shall participate in the scheduling of end-to-end tests with the external elements involved including EDOS for MO&DSD data delivery systems. | critical | demo | B |
| ICC-6020 | ICC-6020-1-1 | The ICC shall establish its configuration, including functional connectivity within the ICC for its instrument operations. | critical | demo | A |
| | ICC-6020-1-2 | The ICC shall establish its configuration, including functional connectivity within the ICC for its tests. | critical | demo | A |
| | ICC-6020-1-3 | The ICC shall establish its configuration, including functional connectivity within the ICC for its maintenance. | critical | demo | A |
| | ICC-6020-2-1 | The ICC shall establish its configuration, including functional connectivity between the ICC and external interfaces, for its instrument operations. | critical | demo | A |
| | ICC-6020-2-2 | The ICC shall establish its configuration, including functional connectivity between the ICC and external interfaces, for its tests. | critical | demo | A |
| | ICC-6020-2-3 | The ICC shall establish its configuration, including functional connectivity between the ICC and external interfaces, for its maintenance. | critical | demo | A |
| ICC-6030 | ICC-6030-1 | The ICC shall perform prepass operational readiness tests on the ICC via test messages. | critical | demo | A |
| | ICC-6030-2 | The ICC shall perform prepass operational readiness tests between the ICC and external interfaces (via test messages). | critical | demo | A |
| ICC-6040 | ICC-6040-1 | The ICC shall support reconfiguration to work around ICC faults without interrupting other ongoing operations. | critical | test | B |
| | ICC-6040-2 | The ICC shall support reconfiguration to work around ICC anomalies without interrupting other ongoing operations. | critical | test | B |
| ICC-6060 | ICC-6060 | The ICC shall allow operator override for ICC reconfiguration requests that violate operational constraints. | critical | test | B |
| ICC-6070 | ICC-6070-1 | The ICC shall manage initialization of ICC functions. | critical | test | A |
| | ICC-6070-2 | The ICC shall manage shutdown of ICC functions. | critical | test | A |
| ICC-6080 | ICC-6080-a-1 | The ICC shall provide the capability to analyze its internal performance at a minimum for the following: a.CPU utilization | essential | test | B |
| | ICC-6080-b-1-1 | The ICC shall provide the capability to analyze its internal performance at a minimum for the following: b. Processing throughput for plans | essential | test | B |
| | ICC-6080-b-1-2 | The ICC shall provide the capability to analyze its internal performance at a minimum for the following: b. Processing throughput for schedules. | essential | test | B |
| | ICC-6080-b-1-3 | The ICC shall provide the capability to analyze and report its internal performance at a minimum for the following: b. Processing throughput for DARs. | essential | test | B |
| | ICC-6080-b-1-4 | The ICC shall provide the capability to analyze its internal performance at a minimum for the following: b. Processing throughput for commands. | essential | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ICC-6080-c-1 | The ICC shall provide the capability to analyze its internal performance at a minimum for the following: c.Equipment downtime | essential | test | B |
| | ICC-6080-d-1 | The ICC shall provide the capability to analyze its internal performance at a minimum for the following: d.Mass storage utilization | essential | test | B |
| | ICC-6080-e-1 | The ICC shall provide the capability to analyze its internal performance at a minimum for the following: e.Communication resource utilization | essential | test | B |
| | ICC-6080-f-1 | The ICC shall provide the capability to analyze its internal performance at a minimum for the following: f.Data accounting | essential | test | B |
| | ICC-6080-a-2 | The ICC shall provide the capability to report its internal performance at a minimum for the following: a.CPU utilization | essential | test | B |
| | ICC-6080-b-2-1 | The ICC shall provide the capability to report its internal performance at a minimum for the following: b. Processing throughput for plans | essential | test | B |
| | ICC-6080-b-2-2 | The ICC shall provide the capability to report its internal performance at a minimum for the following: b. Processing throughput for schedules. | essential | test | B |
| | ICC-6080-b-2-3 | The ICC shall provide the capability to report its internal performance at a minimum for the following: b. Processing throughput for DARs. | essential | test | B |
| | ICC-6080-b-2-4 | The ICC shall provide the capability to report its internal performance at a minimum for the following: b. Processing throughput for commands. | essential | test | B |
| | ICC-6080-c-2 | The ICC shall provide the capability to report its internal performance at a minimum for the following: c.Equipment downtime | essential | test | B |
| | ICC-6080-d-2 | The ICC shall provide the capability to report its internal performance at a minimum for the following: d.Mass storage utilization | essential | test | B |
| | ICC-6080-e-2 | The ICC shall provide the capability to report its internal performance at a minimum for the following: e.Communication resource utilization | essential | test | B |
| | ICC-6080-f-2 | The ICC shall provide the capability to report its internal performance at a minimum for the following: f.Data accounting | essential | test | B |
| ICC-6090 | ICC-6090-1 | The ICC shall alert the operator when its status changes. | critical | demo | B |
| | ICC-6090-2 | The ICC shall alert the operator when data errors exceed operator-specified levels. | critical | demo | B |
| ICC-6110 | ICC-6110-a | The ICC shall manage its faults, including at a minimum the following: a.Fault identification | critical | test | A |
| | ICC-6110-b | The ICC shall manage its faults, including at a minimum the following: b.Identification of recommended solutions | critical | test | B |
| | ICC-6110-c | The ICC shall manage its faults, including at a minimum the following: c.Log of fault activities through resolution | critical | test | B |
| ICC-6120 | ICC-6120-1-1 | The ICC shall analyze the configuration information received from ICC components. | essential | test | B |
| | ICC-6120-1-2 | The ICC shall analyze the status information received from ICC components. | essential | test | B |
| | ICC-6120-1-3 | The ICC shall analyze the accounting information received from ICC components. | essential | test | B |
| | ICC-6120-1-4 | The ICC shall analyze the performance information received from ICC components. | essential | test | B |
| | ICC-6120-2-1 | The ICC shall report the configuration information received from ICC components. | essential | test | B |
| | ICC-6120-2-2 | The ICC shall report the status information received from ICC components. | essential | test | B |
| | ICC-6120-2-3 | The ICC shall report the accounting information received from ICC components. | essential | test | B |
| | ICC-6120-2-4 | The ICC shall report the performance information received from ICC components. | essential | test | B |
| ICC-6130 | ICC-6130-1 | The ICC shall be capable of initiating diagnostics to aid in isolating internal faults. | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ICC-6130-2 | The ICC shall be capable of using safeguards to prevent their operations from affecting other operations. | critical | test | B |
| ICC-6135 | ICC-6135-1 | The ICC shall participate in the resolution of failures and involving the interfaces of the ICC. | critical | test | B |
| | ICC-6135-2 | The ICC shall participate in the resolution of anomalies involving the interfaces of the ICC. | critical | test | B |
| ICC-6140 | ICC-6140-1-1 | The ICC shall provide tests for validating, verifying, and checking functional capabilities for ICC functions after the ICC has been repaired. | critical | demo | B |
| | ICC-6140-1-2 | The ICC shall provide tests for validating, verifying, and checking functional capabilities for ICC functions after the ICC has been upgraded. | critical | demo | B |
| | ICC-6140-2-1 | The ICC shall provide tests for validating, verifying, and checking performance for ICC functions after the ICC has been repaired. | critical | demo | B |
| | ICC-6140-2-2 | The ICC shall provide tests for validating, verifying, and checking performance for ICC functions after the ICC has been upgraded. | critical | demo | B |
| ICC-6145 | ICC-6145 | The ICC shall provide standard test data sets to be used in the validation of the ICC functions. | essential | inspect. | B |
| ICC-6150 | ICC-6150-1 | The ICC shall provide the capability to support the instrument integration test activities associated with the instrument testing, | critical | demo | B |
| | ICC-6150-2 | The ICC shall provide the capability to support the instrument integration test activities associated with spacecraft and instrument integration testing, | critical | demo | B |
| | ICC-6150-3 | The ICC shall provide the capability to support the instrument integration test activities associated with launch site testing. | critical | demo | B |
| ICC-6195 | ICC-6195-a-1 | The ICC shall provide the capabilities: a.To test both nominal | essential | demo | A |
| | ICC-6195-a-2 | The ICC shall provide the capabilities: a.To test failure paths | essential | demo | A |
| | ICC-6195-b-1 | The ICC shall provide the capabilities: b.To log test activities | essential | demo | A |
| | ICC-6195-b-2 | The ICC shall provide the capabilities: b.To log configuration. | essential | demo | A |
| | ICC-6195-c-1 | The ICC shall provide the capabilities: c.To support analysis of test data | essential | demo | A |
| | ICC-6195-c-2 | The ICC shall provide the capabilities: c.To support the generation of test results | essential | demo | A |
| | ICC-6195-d-1 | The ICC shall provide the capabilities: d.To maintain test procedures | essential | inspect. | A |
| | ICC-6195-d-2 | The ICC shall provide the capabilities: a. d.To maintain test results | essential | inspect. | A |
| ICC-6200 | ICC-6200-a | The ICC shall provide capabilities to generate at a minimum the following: a.Security audit log | essential | demo | B |
| | ICC-6200-b | The ICC shall provide capabilities to generate at a minimum the following: b.ICC resource utilization report | essential | demo | B |
| | ICC-6200-c | The ICC shall provide capabilities to generate at a minimum the following: c.ICC status report | essential | demo | B |
| | ICC-6200-d-1 | The ICC shall provide capabilities to generate at a minimum the following: d.ICC hardware/software configuration history | essential | demo | B |
| | ICC-6200-d-2 | The ICC shall provide capabilities to generate at a minimum the following: d.ICC software configuration history | essential | demo | B |
| ICC-6205 | ICC-6205-a | The ICC status report shall include at a minimum the following: a.DAR statistics | essential | inspect. | B |
| | ICC-6205-b | The ICC status report shall include at a minimum the following: b.Compliance with LTIP | essential | inspect. | B |
| | ICC-6205-c | The ICC status report shall include at a minimum the following: c.Anomaly reports | essential | inspect. | B |
| | ICC-6205-d | The ICC status report shall include at a minimum the following: d.Maintenance reports | essential | inspect. | B |
| ICC-6210 | ICC-6210-1 | The ICC shall provide the SMC with access to ICC reports. | essential | demo | B |
| | ICC-6210-2 | The ICC shall provide the EOC with access to ICC reports. | essential | demo | B |
| ICC-6510 | ICC-6510-1 | The ICC shall provide the capability for the operator to control the ICC functions utilizing a combination of input devices . | critical | inspect. | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ICC-6510-2 | The ICC shall provide the capability for the operator to control the ICC components, utilizing a combination of input devices . | critical | inspect. | B |
| ICC-6520 | ICC-6520-1-1-1 | The ICC shall provide the capability for the operator to send to displays spacecraft information used by each ICC function. | critical | inspect. | A |
| | ICC-6520-1-1-2 | The ICC shall provide the capability for the operator to send to displays spacecraft information generated by each ICC function. | critical | inspect. | B |
| | ICC-6520-1-2-1 | The ICC shall provide the capability for the operator to send to displays instrument information used by each ICC function. | critical | inspect. | A |
| | ICC-6520-1-2-2 | The ICC shall provide the capability for the operator to send to displays instrument information generated by each ICC function. | critical | inspect. | B |
| | ICC-6520-1-3-1 | The ICC shall provide the capability for the operator to send to displays ground system information used by each ICC function. | critical | inspect. | A |
| | ICC-6520-1-3-2 | The ICC shall provide the capability for the operator to send to displays ground system information generated by each ICC function. | critical | inspect. | B |
| | ICC-6520-2-1-1 | The ICC shall provide the capability for the operator to send to printers, spacecraft information used by each ICC function. | critical | inspect. | A |
| | ICC-6520-2-1-2 | The ICC shall provide the capability for the operator to send to printers spacecraft information generated by each ICC function. | critical | inspect. | B |
| | ICC-6520-2-2-1 | The ICC shall provide the capability for the operator to send to printers instrument information used by each ICC function. | critical | inspect. | A |
| | ICC-6520-2-2-2 | The ICC shall provide the capability for the operator to print instrument information generated by each ICC function. | critical | inspect. | B |
| | ICC-6520-2-3-1 | The ICC shall provide the capability for the operator to print ground system information used by each ICC function | critical | inspect. | A |
| | ICC-6520-2-3-1 | The ICC shall provide the capability for the operator to print ground system information generated by each ICC function | critical | inspect. | B |
| | ICC-6520-3-1-1 | The ICC shall provide the capability for the operator to send to files spacecraft information used by each ICC function | critical | inspect. | A |
| | ICC-6520-3-1-2 | The ICC shall provide the capability for the operator to send to files spacecraft information generated by each ICC function | critical | inspect. | B |
| | ICC-6520-3-2-1 | The ICC shall provide the capability for the operator to send to files instrument information used by each ICC function | critical | inspect. | A |
| | ICC-6520-3-2-2 | The ICC shall provide the capability for the operator to send to files instrument information generated by each ICC function. | critical | inspect. | B |
| | ICC-6520-3-3-1 | The ICC shall provide the capability for the operator to send to files ground system information used by each ICC function. | critical | inspect. | A |
| | ICC-6520-3-3-2 | The ICC shall provide the capability for the operator to send to files ground system information generated by each ICC function. | critical | inspect. | B |
| ICC-6525 | ICC-6525-2-1 | The ICC shall provide the capability to notify the operator of events. | critical | test | A |
| | ICC-6525-2-2 | The ICC shall provide the capability to notify the operator of alarms. | critical | test | A |
| ICC-6540 | ICC-6540-a-1 | The ICC shall support the use of a high-level interactive control language, which consists of a set of directives and programming-like language capabilities, including at a minimum the following: a.Evaluate algebraic expressions | critical | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ICC-6540-a-2 | The ICC shall support the use of a high-level interactive control language, which consists of a set of directives and programming-like language capabilities, including at a minimum the following: a.Evaluate logical expressions | critical | test | A |
| | ICC-6540-b | The ICC shall support the use of a high-level interactive control language, which consists of a set of directives and programming-like language capabilities, including at a minimum the following: b.Exercise decision logic (IF statements) | critical | test | A |
| | ICC-6540-c | The ICC shall support the use of a high-level interactive control language, which consists of a set of directives and programming-like language capabilities, including at a minimum the following: c.Automated execution of a set of multiple directives (i.e., user interface language procedure) | critical | test | A |
| | ICC-6540-d | The ICC shall support the use of a high-level interactive control language, which consists of a set of directives and programming-like language capabilities, including at a minimum the following: d.Internally branch to other parts of the user interface language procedure | critical | test | B |
| | ICC-6540-e | The ICC shall support the use of a high-level interactive control language, which consists of a set of directives and programming-like language capabilities, including at a minimum the following: e.Nest user interface language procedures within procedures | critical | test | B |
| | ICC-6540-f | The ICC shall support the use of a high-level interactive control language, which consists of a set of directives and programming-like language capabilities, including at a minimum the following: f.Initiate other ICC applications | critical | test | B |
| ICC-6580 | ICC-6580-1 | The ICC shall provide the operator with the capability to create user interface language procedures. | critical | test | A |
| | ICC-6580-2 | The ICC shall provide the operator with the capability to modify user interface language procedures. | critical | test | B |
| | ICC-6580-3 | The ICC shall provide the operator with the capability to delete user interface language procedures. | critical | test | A |
| ICC-6590 | ICC-6590-1-1 | The ICC shall provide the capability for the operator to define the format of text displays. | essential | test | B |
| | ICC-6590-1-2 | The ICC shall provide the capability for the operator to define the format of graphics displays. | essential | test | B |
| | ICC-6590-2-1 | The ICC shall provide the capability for the operator to define the content of text displays. | essential | test | B |
| | ICC-6590-2-2 | The ICC shall provide the capability for the operator to define the content of graphics displays. | essential | test | B |
| ICC-6600 | ICC-6600 | he ICC shall respond to user inputs within 0.5 seconds. | critical | demo | B |
| ICC-6620 | ICC-6620 | The ICC shall be capable of updating displays of rapidly changing information at rates of up to once per second. | essential | demo | B |
| ICC-7010 | ICC-7010-a-1 | The IST shall have the capability to accept from the ICC and display, in parallel with any current activities in the IST, a notification regarding at a minimum the following: a.Conflicts found in planning. | essential | test | A |
| | ICC-7010-a-2 | The IST shall have the capability to accept from the ICC and display, in parallel with any current activities in the IST, a notification regarding at a minimum the following: a.Conflicts found in scheduling | essential | test | A |
| | ICC-7010-b | The IST shall have the capability to accept from the ICC and display, in parallel with any current activities in the IST, a notification regarding at a minimum the following: a.Conflicts found in planning and scheduling b.Arrival of instrument engineering data | essential | test | A |
| | ICC-7010-c | The IST shall have the capability to accept from the ICC and display, in parallel with any current activities in the IST, a notification regarding at a minimum the following: c.Arrival of quick-look data | essential | test | B |
| | ICC-7010-d | The IST shall have the capability to accept from the ICC and display, in parallel with any current activities in the IST, a notification regarding at a minimum the following: d.Instrument anomalies found during instrument monitoring | essential | test | B |
| ICC-7030 | ICC-7030 | The IST shall have the capability to accept the requested data from the ICC in parallel with any current activities in the IST | essential | test | A |
| ICC-7050 | ICC-7050 | The IST shall have the capability to provide the ICC with updates to the IDB. | essential | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| ICC-7060 | ICC-7060-a | The IST shall have the capability to accept data from the Science Computing Facility (SCF), which include at a minimum the following data: a.Microprocessor memory loads | essential | test | B |
| | ICC-7060-b | The IST shall have the capability to accept data from the Science Computing Facility (SCF), which include at a minimum the following data: b.Changes in the instrument parameters | essential | test | B |
| ICC-7070 | ICC-7070-a | The IST shall have the capability to provide data to the SCF, which include at a minimum the following data: a.Microprocessor memory dumps | essential | test | B |
| | ICC-7070-b | The IST shall have the capability to provide data to the SCF, which include at a minimum the following data: b.Instrument analysis results | essential | test | B |
| ICC-7110 | ICC-7110-1 | The IST shall provide the capability to communicate with a DAR originator(s) for modification of DARs. | critical | test | D |
| | ICC-7110-2 | The IST shall provide the capability to communicate with a DAR originator(s) for clarification of DARs. | critical | test | D |
| ICC-7150 | ICC-7150-1 | The IST shall provide the capability to generate DARs. | critical | test | D |
| | ICC-7150-2 | The IST shall provide the capability to submit DARs to the IMS. | critical | test | D |
| ICC-7170 | ICC-7170 | The IST shall receive from the IMS status of the DARs generated at the IST. | critical | test | D |
| ICC-7180 | ICC-7180 | The IST shall have the capability to accept from the ICC a DAR evaluation request along with the corresponding DAR. | critical | test | D |
| ICC-7190 | ICC-7190-1 | The IST shall provide the capability to view DARs received from the ICC. | critical | demo | D |
| | ICC-7190-2 | The IST shall provide the capability to modify the DARs received from the ICC. | critical | test | D |
| ICC-7200 | ICC-7200-1 | The IST shall provide the ICC with DAR acceptance notification. | critical | test | D |
| | ICC-7200-2 | The IST shall provide the ICC with either DAR acceptance notification with updates, if any, | critical | test | D |
| | ICC-7200-3 | The IST shall provide the ICC with DAR rejection notification along with the reasons for rejection. | critical | test | D |
| ICC-7210 | ICC-7210-1 | The IST shall provide the capability to generate a request for an instrument activity. | essential | test | B |
| | ICC-7210-2 | The IST shall provide the capability to submit a request for an instrument activity to the ICC. | essential | test | B |
| ICC-7214 | ICC-7214 | The IST shall interface with the ICC to receive notification of request for instrument support activity receipt. | essential | test | B |
| ICC-7220 | ICC-7220-a-1-1 | The IST shall have the capability to request from the ICC planning and scheduling information, which includes, at a minimum, the following: a.LTSP goals/priorities | essential | test | B |
| | ICC-7220-a-1-2 | The IST shall have the capability to request from the ICC planning and scheduling information, which includes, at a minimum, the following: a.LTIP goals and priorities | essential | test | B |
| | ICC-7220-b-1 | The IST shall have the capability to request from the ICC planning and scheduling information, which includes, at a minimum, the following: b.Current resource availability information | essential | test | B |
| | ICC-7220-c-1 | The IST shall have the capability to request from the ICC planning and scheduling information, which includes, at a minimum, the following: c.Current predicted orbit data and related information | essential | test | B |
| | ICC-7220-d-1-1 | The IST shall have the capability to request from the ICC planning and scheduling information, which includes, at a minimum, the following: d.Plans | essential | test | B |
| | ICC-7220-d-1-2 | The IST shall have the capability to request from the ICC planning and scheduling information, which includes, at a minimum, the following: d.schedules | essential | test | B |
| | ICC-7220-a-2-1 | The IST shall have the capability to accept from the ICC planning and scheduling information, which includes, at a minimum, the following: a.LTSP goals and priorities | essential | test | B |
| | ICC-7220-a-2-2 | The IST shall have the capability to accept from the ICC planning and scheduling information, which includes, at a minimum, the following: a.LTIP goals and priorities | essential | test | B |
| | ICC-7220-b-2 | The IST shall have the capability to accept from the ICC planning and scheduling information, which includes, at a minimum, the following: b.Current resource availability information | essential | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ICC-7220-c-2 | The IST shall have the capability to accept from the ICC planning and scheduling information, which includes, at a minimum, the following: c.Current predicted orbit data and related information | essential | test | B |
| | ICC-7220-d-2-1 | The IST shall have the capability to accept from the ICC planning and scheduling information, which includes, at a minimum, the following: d.Plans | essential | test | B |
| | ICC-7220-d-2-2 | The IST shall have the capability to accept from the ICC planning and scheduling information, which includes, at a minimum, the following: d.schedules | essential | test | B |
| ICC-7230 | ICC-7230-1 | The IST shall have the capability to access planning functions in the ICC . | essential | demo | B |
| | ICC-7230-2 | The IST shall have the capability to access scheduling functions in the ICC . | essential | demo | B |
| ICC-7240 | ICC-7240-1-1 | The IST shall accept from the ICC a request for resolving conflicts identified at the ICC while building plans for its instrument. | essential | test | B |
| | ICC-7240-1-2 | The IST shall accept from the ICC a request for resolving conflicts identified at the ICC while building schedules for its instrument. | essential | test | B |
| | ICC-7240-2-1 | The IST shall accept from the ICC a request for resolving conflicts identified at the ICC while updating plans for its instrument. | essential | test | B |
| | ICC-7240-2-2 | The IST shall accept from the ICC a request for resolving conflicts identified at the ICC while updating schedules for its instrument. | essential | test | B |
| ICC-7250 | ICC-7250-1-1 | The IST shall provide the capability to view the requests for resolving problems of the instrument plans. | essential | demo | B |
| | ICC-7250-1-2 | The IST shall provide the capability to view the requests for resolving problems of the instrument schedules. | essential | demo | B |
| | ICC-7250-2-1 | The IST shall provide the capability to evaluate the requests for resolving problems of the instrument plans. | essential | test | B |
| | ICC-7250-2-2 | The IST shall provide the capability to evaluate the requests for resolving problems of the instrument schedules. | essential | test | B |
| ICC-7270 | ICC-7270-1 | The IST shall provide the ICC with the results of evaluating the plans (in response to the conflict resolution requests from the ICC). | essential | test | B |
| | ICC-7270-2 | The IST shall provide the ICC with the results of evaluating the schedules (in response to the conflict resolution requests from the ICC). | essential | test | B |
| ICC-7290 | ICC-7290-a-1 | The IST shall have the capability to request from the ICC at a minimum the following: a.Current detailed activity schedule | essential | demo | B |
| | ICC-7290-b-1-1 | The IST shall have the capability to request from the ICC at a minimum the following: b.Instrument commands | essential | demo | B |
| | ICC-7290-b-1-2 | The IST shall have the capability to request from the ICC at a minimum the following: b.Instrument memory loads | essential | demo | B |
| | ICC-7290-c-1 | The IST shall have the capability to request from the ICC at a minimum the following: c.Instrument command status | essential | demo | B |
| | ICC-7290-a-2 | The IST shall have the capability to accept from the ICC at a minimum the following: a.Current detailed activity schedule | essential | demo | B |
| | ICC-7290-b-2-1 | The IST shall have the capability to accept from the ICC at a minimum the following: b.Instrument commands. | essential | demo | B |
| | ICC-7290-b-2-2 | The IST shall have the capability to accept from the ICC at a minimum the following: b.Instrument memory loads | essential | demo | B |
| | ICC-7290-c-2 | The IST shall have the capability to accept from the ICC at a minimum the following: c.Instrument command status | essential | demo | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| ICC-7330 | ICC-7330 | The IST shall provide the capability to review instrument commands. | essential | test | B |
| ICC-7350 | ICC-7350-1 | The IST shall provide the capability to generate a command request. | essential | test | B |
| | ICC-7350-2 | The IST shall provide the capability to display a command request. | essential | demo | B |
| ICC-7360 | ICC-7360 | The IST shall have the capability to provide a command request to the ICC. | essential | demo | B |
| ICC-7370 | ICC-7370-a | The IST shall have the capability to accept from the ICC command request status, which contains at a minimum the following: a.Receipt of the command request at the ICC | essential | test | B |
| | ICC-7370-b | The IST shall have the capability to accept from the ICC command request status, which contains at a minimum the following: b.Receipt of the commands at the EOC | essential | test | B |
| | ICC-7370-c | The IST shall have the capability to accept from the ICC command request status, which contains at a minimum the following: c.Status of command trans to the spacecraft | essential | test | B |
| | ICC-7370-d | The IST shall have the capability to accept from the ICC command request status, which contains at a minimum the following: d.Receipt of the commands at the spacecraft | essential | test | B |
| | ICC-7370-e | The IST shall have the capability to accept from the ICC command request status, which contains at a minimum the following: e.Execution of the commands at the instrument | essential | test | B |
| ICC-7390 | ICC-7390 | The IST shall have the capability to send instrument microprocessor memory loads to the ICC. | essential | demo | B |
| ICC-7400 | ICC-7400-1 | In support of a TOO observation the IST shall provide the corresponding command request to the ICC within 10 minutes of receiving initiation notification . | essential | analysis | B |
| | ICC-7400-2 | In support of a late change, the IST shall provide the corresponding command request to the ICC within 10 minutes of receiving initiation notification . | essential | analysis | B |
| ICC-7430 | ICC-7430-a-1-1 | The IST shall have the capability to request from the ICC at a minimum the following: a.Instrument housekeeping data | essential | test | B |
| | ICC-7430-a-1-2 | The IST shall have the capability to request from the ICC at a minimum the following: a.Instrument engineering data | essential | test | B |
| | ICC-7430-b-1 | The IST shall have the capability to request from the ICC at a minimum the following: b.Spacecraft housekeeping data | essential | test | B |
| | ICC-7430-c-1 | The IST shall have the capability to request from the ICC at a minimum the following: c.Derived parameters for its instrument | essential | test | B |
| | ICC-7430-d-1 | The IST shall have the capability to request and accept from the ICC at a minimum the following: d.Quick-look data | essential | test | B |
| | ICC-7430-e-1 | The IST shall have the capability to request from the ICC at a minimum the following: e.Instrument performance assessment data | essential | test | B |
| | ICC-7430-a-2-1 | The IST shall have the capability to accept from the ICC at a minimum the following: a.Instrument housekeeping data | essential | test | B |
| | ICC-7430-a-2-2 | The IST shall have the capability to accept from the ICC at a minimum the following: a.Instrument engineering data | essential | test | B |
| | ICC-7430-b-2 | The IST shall have the capability to accept from the ICC at a minimum the following: b.Spacecraft housekeeping data | essential | test | B |
| | ICC-7430-c-2 | The IST shall have the capability to accept from the ICC at a minimum the following: c.Derived parameters for its instrument | essential | test | B |
| | ICC-7430-d-2 | The IST shall have the capability to accept from the ICC at a minimum the following: d.Quick-look data | essential | test | B |
| | ICC-7430-e-2 | The IST shall have the capability to accept from the ICC at a minimum the following: e.Instrument performance assessment data | essential | test | B |
| ICC-7460 | ICC-7460-1-1 | The IST shall provide the capability to display the raw instrument engineering data . | essential | demo | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | ICC-7460-1-2 | The IST shall provide the capability to display the engineering unit converted instrument engineering data . | essential | demo | B |
| | ICC-7460-2-1 | The IST shall provide the capability to process the raw instrument engineering data . | essential | test | B |
| | ICC-7460-2-2 | The IST shall provide the capability to process the engineering unit converted instrument engineering data . | essential | test | B |
| ICC-7500 | ICC-7500-1 | The IST shall have the capability to analyze instrument housekeeping data to determine the instrument trend. | essential | test | B |
| | ICC-7500-2 | The IST shall have the capability to analyze instrument engineering data to determine the instrument trend. | essential | test | B |
| ICC-7510 | ICC-7510 | The IST shall have the capability to access any data in the ICC history log. | essential | test | B |
| ICC-7530 | ICC-7530 | The IST shall have the capability to display quick-look data. | essential | demo | B |
| ICC-7550 | ICC-7550 | The IST shall provide the capability to notify the ICC of any instrument anomalies detected. | essential | test | B |
| ICC-8010 | ICC-8010-a | The ICC shall be capable of supporting the following simultaneous activities: a.Performing coordination, planning, scheduling, monitoring, and commanding of its instruments. | critical | test | B |
| | ICC-8010-b | The ICC shall be capable of supporting the following simultaneous activities: b.At least two of the following: test activities, ICC system upgrades, training, and/or maintenance. | critical | test | B |
| ICC-8020 | ICC-8020-1 | The ICC computer hardware shall be able to grow without redesign to twice the processing capacities estimated for full system | critical | test | B |
| | ICC-8020-2 | The ICC computer hardware shall be able to grow without redesign to twice the storage capacities estimated for full system | critical | test | B |
| | ICC-8020-3 | The ICC computer hardware shall be able to grow without redesign to twice the communications capacities estimated for full system | critical | test | B |
| ICC-8040 | ICC-8040-1 | The ICC computer processing capacity utilization shall be less than 50 percent at turnover for operations. | essential | test | B |
| | ICC-8040-2 | The ICC computer storage capacity utilization shall be less than 50 percent at turnover for operations. | essential | test | B |
| | ICC-8040-3 | The ICC computer communications capacity utilization shall be less than 50 percent at turnover for operations. | essential | test | B |
| ICC-8050 | ICC-8050 | The GSFC ICC architecture shall be capable of growing to support additional instruments without major redesign. | essential | analysis | B |
| IMS-0010 | IMS-0010 | The IMS shall be capable of providing 24 hour per day, 7 day per week access to the ECS services. | essential | inspect. | A |
| IMS-0020 | IMS-0020-1 | The IMS shall always be accessible to users and an informational status message describing the current availability status of ECS services shall be provided. | essential | demo | A |
| | IMS-0020-2 | The IMS shall provide an informational status message describing the predicted time for resumption of services which are temporarily unavailable. | essential | inspect. | A |
| IMS-0030 | IMS-0030-1 | The IMS shall provide from each ECS access node, access to the full range of services spanning the whole of ECS, including services available from all DAACs without requiring that the user know the physical location of the data. | essential | demo | A |
| | IMS-0030-2 | The IMS shall provide from each ECS access node, access to the full range of services spanning the whole of ECS, including data available from all DAACs without requiring that the user know the physical location of the data. | essential | demo | A |
| IMS-0040 | IMS-0040 | The IMS shall verify user authorization by validation of inputs with information as supplied by the SMC. | critical | test | A |
| IMS-0050 | IMS-0050-a | The IMS shall provide the capability for users to define and modify user profile information, to include at a minimum: a.User electronic address | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-0050-b | The IMS shall provide the capability for users to define and modify user profile information, to include at a minimum: b.Data distribution media | essential | test | A |
| | IMS-0050-c | The IMS shall provide the capability for users to define and modify user profile information, to include at a minimum: c.Data distribution address | essential | test | A |
| | IMS-0050-d | The IMS shall provide the capability for users to define and modify user profile information, to include at a minimum: d.User expertise level | essential | test | A |
| | IMS-0050-e | The IMS shall provide the capability for users to define and modify user profile information, to include at a minimum: e.Default query parameters | essential | test | A |
| | IMS-0050-f | The IMS shall provide the capability for users to define and modify user profile information, to include at a minimum: f.Terminal characteristics | essential | test | A |
| | IMS-0050-g | The IMS shall provide the capability for users to define and modify user profile information, to include at a minimum: g.Technical specialty. | essential | test | A |
| | IMS-0050-a | The IMS shall provide the capability for users to define and modify user profile information, to include at a minimum: a.User electronic address | essential | test | A |
| IMS-0060 | IMS-0060-1 | The IMS shall, when creating ECS user accounts, request registration approval from the SMC. | critical | test | A |
| | IMS-0060-2 | The IMS shall, when creating ECS user accounts, request user account priorities from the SMC. | critical | test | A |
| | IMS-0060-3 | The IMS shall, when creating ECS user accounts, request authorized user services from the SMC. | critical | test | A |
| IMS-0070 | IMS-0070-1 | The IMS shall provide the user with initial system access procedures as maintained in the SMC. | essential | demo | A |
| | IMS-0070-2 | The IMS shall provide the user with priority information as maintained in the SMC. | essential | demo | A |
| | IMS-0070-3 | The IMS shall provide the user with authorized services as maintained in the SMC. | essential | demo | A |
| IMS-0080 | IMS-0080-1 | The IMS shall maintain a list of authorized ECS services for each user with information supplied by the SMC. | essential | inspect. | A |
| | IMS-0080-2 | The IMS shall update the list of authorized ECS services for each user with information supplied by the SMC. | essential | inspect. | A |
| IMS-0085 | IMS-0085 | The IMS shall provide unregistered users access to ECS services as authorized by the SMC. | essential | inspect. | A |
| IMS-0090 | IMS-0090-a | The IMS shall be accessible to users via, at a minimum: a.Direct connection | essential | inspect. | A |
| | IMS-0090-b | The IMS shall be accessible to users via, at a minimum: b.Dial up connection | essential | inspect. | A |
| | IMS-0090-c | The IMS shall be accessible to users via, at a minimum: c.Network link | essential | inspect. | A |
| IMS-0100 | IMS-0100-a | The IMS shall support, at a minimum: a.Interactive sessions | essential | inspect. | A |
| | IMS-0100-b | The IMS shall support, at a minimum: b.Non-interactive remote sessions | essential | inspect. | A |
| | IMS-0100-c | The IMS shall support, at a minimum: c.Client-server interface | essential | inspect. | A |
| | IMS-0100-d | The IMS shall support, at a minimum: d.Simulated sessions for training purposes | fulfillment | inspect. | B |
| IMS-0110 | IMS-0110-1 | The IMS user interface shall support access from local dumb terminals that do not support the IMS toolkit. | essential | inspect. | A |
| | IMS-0110-2 | The IMS user interface shall support access from remote dumb terminals that do not support the IMS toolkit. | essential | inspect. | A |
| | IMS-0110-3 | The IMS user interface shall support access from bitmap display workstations that do not support the IMS toolkit. | essential | inspect. | A |
| IMS-0120 | IMS-0120-a | The IMS shall provide, dependent upon the users display device capabilities, a user-friendly interface with the following features at a minimum: a.Multiple window display | essential | inspect. | A |
| | IMS-0120-b | The IMS shall provide, dependent upon the users display device capabilities, a user-friendly interface with the following features at a minimum: b.Buttons and pull down menus | essential | inspect. | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-0120-c | The IMS shall provide, dependent upon the users display device capabilities, a user-friendly interface with the following features at a minimum: c.Valid lists for all variables | essential | inspect. | A |
| | IMS-0120-d | The IMS shall provide, dependent upon the users display device capabilities, a user-friendly interface with the following features at a minimum: d. An information base of associations between variables (e.g., between instruments and geophysical parameters) | essential | inspect. | A |
| | IMS-0120-e | The IMS shall provide, dependent upon the users display device capabilities, a user-friendly interface with the following features at a minimum: e.Ability to restore a session after interruption | essential | inspect. | A |
| | IMS-0120-f | The IMS shall provide, dependent upon the users display device capabilities, a user-friendly interface with the following features at a minimum: f.Context-sensitive help | fulfillment | inspect. | A |
| | IMS-0120-g | The IMS shall provide, dependent upon the users display device capabilities, a user-friendly interface with the following features at a minimum: g.Minimal and consistent use of non-standard keys | fulfillment | inspect. | A |
| | IMS-0120-h | The IMS shall provide, dependent upon the users display device capabilities, a user-friendly interface with the following features at a minimum: h.Random movement through fields | fulfillment | inspect. | A |
| | IMS-0120-i-1 | The IMS shall provide, dependent upon the users display device capabilities, a user-friendly interface with the following features at a minimum: i.Capability to save the contents of a menu or form | essential | inspect. | A |
| | IMS-0120-j | The IMS shall provide, dependent upon the users display device capabilities, a user-friendly interface with the following features at a minimum: j.Standardized use of commands and terminology across screens | essential | inspect. | A |
| | IMS-0120-k | The IMS shall provide, dependent upon the users display device capabilities, a user-friendly interface with the following features at a minimum: k.Self-explanatory, meaningful error messages | fulfillment | inspect. | A |
| | IMS-0120-l | The IMS shall provide, dependent upon the users display device capabilities, a user-friendly interface with the following features at a minimum: l.Automatic acronym expansion, which can be enabled and disabled interactively | fulfillment | inspect. | A |
| | IMS-0120-m | The IMS shall provide, dependent upon the users display device capabilities, a user-friendly interface with the following features at a minimum: m.Availability of a menu tree diagram | fulfillment | inspect. | A |
| | IMS-0120-n | The IMS shall provide, dependent upon the users display device capabilities, a user-friendly interface with the following features at a minimum: n.Command language | essential | inspect. | A |
| IMS-0130 | IMS-0130 | The IMS shall verify that a user is authorized to access a particular IMS service before providing the service to the user. | critical | demo | A |
| IMS-0140 | IMS-0140-1 | The IMS shall provide the capability for multiple simultaneous sessions . For example, the capability to transition back and forth smoothly between directory search, and inventory search. | fulfillment | demo | A |
| | IMS-0140-2 | The IMS shall provide the capability for multiple simultaneous sessions. For example, the capability to transition back and forth smoothly between directory search and data visualization. | fulfillment | demo | A |
| IMS-0150 | IMS-0150-a | The IMS shall supply a uniform user interface for access to the following at a minimum: a.Heterogeneous data sets. | fulfillment | demo | A |
| | IMS-0150-b | The IMS shall supply a uniform user interface for access to the following at a minimum: b.Communications networks. | fulfillment | demo | A |
| | IMS-0150-c | The IMS shall supply a uniform user interface for access to the following at a minimum: c.Data bases that are geographically dispersed. | fulfillment | demo | A |
| | IMS-0150-d | The IMS shall supply a uniform user interface for access to the following at a minimum: d.Multi-disciplined directories and inventories. | fulfillment | demo | A |
| IMS-0160 | IMS-0160-a | The IMS shall provide levels of user interaction support to include at a minimum: a.Expert ( e.g., quick command driven direct information input). | fulfillment | demo | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-0160-b | The IMS shall provide levels of user interaction support to include at a minimum: b.Intermediate (e.g., some prompting and automatically supplied help). | fulfillment | demo | A |
| | IMS-0160-c | The IMS shall provide levels of user interaction support to include at a minimum: c.Novice (e.g., extensive prompting and help facilities). | fulfillment | demo | A |
| IMS-0170 | IMS-0170 | The IMS user interface shall be designed so that restructuring of the IMS data bases shall not result in the need for changes to the IMS interface. | fulfillment | analysis | A |
| IMS-0180 | IMS-0180 | The IMS shall extract relevant data from the user profile information and display as default values. | fulfillment | demo | A |
| IMS-0190 | IMS-0190-1 | The IMS shall provide the capability to save information selected in prior metadata searches for use in subsequent IMS service requests, in the current session. | essential | demo | A |
| | IMS-0190-2 | The IMS shall provide the capability to save information selected in prior metadata searches for use in subsequent IMS service requests or in future sessions. | essential | demo | A |
| IMS-0210 | IMS-0210-a | The IMS shall allow data access privileges to be configurable by user and data type for: a.Read | critical | demo | A |
| | IMS-0210-b | The IMS shall allow data access privileges to be configurable by user and data type for: b.Write | critical | demo | A |
| | IMS-0210-c | The IMS shall allow data access privileges to be configurable by user and data type for: c.Update | critical | demo | A |
| | IMS-0210-d | The IMS shall allow data access privileges to be configurable by user and data type for: d.Delete | critical | demo | A |
| | IMS-0210-e | The IMS shall allow data access privileges to be configurable by user and data type for: a.Read b.Write c.Update d.Delete e.Any combination of the above | critical | demo | A |
| IMS-0220 | IMS-0220-1-1 | The IMS shall store data management services for ECS directory data bases. | essential | demo | A |
| | IMS-0220-1-2 | The IMS shall store data management services for ECS inventory data bases. | essential | demo | A |
| | IMS-0220-1-3 | The IMS shall store data management services for ECS guide (documentation/reference material) data bases. | essential | demo | A |
| | IMS-0220-1-4 | The IMS shall store data management services for other IMS data bases. | essential | demo | A |
| | IMS-0220-2-1 | The IMS shall maintain data management services for ECS directory data bases. | essential | demo | A |
| | IMS-0220-2-2 | The IMS shall maintain data management services for ECS inventory data bases. | essential | demo | A |
| | IMS-0220-2-3 | The IMS shall maintain data management services for ECS guide (documentation/reference material) data bases. | essential | demo | A |
| | IMS-0220-2-4 | The IMS shall maintain data management services for other IMS data bases. | essential | demo | A |
| | IMS-0220-3-1 | The IMS shall provide data management services for ECS directory data bases. | essential | demo | A |
| | IMS-0220-3-2 | The IMS shall provide data management services for ECS inventory data bases. | essential | demo | A |
| | IMS-0220-3-3 | The IMS shall provide data management services for ECS guide (documentation/reference material) data bases. | essential | demo | A |
| | IMS-0220-3-4 | The IMS shall provide data management services for other IMS data bases. | essential | demo | A |
| IMS-0230 | IMS-0230-1 | The IMS shall restrict update of ECS directory IMS data bases to authorized users based on the user's access privileges. | critical | demo | A |
| | IMS-0230-2 | The IMS shall restrict update of ECS inventory IMS data bases to authorized users based on the user's access privileges. | critical | demo | A |
| | IMS-0230-3 | The IMS shall restrict update of ECS guide (documentation/reference material) IMS data bases to authorized users based on the user's access privileges. | critical | demo | A |
| | IMS-0230-4 | The IMS shall restrict update of ECS and other IMS data bases to authorized users based on the user's access privileges. | critical | demo | A |
| IMS-0240 | IMS-0240-a | The IMS shall provide, at a minimum, data base administration utilities for: a.Modifying the data base schema | critical | demo | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-0240-b | The IMS shall provide, at a minimum, data base administration utilities for: b.Performance monitoring | essential | demo | A |
| | IMS-0240-c | The IMS shall provide, at a minimum, data base administration utilities for: c.Performance tuning | essential | demo | A |
| | IMS-0240-d | The IMS shall provide, at a minimum, data base administration utilities for: d.Administration of user access control | critical | demo | A |
| | IMS-0240-e | The IMS shall provide, at a minimum, data base administration utilities for: e.On-line incremental backup | critical | demo | A |
| | IMS-0240-f | The IMS shall provide, at a minimum, data base administration utilities for: f.On-line recovery | critical | demo | A |
| | IMS-0240-g | The IMS shall provide, at a minimum, data base administration utilities for: g.Export/import of data | critical | demo | A |
| IMS-0250 | IMS-0250-a | The IMS shall provide required maintenance of the IMS data bases, to include at a minimum: a.Capability to restructure the data base. | essential | demo | A |
| | IMS-0250-a | The IMS shall provide required maintenance of the IMS data bases, to include at a minimum: b.Capability to interrupt a maintenance session and restart the session without loss of information. | essential | demo | A |
| IMS-0260 | IMS-0260-1-1 | The IMS shall provide interactive information management capabilities for authorized users to add information to the IMS data bases. | essential | demo | A |
| | IMS-0260-1-2 | The IMS shall provide interactive information management capabilities for authorized users to update information from the IMS data bases. | essential | demo | A |
| | IMS-0260-1-3 | The IMS shall provide interactive information management capabilities for authorized users to delete information from the IMS data bases. | essential | demo | A |
| | IMS-0260-1-4 | The IMS shall provide interactive information management capabilities for authorized users to retrieve information from the IMS data bases. | essential | demo | A |
| | IMS-0260-2-1 | The IMS shall provide batch information management capabilities for authorized users to add information to the IMS data bases. | essential | demo | A |
| | IMS-0260-2-2 | The IMS shall provide batch information management capabilities for authorized users to update information from the IMS data bases. | essential | demo | A |
| | IMS-0260-2-3 | The IMS shall provide batch information management capabilities for authorized users to delete information from the IMS data bases. | essential | demo | A |
| | IMS-0260-2-4 | The IMS shall provide batch information management capabilities for authorized users to retrieve information from the IMS data bases. | essential | demo | A |
| IMS-0270 | IMS-0270-1 | IMS shall maintain information on the science processing library holdings. | essential | inspect. | A |
| | IMS-0270-2-2 | IMS shall provide the capability for users to order science processing library software from the science processing library holdings. | essential | demo | A |
| | IMS-0270-2-1 | IMS shall provide the capability for users to search for science processing library software in the science processing library holdings. | essential | demo | A |
| IMS-0280 | IMS-0280 | The IMS shall maintain DAR generation information in a data base which will be accessible during the DAR planning and submittal process. | critical | demo | B |
| IMS-0290 | IMS-0290 | IMS internal data base management queries shall be expressed in a standard query language. | fulfillment | analysis | A |
| IMS-0300 | IMS-0300 | The IMS shall maintain a log of all information update activity. | essential | inspect. | A |
| IMS-0320 | IMS-0320-a | Standard Product related metadata shall contain, at a minimum: a.Keywords and glossary from investigators | essential | inspect. | A |
| | IMS-0320-b | Standard Product related metadata shall contain, at a minimum: b.Keywords, synonyms, and glossary for cross-product and cross-directory referencing. | essential | inspect. | A |
| | IMS-0320-c | Standard Product related metadata shall contain, at a minimum: c.Identifiers for locating products in the DADS archive by granule | essential | inspect. | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-0320-d | Standard Product related metadata shall contain, at a minimum: d.Documentation on algorithms, including version history, authors, written description of product, equations, and references. | essential | inspect. | A |
| | IMS-0320-e-1 | Standard Product related metadata shall contain, at a minimum: e.Documentation on instrument(s) and spacecraft(s) including history of housekeeping parameters. | essential | inspect. | A |
| | IMS-0320-e-2 | Standard Product related metadata shall contain, at a minimum: e.Documentation on instrument(s) and spacecraft(s) including history of ancillary parameters. | essential | inspect. | A |
| | IMS-0320-e-3 | Standard Product related metadata shall contain, at a minimum: e.Documentation on instrument(s) and spacecraft(s) including history of discipline characterization. | essential | inspect. | A |
| | IMS-0320-e-4 | Standard Product related metadata shall contain, at a minimum: e.Documentation on instrument(s) and spacecraft(s) including history of calibration parameters. | essential | inspect. | A |
| | IMS-0320-e-5 | Standard Product related metadata shall contain, at a minimum: e.Documentation on instrument(s) and spacecraft(s) including history of key individuals. | essential | inspect. | A |
| | IMS-0320-e-5 | Standard Product related metadata shall contain, at a minimum: e.Documentation on instrument(s) and spacecraft(s) including history of references. | essential | inspect. | A |
| | IMS-0320-f-1-1 | Standard Product related metadata shall contain, at a minimum: f.Identifiers associated with static browse products. | essential | inspect. | A |
| | IMS-0320-f-1-2 | Standard Product related metadata shall contain, at a minimum: f.Identifiers associated with subsetted data products. | essential | inspect. | A |
| | IMS-0320-f-1-3 | Standard Product related metadata shall contain, at a minimum: f.Identifiers associated with subsampled products. | essential | inspect. | A |
| | IMS-0320-f-1-4 | Standard Product related metadata shall contain, at a minimum: f.Identifiers associated with summary data products. | essential | inspect. | A |
| | IMS-0320-f-2-1 | Standard Product related metadata shall contain, at a minimum: f.Algorithms associated with static browse products. | essential | inspect. | A |
| | IMS-0320-f-2-2 | Standard Product related metadata shall contain, at a minimum: f.Algorithms associated with subsetted data products. | essential | inspect. | A |
| | IMS-0320-f-2-3 | Standard Product related metadata shall contain, at a minimum: f.Algorithms associated with subsampled data products. | essential | inspect. | A |
| | IMS-0320-f-2-4 | Standard Product related metadata shall contain, at a minimum: f.Algorithms associated with summary data products. | essential | inspect. | A |
| | IMS-0320-f-3-1 | Standard Product related metadata shall contain, at a minimum: f.Written descriptions associated with static browse products. | essential | inspect. | A |
| | IMS-0320-f-3-2 | Standard Product related metadata shall contain, at a minimum: f.Written descriptions associated with subsetted data products. | essential | inspect. | A |
| | IMS-0320-f-3-3 | Standard Product related metadata shall contain, at a minimum: f.Written descriptions associated withsubsampled data products. | essential | inspect. | A |
| | IMS-0320-f-3-4 | Standard Product related metadata shall contain, at a minimum: f.Written descriptions associated with summary data products. | essential | inspect. | A |
| | IMS-0320-f-4-1 | Standard Product related metadata shall contain, at a minimum: f.Equations associated with static browse products. | essential | inspect. | A |
| | IMS-0320-f-4-2 | Standard Product related metadata shall contain, at a minimum: f.Equations associated with subsetted data products. | essential | inspect. | A |
| | IMS-0320-f-4-3 | Standard Product related metadata shall contain, at a minimum: f.Equations associated with subsampled data products. | essential | inspect. | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-0320-f-4-4 | Standard Product related metadata shall contain, at a minimum: f.Equations associated with summary data products. | essential | inspect. | A |
| | IMS-0320-f-5-1 | Standard Product related metadata shall contain, at a minimum: f.Authors associated with static browse products. | essential | inspect. | A |
| | IMS-0320-f-5-2 | Standard Product related metadata shall contain, at a minimum: f. Authors associated with subsetted data products. | essential | inspect. | A |
| | IMS-0320-f-5-3 | Standard Product related metadata shall contain, at a minimum: f.Authors associated with subsampled data products. | essential | inspect. | A |
| | IMS-0320-f-5-4 | Standard Product related metadata shall contain, at a minimum: f.Authors associated with summary data products. | essential | inspect. | A |
| | IMS-0320-f-6-1 | Standard Product related metadata shall contain, at a minimum: f.References associated with static browse products. | essential | inspect. | A |
| | IMS-0320-f-6-2 | Standard Product related metadata shall contain, at a minimum: f.References associated with subsetted data products. | essential | inspect. | A |
| | IMS-0320-f-6-3 | Standard Product related metadata shall contain, at a minimum: f.References associated with subsampled data products. | essential | inspect. | A |
| | IMS-0320-f-6-4 | Standard Product related metadata shall contain, at a minimum: f.References associated with summary data products. | essential | inspect. | A |
| | IMS-0320-g-1 | Standard Product related metadata shall contain, at a minimum: g.Published papers by author and date. | essential | inspect. | A |
| | IMS-0320-g-2 | Standard Product related metadata shall contain, at a minimum: g.Research results by author and date. | essential | inspect. | A |
| | IMS-0320-g-3 | Standard Product related metadata shall contain, at a minimum: g."significant" results by author and date. | essential | inspect. | A |
| | IMS-0320-g-4 | Standard Product related metadata shall contain, at a minimum: g.References by author and date. | essential | inspect. | A |
| | IMS-0320-h-1 | Standard Product related metadata shall contain, at a minimum: h.Key organizations and personnel for all product-related DAACs. | essential | inspect. | A |
| | IMS-0320-h-2 | Standard Product related metadata shall contain, at a minimum: h.Key organizations and personnel for all product-related ADCs. | essential | inspect. | A |
| | IMS-0320-h-3 | Standard Product related metadata shall contain, at a minimum: h.Key organizations and personnel for all product-related ODCs. | essential | inspect. | A |
| | IMS-0320-i | Standard Product related metadata shall contain, at a minimum: i.Granule-specific information as listed in Tables C-10 and C-11 in Appendix C | essential | inspect. | A |
| IMS-0330 | IMS-0330-a-1 | The metadata maintained by the IMS shall provide a cross reference that relates science data to the following at a minimum: a.Calibration data. | essential | demo | A |
| | IMS-0330-a-2 | The metadata maintained by the IMS shall provide a cross reference that relates science data to the following at a minimum: a.Navigation data. | essential | demo | A |
| | IMS-0330-a-3 | The metadata maintained by the IMS shall provide a cross reference that relates science data to the following at a minimum: a.Instrument engineering data | essential | demo | A |
| | IMS-0330-b | The metadata maintained by the IMS shall provide a cross reference that relates science data to the following at a minimum: b.Processing algorithms used for data generation at the PGS. | essential | demo | A |
| | IMS-0330-c | The metadata maintained by the IMS shall provide a cross reference that relates science data to the following at a minimum: c.Software used for data generation at the PGS. | essential | demo | A |
| | IMS-0330-c | The metadata maintained by the IMS shall provide a cross reference that relates science data to the following at a minimum: d.Parameters used for data generation at the PGS. | essential | demo | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-0330-d | The metadata maintained by the IMS shall provide a cross reference that relates science data to the following at a minimum: d.Parameters used for data generation at the PGS. | essential | demo | A |
| | IMS-0330-e | The metadata maintained by the IMS shall provide a cross reference that relates science data to the following at a minimum: e.Input data used for data generation at the PGS. | essential | demo | A |
| | IMS-0330-f | The metadata maintained by the IMS shall provide a cross reference that relates The metadata maintained by the IMS shall provide a cross reference that relates science data to the following at a minimum: f.Data recipients. | essential | demo | A |
| | IMS-0330-g | The metadata maintained by the IMS shall provide a cross reference that relates science data to the following at a minimum: g.The PGS at which the data was processed | essential | demo | A |
| | IMS-0330-h-1 | The metadata maintained by the IMS shall provide a cross reference that relates science data to the following at a minimum: h.QA and validation data. | essential | demo | A |
| IMS-0340 | IMS-0340-1-1 | The metadata maintained by the IMS shall contain content-based summary information, including statistical summaries for all ECS standard products. | essential | inspect. | A |
| | IMS-0340-1-2 | The metadata maintained by the IMS shall contain content-based summary information, including statistical summaries for all ECS special products. | essential | inspect. | A |
| | IMS-0340-2-1 | The metadata maintained by the IMS shall contain content-based summary information, including granule features, for all ECS standard products. | essential | inspect. | A |
| | IMS-0340-2-2 | The metadata maintained by the IMS shall contain content-based summary information, including granule features, for all ECS special products. | essential | inspect. | A |
| IMS-0350 | IMS-0350-1-1 | The IMS shall provide the capability for authorized personnel to add ECS metadata entries individually. | critical | inspect. | A |
| | IMS-0350-1-2 | The IMS shall provide the capability for authorized personnel to add ECS metadata entries in groups. | critical | inspect. | A |
| | IMS-0350-2-1 | The IMS shall provide the capability for authorized personnel to delete ECS metadata entries individually. | critical | inspect. | A |
| | IMS-0350-2-2 | The IMS shall provide the capability for authorized personnel to delete ECS metadata entries in groups. | critical | inspect. | A |
| | IMS-0350-3-1 | The IMS shall provide the capability for authorized personnel to modify ECS metadata entries individually. | critical | inspect. | A |
| | IMS-0350-3-2 | The IMS shall provide the capability for authorized personnel to modify ECS metadata entries in groups. | critical | inspect. | A |
| IMS-0355 | IMS-0355 | The metadata shall be expandable to include additional attributes which are identified during the and deemed useful for data search. | fulfillment | analysis | A |
| IMS-0356 | IMS-0356-1 | The IMS shall provide a mechanism to create directory entries on EOSDIS data sets and forward directory entries in the appropriate format to the Global Change Master Directory. | fulfillment | analysis | A |
| | IMS-0356-2 | The IMS shall provide a mechanism to update directory entries on EOSDIS data sets and forward directory entries in the appropriate format to the Global Change Master Directory. | fulfillment | analysis | A |
| IMS-0360 | IMS-0360 | The IMS shall maintain or provide access to an on-line Earth Science master directory of information, which may be geographically distributed, that describes whole data sets in the Earth science disciplines. | essential | demo | A |
| IMS-0380 | IMS-0380-1 | The IMS shall provide the capability to exchange directory data with IP data centers. | essential | demo | A |
| | IMS-0380-2 | The IMS shall provide the capability to exchange directory data with ADCs. | essential | demo | A |
| | IMS-0380-3 | The IMS shall provide the capability to exchange directory data with selected ODCs. | essential | demo | A |
| IMS-0390 | IMS-0390-1 | The IMS shall maintain or provide access to directory entries for all data sets accessible through the IMS search service. | essential | demo | A |
| | IMS-0390-2 | The IMS shall maintain or provide access to directory entries for all data sets accessible through the IMS order service. | essential | demo | A |
| IMS-0410 | IMS-0410 | The IMS shall maintain an on-line guide (documentation/reference material) that provides information about individual EOSDIS data sets. | essential | demo | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| IMS-0415 | IMS-0415-1-1 | The IMS shall provide the ability to access guide information which includes graphics derivable from suitably structured documents. | essential | demo | A |
| | IMS-0415-1-2 | The IMS shall provide the ability to access guide information which includes hypertext, derivable from suitably structured documents. | essential | demo | A |
| | IMS-0415-1-3 | The IMS shall provide the ability to access guide information which includes plain text documents. | essential | demo | A |
| | IMS-0415-2-1 | The IMS shall provide the ability to present (dependent on the user's display device capabilities) guide information which includes graphics. | essential | demo | A |
| | IMS-0415-2-2 | The IMS shall provide the ability to present (dependent on the user's display device capabilities) guide information which includes hypertext derivable from suitably structured documents. | essential | demo | A |
| | IMS-0415-2-3 | The IMS shall provide the ability present (dependent on the user's display device capabilities) guide information which includes plain text documents. | essential | demo | A |
| IMS-0420 | IMS-0420-a-1 | The IMS on-line guide (documentation/reference material) shall provide or, where appropritate, contain references to such information as: a.Documentation of processing algorithms used for EOS data products generated by the ECS. | essential | demo | A |
| | IMS-0420-a-2 | The IMS on-line guide (documentation/reference material) shall provide or, where appropritate, contain references to such information as: a.Documentation of processing algorithms used for other Earth science data products generated by the ECS. | essential | demo | A |
| | IMS-0420-b | The IMS on-line guide (documentation/reference material) shall provide or, where appropritate, contain references to such information as: b.Results of science data quality assessments of EOS data. | essential | demo | A |
| | IMS-0420-c | The IMS on-line guide (documentation/reference material) shall provide or, where appropritate, contain references to such information as: c.Bibliography of published and unpublished literature (as available) derived from the project. | essential | demo | A |
| | IMS-0420-d | The IMS on-line guide (documentation/reference material) shall provide or, where appropritate, contain references to such information as: d.Cross references between differing studies of the same data. | essential | demo | A |
| | IMS-0420-e | The IMS on-line guide (documentation/reference material) shall provide or, where appropritate, contain references to such information as: e.Other documents relevant to quality assessment of EOS data. | essential | demo | A |
| | IMS-0420-f | The IMS on-line guide (documentation/reference material) shall provide or, where appropritate, contain references to such information as: f.Product specifications. | essential | demo | A |
| | IMS-0420-g | The IMS on-line guide (documentation/reference material) shall provide or, where appropritate, contain references to such information as: g.Instrument specifications. | essential | demo | A |
| | IMS-0420-h | The IMS on-line guide (documentation/reference material) shall provide or, where appropritate, contain references to such information as: h.Summaries of data sets derived from observation logs. | essential | demo | A |
| | IMS-0420-i | The IMS on-line guide (documentation/reference material) shall provide or, where appropritate, contain references to such information as: i.Format options available for the given data set. | essential | demo | A |
| | IMS-0420-j-1 | The IMS on-line guide (documentation/reference material) shall provide or, where appropritate, contain references to such information as: j.Subsetting options available for the given data set. | essential | demo | A |
| | IMS-0420-j-2 | The IMS on-line guide (documentation/reference material) shall provide or, where appropritate, contain references to such information as: j.Subsampling options available for the given data set. | essential | demo | A |
| | IMS-0420-j-3 | The IMS on-line guide (documentation/reference material) shall provide or, where appropritate, contain references to such information as: j.Transformation options available for the given data set. | essential | demo | A |
| | IMS-0420-k | The IMS on-line guide (documentation/reference material) shall provide or, where appropritate, contain references to such information as: k.Inventory search options available for the given data set. | essential | demo | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| IMS-0430 | IMS-0430 | The IMS shall maintain an on-line inventory with information that individually describes each granule of EOSDIS data as defined by the instrument science team. Where granule refers to the minimum traceable logical unit of data stored in the archives. | essential | analysis | A |
| IMS-0440 | IMS-0440-1 | The IMS shall maintain information that describes spacecraft housekeeping data parameters stored in the archives. | essential | demo | A |
| | IMS-0440-2 | The IMS shall maintain information that describes spacecraft ancillary data parameters stored in the archives. | essential | demo | A |
| IMS-0450 | IMS-0450-1 | The IMS shall accept and validate new metadata for all ECS archive data which has been ingested at the DADS. | essential | test | A |
| | IMS-0450-2 | The IMS shall accept and validate updated metadata for all ECS archive data which has been ingested at the DADS. | essential | test | A |
| IMS-0455 | IMS-0455-a | The IMS shall accept and validate new metadata from the DADS reflecting changes as a result of: a.Purges. | essential | test | A |
| | IMS-0455-b | The IMS shall accept and validate new metadata from the DADS reflecting changes as a result of: b.Transfers. | essential | test | A |
| | IMS-0455-c | The IMS shall accept and validate new metadata from the DADS reflecting changes as a result of: c.Unexpected loss. | essential | test | A |
| | IMS-0455-d | The IMS shall accept and validate new metadata from the DADS reflecting changes as a result of: d.Restoration of data after recovery from loss. | essential | test | A |
| IMS-0460 | IMS-0460 | The IMS shall provide the capability to accept metadata problem reports from users, and inform the PGS quality assurance staff of the problem. | fulfillment | demo | A |
| IMS-0480 | IMS-0480 | The IMS shall allow the user to store documents in the ECS. | essential | demo | B |
| IMS-0490 | IMS-0490-a | The IMS shall provide the capability to ingest documentation in a number of digital text formats, at a minimum the following: a. ASCII text. | essential | demo | A |
| | IMS-0490-b | The IMS shall provide the capability to ingest documentation in a number of digital text formats, at a minimum the following: b. Microsoft WORD | essential | demo | A |
| | IMS-0490-c | The IMS shall provide the capability to ingest documentation in a number of digital text formats, at a minimum the following: c. HTML (Hyper-Text Markup Language) | fulfillment | demo | A |
| | IMS-0490-d | The IMS shall provide the capability to ingest documentation in a number of digital text formats, at a minimum the following: d. Interleaf | essential | demo | A |
| | IMS-0490-e | The IMS shall provide the capability to ingest documentation in a number of digital text formats, at a minimum the following: e. Postscript. | fulfillment | demo | A |
| | IMS-0490-f | The IMS shall provide the capability to ingest documentation in a number of digital text formats, at a minimum the following: f. WordPerfect. | fulfillment | demo | A |
| IMS-0500 | IMS-0500-a | The IMS shall provide access to information to include at a minimum: a.Metadata. | essential | demo | A |
| | IMS-0500-b-1 | The IMS shall provide access to information to include at a minimum: b.Spacecraft housekeeping information. | essential | demo | A |
| | IMS-0500-b-2 | The IMS shall provide access to information to include at a minimum: b.Spacecraft ancillary data information. | essential | demo | A |
| | IMS-0500-c | The IMS shall provide access to information to include at a minimum: c.Engineering data. | essential | demo | A |
| | IMS-0500-d | The IMS shall provide access to information to include at a minimum: d.EOC historical data. | essential | demo | A |
| | IMS-0500-e | The IMS shall provide access to information to include at a minimum: e.Data acquisition plans and schedules | essential | demo | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-0500-f | The IMS shall provide access to information to include at a minimum: f.Processing schedules | essential | demo | A |
| | IMS-0500-g | The IMS shall provide access to information to include at a minimum: g.Documentation | essential | demo | A |
| | IMS-0500-h | The IMS shall provide access to information to include at a minimum: h.ESDIS Project Policies and Procedures obtained from SMC data base. | essential | demo | A |
| | IMS-0500-i | The IMS shall provide access to information to include at a minimum: i.Science Processing Library software | essential | demo | A |
| | IMS-0500-j | The IMS shall provide access to information to include at a minimum: j.Documentation on data format and metadata standards. | essential | demo | A |
| IMS-0510 | IMS-0510-1-a | The IMS shall provide tools for research planning to include at a minimum: a.Data acquisition schedules and plans | critical | demo | B |
| | IMS-0510-1-b | The IMS shall provide tools for research planning to include at a minimum: b.The capability to map specified geophysical parameters to the appropriate instrument and/or Standard Product | essential | demo | A |
| | IMS-0510-1-c | The IMS shall provide tools for research planning to include at a minimum: c.Descriptive information on instruments and geophysical parameters available in Standard Products. | critical | demo | B |
| | IMS-0510-1-d | The IMS shall provide tools for research planning to include at a minimum: d.Climatology information. | essential | demo | A |
| | IMS-0510-1-e | The IMS shall provide tools for research planning to include at a minimum: e.Phenomenology information. | essential | demo | A |
| | IMS-0510-1-f | The IMS shall provide tools for research planning to include at a minimum: f.Geographic reference aids. | essential | demo | A |
| | IMS-0510-1-g | The IMS shall provide tools for research planning to include at a minimum: g.Spacecraft location projections. | critical | demo | B |
| | IMS-0510-2-a | The IMS shall provide tools for data search to include at a minimum: a.Data acquisition schedules and plans. | critical | demo | B |
| | IMS-0510-2-b | The IMS shall provide tools for data search, to include at a minimum: b.The capability to map specified geophysical parameters to the appropriate instrument and/or Standard Product. | essential | demo | A |
| | IMS-0510-2-c | The IMS shall provide tools for data search, to include at a minimum: c.Descriptive information on instruments and geophysical parameters available in Standard Products. | critical | demo | B |
| | IMS-0510-2-d | The IMS shall provide tools for research planning and data search, to include at a minimum: d.Climatology information. | essential | demo | A |
| | IMS-0510-2-e | The IMS shall provide tools for data search, to include at a minimum: e.Phenomenology information. | essential | demo | A |
| | IMS-0510-2-f | The IMS shall provide tools for data search, to include at a minimum: f.Geographic reference aids. | essential | demo | A |
| | IMS-0510-2-g | The IMS shall provide tools for data search, to include at a minimum: g.Spacecraft location projections. | critical | demo | B |
| IMS-0530 | IMS-0530 | The IMS shall provide document text search. | essential | demo | A |
| IMS-0535 | IMS-0535 | The IMS shall support hierarchical searching of suitably structured documents. | fulfillment | demo | A |
| IMS-0540 | IMS-0540 | The IMS shall display PGS system processing schedules to users. | fulfillment | demo | A |
| IMS-0545 | IMS-0545 | The IMS shall provide the capability to search a product's processing history. | fulfillment | demo | A |
| IMS-0550 | IMS-0550-a | The IMS shall allow a user to locate and identify desired data without detailed knowledge of the ECS's: a.Architecture. | fulfillment | demo | A |
| | IMS-0550-b | The IMS shall allow a user to locate and identify desired data without detailed knowledge of the ECS's: b.Data Base management system. | fulfillment | demo | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-0550-c | The IMS shall allow a user to locate and identify desired data without detailed knowledge of the ECS's: c.Data Base structure. | fulfillment | demo | A |
| | IMS-0550-d | The IMS shall allow a user to locate and identify desired data without detailed knowledge of the ECS's: d.Query languages. | fulfillment | demo | A |
| | IMS-0550-e | The IMS shall allow a user to locate and identify desired data without detailed knowledge of the ECS's: e.Data formats | fulfillment | demo | A |
| IMS-0560 | IMS-0560 | The IMS shall decompose complex data base search requests into executable data base queries in a manner which is transparent to the user. | fulfillment | demo | A |
| IMS-0570 | IMS-0570 | The IMS shall provide an incremental search capability. | fulfillment | demo | A |
| IMS-0575 | IMS-0575 | The IMS shall provide the capability to search across multiple data sets for coincident occurences of data in space and/or time and any other attribute(s) of metadata. | essential | demo | A |
| IMS-0580 | IMS-0580-1 | The IMS shall provide geographic (e.g. surface features) overlays to aid in the selection of spatial data and to enhance the display of metadata. | fulfillment | demo | A |
| | IMS-0580-2 | The IMS shall provide geophysical (e.g. surface features) overlays to aid in the selection of spatial data and to enhance the display of metadata. | fulfillment | demo | A |
| IMS-0590 | IMS-0590-a | The IMS shall provide the capability to distribute information: a.On-line (i.e., over a network). | essential | demo | A |
| | IMS-0590-a | The IMS shall provide the capability to distribute information: b.Off-line (hardcopy or offline data media ). | essential | demo | A |
| IMS-0600 | IMS-0600-1 | The IMS shall provide the capability to search a directory of information that describes whole EOSDIS earth science data sets. | essential | demo | A |
| | IMS-0600-2 | The IMS shall provide the capability to search a directory of information that describes non-EOSDIS earth science data sets. | essential | demo | A |
| | IMS-0600-3 | The IMS shall provide the capability to search a directory of information that describes ADC earth science data sets. | essential | demo | A |
| IMS-0610 | IMS-0610 | The IMS shall provide the capability to search the data inventory which describes each granule of EOSDIS data. | essential | demo | A |
| IMS-0620 | IMS-0620-2-1 | The IMS shall provide access to inventories of ADCs via level II catalog interoperability as specified in ICDs. | essential | demo | A |
| | IMS-0620-1-1 | The IMS shall provide access to inventories of selected ODCs via level II catalog interoperability as specified in ICDs. | essential | demo | A |
| | IMS-0620-1-2 | The IMS shall provide access to inventories of selected ODCs and level III catalog interoperability as specified in ICDs. | essential | demo | A |
| | IMS-0620-2-2 | The IMS shall provide access to inventories of ADCs via level III catalog interoperability as specified in ICDs. | essential | demo | A |
| IMS-0625 | IMS-0625-1 | The IMS shall provide bi-directional interoperability between ECS and V0 for access to the inventory metadata, via level III catalog interoperability as specified in ICDs. | fulfillment | demo | A |
| | IMS-0625-2 | The IMS shall provide bi-directional interoperability between ECS and V0 for access to the guide information via level III catalog interoperability as specified in ICDs. | fulfillment | demo | A |
| | IMS-0625-3 | The IMS shall provide bi-directional interoperability between ECS and V0 for access to the browse products via level III catalog interoperability as specified in ICDs. | fulfillment | demo | A |
| IMS-0630 | IMS-0630-a | The IMS shall provide the capability to select metadata for retrieval by: a.Boolean operators. | essential | test | A |
| | IMS-0630-b | The IMS shall provide the capability to select metadata for retrieval by: b.Relational operators. | fulfillment | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-0630-c | The IMS shall provide the capability to select metadata for retrieval by: c.Attribute values | essential | test | A |
| | IMS-0630-d | The IMS shall provide the capability to select metadata for retrieval by: d.Search strings. | essential | test | A |
| | IMS-0630-e | The IMS shall provide the capability to select metadata for retrieval by: a.Boolean operators b.Relational operators c.Attribute values d.Search strings e.Combinations thereof. | essential | test | A |
| IMS-0640 | IMS-0640-a | The IMS shall provide the capability to query geographic metadata by any of the following criteria at a minimum: a.Geographic reference. | essential | test | A |
| | IMS-0640-b | The IMS shall provide the capability to query geographic metadata by any of the following criteria at a minimum: b.Data element content (as specified in metadata). | essential | test | A |
| | IMS-0640-c | The IMS shall provide the capability to query geographic metadata by any of the following criteria at a minimum: c.Minimum bounding rectangle. | essential | test | A |
| | IMS-0640-d | The IMS shall provide the capability to query geographic metadata by any of the following criteria at a minimum: d.Point and radius. | essential | test | A |
| | IMS-0640-e | The IMS shall provide the capability to query geographic metadata by any of the following criteria at a minimum: e.Geographic name (based on a standard data base, such as USGS Geographic Names Information System). | essential | test | A |
| | IMS-0640-f | The IMS shall provide the capability to query geographic metadata by any of the following criteria at a minimum: f.Any combination of the above. | essential | test | A |
| IMS-0650 | IMS-0650-a | The IMS shall query non-geographic metadata by any of the following criteria at a minimum: a.Exact word match. | essential | test | A |
| | IMS-0650-b | The IMS shall query non-geographic metadata by any of the following criteria at a minimum: b.Phrase match. | essential | test | A |
| | IMS-0650-c | The IMS shall query non-geographic metadata by any of the following criteria at a minimum: c.Character set (string). | essential | test | A |
| | IMS-0650-d-1 | The IMS shall query non-geographic metadata by any of the following criteria at a minimum: d.Wildcard construct (prefix). | essential | test | A |
| | IMS-0650-d-2 | The IMS shall query non-geographic metadata by any of the following criteria at a minimum: d.Wildcard construct (embedded). | essential | test | A |
| | IMS-0650-d-3 | The IMS shall query non-geographic metadata by any of the following criteria at a minimum: d.Wildcard construct (suffix). | essential | test | A |
| | IMS-0650-e | The IMS shall query non-geographic metadata by any of the following criteria at a minimum: e.Character range. | essential | test | A |
| | IMS-0650-f-1 | The IMS shall query non-geographic metadata by any of the following criteria at a minimum: f.Logical operators. | essential | test | A |
| | IMS-0650-f-1 | The IMS shall query non-geographic metadata by any of the following criteria at a minimum: g. Boolean operators. | essential | test | A |
| | IMS-0650-f-2 | The IMS shall query non-geographic metadata by any of the following criteria at a minimum: f.Boolean operators. | essential | test | A |
| | IMS-0650-g | The IMS shall query non-geographic metadata by any of the following criteria at a minimum: g.Min/max range search. | essential | test | A |
| | IMS-0650-f-2 | The IMS shall query non-geographic metadata by any of the following criteria at a minimum: a.Exact word match f.Logical operators. | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-0650-f-2 | The IMS shall query non-geographic metadata by any of the following criteria at a minimum: a.Exact word match b.Phrase match c.Character set (string) d.Wildcard construct (prefix, embedded, suffix) e.Character range f.Logical and Boolean operators g.Min/max range search h.Any combination of the above | essential | test | A |
| IMS-0660 | IMS-0660-1 | The IMS shall provide inventory metadata search based on any combination of the core (Table C-10, Appendix C) and where applicable dataset-specific (Table C-11, Appendix C) inventory metadata attributes at a minimum. | essential | test | A |
| | IMS-0660-2 | The IMS shall provide inventory metadata search based on any combination of the core (Table C-10, Appendix C) and where applicable dataset-specific (Table C-11, Appendix C) geophysical parameters at a minimum. | essential | test | A |
| IMS-0665 | IMS-0665-1 | The IMS shall provide informational messages to indicate that a query is being executed. | essential | demo | A |
| | IMS-0665-2 | The IMS shall provide the capability for the user to abort any time-intensive operations. | essential | demo | A |
| IMS-0670 | IMS-0670-1 | The IMS shall provide the capability to accept orders from users for periodic delivery of information stored at the IMS. | fulfillment | demo | A |
| | IMS-0670-1 | The IMS shall provide the capability to validate orders from users for periodic delivery of information stored at the IMS. | fulfillment | demo | A |
| | IMS-0670-3 | The IMS shall provide the capability to fill orders from users for periodic delivery of information stored at the IMS. | fulfillment | demo | A |
| IMS-0680 | IMS-0680 | The IMS shall provide data order capabilities integrated with metadata search capabilities. | essential | demo | A |
| IMS-0690 | IMS-0690-1 | The IMS shall provide the capability to visualize pre-order data products to facilitate the data selection and ordering process. | essential | demo | A |
| | IMS-0690-2 | The IMS shall provide the capability to visualize pre-order metadata (e.g. coverage maps, summary data) to facilitate the data selection and ordering process. | essential | demo | A |
| | IMS-0690 | The IMS shall provide the capability to visualize pre-order data products and metadata (e.g. coverage maps, summary data) to facilitate the data selection and ordering process. | essential | demo | A |
| IMS-0700 | IMS-0700-1 | The IMS shall provide the capability for users to request subsetted data products, which have been processed at the PGS during the routine production processing and archived at the DADS, whenever associated inventory information is displayed. | essential | demo | B |
| | IMS-0700-2 | The IMS shall provide the capability for users to request subsampled data products, which have been processed at the PGS during the routine production processing and archived at the DADS, whenever associated inventory information is displayed. | essential | demo | B |
| | IMS-0700-3 | The IMS shall provide the capability for users to request summary data products, which have been processed at the PGS during the routine production processing and archived at the DADS, whenever associated inventory information is displayed. | essential | demo | B |
| IMS-0720 | IMS-0720-1-a | The IMS shall provide the capability to request data products which are processed ad hoc in response to user requests for subsetting within a granule based on defined criteria to include: a. Geographical location (x, y, z - spatial with rectangular boundaries). | essential | test | B |
| | IMS-0720-1-b | The IMS shall provide the capability to request data products which are processed ad hoc in response to user requests for subsetting within a granule based on defined criteria to include: b. Spectral band | essential | test | B |
| | IMS-0720-1-c | The IMS shall provide the capability to request data products which are processed ad hoc in response to user requests for subsetting within a granule based on defined criteria to include: c. Time. | essential | test | B |
| | IMS-0720-2-a | The IMS shall provide the capability to request data products which are processed ad hoc in response to user requests for subsampling within a granule based on defined criteria to include: a. Geographical location (x, y, z - spatial with rectangular boundaries). | essential | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-0720-2-b | The IMS shall provide the capability to request data products which are processed ad hoc in response to user requests for subsampling within a granule based on defined criteria to include: b. Spectral band. | essential | test | B |
| | IMS-0720-2-c | The IMS shall provide the capability to request data products which are processed ad hoc in response to user requests for subsampling within a granule based on defined criteria to include: c. Time. | essential | test | B |
| | IMS-0720-3-a | The IMS shall provide the capability to request data products which are processed ad hoc in response to user requests for averaging within a granule based on defined criteria to include: a. Geographical location (x, y, z - spatial with rectangular boundaries). | essential | test | B |
| | IMS-0720-3-b | The IMS shall provide the capability to request data products which are processed ad hoc in response to user requests for averaging within a granule based on defined criteria to include: b. Spectral band. | essential | test | B |
| | IMS-0720-3-c | The IMS shall provide the capability to request data products which are processed ad hoc in response to user requests for averaging within a granule based on defined criteria to include: c. Time. | essential | test | B |
| IMS-0730 | IMS-0730-1 | The IMS shall, using information supplied by the DADS, provide the user an estimate of how long it will take before subsetted data products are ready for visualization. | fulfillment | demo | B |
| | IMS-0730-2 | The IMS shall, using information supplied by the DADS, provide the user an estimate of how long it will take before subsampled data products are ready for visualization. | fulfillment | demo | B |
| | IMS-0730-3 | The IMS shall, using information supplied by the DADS, provide the user an estimate of how long it will take before summary data products are ready for visualization. | fulfillment | demo | B |
| IMS-0740 | IMS-0740-1-1-1 | The IMS shall provide the capability for users to generate one-time orders for the DADS to distribute DADS archive holdings to include Standard Products. | essential | demo | A |
| | IMS-0740-1-1-2 | The IMS shall provide the capability for users to generate requests for one-time orders for the DADS to distribute DADS archive holdings to include Standard Product software. | essential | demo | A |
| | IMS-0740-1-1-3 | The IMS shall provide the capability for users to generate one-time orders for the DADS to distribute DADS archive holdings to include EOC historical data. | essential | demo | A |
| | IMS-0740-1-1-4 | The IMS shall provide the capability for users to generate requests for one-time orders for the DADS to distribute DADS archive holdings to include spacecraft housekeeping. | essential | demo | A |
| | IMS-0740-1-1-5 | The IMS shall provide the capability for users to generate requests for one-time orders for the DADS to distribute DADS archive holdings to include ancillary data. | essential | demo | A |
| | IMS-0740-1-1-6 | The IMS shall provide the capability for users to generate requests for one-time orders for the DADS to distribute DADS archive holdings to include engineering data. | essential | demo | A |
| | IMS-0740-2-1-1 | The IMS shall provide the capability for users to update requests for one-time orders for the DADS to distribute DADS archive holdings to include Standard Products. | essential | demo | A |
| | IMS-0740-2-1-1 | The IMS shall provide the capability for users to update requests for one-time orders for the DADS to distribute DADS archive holdings to include Standard Product software. | essential | demo | A |
| | IMS-0740-2-1-2 | The IMS shall provide the capability for users to update requests for one-time orders for the DADS to distribute DADS archive holdings to include Standard Product software. | essential | demo | A |
| | IMS-0740-2-1-3 | The IMS shall provide the capability for users to update requests for one-time orders for the DADS to distribute DADS archive holdings to include EOC historical data. | essential | demo | A |
| | IMS-0740-2-1-4 | The IMS shall provide the capability for users to update requests for one-time orders for the DADS to distribute DADS archive holdings to include, at a minimum spacecraft housekeeping data. | essential | demo | A |
| | IMS-0740-2-1-4 | The IMS shall provide the capability for users to update requests for one-time orders for the DADS to distribute DADS archive holdings to include ancillary data. | essential | demo | A |
| | IMS-0740-2-1-5 | The IMS shall provide the capability for users to update requests for one-time orders for the DADS to distribute DADS archive holdings to include engineering data. | essential | demo | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-0740-1-2-1 | The IMS shall provide the capability for users to generate standing orders for the DADS to distribute DADS archive holdings to include Standard Products. | essential | demo | A |
| | IMS-0740-1-2-2 | The IMS shall provide the capability for users to generate standing orders for the DADS to distribute DADS archive holdings to include Standard Product software. | essential | demo | A |
| | IMS-0740-1-2-3 | The IMS shall provide the capability for users to generate requests for standing orders for the DADS to distribute DADS archive holdings to include EOC historical data. | essential | demo | A |
| | IMS-0740-1-2-4 | The IMS shall provide the capability for users to generate requests for standing orders for the DADS to distribute DADS archive holdings to include spacecraft housekeeping data. | essential | demo | A |
| | IMS-0740-1-2-5 | The IMS shall provide the capability for users to generate requests for standing orders for the DADS to distribute DADS archive holdings to include ancillary data. | essential | demo | A |
| | IMS-0740-1-2-6 | The IMS shall provide the capability for users to generate requests for standing orders for the DADS to distribute DADS archive holdings to include engineering data. | essential | demo | A |
| | IMS-0740-2-2-1 | The IMS shall provide the capability for users to update requests for standing orders for the DADS to distribute DADS archive holdings to include Standard Products. | essential | demo | A |
| | IMS-0740-2-2-2 | The IMS shall provide the capability for users to update requests for standing orders for the DADS to distribute DADS archive holdings to include Standard Product software. | essential | demo | A |
| | IMS-0740-2-2-3 | The IMS shall provide the capability for users to update requests for standing orders for the DADS to distribute DADS archive holdings to include EOC historical data. | essential | demo | A |
| | IMS-0740-2-2-4 | The IMS shall provide the capability for users to update requests for standing orders for the DADS to distribute DADS archive holdings to include spacecraft housekeeping data. | essential | demo | A |
| | IMS-0740-2-2-5 | The IMS shall provide the capability for users to update requests for standing orders for the DADS to distribute DADS archive holdings to include ancillary data. | essential | demo | A |
| | IMS-0740-2-2-5 | The IMS shall provide the capability for users to update requests for standing orders for the DADS to distribute DADS archive holdings to include ancillary data. | essential | demo | A |
| | IMS-0740-2-2-6 | The IMS shall provide the capability for users to update requests for standing orders for the DADS to distribute DADS archive holdings to include engineering data. | essential | demo | A |
| IMS-0750 | IMS-0750 | The IMS shall provide the capability for the user to order Standard Product software and associated documentation in accordance with EOSDIS distribution criteria. | fulfillment | demo | A |
| IMS-0760 | IMS-0760-1-1-2-1 | The IMS shall access distribution criteria for each data product and compare the distribution criteria to the requestors data access rights to verify that the data can be distributed as requested. | essential | test | A |
| | IMS-0760-1-2-2-2 | The IMS shall access distribution criteria for each data product software and compare the distribution criteria to the requestors data access rights to verify that the software can be distributed as requested. | essential | test | A |
| IMS-0770 | IMS-0770-1 | The IMS shall allow users to formulate a data order based on any combination of the inventory core metadata attributes at a minimum. | essential | test | A |
| | IMS-0770-2 | The IMS shall allow users to formulate a data order based on any combination of the inventory core metadata geophysical parameters at a minimum. | essential | test | A |
| IMS-0780 | IMS-0780-1-1 | The IMS shall accept from the ECS users, requests for ECS archival data products. | essential | test | A |
| | IMS-0780-1-2 | The IMS shall accept from the IPs requests for ECS archival data products. | essential | test | A |
| | IMS-0780-1-3 | The IMS shall accept from the ADCs, requests for ECS archival data products. | essential | test | A |
| | IMS-0780-1-4 | The IMS shall accept from the ODCs, requests for ECS archival data products. | essential | test | A |
| | IMS-0780-2-1 | The IMS shall validate from the ECS users, requests for ECS archival data products. | essential | test | A |
| | IMS-0780-2-2 | The IMS shall validate from the IPs, requests for ECS archival data products. | essential | test | A |
| | IMS-0780-2-3 | The IMS shall validate from the ADCs, requests for ECS archival data products. | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-0780-2-4 | The IMS shall validate from the ODCs, requests for ECS archival data products. | essential | test | A |
| IMS-0790 | IMS-0790-1 | The IMS shall determine the location of requested data products, where the data are archived. | essential | test | A |
| | IMS-0790-2 | The IMS shall submit the product order to the data center where the data are archived. | essential | test | A |
| IMS-0800 | IMS-0800-1 | The IMS shall determine the amount of data expected to be returned as the result of the product order. | fulfillment | demo | A |
| | IMS-0800-2 | The IMS shall provide the amount of data expected to be returned to the requestor. | fulfillment | demo | A |
| IMS-0810 | IMS-0810-a | The IMS shall prepare, for output to the DADS, product orders to retrieve specified data from the archive and distribute it, which contains the following information at a minimum: a. Requestor identification | essential | test | A |
| | IMS-0810-b | The IMS shall prepare, for output to the DADS, product orders to retrieve specified data from the archive and distribute it, which contains the following information at a minimum: b. Data type | essential | test | A |
| | IMS-0810-c | The IMS shall prepare, for output to the DADS, product orders to retrieve specified data from the archive and distribute it, which contains the following information at a minimum: c. Data set identifier | essential | test | A |
| | IMS-0810-d | The IMS shall prepare, for output to the DADS, product orders to retrieve specified data from the archive and distribute it, which contains the following information at a minimum: d. Data set subsetting instructions | essential | test | A |
| | IMS-0810-e | The IMS shall prepare, for output to the DADS, product orders to retrieve specified data from the archive and distribute it, which contains the following information at a minimum: e. Data formats | essential | test | A |
| | IMS-0810-f | The IMS shall prepare, for output to the DADS, product orders to retrieve specified data from the archive and distribute it, which contains the following information at a minimum: f. Distribution instructions, including media requirements | essential | test | A |
| | IMS-0810-g | The IMS shall prepare, for output to the DADS, product orders to retrieve specified data from the archive and distribute it, which contains the following information at a minimum: g. Request priority | essential | test | A |
| | IMS-0810-h | The IMS shall prepare, for output to the DADS, product orders to retrieve specified data from the archive and distribute it, which contains the following information at a minimum: h. Suggested earliest start time | essential | test | A |
| | IMS-0810-i | The IMS shall prepare, for output to the DADS, product orders to retrieve specified data from the archive and distribute it, which contains the following information at a minimum: i. Suggested latest completion time | essential | test | A |
| IMS-0820 | IMS-0820-1-a | The IMS shall provide to the user product order status information from the DADS to confirm an order, which contains the following information at a minimum: a. Requestor identification | essential | test | A |
| | IMS-0820-1-b | The IMS shall provide to the user product order status information from the DADS to confirm an order, which contains the following information at a minimum: b. Request identification | essential | test | A |
| | IMS-0820-1-c | The IMS shall provide to the user product order status information from the DADS to confirm an order, which contains the following information at a minimum: c. Request status | essential | test | A |
| | IMS-0820-1-e | The IMS shall provide to the user product order status information from the DADS to confirm an order, which contains the following information at a minimum: e. If delayed longer than latest completion time specified by user, adjusted start and completion times. | essential | test | A |
| | IMS-0820-2-a | The IMS shall provide to the user product order status information from the DADS to reject an order, which contains the following information at a minimum: a. Requestor identification | essential | test | A |
| | IMS-0820-2-b | The IMS shall provide to the user product order status information from the DADS to reject an order, which contains the following information at a minimum: b. Request identification | essential | test | A |
| | IMS-0820-2-c | The IMS shall provide to the user product order status information from the DADS to reject an order, which contains the following information at a minimum: c. Request status | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-0820-2-d | The IMS shall provide to the user product order status information from the DADS to reject an order, which contains the following information at a minimum: d. If rejection, then the reason for the rejection | essential | test | A |
| IMS-0830 | IMS-0830-1 | The IMS shall, using information provided by the DADS, notify users when products will not be distributed within the estimated time, and provide the reason for the delay. | essential | test | A |
| | IMS-0830-2 | The IMS shall, using information provided by the DADS, notify users when products will not be distributed within the estimated time, and provide modified arrival times. | essential | test | A |
| IMS-0840 | IMS-0840 | The IMS shall provide the capability to receive data order status from the DADS when the ordered data has been shipped to the user. | essential | demo | A |
| IMS-0860 | IMS-0860-1-1-1-1 | The IMS shall provide an interface to ADC data systems that produce Earth science data sets and that have agreed to make the information available to ECS. | essential | demo | A |
| | IMS-0860-1-1-1-2 | The IMS shall provide an interface to ADC data systems that produce Earth science data sets and that have agreed to make the services available to ECS. | essential | demo | A |
| | IMS-0860-1-1-2-1 | The IMS shall provide an interface to ADC data systems that process Earth science data sets and that have agreed to make the information available to ECS. | essential | demo | A |
| | IMS-0860-1-1-2-2 | The IMS shall provide an interface to ADC data systems that process Earth science data sets and that have agreed to make the services available to ECS. | essential | demo | A |
| | IMS-0860-1-1-3-1 | The IMS shall provide an interface to ADC data systems maintain Earth science data sets and that have agreed to make the information available to ECS. | essential | demo | A |
| | IMS-0860-1-1-3-2 | The IMS shall provide an interface to ADC data systems that maintain Earth science data sets and that have agreed to make the services available to ECS. | essential | demo | A |
| | IMS-0860-1-1-4-1 | The IMS shall provide an interface to ADC data systems that produce and process Earth science data sets and that have agreed to make the information available to ECS. | essential | demo | A |
| | IMS-0860-1-1-4-2 | The IMS shall provide an interface to ADC data systems that produce and process Earth science data sets and that have agreed to make the services available to ECS. | essential | demo | A |
| | IMS-0860-1-1-5-1 | The IMS shall provide an interface to ADC data systems that produce and maintain Earth science data sets and that have agreed to make the information available to ECS. | essential | demo | A |
| | IMS-0860-1-1-5-2 | The IMS shall provide an interface to ADC data systems that produce and maintain Earth science data sets and that have agreed to make the services available to ECS. | essential | demo | A |
| | IMS-0860-1-1-6-1 | The IMS shall provide an interface to ADC data systems that process and maintain Earth science data sets and that have agreed to make the information available to ECS. | essential | demo | A |
| | IMS-0860-1-1-6-2 | The IMS shall provide an interface to ADC data systems process and maintain Earth science data sets and that have agreed to make the services available to ECS. | essential | demo | A |
| | IMS-0860-1-2-1-1 | The IMS shall provide an interface to ADC archives that produce Earth science data sets and that have agreed to make the information available to ECS. | essential | demo | A |
| | IMS-0860-1-2-1-2 | The IMS shall provide an interface to ADC data archives that produce Earth science data sets and that have agreed to make th services available to ECS. | essential | demo | A |
| | IMS-0860-1-2-2-1 | The IMS shall provide an interface to ADC data archives that process Earth science data sets and that have agreed to make the information available to ECS. | essential | demo | A |
| | IMS-0860-1-2-2-2 | The IMS shall provide an interface to ADC data archives process Earth science data sets and that have agreed to make the services available to ECS. | essential | demo | A |
| | IMS-0860-1-2-3-1 | The IMS shall provide an interface to ADC data archives that maintain Earth science data sets and that have agreed to make the information available to ECS. | essential | demo | A |
| | IMS-0860-1-2-3-2 | The IMS shall provide an interface to ADC data archives that maintain Earth science data sets and that have agreed to make the services available to ECS. | essential | demo | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-0860-1-2-4-1 | The IMS shall provide an interface to ADC data archives that produce and process Earth science data sets and that have agreed to make the information available to ECS. | essential | demo | A |
| | IMS-0860-1-2-4-2 | The IMS shall provide an interface to ADC data archives that produce and process Earth science data sets and that have agreed to make the services available to ECS. | essential | demo | A |
| | IMS-0860-1-2-5-1 | The IMS shall provide an interface to ADC data archives that produce and maintain Earth science data sets and that have agreed to make the information available to ECS. | essential | demo | A |
| | IMS-0860-1-2-5-2 | The IMS shall provide an interface to ADC data archives that produce and maintain Earth science data sets and that have agreed to make the services available to ECS. | essential | demo | A |
| | IMS-0860-1-2-6-1 | The IMS shall provide an interface to ADC data archives that process and maintain Earth science data sets and that have agreed to make the information available to ECS. | essential | demo | A |
| | IMS-0860-1-2-6-2 | The IMS shall provide an interface to ADC data archives that process and maintain Earth science data sets and that have agreed to make the services available to ECS. | essential | demo | A |
| | IMS-0860-1-2-7-1 | The IMS shall provide an interface to ADC data archives that produce, process, and maintain Earth science data sets and that have agreed to make the information available to ECS. | essential | demo | A |
| | IMS-0860-1-1-7-2 | The IMS shall provide an interface to ADC data systems that produce, process, and maintain Earth science data sets and that have agreed to make the services available to ECS. | essential | demo | A |
| | IMS-0860-1-1-7-1 | The IMS shall provide an interface to ADC data systems that produce, process, and maintain Earth science data sets and that have agreed to make the information available to ECS. | essential | demo | A |
| | IMS-0860-1-2-7-2 | The IMS shall provide an interface to ADC data archives that produce, process, and maintain Earth science data sets and that have agreed to make the services available to ECS. | essential | demo | A |
| | IMS-0860-2-1-1-1 | The IMS shall provide an interface to ODC data systems that produce Earth science data sets and that have agreed to make the information available to ECS. | essential | demo | A |
| | IMS-0860-2-1-1-2 | The IMS shall provide an interface to ODC data systems that produce Earth science data sets and that have agreed to make the services available to ECS. | essential | demo | A |
| | IMS-0860-2-1-2-1 | The IMS shall provide an interface to ODC data systems that process Earth science data sets and that have agreed to make the information available to ECS. | essential | demo | A |
| | IMS-0860-2-1-2-2 | The IMS shall provide an interface to ODC data systems that process Earth science data sets and that have agreed to make the services available to ECS. | essential | demo | A |
| | IMS-0860-2-1-3-1 | The IMS shall provide an interface to ODC data systems that maintain Earth science data sets and that have agreed to make the information available to ECS. | essential | demo | A |
| | IMS-0860-2-1-3-2 | The IMS shall provide an interface to ODC data systems that maintain Earth science data sets and that have agreed to make the services available to ECS. | essential | demo | A |
| | IMS-0860-2-1-4-1 | The IMS shall provide an interface to ODC data systems that produce and process Earth science data sets and that have agreed to make the information available to ECS. | essential | demo | A |
| | IMS-0860-2-1-4-2 | The IMS shall provide an interface to ODC data systems that produce and process Earth science data sets and that have agreed to make the services available to ECS. | essential | demo | A |
| | IMS-0860-2-1-5-1 | The IMS shall provide an interface to ODC data systems that produce and maintain Earth science data sets and that have agreed to make the information available to ECS. | essential | demo | A |
| | IMS-0860-2-1-5-2 | The IMS shall provide an interface to ODC data systems that produce and maintain Earth science data sets and that have agreed to make the services available to ECS. | essential | demo | A |
| | IMS-0860-2-1-6-1 | The IMS shall provide an interface to ODC data systems that process and maintain Earth science data sets and that have agreed to make the information available to ECS. | essential | demo | A |
| | IMS-0860-2-1-6-2 | The IMS shall provide an interface to ODC data systems that process and maintain Earth science data sets and that have agreed to make the services available to ECS. | essential | demo | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-0860-2-1-7-1 | The IMS shall provide an interface to ODC data systems that produce, process, and maintain Earth science data sets and that have agreed to make the information available to ECS. | essential | demo | A |
| | IMS-0860-2-1-7-2 | The IMS shall provide an interface to ODC data systems that produce, process, and maintain Earth science data sets and that have agreed to make the services available to ECS. | essential | demo | A |
| | IMS-0860-2-2-1-1 | The IMS shall provide an interface to ODC data archives that produce Earth science data sets and that have agreed to make the information available to ECS. | essential | demo | A |
| | IMS-0860-2-2-1-2 | The IMS shall provide an interface to ODC data archives that produce Earth science data sets and that have agreed to make the services available to ECS. | essential | demo | A |
| | IMS-0860-2-2-2-1 | The IMS shall provide an interface to ODC data archives that process Earth science data sets and that have agreed to make the information available to ECS. | essential | demo | A |
| | IMS-0860-2-2-2-2 | The IMS shall provide an interface to ODC data archives that process Earth science data sets and that have agreed to make the services available to ECS. | essential | demo | A |
| | IMS-0860-2-2-3-1 | The IMS shall provide an interface to ODC data archives that maintain Earth science data sets and that have agreed to make the information available to ECS. | essential | demo | A |
| | IMS-0860-2-2-3-2 | The IMS shall provide an interface to ODC data archives that maintain Earth science data sets and that have agreed to make the services available to ECS. | essential | demo | A |
| | IMS-0860-2-2-4-1 | The IMS shall provide an interface to ODC data archives that produce and process Earth science data sets and that have agreed to make the information available to ECS. | essential | demo | A |
| | IMS-0860-2-2-4-2 | The IMS shall provide an interface to ODC data archives that produce and process Earth science data sets and that have agreed to make the services available to ECS. | essential | demo | A |
| | IMS-0860-2-2-5-1 | The IMS shall provide an interface to ODC data archives that produce and maintain Earth science data sets and that have agreed to make the information available to ECS. | essential | demo | A |
| | IMS-0860-2-2-5-2 | The IMS shall provide an interface to ODC data archives that produce and maintain Earth science data sets and that have agreed to make the services available to ECS. | essential | demo | A |
| | IMS-0860-2-2-6-1 | The IMS shall provide an interface to ODC data archives that process and maintain Earth science data sets and that have agreed to make the information available to ECS. | essential | demo | A |
| | IMS-0860-2-2-6-2 | The IMS shall provide an interface to ODC data archives that process and maintain Earth science data sets and that have agreed to make the services available to ECS. | essential | demo | A |
| | IMS-0860-2-2-7-1 | The IMS shall provide an interface to ODC data archives that produce, process, and maintain Earth science data sets and that have agreed to make the information available to ECS. | essential | demo | A |
| | IMS-0860-2-2-7-2 | The IMS shall provide an interface to ODC data archives that produce, process, and maintain Earth science data sets and that have agreed to make the services available to ECS. | essential | demo | A |
| IMS-0870 | IMS-0870-1-a-1 | The IMS shall provide access in accordance with MOUs to ADC data that: a. Has been generated by ADC data systems | essential | test | A |
| | IMS-0870-1-b-1 | The IMS shall provide access in accordance with MOUs to ADC data that: b. Is stored by ADC archives and requested by EOSDIS users | essential | test | A |
| | IMS-0870-1-c | The IMS shall provide access in accordance with MOUs to ADC data that: c. Is required as ancillary data for production processing | essential | test | A |
| | IMS-0870-2-a-2 | The IMS shall provide access in accordance with MOUs to ODC data that: a. Has been generated by ODC data systems | essential | test | A |
| | IMS-0870-2-b-2 | The IMS shall provide access in accordance with MOUs to ODC data that: b. Is stored by ODC archives and requested by EOSDIS users | essential | test | A |
| | IMS-0870-2-c | The IMS shall provide access in accordance with MOUs to ODC data that: c. Is required as ancillary data for production processing | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| IMS-0880 | IMS-0880-1 | The IMS shall provide an interface to the ADC archives for ordering data to be delivered directly to the user or to a DADS. | essential | test | B |
| | IMS-0880-2 | The IMS shall provide an interface to the ODC archives for ordering data to be delivered directly to the user or to a DADS. | essential | test | B |
| IMS-0890 | IMS-0890-1 | The IMS shall provide the capability to receive the metadata from the DADS when ADC data has been ingested into the ECS archives. | essential | test | B |
| | IMS-0890-2 | The IMS shall provide the capability to receive the metadata from the DADS when ODC data has been ingested into the ECS archives. | essential | test | B |
| IMS-0900 | IMS-0900 | The IMS shall provide an interface to the IPs for ordering data to be delivered directly to the user or to a DADS. | essential | test | B |
| IMS-0910 | IMS-0910 | The IMS shall provide the capability to receive the metadata from the DADS, when IP data has been ingested into the EOSDIS archives. | essential | test | B |
| IMS-0915 | IMS-0915 | The IMS shall provide an interface to the Version 0 system for ordering data products to be delivered directly to the user, or as specified in ICDs. | essential | test | A |
| IMS-0920 | IMS-0920-1-1-a | The IMS shall provide the capability for users to construct standing orders for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: a. Requestor identification | essential | test | B |
| | IMS-0920-1-1-b | The IMS shall provide the capability for users to construct standing orders for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: b. Algorithm input requirements | essential | test | B |
| | IMS-0920-1-1-c | The IMS shall provide the capability for users to construct standing orders for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: c. Text description of need for processing | essential | test | B |
| | IMS-0920-1-1-d | The IMS shall provide the capability for users to construct standing orders for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: d. Level 0-4 data set/subset | essential | test | B |
| | IMS-0920-1-1-e | The IMS shall provide the capability for users to construct standing orders for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: e. Required time of generation | essential | test | B |
| | IMS-0920-1-1-f | The IMS shall provide the capability for users to construct standing orders for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: f. Requested priority for product processing | essential | test | B |
| | IMS-0920-1-1-g | The IMS shall provide the capability for users to construct standing orders for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: g. Resulting product type | essential | test | B |
| | IMS-0920-1-1-h | The IMS shall provide the capability for users to construct standing orders for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: h. Processing parameters | essential | test | B |
| | IMS-0920-1-2-a | The IMS shall provide the capability for users to construct one-time requests for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: a. Requestor identification | essential | test | B |
| | IMS-0920-1-2-b | The IMS shall provide the capability for users to construct one-time requests for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: b. Algorithm input requirements | essential | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-0920-1-2-c | The IMS shall provide the capability for users to construct one-time requests for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: c. Text description of need for processing | essential | test | B |
| | IMS-0920-1-2-d | The IMS shall provide the capability for users to construct one-time requests for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: d. Level 0-4 data set/subset | essential | test | B |
| | IMS-0920-1-2-e | The IMS shall provide the capability for users to construct one-time requests for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: e. Required time of generation | essential | test | B |
| | IMS-0920-1-2-f | The IMS shall provide the capability for users to construct one-time requests for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: f. Requested priority for product processing | essential | test | B |
| | IMS-0920-1-2-g | The IMS shall provide the capability for users to construct one-time requests for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: g. Resulting product type | essential | test | B |
| | IMS-0920-1-2-h | The IMS shall provide the capability for users to construct one-time requests for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: h. Processing parameters | essential | test | B |
| | IMS-0920-2-1-a | The IMS shall provide the capability for users to submit standing orders for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: a. Requestor identification | essential | test | B |
| | IMS-0920-2-1-b | The IMS shall provide the capability for users to submit standing orders for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: b. Algorithm input requirements | essential | test | B |
| | IMS-0920-2-1-c | The IMS shall provide the capability for users to submit standing orders for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: c. Text description of need for processing | essential | test | B |
| | IMS-0920-2-1-d | The IMS shall provide the capability for users to submit standing orders for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: d. Level 0-4 data set/subset | essential | test | B |
| | IMS-0920-2-1-e | The IMS shall provide the capability for users to submit standing orders for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: e. Required time of generation | essential | test | B |
| | IMS-0920-2-1-f | The IMS shall provide the capability for users to submit standing orders for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: f. Requested priority for product processing | essential | test | B |
| | IMS-0920-2-1-g | The IMS shall provide the capability for users to submit standing orders for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: g. Resulting product type | essential | test | B |
| | IMS-0920-2-1-h | The IMS shall provide the capability for users to submit standing orders for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: h. Processing parameters | essential | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-0920-2-2-a | The IMS shall provide the capability for users to submit one-time requests for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: a. Requestor identification | essential | test | B |
| | IMS-0920-2-2-b | The IMS shall provide the capability for users to submit one-time requests for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: b. Algorithm input requirements | essential | test | B |
| | IMS-0920-2-2-c | The IMS shall provide the capability for users to submit one-time requests for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: c. Text description of need for processing | essential | test | B |
| | IMS-0920-2-2-d | The IMS shall provide the capability for users to submit one-time requests for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: d. Level 0-4 data set/subset | essential | test | B |
| | IMS-0920-2-2-e | The IMS shall provide the capability for users to submit one-time requests for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: e. Required time of generation | essential | test | B |
| | IMS-0920-2-2-f | The IMS shall provide the capability for users to submit one-time requests for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: f. Requested priority for product processing | essential | test | B |
| | IMS-0920-2-2-g | The IMS shall provide the capability for users to submit one-time requests for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: g. Resulting product type | essential | test | B |
| | IMS-0920-2-2-h | The IMS shall provide the capability for users to submit one-time requests for processing of ECS data by pre-existing processes, which shall contain the following information at a minimum: h. Processing parameters | essential | test | B |
| IMS-0925 | IMS-0925 | The IMS shall provide the capability for users to construct a Product Order associated with a Product Processing Order. | essential | test | B |
| IMS-0930 | IMS-0930-1 | The IMS shall provide the capability to search metadata holdings for the purpose of identifying the product desired. | essential | test | B |
| | IMS-0930-2 | The IMS shall provide the capability to search metadata holdings for the purpose of identifying the input data to be processed. | essential | test | B |
| | IMS-0930-1 | The IMS shall provide the capability to search metadata holdings for the purpose of identifying the product desired. | essential | test | B |
| IMS-0940 | IMS-0940-1 | The IMS shall integrate the searching of metadata holdings for identifying information needed to complete a processing request into the request construction process. | essential | test | B |
| | IMS-0940-2 | The IMS shall integrate the searching of metadata holdings for identifying information needed to complete a processing request into the request sub process. | essential | test | B |
| IMS-0950 | IMS-0950 | The IMS shall accept from the originator changes to existing standing orders for data to be processed by the PGS. | essential | test | B |
| IMS-0960 | IMS-0960 | The IMS shall provide the capability to request priority processing of requested data. | essential | test | A |
| IMS-0970 | IMS-0970-1 | The IMS shall determine if requested data products already exist. | essential | test | A |
| | IMS-0970-2 | The IMS shall determine if requested data products already exist and can be retrieved. | essential | test | A |
| IMS-0980 | IMS-0980 | The IMS shall determine the necessary processing required to generate a requested product. | essential | test | A |
| IMS-0990 | IMS-0990 | The IMS shall determine if necessary lower level products exist for processing of the requested data product. | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| IMS-1000 | IMS-1000-1-a | The IMS shall prepare, for output to the PGS, the Product Processing Order for specifying processing to be used in generating a product, which shall contain the following information at a minimum: a. Identification of the product(s) to be generated | essential | test | A |
| | IMS-1000-1-b-1 | The IMS shall prepare, for output to the PGS, the Product Processing Order for specifying processing to be used in generating a product, which shall contain the following information at a minimum: b. Identification of the expected time/time window of receipt of input products | essential | test | A |
| | IMS-1000-1-b-2 | The IMS shall prepare, for output to the PGS, the Product Processing Order for specifying processing to be used in generating a product, which shall contain the following information at a minimum: b. Identification of ancillary data | essential | test | A |
| | IMS-1000-1-c | The IMS shall prepare, for output to the PGS, the Product Processing Order for specifying processing to be used in generating a product, which shall contain the following information at a minimum: c. Product processing priority | essential | test | A |
| | IMS-1000-1-d | The IMS shall prepare, for output to the PGS, the Product Processing Order for specifying processing to be used in generating a product, which shall contain the following information at a minimum: d. Destination(s) of product output | essential | test | A |
| | IMS-1000-1-e | The IMS shall prepare, for output to the PGS, the Product Processing Order for specifying processing to be used in generating a product, which shall contain the following information at a minimum: e. Suggested earliest start time | essential | test | A |
| | IMS-1000-1-f | The IMS shall prepare, for output to the PGS, the Product Processing Order for specifying processing to be used in generating a product, which shall contain the following information at a minimum: f. Suggested latest completion time | essential | test | A |
| | IMS-1000-2-a | The IMS shall prepare, for output to the PGS, the Product Processing Order for specifying data to be used in generating a product, which shall contain the following information at a minimum: a. Identification of the product(s) to be generated | essential | test | A |
| | IMS-1000-2-b-1 | The IMS shall prepare, for output to the PGS, the Product Processing Order for specifying data to be used in generating a product, which shall contain the following information at a minimum: b. Identification of the expected time/time window of receipt of input products | essential | test | A |
| | IMS-1000-2-b-2 | The IMS shall prepare, for output to the PGS, the Product Processing Order for specifying data to be used in generating a product, which shall contain the following information at a minimum: b. Identification of the ancillary data | essential | test | A |
| | IMS-1000-2-c | The IMS shall prepare, for output to the PGS, the Product Processing Order for specifying data to be used in generating a product, which shall contain the following information at a minimum: c. Product processing priority | essential | test | A |
| | IMS-1000-2-d | The IMS shall prepare, for output to the PGS, the Product Processing Order for specifying data to be used in generating a product, which shall contain the following information at a minimum: d. Destination(s) of product output | essential | test | A |
| | IMS-1000-2-e | The IMS shall prepare, for output to the PGS, the Product Processing Order for specifying data to be used in generating a product, which shall contain the following information at a minimum: e. Suggested earliest start time | essential | test | A |
| | IMS-1000-2-f | The IMS shall prepare, for output to the PGS, the Product Processing Order for specifying data to be used in generating a product, which shall contain the following information at a minimum: f. Suggested latest completion time | essential | test | A |
| IMS-1005 | IMS-1005 | The IMS shall forward, to the appropriate DADS, Product Orders for distribution of the products generated as a result of the Product Processing Order. | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| IMS-1010 | IMS-1010-1-a | The IMS shall accept from the PGS a processing status message to confirm a processing order, which shall contain the following information at a minimum: a. Requestor identification | essential | test | A |
| | IMS-1010-1-b | The IMS shall accept from the PGS a processing status message to confirm a processing order, which shall contain the following information at a minimum: b. Request identification | essential | test | A |
| | IMS-1010-1-c | The IMS shall accept from the PGS a processing status message to confirm a processing order, which shall contain the following information at a minimum: c. Request status | essential | test | A |
| | IMS-1010-1-e | The IMS shall accept from the PGS a processing status message to confirm a processing order, which shall contain the following information at a minimum: e. If delayed longer than latest completion time specified by user, adjusted start and completion times. | essential | test | A |
| | IMS-1010-2-a | The IMS shall accept from the PGS a processing status message to reject a processing order, which shall contain the following information at a minimum: a. Requestor identification | essential | test | A |
| | IMS-1010-2-b | The IMS shall accept from the PGS a processing status message to reject a processing order, which shall contain the following information at a minimum: b. Request identification | essential | test | A |
| | IMS-1010-2-c | The IMS shall accept from the PGS a processing status message to reject a processing order, which shall contain the following information at a minimum: c. Request status | essential | test | A |
| | IMS-1010-2-d | The IMS shall accept from the PGS a processing status message to reject a processing order, which shall contain the following information at a minimum: d. If rejection, then the reason for the rejection | essential | test | A |
| IMS-1020 | IMS-1020-1 | The IMS shall prepare, for output to the SMC, a request for conflict adjudication in the event a processing conflict cannot be resolved between the IMS and the requestor. | critical | test | A |
| | IMS-1020-2 | The IMS shall prepare, for output to the SMC, a request for conflict adjudication in the event a processing conflict cannot be resolved between the IMS and the PGS. | critical | test | A |
| | IMS-1020-3 | The IMS shall prepare, for output to the SMC, a request for conflict adjudication in the event a processing conflict cannot be resolved between the requestor and the PGS. | critical | test | A |
| | IMS-1020-4 | The IMS shall prepare, for output to the SMC, a request for conflict adjudication in the event a processing conflict cannot be resolved between the IMS, the requestor, and the PGS. | critical | test | A |
| IMS-1030 | IMS-1030-1-a | The IMS shall accept from the SMC conflict resolution, which shall contain the following information at a minimum: a. Request identification | essential | test | A |
| | IMS-1030-1-b | The IMS shall accept from the SMC conflict resolution, which shall contain the following information at a minimum: b. Data type | essential | test | A |
| | IMS-1030-1-c | The IMS shall accept from the SMC conflict resolution, which shall contain the following information at a minimum: c. Priority modifications | essential | test | A |
| | IMS-1030-1-d | The IMS shall accept from the SMC conflict resolution, which shall contain the following information at a minimum: d. Account balance modifications | essential | test | A |
| | IMS-1030-1-e | The IMS shall accept from the SMC conflict resolution, which shall contain the following information at a minimum: e. Information on when request will be serviced | essential | test | A |
| | IMS-1030-1-f | The IMS shall accept from the SMC conflict resolution, which shall contain the following information at a minimum: f. SMC contact point | essential | test | A |
| | IMS-1030-2-a | The IMS shall provide to the requestor, conflict resolution, which shall contain the following information at a minimum: a. Request identification | essential | test | A |
| | IMS-1030-2-b | The IMS shall provide to the requestor, conflict resolution, which shall contain the following information at a minimum: b. Data type | essential | test | A |
| | IMS-1030-2-d | The IMS shall provide to the requestor, conflict resolution, which shall contain the following information at a minimum: c. Priority modifications | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-1030-2-d | The IMS shall provide to the requestor, conflict resolution, which shall contain the following information at a minimum: d. Account balance modifications | essential | test | A |
| | IMS-1030-2-e | The IMS shall provide to the requestor, conflict resolution, which shall contain the following information at a minimum: e. Information on when request will be serviced | essential | test | A |
| | IMS-1030-2-f | The IMS shall provide to the requestor, conflict resolution, which shall contain the following information at a minimum: f. SMC contact point | essential | test | A |
| IMS-1040 | IMS-1040-1 | The IMS shall, using information provided by the PGS, notify users when processing will not be completed within the estimated time, and provide the reason for the delay. | essential | test | A |
| | IMS-1040-2 | The IMS shall, using information provided by the PGS, notify users when processing will not be completed within the estimated time, and provide modified arrival times. | essential | test | A |
| IMS-1050 | IMS-1050 | The IMS shall provide the capability to notify the user community if data has been reprocessed. | fulfillment | demo | A |
| IMS-1060 | IMS-1060-1 | The IMS shall maintain a cross reference of processing performed. | essential | test | A |
| | IMS-1060-2 | The IMS shall maintain a cross reference of data sets produced. | essential | test | A |
| | IMS-1060-3 | The IMS shall maintain a cross reference of supporting data used. | essential | test | A |
| | IMS-1060-4 | The IMS shall maintain a cross reference of data recipient. | essential | test | A |
| IMS-1070 | IMS-1070-1 | The IMS shall provide the capability for users to construct DARs, for collection of EOS data which shall contain the following information at a minimum: 1. Observation number | critical | demo | B |
| | IMS-1070-2 | The IMS shall provide the capability for users to construct DARs, for collection of EOS data which shall contain the following information at a minimum: 2. Experimenter identification | critical | demo | B |
| | IMS-1070-3 | The IMS shall provide the capability for users to construct DARs, for collection of EOS data which shall contain the following information at a minimum: 3. Experimenter address | critical | demo | B |
| | IMS-1070-4 | The IMS shall provide the capability for users to construct DARs, for collection of EOS data which shall contain the following information at a minimum: 4. Investigation identification | critical | demo | B |
| | IMS-1070-5 | The IMS shall provide the capability for users to construct DARs, for collection of EOS data which shall contain the following information at a minimum: 5. Scientific discipline | critical | demo | B |
| | IMS-1070-6 | The IMS shall provide the capability for users to construct DARs, for collection of EOS data which shall contain the following information at a minimum: 6. Observation repetition period | critical | demo | B |
| | IMS-1070-7 | The IMS shall provide the capability for users to construct DARs, for collection of EOS data which shall contain the following information at a minimum: 7. Tolerance in observation time | critical | demo | B |
| | IMS-1070-8 | The IMS shall provide the capability for users to construct DARs, for collection of EOS data which shall contain the following information at a minimum: 8. User priority | critical | demo | B |
| | IMS-1070-9-1 | The IMS shall provide the capability for users to construct DARs, for collection of EOS data which shall contain the following information at a minimum: 9. Scheduling priority | critical | demo | B |
| | IMS-1070-9-2 | The IMS shall provide the capability for users to construct DARs, for collection of EOS data which shall contain the following information at a minimum: 9. Target of opportunity flag | critical | demo | B |
| | IMS-1070-10 | The IMS shall provide the capability for users to construct DARs, for collection of EOS data which shall contain the following information at a minimum: 10. Descriptive text | critical | demo | B |
| | IMS-1070-11 | The IMS shall provide the capability for users to construct DARs, for collection of EOS data which shall contain the following information at a minimum: 11. Location data expressed in terms of longitude and latitude as earliest start coordinates and latest stop coordinates | critical | demo | B |
| | IMS-1070-12 | The IMS shall provide the capability for users to construct DARs, for collection of EOS data which shall contain the following information at a minimum: 12. Earliest start time | critical | demo | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-1070-13 | The IMS shall provide the capability for users to construct DARs, for collection of EOS data which shall contain the following information at a minimum: 13. Latest stop time | critical | demo | B |
| | IMS-1070-14 | The IMS shall provide the capability for users to construct DARs, for collection of EOS data which shall contain the following information at a minimum: 14. Minimum coverage required | critical | demo | B |
| | IMS-1070-15 | The IMS shall provide the capability for users to construct DARs, for collection of EOS data which shall contain the following information at a minimum: 15. Maximum coverage desired | critical | demo | B |
| | IMS-1070-16 | The IMS shall provide the capability for users to construct DARs, for collection of EOS data which shall contain the following information at a minimum: 16. Number of instruments involved in the investigation | critical | demo | B |
| | IMS-1070-17 | he IMS shall provide the capability for users to construct DARs, for collection of EOS data which shall contain the following information at a minimum: 17. Which instruments are involved in the investigation | critical | demo | B |
| IMS-1071 | IMS-1071 | The IMS shall provide the capability for users to construct a Product Order associated with a Data Acquisition Request. | essential | demo | A |
| IMS-1072 | IMS-1072 | The IMS shall provide the capability for users to construct a Product Processing Order associated with a Data Acquisition Request. | essential | demo | A |
| IMS-1080 | IMS-1080-1 | The IMS shall accept requests for acquisition of data to be processed one time. | critical | demo | B |
| | IMS-1080-2 | The IMS shall accept requests for acquisition of data to be processed as standing orders. | critical | demo | B |
| IMS-1090 | IMS-1090-1 | The IMS shall accept requests for changes to existing DARs from the requestor. | critical | demo | B |
| | IMS-1090-2 | The IMS shall forward requests for changes to existing DARs to the ICC. | critical | demo | B |
| IMS-1100 | IMS-1100-1-1 | The IMS shall accept from the EOC the current data acquisition schedules. | essential | test | B |
| | IMS-1100-1-2 | The IMS shall accept from the EOC the current data acquisition plans. | essential | test | B |
| | IMS-1100-2-1 | The IMS shall make the data acquisition schedules accessible to authorized users on request. | essential | test | B |
| | IMS-1100-2-2 | The IMS shall make the data acquisition plans accessible to authorized users on request. | essential | test | B |
| IMS-1105 | IMS-1105-1 | The IMS shall maintain access to climatology databases for DAR generation. | essential | test | B |
| | IMS-1105-2 | The IMS shall provide access to climatology databases for DAR generation. | essential | test | B |
| IMS-1110 | IMS-1110-1 | The IMS shall provide the capability to receive a product request from the user. | critical | test | B |
| | IMS-1110-2 | The IMS shall determine the instrument(s) required for the data acquisition requested from a user. | critical | test | B |
| IMS-1120 | IMS-1120-1 | IMS shall provide the capability to receive a geophysical parameter specification from the user. | critical | test | B |
| | IMS-1120-2 | IMS shall determine the instrument(s) required for the data acquisition given a geophysical parameter specification from a user. | critical | test | B |
| IMS-1130 | IMS-1130-1 | The IMS shall provide descriptive information on instruments available in Standard Products to help with the creation of data acquisition requests. | essential | test | B |
| | IMS-1130-2 | The IMS shall provide descriptive information on parameters available in Standard Products to help with the creation of data acquisition requests. | essential | test | B |
| IMS-1140 | IMS-1140-a | The IMS shall provide instrument specific graphic displays to help with the creation of data acquisition requests, which shall include at a minimum: a. Geographic reference aids | essential | demo | B |
| | IMS-1140-b | The IMS shall provide instrument specific graphic displays to help with the creation of data acquisition requests, which shall include at a minimum: b. Spacecraft location projections | essential | demo | B |
| IMS-1150 | IMS-1150 | The IMS shall provide product specific help to identify instruments needed to create a product. | essential | test | B |
| IMS-1160 | IMS-1160 | The IMS shall provide instrument specific default settings for instrument configurable parameters. | essential | inspect. | B |
| IMS-1170 | IMS-1170 | The IMS shall provide instrument specific help to assist with setting instrument parameters. | essential | test | B |
| IMS-1180 | IMS-1180 | The IMS shall validate that user specified instrument settings are within the range of acceptable values. | critical | test | B |
| IMS-1190 | IMS-1190-1 | The IMS shall validate DAR parameters against EOC provided constraints. | critical | test | B |
| | IMS-1190-2 | The IMS shall validate DAR parameters against ICC provided constraints. | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| IMS-1195 | IMS-1195-1 | The IMS shall validate DAR parameters against constraints provided by external instrument operations facilities (e.g. Landsat-7, ASTER) as applicable. | critical | test | B |
| | IMS-1195-2 | The IMS shall validate DAR parameters against constraints in accordance with applicable MOUs. | critical | test | B |
| IMS-1200 | IMS-1200 | The IMS shall forward DARs for specific observational sequences generated by an authorized user to the ICC. | critical | test | B |
| IMS-1210 | IMS-1210 | The IMS shall forward the processing product orders associated with a DAR to the appropriate PGS. | essential | test | B |
| IMS-1220 | IMS-1220 | The IMS shall forward, to the appropriate DADS, product orders for distribution of the products generated as a result of the DAR. | essential | test | B |
| IMS-1230 | IMS-1230-1-1-a | The IMS shall accept from the ICC such information as data acquisition request confirmation or rejection, to include at a minimum: a. Date and time | critical | test | B |
| | IMS-1230-1-1-b | The IMS shall accept from the ICC such information as data aquisition request confirmation or rejection, to include at a minimum: b. Instrument ID | critical | test | B |
| | IMS-1230-1-1-c | The IMS shall accept from the ICC such information as data acquisition request confirmation or rejection, to include at a minimum: c. Data acquisition request ID | critical | test | B |
| | IMS-1230-1-1-d | The IMS shall accept from the ICC such information as data acquisition request confirmation or rejection, to include at a minimum: d. Request status | critical | test | B |
| | IMS-1230-1-1-e | The IMS shall accept from the ICC such information as data acquisition request confirmation or rejection, to include at a minimum: e. Implementation schedule | critical | test | B |
| | IMS-1230-1-1-f | The IMS shall accept from the ICC such information as data acquisition request confirmation or rejection, to include at a minimum: f. If rejection, then the reason for the rejection | critical | test | B |
| | IMS-1230-1-2-a | The IMS shall accept from the ICC notification of data acquisition request scheduling and completion, to include at a minimum: a. Date and time | critical | test | B |
| | IMS-1230-1-2-b | The IMS shall accept from the ICC notification of data acquisition request scheduling and completion, to include at a minimum: b. Instrument ID | critical | test | B |
| | IMS-1230-1-2-c | The IMS shall accept from the ICC notification of data acquisition request scheduling and completion, to include at a minimum: c. Data acquisition request ID | critical | test | B |
| | IMS-1230-1-2-d | The IMS shall accept from the ICC notification of data acquisition request scheduling and completion, to include at a minimum: d. Request status | critical | test | B |
| | IMS-1230-1-2-e | The IMS shall accept from the ICC notification of data acquisition request scheduling and completion, to include at a minimum: e. Implementation schedule | critical | test | B |
| | IMS-1230-1-2-f | The IMS shall accept from the ICC notification of data acquisition request scheduling and completion, to include at a minimum: f. If rejection, then the reason for the rejection | critical | test | B |
| | IMS-1230-2-1-a | The IMS shall provide to the requestor such information as data acquisition request confirmation or rejection, to include at a minimum: a. Date and time | critical | test | B |
| | IMS-1230-2-1-b | The IMS shall provide to the requestor such information as data acquisition request confirmation or rejection, to include at a minimum: b. Instrument ID | critical | test | B |
| | IMS-1230-2-1-c | The IMS shall provide to the requestor such information as data acquisition request confirmation or rejection, to include at a minimum: c. Data acquisition request ID | critical | test | B |
| | IMS-1230-2-1-d | The IMS shall provide to the requestor such information as data acquisition request confirmation or rejection, to include at a minimum: d. Request status | critical | test | B |
| | IMS-1230-2-1-e | The IMS shall provide to the requestor such information as data acquisition request confirmation or rejection, to include at a minimum: e. Implementation schedule | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-1230-2-1-f | The IMS shall provide to the requestor such information as data acquisition request confirmation or rejection, to include at a minimum: f. If rejection, then the reason for the rejection | critical | test | B |
| | IMS-1230-2-2-a | The IMS shall provide to the requestor notification of data acquisition request scheduling and completion, to include at a minimum: a. Date and time | critical | test | B |
| | IMS-1230-2-2-b | The IMS shall provide to the requestor notification of data acquisition request scheduling and completion, to include at a minimum: b. Instrument ID | critical | test | B |
| | IMS-1230-2-2-c | The IMS shall provide to the requestor notification of data acquisition request scheduling and completion, to include at a minimum: c. Data acquisition request ID | critical | test | B |
| | IMS-1230-2-2-d | The IMS shall provide to the requestor notification of data acquisition request scheduling and completion, to include at a minimum: d. Request status | critical | test | B |
| | IMS-1230-2-2-e | The IMS shall provide to the requestor notification of data acquisition request scheduling and completion, to include at a minimum: e. Implementation schedule | critical | test | B |
| | IMS-1230-2-2-f | The IMS shall provide to the requestor notification of data acquisition request scheduling and completion, to include at a minimum: f. If rejection, then the reason for the rejection | critical | test | B |
| IMS-1240 | IMS-1240-1-1 | The IMS shall be expandable to accept from the IP Information Management System or an equivalent IP facility the current data acquisition schedules for U.S. instruments on foreign spacecraft. | essential | analysis | B |
| | IMS-1240-1-2 | The IMS shall be expandable to accept from the IP Information Management System or an equivalent IP facility the current data acquisition plans for U.S. instruments on foreign spacecraft. | essential | analysis | B |
| | IMS-1240-2-1 | The IMS shall make the IP data acquisition schedules accessible to authorized users on request, in accordance with applicable MOUs. | essential | analysis | B |
| | IMS-1240-2-2 | The IMS shall make the IP data axquisition plans accessible to authorized users on request, in accordance with applicable MOUs. | essential | analysis | B |
| IMS-1250 | IMS-1250 | The IMS shall be expandable to forward DARs for U.S. instruments on IP spacecraft to the IP Information Management System or an equivalent IP facility, in accordance with applicable MOUs. | critical | analysis | B |
| IMS-1260 | IMS-1260-1 | The IMS shall provide the capability to receive, from the IP Information Management System or an equivalent IP facility, data acquisition request status in accordance with applicable MOUs. | essential | test | B |
| | IMS-1260-2 | The IMS shall provide the IP data acquisition status to the data acquisition requestor. | essential | test | B |
| IMS-1261 | IMS-1261-1 | The IMS shall provide the capability to forward data acquisition requests to the ASTER GDS, in accordance with applicable IRDs. | critical | test | B |
| | IMS-1261-2 | The IMS shall provide the capability to forward data acquisition requests to the ASTER GDS, in accordance with applicable ICDs. | critical | test | B |
| IMS-1262 | IMS-1262-1-1 | The IMS shall provide the capability to receive the ASTER GDS data acquisition request status in accordance with applicable IRDs. | critical | test | B |
| | IMS-1262-1-2 | The IMS shall provide the capability to receive the ASTER GDS data acquisition request status in accordance with applicable ICDs. | critical | test | B |
| | IMS-1262-2 | The IMS shall provide ASTER GDS data acquisition request status status to the data acquisition requester. | critical | test | B |
| IMS-1265 | IMS-1265-1 | The IMS shall provide the capability to forward data acquisition requests to the Landsat-7 Ground Segment, in accordance with applicable IRDs. | critical | test | B |
| | IMS-1265-2 | The IMS shall provide the capability to forward data acquisition requests to the Landsat-7 Ground Segment, in accordance with applicable ICDs. | critical | test | B |
| IMS-1266 | IMS-1266-1-1 | The IMS shall provide the capability to receive the Landsat-7 Ground Segment data acquisition request status in accordance with applicable IRDs. | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-1266-1-2 | The IMS shall provide the capability to receive the Landsat-7 Ground Segment data acquisition request status in accordance with applicable ICDs. | critical | test | B |
| | IMS-1266-2 | The IMS shall provide the Landsat-7 Ground Segment data acquisition request status to the data acquisition requester. | critical | test | B |
| IMS-1270 | IMS-1270-1-1 | The IMS shall determine the ECS elements responsible for processing using the product thread information provided by the SMC. | essential | test | B |
| | IMS-1270-1-2 | The IMS shall determine the ECS elements responsible for distributing using the product thread information provided by the SMC. | essential | test | B |
| | IMS-1270-2 | The IMS shall determine the input data required for processing using the product thread information provided by the SMC. | essential | test | B |
| IMS-1280 | IMS-1280-1-1 | The IMS shall send a product order to the ECS elements responsible for processing a product. | essential | test | A |
| | IMS-1280-1-2 | The IMS shall send a product order to the ECS elements responsible for distributing a product. | essential | test | A |
| | IMS-1280-2-1 | The IMS shall send a product priority to the ECS elements responsible for processing a product. | essential | test | A |
| | IMS-1280-2-2 | The IMS shall send a product priority to the ECS elements responsible for distributing a product. | essential | test | A |
| | IMS-1280-3-1 | The IMS shall send a product suggested start time and completion time to the ECS elements responsible for processing a product. | essential | test | A |
| | IMS-1280-3-2 | The IMS shall send a product suggested start time and completion time to the ECS elements responsible for distributing a product. | essential | test | A |
| IMS-1290 | IMS-1290-1-1 | The IMS shall send a product order to an ADC with the identification of the destination DADS. | essential | test | A |
| | IMS-1290-2-1 | The IMS shall send a product order to an ODC with the identification of the destination DADS. | essential | test | A |
| | IMS-1290-1-2 | The IMS shall send a product order to an ADC with suggested shipping deadline for data required for product processing. | essential | test | A |
| | IMS-1290-2-2 | The IMS shall send a product order to an ODC with suggested shipping deadline for data required for product processing. | essential | test | A |
| IMS-1300 | IMS-1300-1 | The IMS shall be capable of responding to user inquiries for status of user-initiated requests. | fulfillment | demo | A |
| | IMS-1300-2 | The IMS shall be capable of responding to user inquiries for status of user request history. | fulfillment | demo | A |
| IMS-1310 | IMS-1310-1-1 | The IMS shall provide the capability to accept, from product requestors, product distribution status requests for an ECS data product. | essential | test | A |
| | IMS-1310-1-2 | The IMS shall provide the capability to accept, from product requestors, product distribution status requests for an ADC data product. | essential | test | A |
| | IMS-1310-1-3 | The IMS shall provide the capability to accept, from product requestors, product distribution status requests for an ODC data product. | essential | test | A |
| | IMS-1310-2-1 | The IMS shall provide the capability to retrieve, from product requestors, request status for an ECS data product. | essential | test | A |
| | IMS-1310-2-2 | The IMS shall provide the capability to retrieve, from product requestors, the request status for an ADC data product. | essential | test | A |
| | IMS-1310-2-3 | The IMS shall provide the capability to retrieve, from product requestors, the request status for an ODC data product. | essential | test | A |
| | IMS-1310-3-1 | The IMS shall provide the capability to display the request status to the requestor for an ECS data product. | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-1310-3-2 | The IMS shall provide the capability to display the request status to the requestor for an ADC data product. | essential | test | A |
| | IMS-1310-3-3 | The IMS shall provide the capability to display the request status to the requestor for an ODC data product. | essential | test | A |
| IMS-1320 | IMS-1320-1 | The IMS shall provide the capability to accept, from data acquisition requestors, data acquisition status requests. | essential | test | B |
| | IMS-1320-2 | The IMS shall provide the capability to retrieve, from data acquisition requestors, the request status. | essential | test | B |
| | IMS-1320-3 | The IMS shall provide the capability to display the request status to the requestor. | essential | test | B |
| IMS-1330 | IMS-1330-1 | The IMS shall provide the capability to accept, from data processing requestors, data processing status requests. | essential | test | A |
| | IMS-1330-2 | The IMS shall provide the capability to retrieve, from data processing requestors, the data processing request status. | essential | test | A |
| | IMS-1330-3 | The IMS shall provide the capability to display the data processing status to the requestor. | essential | test | A |
| IMS-1340 | IMS-1340 | The IMS shall, using information provided by the SMC, provide the capability for users to preview billing costs for EOSDIS data products prior to order submission. | essential | test | B |
| IMS-1350 | IMS-1350-1 | The IMS shall provide the capability for users to preview billing costs, which are based upon MOUs with the ADC, prior to ADC data product order submission. | essential | test | A |
| | IMS-1350-2 | The IMS shall provide the capability for users to preview billing costs, which are based upon MOUs with non-EOSDIS data centers, prior to non-EOSDIS data product order submission. | essential | test | A |
| IMS-1360 | IMS-1360-1 | The IMS shall provide the capability for users to request the current status of their account balance. | essential | test | A |
| | IMS-1360-2 | The IMS shall provide the capability for users to receive the current status of their account balance. | essential | test | A |
| IMS-1370 | IMS-1370 | The IMS shall present account status reports prepared by the SMC to requestors. | essential | test | A |
| IMS-1380 | IMS-1380 | The IMS shall provide the capability to integrate the element toolkits with a common user interface. | fulfillment | test | A |
| IMS-1385 | IMS-1385 | The IMS toolkit software shall be able to interactively display interrupt messages. | fulfillment | test | A |
| IMS-1400 | IMS-1400 | The Virtual IMS Information Management software shall operate with a local data base using an ECS supported DBMS provided by the SCF , thereby facilitating the process of importation of the local data base into the ECS. | essential | demo | A |
| IMS-1410 | IMS-1410 | The Virtual IMS Information Management software shall provide metadata management services for local SCF metadata. | essential | demo | A |
| IMS-1420 | IMS-1420 | The Virtual IMS Information Management software shall provide the capabilities to search the local SCF data base/ | essential | demo | A |
| IMS-1430 | IMS-1430-1-a | The Virtual IMS Information Management software shall provide local interactive data management capabilities to: a. Add | essential | demo | A |
| | IMS-1430-1-b | The Virtual IMS Information Management software shall provide local interactive data management capabilities to: b. Update | essential | demo | A |
| | IMS-1430-1-c | The Virtual IMS Information Management software shall provide local interactive data management capabilities to: c. Delete | essential | demo | A |
| | IMS-1430-1-d | The Virtual IMS Information Management software shall provide local interactive data management capabilities to: d. Retrieve | essential | demo | A |
| | IMS-1430-2-a | The Virtual IMS Information Management software shall provide local batch data management capabilities to: a. Add | essential | demo | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-1430-2-b | The Virtual IMS Information Management software shall provide local batch data management capabilities to: | essential | demo | A |
| | IMS-1430-2-c | The Virtual IMS Information Management software shall provide local batch data management capabilities to: c. Delete | essential | demo | A |
| | IMS-1430-2-d | The Virtual IMS Information Management software shall provide local batch data management capabilities to: d. Retrieve | essential | demo | A |
| IMS-1440 | IMS-1440-a | The Virtual IMS Information Management software shall provide local SCF data base administration utilities for, at a minimum: a. Modifying the data base schema | essential | demo | A |
| | IMS-1440-b | The Virtual IMS Information Management software shall provide local SCF data base administration utilities for, at a minimum: b. Performance monitoring | essential | demo | A |
| | IMS-1440-c | The Virtual IMS Information Management software shall provide local SCF data base administration utilities for, at a minimum: c. Administration of user access control | essential | demo | A |
| | IMS-1440-d | The Virtual IMS Information Management software shall provide local SCF data base administration utilities for, at a minimum: d. Data base backup | essential | demo | A |
| | IMS-1440-e | The Virtual IMS Information Management software shall provide local SCF data base administration utilities for, at a minimum: e. Data base recovery | essential | demo | A |
| IMS-1450 | IMS-1450 | The Virtual IMS Information Management tools shall provide the capability to modify the data base structure while adhering to established standards. | essential | demo | A |
| IMS-1460 | IMS-1460-1 | The Virtual IMS Information Management software shall provide the capability to electronically load data base structures. | essential | demo | A |
| | IMS-1460-2 | The Virtual IMS Information Management software shall provide the capability to electronically load data base content. | essential | demo | A |
| IMS-1470 | IMS-1470-a | The Virtual IMS Information Management software data base management system shall provide, at a minimum, the capability to select data for retrieval by: a. Boolean operators | essential | demo | A |
| | IMS-1470-b | The Virtual IMS Information Management software data base management system shall provide, at a minimum, the capability to select data for retrieval by: b. Relational operators | essential | demo | A |
| | IMS-1470-c | The Virtual IMS Information Management software data base management system shall provide, at a minimum, the capability to select data for retrieval by: c. Attribute values | essential | demo | A |
| | IMS-1470-d | The Virtual IMS Information Management software data base management system shall provide, at a minimum, the capability to select data for retrieval by: d. Combinations thereof | essential | demo | A |
| IMS-1480 | IMS-1480-1-a | The Virtual IMS Information Management software shall allow a user to locate desired data without having detailed knowledge of the systems: a. Architecture | essential | demo | A |
| | IMS-1480-1-b | The Virtual IMS Information Management software shall allow a user to locate desired data without having detailed knowledge of the systems: b. Data base management system | essential | demo | A |
| | IMS-1480-1-c | The Virtual IMS Information Management software shall allow a user to locate desired data without having detailed knowledge of the systems: c. Data base structure | essential | demo | A |
| | IMS-1480-1-d | The Virtual IMS Information Management software shall allow a user to locate desired data without having detailed knowledge of the systems: d. Query languages | essential | demo | A |
| | IMS-1480-1-e | The Virtual IMS Information Management software shall allow a user to locate desired data without having detailed knowledge of the systems: e. Data formats | essential | demo | A |
| | IMS-1480-2-a | The Virtual IMS Information Management software shall allow a user to identify desired data without having detailed knowledge of the systems: | essential | demo | A |
| | IMS-1480-2-b | The Virtual IMS Information Management software shall allow a user to identify desired data without having detailed knowledge of the systems: b. Data base management system | essential | demo | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-1480-2-c | The Virtual IMS Information Management software shall allow a user to identify desired data without having detailed knowledge of the systems: c. Data base structure | essential | demo | A |
| | IMS-1480-2-d | The Virtual IMS Information Management software shall allow a user to identify desired data without having detailed knowledge of the systems: d. Query languages | essential | demo | A |
| | IMS-1480-2-e | The Virtual IMS Information Management software shall allow a user to identify desired data without having detailed knowledge of the systems: e. Data formats | essential | demo | A |
| IMS-1490 | IMS-1490-1 | The IMS toolkit software shall provide users, including those working from ICCs and ISTs, with the capability to locally construct the requests for IMS services. | essential | test | B |
| | IMS-1490-2 | The IMS toolkit software shall provide users, including those working from ICCs and ISTs, the capability to forward the requests to the IMS server. | essential | test | B |
| | IMS-1490-3 | The IMS toolkit software shall provide users, including those working from ICCs and ISTs, with the capability to obtain request results. | essential | test | B |
| IMS-1500 | IMS-1500-1 | The IMS toolkit software shall provide the tools to support user preparation of metadata, for example, directory, inventory, and guide (documentation /reference material) entries. | essential | test | A |
| | IMS-1500-2 | The IMS toolkit software shall provide the tools to support automated generation of metadata, for example, directory, inventory, and guide (documentation /reference material) entries. | essential | test | A |
| IMS-1505 | IMS-1505 | The IMS toolkit software shall provide the tools to simulate an on-line IMS session for training sessions. | fulfillment | test | A |
| IMS-1510 | IMS-1510-1 | The IMS data visualization toolkit capabilities shall be portable. | essential | test | A |
| | IMS-1510-2-1 | The IMS data visualization toolkit capabilities shall execute on ECS supported workstations. | essential | test | A |
| | IMS-1510-2-2 | The IMS data visualization toolkit capabilities shall execute on appropriate ECS facility computers. | essential | test | A |
| IMS-1520 | IMS-1520-a | The IMS toolkit software shall provide data visualization tools to assist the investigators to perform the following functions, at a minimum: a. QA/Validation of products generated by the PGS | essential | test | A |
| | IMS-1520-b | The IMS toolkit software shall provide data visualization tools to assist the investigators to perform the following functions, at a minimum: b. Algorithm development | essential | test | A |
| | IMS-1520-c-1 | The IMS toolkit software shall provide data visualization tools to assist the investigators to perform the following functions, at a minimum: c. Calibration functions | essential | test | A |
| | IMS-1520-c-2 | The IMS toolkit software shall provide data visualization tools to assist the investigators to perform the following functions, at a minimum: c. Parameter verification | essential | test | A |
| | IMS-1520-c-3 | The IMS toolkit software shall provide data visualization tools to assist the investigators to perform the following functions, at a minimum: c. Anomaly detection | essential | test | A |
| | IMS-1520-d-1 | The IMS toolkit software shall provide data visualization tools to assist the investigators to perform the following functions, at a minimum: d. View subsetted data whenever associated inventory information is displayed. | essential | test | B |
| | IMS-1520-d-2 | The IMS toolkit software shall provide data visualization tools to assist the investigators to perform the following functions, at a minimum: d. View subsampled data whenever associated inventory information is displayed. | essential | test | B |
| | IMS-1520-d-3 | The IMS toolkit software shall provide data visualization tools to assist the investigators to perform the following functions, at a minimum: d. View summarized data whenever associated inventory information is displayed. | essential | test | B |
| IMS-1530 | IMS-1530-1 | The IMS data visualization toolkit shall provide the capability to visualize data in raster formats. | essential | demo | A |
| | IMS-1530-2 | The IMS data visualization toolkit shall provide the capability to visualize data in vector formats. | essential | demo | A |
| | IMS-1530-3 | The IMS data visualization toolkit shall provide the capability to visualize animated products. | essential | demo | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| IMS-1540 | IMS-1540-a | The IMS toolkit software shall provide the capability to generate, at a minimum: a. Two-dimensional plots (x-y plots, scatter plots, profiles, histograms) | essential | demo | A |
| | IMS-1540-b | The IMS toolkit software shall provide the capability to generate, at a minimum: b. Three-dimensional plots | essential | demo | A |
| | IMS-1540-c | The IMS toolkit software shall provide the capability to generate, at a minimum: c. Contour plots | essential | demo | A |
| | IMS-1540-d | The IMS toolkit software shall provide the capability to generate, at a minimum: d. Three-dimensional surface diagrams | essential | demo | A |
| IMS-1550 | IMS-1550 | The IMS toolkit data visualization tools shall provide capabilities for image manipulation (e.g., pan, zoom, color, contrast). | essential | demo | A |
| IMS-1570 | IMS-1570 | The IMS toolkit software shall provide statistical analysis capabilities. | essential | test | A |
| IMS-1590 | IMS-1590-1-a | The IMS toolkit data visualization tools shall provide capabilities for sizing the cursor by: a. Earth coordinates | essential | test | A |
| | IMS-1590-1-b | The IMS toolkit data visualization tools shall provide capabilities for sizing the cursor by: b. Image coordinates | essential | test | A |
| | IMS-1590-1-c | The IMS toolkit data visualization tools shall provide capabilities for sizing the cursor by: c. Instrument scan-line coordinated | essential | test | A |
| | IMS-1590-2-a | The IMS toolkit data visualization tools shall provide capabilities for positioning the cursor by: a. Earth coordinates | essential | test | A |
| | IMS-1590-2-b | The IMS toolkit data visualization tools shall provide capabilities for positioning the cursor by: b. Image coordinates | essential | test | A |
| | IMS-1590-2-c | The IMS toolkit data visualization tools shall provide capabilities for positioning the cursor by: c. Instrument scan-line coordinated | essential | test | A |
| IMS-1600 | IMS-1600-a | The IMS shall provide access to the following ESN communication services at a minimum: a. File transfer | essential | demo | IR1 |
| | IMS-1600-b | The IMS shall provide access to the following ESN communication services at a minimum: b. Electronic mail | essential | demo | IR1 |
| | IMS-1600-c | The IMS shall provide access to the following ESN communication services at a minimum: c. Remote log-on | essential | demo | IR1 |
| | IMS-1600-d | The IMS shall provide access to the following ESN communication services at a minimum: d. Electronic Bulletin Board | essential | demo | IR1 |
| | IMS-1600-e | The IMS shall provide access to the following ESN communication services at a minimum: e. Access to other networks | essential | demo | IR1 |
| IMS-1620 | IMS-1620-a | The IMS element shall collect the management data used to support the following system management functions: a. Fault Management | essential | test | A |
| | IMS-1620-b | The IMS element shall collect the management data used to support the following system management functions: b. Configuration Management | essential | test | A |
| | IMS-1620-c | The IMS element shall collect the management data used to support the following system management functions: c. Accounting Management | essential | test | A |
| | IMS-1620-d | The IMS element shall collect the management data used to support the following system management functions: d. Accountability Management | essential | test | A |
| | IMS-1620-e | The IMS element shall collect the management data used to support the following system management functions: e. Performance Management | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-1620-f | The IMS element shall collect the management data used to support the following system management functions: f. Security Management | essential | test | A |
| | IMS-1620-g | The IMS element shall collect the management data used to support the following system management functions: g. Scheduling Management. | essential | test | A |
| IMS-1630 | IMS-1630-a-1 | The IMS shall provide the capability to receive from the SMC, directives to include at a minimum: a. Directives for integration | fulfillment | demo | B |
| | IMS-1630-a-2 | The IMS shall provide the capability to receive from the SMC, directives to include at a minimum: a. Directives for testing | fulfillment | demo | B |
| | IMS-1630-a-3 | The IMS shall provide the capability to receive from the SMC, directives to include at a minimum: a. Directives for simulation | fulfillment | demo | B |
| | IMS-1630-b | The IMS shall provide the capability to receive from the SMC, directives to include at a minimum: b. Maintenance directives | fulfillment | demo | B |
| | IMS-1630-c | The IMS shall provide the capability to receive from the SMC, directives to include at a minimum: c. Configuration management directives | fulfillment | demo | B |
| | IMS-1630-d | The IMS shall provide the capability to receive from the SMC, directives to include at a minimum: d. Logistics management directives | fulfillment | demo | B |
| | IMS-1630-e | The IMS shall provide the capability to receive from the SMC, directives to include at a minimum: e. Training management directives | fulfillment | demo | B |
| | IMS-1630-f | The IMS shall provide the capability to receive from the SMC, directives to include at a minimum: f. Fault management directives | fulfillment | demo | B |
| | IMS-1630-g | The IMS shall provide the capability to receive from the SMC, directives to include at a minimum: g. Security directives | fulfillment | demo | B |
| IMS-1640 | IMS-1640-a-1 | The IMS shall provide to the SMC, status to include at a minimum: a. Integration | fulfillment | demo | A |
| | IMS-1640-a-2 | The IMS shall provide to the SMC, status to include at a minimum: a. Testing | fulfillment | demo | A |
| | IMS-1640-a-3 | The IMS shall provide to the SMC, status to include at a minimum: a. Simulation status | fulfillment | demo | A |
| | IMS-1640-b | The IMS shall provide to the SMC, status to include at a minimum: b. Maintenance status | fulfillment | demo | A |
| | IMS-1640-c | The IMS shall provide to the SMC, status to include at a minimum: c. Logistics status | fulfillment | demo | A |
| | IMS-1640-d | The IMS shall provide to the SMC, status to include at a minimum: d. Training information | fulfillment | demo | A |
| IMS-1645 | IMS-1645-1-a | The IMS shall accept from the users, user feedback information, which shall contain the following at a minimum: a. Product data quality assessment | fulfillment | demo | A |
| | IMS-1645-1-b | The IMS shall accept from the users, user feedback information, which shall contain the following at a minimum: b. Schedule performance assessment | fulfillment | demo | A |
| | IMS-1645-1-c | The IMS shall accept from the users, user feedback information, which shall contain the following at a minimum: c. Evaluation of quality of ECS service | fulfillment | demo | A |
| | IMS-1645-2-a | The IMS shall output to the SMC, user feedback information, which shall contain the following at a minimum: a. Product data quality assessment | fulfillment | demo | A |
| | IMS-1645-2-b | The IMS shall output to the SMC, user feedback information, which shall contain the following at a minimum: b. Schedule performance assessment | fulfillment | demo | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-1645-2-c | The IMS shall output to the SMC, user feedback information, which shall contain the following at a minimum: c. Evaluation of quality of ECS service | fulfillment | demo | A |
| IMS-1646 | IMS-1646 | The IMS shall provide to the SMC a record of data orders for the purposes of maintaining a full and complete history of all data orders. | fulfillment | demo | A |
| IMS-1650 | IMS-1650-a | IMS operations data shall contain information on: a. System utilization at the IMS | essential | test | A |
| | IMS-1650-b | IMS operations data shall contain information on: b. Outstanding data distribution requests | essential | test | A |
| | IMS-1650-c | IMS operations data shall contain information on: c. Outstanding processing requests | essential | test | A |
| | IMS-1650-d | IMS operations data shall contain information on: d. Outstanding data acquisition requests | critical | test | A |
| IMS-1660 | IMS-1660-a | The IMS shall provide to the SMC a full and complete history of all IMS resources used by science investigators including, at a minimum: a. CPU utilization | essential | test | A |
| | IMS-1660-b | The IMS shall provide to the SMC a full and complete history of all IMS resources used by science investigators including, at a minimum: b. Amount of user storage | essential | test | A |
| | IMS-1660-c | The IMS shall provide to the SMC a full and complete history of all IMS resources used by science investigators including, at a minimum: c. Connect time | essential | test | A |
| | IMS-1660-d | The IMS shall provide to the SMC a full and complete history of all IMS resources used by science investigators including, at a minimum: d. Session histories | essential | test | A |
| IMS-1665 | IMS-1665-1 | The IMS shall provide to the SMC, IMS services usage by each user (to include at a minimum user name, IMS service identification, date/time stamp, time expended, facilities used) for later reporting. | fulfillment | test | B |
| | IMS-1665-2 | The IMS shall provide to the SMC, IMS services usage by each user (to include at a minimum user name, IMS service identification, date/time stamp, time expended, facilities used) for determination of access patterns. | fulfillment | test | B |
| IMS-1680 | IMS-1680 | The IMS status monitoring function shall provide the capability to distribute reports on a periodic basis to a predefined list of report recipients. | essential | demo | A |
| IMS-1690 | IMS-1690-1 | The IMS status monitoring function shall provide the capability to disseminate reports on-line electronically. | essential | demo | A |
| | IMS-1690-2-1 | The IMS status monitoring function shall provide the capability to disseminate reports off-line on paper. | essential | demo | A |
| | IMS-1690-2-2 | The IMS status monitoring function shall provide the capability to disseminate reports off-line on electronic media. | essential | demo | A |
| IMS-1700 | IMS-1700-a | The IMS shall provide the capability to generate reports on: a.The backlog of data distribution requests | essential | test | A |
| | IMS-1700-b | The IMS shall provide the capability to generate reports on: b.The backlog of processing requests | essential | test | A |
| | IMS-1700-c | The IMS shall provide the capability to generate reports on: c.The backlog of data acquisition requests | critical | test | A |
| | IMS-1700-d | The IMS shall provide the capability to generate reports on: d.Data quality assessment | essential | test | A |
| | IMS-1700-e | The IMS shall provide the capability to generate reports on: e.Daily IMS operations summaries | essential | test | A |
| | IMS-1700-f | The IMS shall provide the capability to generate reports on: f.IMS performance summaries | essential | test | A |
| IMS-1710 | IMS-1710-a | The IMS shall provide the capability to produce reports that correlate science data to associated: a.Calibration data | essential | test | A |
| | IMS-1710-b | The IMS shall provide the capability to produce reports that correlate science data to associated: b.Navigation data | essential | test | A |
| | IMS-1710-c | The IMS shall provide the capability to produce reports that correlate science data to associated: c.Instrument engineering data | essential | test | A |
| IMS-1720 | IMS-1720-a | The IMS shall provide the capability to produce reports that relate data sets to: a.Processing algorithms used for data generation at the PGS | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-1720-b | The IMS shall provide the capability to produce reports that relate data sets to: b.Software used for data generation at the PGS | essential | test | A |
| | IMS-1720-c | The IMS shall provide the capability to produce reports that relate data sets to: c.Parameters used for data generation at the PGS | essential | test | A |
| | IMS-1720-d | The IMS shall provide the capability to produce reports that relate data sets to: d.Data recipients | essential | test | A |
| IMS-1730 | IMS-1730 | The IMS shall provide the capability to produce reports that trace the data product back to the source instrument. | essential | test | A |
| IMS-1740 | IMS-1740-1 | The IMS shall produce cross reference reports, by user and data set, of processing performed. | essential | test | A |
| | IMS-1740-2 | The IMS shall produce cross reference reports, by user and data set, of data sets produced. | essential | test | A |
| | IMS-1740-3 | The IMS shall produce cross reference reports, by user and data set, of supporting data used. | essential | test | A |
| | IMS-1740-4 | The IMS shall produce cross reference reports, by user and data set, of data recipients. | essential | test | A |
| IMS-1760 | IMS-1760-a | The IMS shall send detected hardware faults to the SMC, to include at a minimum: a.IMS processors | essential | demo | A |
| | IMS-1760-b | The IMS shall send detected hardware faults to the SMC, to include at a minimum: b.IMS network interfaces | essential | demo | A |
| | IMS-1760-c | The IMS shall send detected hardware faults to the SMC, to include at a minimum: c.Storage devices | essential | demo | A |
| IMS-1765 | IMS-1765-a | The IMS shall be developed with configuration-controlled application programming interfaces (APIs) that will be capable of supporting development of the following extensions to the ECS IMS by the DAACs: a.Addition of metadata fields that are unique to the data maintained at a specific DAAC | essential | test | A |
| | IMS-1765-b | The IMS shall be developed with configuration-controlled application programming interfaces (APIs) that will be capable of supporting development of the following extensions to the ECS IMS by the DAACs: b.Addition of documents for use as guide metadata for DAAC-specific data products | essential | test | A |
| | IMS-1765-c | The IMS shall be developed with configuration-controlled application programming interfaces (APIs) that will be capable of supporting development of the following extensions to the ECS IMS by the DAACs: c.Development of DAAC-specific data acquistion request utilities | essential | test | A |
| | IMS-1765-d | The IMS shall be developed with configuration-controlled application programming interfaces (APIs) that will be capable of supporting development of the following extensions to the ECS IMS by the DAACs: d.Support of data visualization utilities for DAAC-specific products | essential | test | A |
| | IMS-1765-e | The IMS shall be developed with configuration-controlled application programming interfaces (APIs) that will be capable of supporting development of the following extensions to the ECS IMS by the DAACs: e.Support of DAAC-specific data analysis utilities | essential | test | A |
| | IMS-1765-f | The IMS shall be developed with configuration-controlled application programming interfaces (APIs) that will be capable of supporting development of the following extensions to the ECS IMS by the DAACs: f.Development of DAAC-unique metadata searching services that will operate independent of the delivered ECS IMS services | essential | test | A |
| | IMS-1765-g | The IMS shall be developed with configuration-controlled application programming interfaces (APIs) that will be capable of supporting development of the following extensions to the ECS IMS by the DAACs: g.Development of a local user interface that can bypass the delivered ECS user interface for accessing DAAC-unique metadata searching services | essential | test | A |
| IMS-1780 | IMS-1780 | The IMS shall respond to each user session operation within the time period specified in Table 7-4 with the specified rate of IMS operations. | essential | test | A |
| IMS-1785 | IMS-1785 | The IMS performance specified in Table 7-4 shall be maintained during other IMS operational activities such as database updates from the DADS. | essential | test | A |
| IMS-1790 | IMS-1790-a | The IMS shall provide, based upon the data model defined in Appendix C, sufficient storage for, at a minimum: a.Directory metadata | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | IMS-1790-b | The IMS shall provide, based upon the data model defined in Appendix C, sufficient storage for, at a minimum: b. Guide (documentation /reference material) metadata | essential | test | A |
| | IMS-1790-c | The IMS shall provide, based upon the data model defined in Appendix C, sufficient storage for, at a minimum: c.Inventory metadata | essential | test | A |
| | IMS-1790-d | The IMS shall provide, based upon the data model defined in Appendix C, sufficient storage for, at a minimum: d.System space, LSM data, and data base system overhead | essential | test | A |
| | IMS-1790-e | The IMS shall provide, based upon the data model defined in Appendix C, sufficient storage for, at a minimum: e.Metadata staging area | essential | test | A |
| | IMS-1790-f | The IMS shall provide, based upon the data model defined in Appendix C, sufficient storage for, at a minimum: f.Spacecraft housekeeping and ancillary data metadata | critical | analysis | B |
| | IMS-1790-g | The IMS shall provide, based upon the data model defined in Appendix C, sufficient storage for, at a minimum: g.Science processing library software metadata | essential | test | A |
| | IMS-1790-h | The IMS shall provide, based upon the data model defined in Appendix C, sufficient storage for, at a minimum: h.Summary data statistics. | essential | test | A |
| IMS-1800 | IMS-1800-1-1 | The IMS design and implementation shall have the flexibility to accommodate 100% expansion in processing capacity without major changes to the IMS hardware design. This expansion capacity shall apply to the total at-launch requirement plus the yearly product growth requirement specified in Appendix C. | fulfillment | analysis | A |
| | IMS-1800-1-2 | The IMS design and implementation shall have the flexibility to accommodate 100% expansion in processing capacity without major changes to the IMS software design. This expansion capacity shall apply to the total at-launch requirement plus the yearly product growth requirement specified in Appendix C. | fulfillment | analysis | A |
| | IMS-1800-2-1 | The IMS design and implementation shall have the flexibility to accommodate 100% expansion in storage capacity without major changes to the IMS hardware design. This expansion capacity shall apply to the total at-launch requirement plus the yearly product growth requirement specified in Appendix C. | fulfillment | analysis | A |
| | IMS-1800-2-2 | The IMS design and implementation shall have the flexibility to accommodate 100% expansion in storage capacity without major changes to the IMS software design. This expansion capacity shall apply to the total at-launch requirement plus the yearly product growth requirement specified in Appendix C. | fulfillment | analysis | A |
| PGS-0140 | PGS-0140-1-1 | The PGS shall provide tools to help the PGS staff create SDPS plans. | essential | test | A |
| | PGS-0140-1-2 | The PGS shall provide tools to help the PGS staff create SDPS schedules. | essential | test | A |
| | PGS-0140-1-3 | The PGS shall provide tools to help the PGS staff create SDS lists. | essential | test | A |
| | PGS-0140-2-1 | The PGS shall provide tools to help the PGS staff modify SDPS plans. | essential | test | A |
| | PGS-0140-2-2 | The PGS shall provide tools to help the PGS staff modify SDPS schedules. | essential | test | A |
| | PGS-0140-2-3 | The PGS shall provide tools to help the PGS staff modify lists. | essential | test | A |
| PGS-0150 | PGS-0150-1 | The PGS shall receive from the collocated DADS data availability schedules for remote DADS. | essential | test | A |
| | PGS-0150-2 | The PGS shall receive from the collocated DADS data availability schedules for remote EDOS. | essential | test | A |
| | PGS-0150-3 | The PGS shall receive from the collocated DADS data availability schedules for remote SDPF. | essential | test | A |
| | PGS-0150-4 | The PGS shall receive from the collocated DADS data availability schedules for remote IPs. | essential | test | A |
| | PGS-0150-5 | The PGS shall receive from the collocated DADS data availability schedules for remote ADCs. | essential | test | A |
| | PGS-0150-6 | The PGS shall receive from the collocated DADS data availability schedules for remote ODCs. | essential | test | A |
| PGS-0160 | PGS-0160-1 | The PGS shall receive standing orders from the IMS. | essential | test | A |
| | PGS-0160-2 | The PGS shall receive changes to standing orders from the IMS. | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | PGS-0160-3 | The PGS shall receive product requests from the IMS. | essential | test | A |
| PGS-0165 | PGS-0165 | The PGS shall accept priority processing requests from the IMS. | essential | test | A |
| PGS-0170 | PGS-0170-1 | The PGS shall receive priority assignments from the SMC. | essential | test | A |
| | PGS-0170-2 | The PGS shall receive schedule conflict resolutions from the SMC. | essential | test | A |
| | PGS-0170-3 | The PGS shall receive other operational directives from the SMC. | essential | test | A |
| PGS-0180 | PGS-0180 | The PGS shall receive a notice from DADS when data that it has received is available. | essential | test | A |
| PGS-0190 | PGS-0190 | The PGS shall coordinate with the DADS on the staging of data for product generation. | essential | test | A |
| PGS-0210 | PGS-0210-a | The PGS shall maintain an algorithm processing control language capable of constructs (e.g., if-then-else) based on the complexities of the PGS. This control language shall be utilized in conjunction with a database of product specifications that contains the recipe for the generation of all Standard Products allocated to that PGS including the algorithm(s) to be used | essential | test | IR1 |
| | PGS-0210-b | The PGS shall maintain an algorithm processing control language capable of constructs (e.g., if-then-else) based on the complexities of the PGS. This control language shall be utilized in conjunction with a database of product specifications that contains the recipe for the generation of all Standard Products allocated to that PGS including the order in which algorithms are to be executed. | essential | test | IR1 |
| | PGS-0210-c | The PGS shall maintain an algorithm processing control language capable of constructs (e.g., if-then-else) based on the complexities of the PGS. This control language shall be utilized in conjunction with a database of product specifications that contains the recipe for the generation of all Standard Products allocated to that PGS including the input data sets required. | essential | test | IR1 |
| | PGS-0210-d | The PGS shall maintain an algorithm processing control language capable of constructs (e.g., if-then-else) based on the complexities of the PGS. This control language shall be utilized in conjunction with a database of product specifications that contains the recipe for the generation of all Standard Products allocated to that PGS including time and other processing resources required. | essential | test | IR1 |
| PGS-0220 | PGS-0220-a | The PGS shall create a reprocessing plan containing a list of processing tasks needed to carry out each product's reprocessing. | essential | test | A |
| | PGS-0220-b | The PGS shall create a reprocessing plan containing a estimated schedule for each task. | essential | test | A |
| | PGS-0220-c | The PGS shall create a reprocessing plan containing the order in which tasks will be executed. | essential | test | A |
| PGS-0230 | PGS-0230-a | The PGS shall base the PGS reprocessing plan on requests received from the IMS. | essential | analysis | A |
| | PGS-0230-b | The PGS shall base the PGS reprocessing plan on SMC directives. | essential | analysis | A |
| | PGS-0230-c | The PGS shall base the PGS reprocessing plan on the Standard Product specifications. | essential | analysis | A |
| PGS-0240 | PGS-0240-1 | The PGS shall perform reprocessing according to the PGS reprocessing plan. | essential | analysis | A |
| | PGS-0240-2 | The PGS shall perform reprocessing according to the availability of resources. | essential | analysis | A |
| PGS-0250 | PGS-0250-a | The PGS shall schedule product generation when all inputs required to generate a Standard Product for which there is a current order (from IMS) are available. Entries in the schedule shall contain the product to be generated. | essential | test | A |
| | PGS-0250-b | The PGS shall schedule product generation when all inputs required to generate a Standard Product for which there is a current order (from IMS) are available. Entries in the schedule shall contain the specific algorithm(s) and calibration coefficients to be used. | essential | test | A |
| | PGS-0250-c | The PGS shall schedule product generation when all inputs required to generate a Standard Product for which there is a current order (from IMS) are available. Entries in the schedule shall contain the specific data sets needed and their sizes. | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | PGS-0250-d | The PGS shall schedule product generation when all inputs required to generate a Standard Product for which there is a current order (from IMS) are available. Entries in the schedule shall contain priorities and deadlines that apply to the order for the product. | essential | test | A |
| PGS-0260 | PGS-0260-a | The PGS shall schedule file backups. | essential | test | A |
| | PGS-0260-b | The PGS shall schedule file maintenance. | essential | test | A |
| | PGS-0260-c | The PGS shall schedule calibration data handling. | essential | test | A |
| PGS-0270 | PGS-0270-a | The PGS shall provide the capability to allocate tasks among processors. | essential | test | A |
| | PGS-0270-b | The PGS shall provide the capability to suspend execution of tasks. | essential | test | A |
| | PGS-0270-c | The PGS shall provide the capability to resume execution of a suspended task. | essential | test | A |
| | PGS-0270-d | The PGS shall provide the capability to cancel execution of tasks. | essential | test | A |
| | PGS-0270-e-1-1 | The PGS shall provide the capability to request the staging of data stored in the DADS. | essential | test | A |
| | PGS-0270-e-1-2 | The PGS shall provide the capability to request the destaging of data stored in the DADS. | essential | test | A |
| | PGS-0270-e-2-1 | The PGS shall provide the capability to verify the staging of data stored in the DADS. | essential | test | A |
| | PGS-0270-e-2-2 | The PGS shall provide the capability to verify the destaging of data stored in the DADS. | essential | test | A |
| PGS-0285 | PGS-0285-1 | The PGS shall transmit to the IMS a status message to confirm a processing order. | essential | test | A |
| | PGS-0285-2 | The PGS shall transmit to the IMS a status message to reject a processing order. The reason for rejection shall be included. | essential | test | A |
| PGS-0290 | PGS-0290-1-1 | The PGS shall make electronic copies of its plans available to the IMS. | essential | test | A |
| | PGS-0290-1-2 | The PGS shall make electronic copies of its plans available to the SMC. | essential | test | A |
| | PGS-0290-1-3 | The PGS shall make electronic copies of its plans to the collocated DADS. | essential | test | A |
| | PGS-0290-2-1 | The PGS shall make electronic copies of its schedules available to the IMS. | essential | test | A |
| | PGS-0290-2-2 | The PGS shall make electronic copies of its schedules available to the SMC. | essential | test | A |
| | PGS-0290-2-3 | The PGS shall make electronic copies of its schedules available to the DADS. | essential | test | A |
| PGS-0295 | PGS-0295 | The PGS shall transmit a status message notifying the IMS of a revised completion time if processing will not complete per original schedule. | fulfillment | test | A |
| PGS-0300 | PGS-0300-1 | The PGS shall have the capability for an operator to interactively review the current data processing schedule. | essential | test | A |
| | PGS-0300-2 | The PGS shall have the capability for an operator to interactively update the current data processing schedule. | essential | test | A |
| PGS-0310 | PGS-0310-a | The PGS element shall collect the management data used to support Fault Management. | essential | test | A |
| | PGS-0310-b | The PGS element shall collect the management data used to support Configuration Management. | essential | test | A |
| | PGS-0310-c | The PGS element shall collect the management data used to support Accounting Management. | essential | test | A |
| | PGS-0310-d | The PGS element shall collect the management data used to support Accountability Management. | essential | test | A |
| | PGS-0310-e | The PGS element shall collect the management data used to support Performance Management. | essential | test | A |
| | PGS-0310-f | The PGS element shall collect the management data used to support Security Management. | essential | test | A |
| | PGS-0310-g | The PGS element shall collect the management data used to support Scheduling Management. | essential | test | A |
| PGS-0320 | PGS-0320 | The PGS shall display detected faults to the system operators. | essential | test | A |
| PGS-0325 | PGS-0325-1 | The PGS shall provide the SMC with scheduling information. | essential | test | A |
| | PGS-0325-2 | The PGS shall provide the SMC with status information. | essential | test | A |
| PGS-0330 | PGS-0330 | The PGS shall report detected processing system faults to the SMC. | essential | test | A |
| PGS-0340 | PGS-0340-1 | The PGS shall utilize fault isolation tools provided by the LSM for the PGS. | essential | test | A |
| | PGS-0340-2 | The PGS shall utilize fault isolation tools provided by the LSM for the PGS subsystems. | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| PGS-0350 | PGS-0350 | The PGS shall utilize tools provided by the LSM to support fault isolation between the PGS and external interfaces. | essential | test | A |
| PGS-0360 | PGS-0360 | The PGS shall generate a PGS processing log that accounts for all data processing activities. | essential | test | A |
| PGS-0370 | PGS-0370 | The PGS shall utilize the LSM to generate a PGS resource utilization report. | fulfillment | test | A |
| PGS-0380 | PGS-0380-1 | The PGS shall monitor its internal operations. | essential | test | A |
| | PGS-0380-2-1 | The PGS shall generate a status report periodically on its internal operations. | fulfillment | test | A |
| | PGS-0380-2-2 | The PGS shall generate a status report of its internal operations on request. | fulfillment | test | A |
| PGS-0400 | PGS-0400-1-1 | The PGS shall have the capability to monitor the status of all algorithm testing . | essential | test | A |
| | PGS-0400-1-2 | The PGS shall have the capability to monitor the status of all calibration coefficient testing. | essential | test | A |
| | PGS-0400-2-1 | The PGS shall have the capability to generate algorithm test reports. | essential | test | A |
| | PGS-0400-2-2 | The PGS shall have the capability to generate calibration test reports. | essential | test | A |
| PGS-0410 | PGS-0410 | The PGS shall have the capability to track the processing status of all products scheduled to be generated. | essential | test | A |
| PGS-0440 | PGS-0440-b-1 | The PGS shall accept from the DADS L0 data products including L0 data set. | essential | test | IR1 |
| | PGS-0440-c-1 | The PGS shall accept from the DADS L0 data products including metadata required for processing. | essential | test | IR1 |
| | PGS-0440-d-1 | The PGS shall accept from the DADS L0 data products including current date and time. | essential | test | IR1 |
| | PGS-0440-e-1 | The PGS shall accept from the DADS L0 data products including DADS identification. | essential | test | IR1 |
| | PGS-0440-a-1 | The PGS shall accept from the DADS L0 data products including product identification. | essential | test | IR1 |
| PGS-0450 | PGS-0450-a | The PGS shall accept from the DADS ancillary data sets including Product identification. | essential | test | IR1 |
| | PGS-0450-b | The PGS shall accept from the DADS ancillary data sets including ancillary data set. | essential | test | IR1 |
| | PGS-0450-c | The PGS shall accept from the DADS ancillary data sets including metadata required for processing. | essential | test | IR1 |
| | PGS-0450-d | The PGS shall accept from the DADS ancillary data sets including current data and time. | essential | test | IR1 |
| | PGS-0450-e | The PGS shall accept from the DADS ancillary data sets including DADS identification. | essential | test | IR1 |
| PGS-0455 | PGS-0455-1 | The PGS shall have the capability to assess the quality of spacecraft orbit data contained in the ancillary data. | essential | test | A |
| | PGS-0455-2 | The PGS shall have the capability to assess the quality of attitude (O/A) data contained in the ancillary data. | essential | test | A |
| PGS-0456 | PGS-0456-1 | The PGS shall notify the FDF, via the DADS, of O/A quality checks. | essential | test | A |
| | PGS-0456-1 | The PGS shall request updated (refined/repaired) O/A data from the FDF when necessary. | essential | test | A |
| PGS-0458 | PGS-0458-1 | The PGS shall use configuration-controlled calibration coefficients to generate calibrated ancillary data products necessary as input to the generation of Level 1 Standard Products in a timeframe that assures that production schedules for all products including quick-look can be met. | essential | test | A |
| | PGS-0458-2 | The PGS shall use selected engineering data to generate calibrated ancillary data products necessary as input to the generation of Level 1 Standard Products in a timeframe that assures that production schedules for all products including quick-look can be met. | essential | test | A |
| PGS-0470 | PGS-0470 | The PGS shall have the capability to produce each Standard Product as specified in that product's Standard Product specification. | essential | test | A |
| PGS-0480 | PGS-0480 | The PGS shall have the capability to perform all its processing based on priority. | essential | test | A |
| PGS-0490 | PGS-0490-1-a | The PGS shall have the capability to access Digital terrain map databases for the generation of Standard Products. | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | PGS-0490-1-b | The PGS shall have the capability to access Land/sea databases for the generation of Standard Products. | essential | test | A |
| | PGS-0490-1-c | The PGS shall have the capability to access Climatology databases for the generation of Standard Products. | essential | test | A |
| | PGS-0490-1-d | The PGS shall have the capability to access Digital political map databases for the generation of Standard Products. | essential | test | A |
| | PGS-0490-2-a | The PGS shall have the capability to use Digital terrain map databases for the generation of Standard Products. | essential | test | A |
| | PGS-0490-2-b | The PGS shall have the capability to use Land/sea databases for the generation of Standard Products. | essential | test | A |
| | PGS-0490-2-c | The PGS shall have the capability to use Climatology databases for the generation of Standard Products. | essential | test | A |
| | PGS-0490-2-d | The PGS shall have the capability to use Digital political map databases for the generation of Standard Products. | essential | test | A |
| PGS-0500 | PGS-0500-1-1 | The PGS shall have the capability to generate Level 1 Standard Products using validated algorithms provided by the scientists. | essential | test | A |
| | PGS-0500-1-2 | The PGS shall have the capability to generate Level 1 Standard Products using validated algorithms and calibration coefficients provided by the scientists. | essential | test | A |
| | PGS-0500-2-1 | The PGS shall have the capability to generate Level 2 Standard Products using validated algorithms provided by the scientists. | essential | test | A |
| | PGS-0500-2-2 | The PGS shall have the capability to generate Level 2 Standard Products using validated algorithms and calibration coefficients provided by the scientists. | essential | test | A |
| | PGS-0500-3-1 | The PGS shall have the capability to generate Level 3 Standard Products using validated algorithms provided by the scientists. | essential | test | A |
| | PGS-0500-3-2 | The PGS shall have the capability to generate Level 3 Standard Products using validated algorithms and calibration coefficients provided by the scientists. | essential | test | A |
| | PGS-0500-4-1 | The PGS shall have the capability to generate Level 4 Standard Products using validated algorithms provided by the scientists. | essential | test | A |
| | PGS-0500-4-2 | The PGS shall have the capability to generate Level 4 Standard Products using validated algorithms and calibration coefficients provided by the scientists. | essential | test | A |
| PGS-0510 | PGS-0510-1 | he PGS shall have the capability to generate metadata (see Appendix C) according to the algorithms provided by the scientists. | essential | test | A |
| | PGS-0510-2 | The PGS shall have the capability to associate this metadata with each Standard Product generated. | essential | test | A |
| PGS-0512 | PGS-0512 | The PGS shall generate unique granule IDs for all products generated at the PGS. | essential | test | A |
| PGS-0520 | PGS-0520-1 | The PGS shall have the capability to generate data products from any single data input according to the algorithms provided by the scientists. | essential | test | A |
| | PGS-0520-2 | The PGS shall have the capability to generate data products from any combination of data inputs according to the algorithms provided by the scientists. | essential | test | A |
| PGS-0530 | PGS-0530-1-1 | The PGS shall generate quick-look products in support of field experiments using algorithms provided by the scientists. | essential | test | A |
| | PGS-0530-1-2 | The PGS shall generate quick-look products in support of field experiments using algorithms and calibration coefficients provided by the scientists. | essential | test | A |
| | PGS-0530-2-1 | The PGS shall generate quick-look products in support of event monitoring using algorithms provided by the scientists. | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | PGS-0530-2-2 | The PGS shall generate quick-look products in support of event monitoring using algorithms and calibration coefficients provided by the scientists. | essential | test | A |
| | PGS-0530-3-1 | The PGS shall generate quick-look products in support of instrument monitoring using algorithms provided by the scientists. | essential | test | A |
| | PGS-0530-3-2 | The PGS shall generate quick-look products in support instrument monitoring using algorithms and calibration coefficients provided by the scientists. | essential | test | A |
| PGS-0540 | PGS-0540-1 | The PGS shall reprocess specified science data using original algorithms provided by the scientists. | essential | test | A |
| | PGS-0540-2 | The PGS shall reprocess specified science data using updated algorithms provided by the scientists. | essential | test | A |
| PGS-0550 | PGS-0550-1 | The PGS shall reprocess science data using the original calibration coefficients. | essential | test | A |
| | PGS-0550-2 | The PGS shall reprocess science data using updated (provided by the scientists) calibration coefficients. | essential | test | A |
| PGS-0560 | PGS-0560 | The PGS shall maintain copies of generated products to be used as inputs to other scheduled products for processing efficiency. | essential | test | A |
| PGS-0590 | PGS-0590-1 | The PGS shall have the capability to indicate the temporary status of data stored in the DADS that is awaiting QA in product production. | essential | test | A |
| PGS-0600 | PGS-0600-1 | The PGS shall provide an algorithm and calibration test and validation environment that is fully compatible with the operational production environment. | essential | test | IR1 |
| | PGS-0600-2 | The PGS shall provide an algorithm and calibration test and validation environment that is isolated from the operational production environment. | essential | test | IR1 |
| PGS-0602 | PGS-0602-1 | The PGS shall have the capability to accept POSIX-compliant science algorithms. | essential | test | IR1 |
| | PGS-0602-1 | The PGS shall have the capability to compile algorithm source code written in a standard programming language (e.g., Fortran, C, Ada). | essential | test | IR1 |
| PGS-0605 | PGS-0605-1 | The PGS shall process pre-launch test data. | essential | test | IR1 |
| | PGS-0605-2 | The PGS shall provide test data product samples for user verification. | essential | test | IR1 |
| PGS-0610 | PGS-0610-1 | The PGS shall accept from the SCFs new calibration coefficients to be validated in the test environment. | essential | test | IR1 |
| | PGS-0610-2 | The PGS shall accept from the SCFs updated calibration coefficients to be validated in the test environment. | essential | test | IR1 |
| | PGS-0610-1-c | The PGS shall accept from the SCFs new calibration coefficients, which contain author and version number, to be validate in the test environment. | essential | test | IR1 |
| | PGS-0610-1-d | The PGS shall accept from the SCFs new calibration coefficients, which contain identification or releated processing algortihm, to be validated in the test environment. | essential | test | IR1 |
| PGS-0620 | PGS-0620-1 | The PGS shall have the capabiliy to validate received calibration coefficients for completeness. | essential | test | IR1 |
| | PGS-0620-2 | The PGS shall have the capability to validate received calibration coefficients for correct format. | essential | test | IR1 |
| PGS-0630 | PGS-0630-1-a | The PGS shall send the DADS new calibration coefficients which contain identification of coefficient data set. | essential | test | A |
| | PGS-0630-1-b | The PGS shall send the DADS new calibration coefficients which contain calibration coefficients values. | essential | test | A |
| | PGS-0630-1-c-1 | The PGS shall send the DADS new calibration coefficients which contain author. | essential | test | A |
| | PGS-0630-1-d | The PGS shall send the DADS new calibration coefficients which contain identification of related processing algorithms. | essential | test | A |
| | PGS-0630-1-e-1 | The PGS shall send the DADS new calibration coefficients which contain start date/time of applicability. | essential | test | A |
| | PGS-0630-1-f | The PGS shall send the DADS new calibration coefficients which contain documentation. | essential | test | A |
| | PGS-0630-2-a | The PGS shall send the DADS modified calibration coeffiecients which contain identification of coefficient data set. | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | PGS-0630-2-b | The PGS shall send the DADS modified calibration coefficients which contain calibration coefficients values. | essential | test | A |
| | PGS-0630-2-c-1 | The PGS shall send the DADS modified calibration coefficients which contain author. | essential | test | A |
| | PGS-0630-2-c-2 | The PGS shall send the DADS modified calibration coefficients which contain version number. | essential | test | A |
| | PGS-0630-2-d | The PGS shall send the DADS modified calibration coefficients which contain identification of related processing algortihm. | essential | test | A |
| | PGS-0630-2-e-1 | The PGS shall send the DADS modified calibration coefficients which contain start date/time of applicability. | essential | test | A |
| | PGS-0630-2-e-2 | The PGS shall send the DADS modified calibration coefficients which contain stop date/time of applicability. | essential | test | A |
| | PGS-0630-2-f | The PGS shall send the DADS modified calibration coefficients which contain documentation. | essential | test | A |
| | PGS-0630-1-e-2 | The PGS shallsend the DADS modified calibration coefficients which contain stop date/time of applicability. | essential | test | A |
| | PGS-0630-1-c-2 | The PGS shall send the DADS modified calibration coefficients which contain version number. | essential | test | A |
| PGS-0640 | PGS-0640-1 | The PGS shall accept from the SCF new Standard Product algorithms to be tested at the processing facility. | essential | test | IR1 |
| | PGS-0640-2 | The PGS shall accept from the SCF modified Standard Product algorithms to be tested at the processing facility. | essential | test | IR1 |
| PGS-0650 | PGS-0650-a | he PGS shall have the capability to validate required operational algorithm characteristics prior to scheduling algorithm test time. These characteristics shall include at a minimum: a.Language | essential | test | A |
| | PGS-0650-b | The PGS shall have the capability to validate required operational algorithm characteristics prior to scheduling algorithm test time. These characteristics shall include at a minimum: b.Operational impacts (e.g., algorithm software size, required resources) | essential | test | A |
| | PGS-0650-c | The PGS shall have the capability to validate required operational algorithm characteristics prior to scheduling algorithm test time. These characteristics shall include at a minimum: c.Algorithm documentation | essential | test | A |
| | PGS-0650-d | The PGS shall have the capability to validate required operational algorithm characteristics prior to scheduling algorithm test time. These characteristics shall include at a minimum: d.Data handling standards as appropriate | essential | test | A |
| | PGS-0650-e-1 | The PGS shall have the capability to validate required operational algorithm characteristics prior to scheduling algorithm test time. These characteristics shall include at a minimum: e.Units used | essential | test | A |
| | PGS-0650-e-2 | The PGS shall have the capability to validate required operational algorithm characteristics prior to scheduling algorithm test time. These characteristics shall include at a minimum: e. Models used | essential | test | A |
| | PGS-0650-f | The PGS shall have the capability to validate required operational algorithm characteristics prior to scheduling algorithm test time. These characteristics shall include at a minimum: f.Operational compatibility | essential | test | A |
| | PGS-0650-g | The PGS shall have the capability to validate required operational algorithm characteristics prior to scheduling algorithm test time. These characteristics shall include at a minimum: g.Required metadata outputs | essential | test | A |
| PGS-0860 | PGS-0860-1-1 | The PGS shall have the capability to schedule algorithm test time in the test environment with the appropriate SCF. | essential | test | A |
| | PGS-0860-1-2 | The PGS shall have the capability to schedule algorithm and calibration coefficient test time in the test environment with the appropriate SCF. | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | PGS-0860-2-1 | The PGS shall have the capability to coordinate algorithm test time in the test environment with the appropriate SCF. | essential | test | A |
| | PGS-0860-2-2 | The PGS shall have the capability to coordinate algorithm and calibration coefficient test time in the test environment with the appropriate SCF. | essential | test | A |
| PGS-0870 | PGS-0870 | The PGS shall have the capability to schedule algorithm test resources that do not interfere with the operational production environment. | essential | test | A |
| PGS-0900 | PGS-0900-a | The PGS shall send test products to the SCF for analysis. These shall contain the results of algorithm testing and shall contain the following information at a minimum: a.Algorithm identification | essential | test | IR1 |
| | PGS-0900-b | The PGS shall send test products to the SCF for analysis. These shall contain the results of algorithm testing and shall contain the following information at a minimum: b.Test time(s) | essential | test | IR1 |
| | PGS-0900-c | The PGS shall send test products to the SCF for analysis. These shall contain the results of algorithm testing and shall contain the following information at a minimum: c.Processor identification | essential | test | IR1 |
| | PGS-0900-c | The PGS shall send test products to the SCF for analysis. These shall contain the results of algorithm testing and shall contain the following information at a minimum: d.Test results | essential | test | IR1 |
| PGS-0910 | PGS-0910 | The PGS shall have the capability to support analysis of algorithm test results. | essential | test | IR1 |
| PGS-0920 | PGS-0920 | The PGS shall have the capability to validate, through testing, that SCF processing algorithms will execute properly in the operational environment. | essential | test | IR1 |
| PGS-0925 | PGS-0925-1 | The PGS shall validate algorithms used for conversions of EOS engineering data. | essential | test | B |
| | PGS-0925-2 | The PGS shall validate algorithms used for calibrations of EOS engineering data. | essential | test | B |
| | PGS-0925-3 | The PGS shall validate algorithms used for transformations of EOS engineering data. | essential | test | B |
| PGS-0930 | PGS-0930-1 | The PGS shall have the capability to transfer validated algorithm software from the test environment to the operational environment to be used in the production of Standard Products. | essential | test | A |
| | PGS-0930-2 | he PGS shall have the capability to transfer validated calibration coefficients from the test environment to the operational environment to be used in the production of Standard Products. | essential | test | A |
| PGS-0940 | PGS-0940-1 | The PGS shall provide storage for all candidate algorithms' software executables. | essential | test | IR1 |
| | PGS-0940-2 | The PGS shall provide storage for all candidate algorithm's calibration coefficients. | essential | test | IR1 |
| PGS-0950 | PGS-0950-a-1 | The PGS shall interface to the SMC to maintain configuration control of all algorithms and calibration coefficients used in operational Standard Product production. Controlled information shall contain at a minimum: a.Source code including version number. | essential | test | IR1 |
| | PGS-0950-a-2 | The PGS shall interface to the SMC to maintain confguration control of all algorithms and calibration coefficients used in operational Standard Product production. Controlled information shall contain at a minimum: a.Source code including author. | essential | test | IR1 |
| | PGS-0950-b-1 | The PGS shall interface to the SMC to maintain configuration control of all algorithms and calibration coefficients used in operational Standard Product production. Controlled information shall contain at a minimum: b. Benchmark test procedures. | essential | test | IR1 |
| | PGS-0950-b-2 | The PGS shall interface to the SMC to maintain configuration control of all algorithms and calibration coefficients used in operational Standard Product production. Controlled information shall contain at a minimum: b. Benchmark test data. | essential | test | IR1 |
| | PGS-0950-b-3 | The PGS shall interface to the SMC to maintain configuration control of all algorithms and calibration coefficients used in operational Standard Product production. Controlled information shall contain at a minimum: b. Benchmark test results. | essential | test | IR1 |
| | PGS-0950-c-1 | The PGS shall interface to the SMC to maintain configuration control of all algorithms and calibration coefficients used in operational Standard Product production. Controlled information shall contain at a minimum: c. Date of operational installation | essential | test | IR1 |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | PGS-0950-c-2 | The PGS shall interface to the SMC to maintain configuration control of all algorithms and calibration coefficients used in operational Standard Product production. Controlled information shall contain at a minimum: c. Time of operational installation. | essential | test | IR1 |
| | PGS-0950-d-1 | The PGS shall interface to the SMC to maintain configuration control of all algorithms and calibration coefficients used in operational Standard Product production. Controlled information shall contain at a minimum: d. Compiler identification. | essential | test | IR1 |
| | PGS-0950-d-2 | The PGS shall interface to the SMC to maintain configuration control of all algorithms and calibration coefficients used in operational Standard Product production. Controlled information shall contain at a minimum: d. Compiler version. | essential | test | IR1 |
| | PGS-0950-e | The PGS shall interface to the SMC to maintain configuration control of all algorithms and calibration coefficients used in operational Standard Product production. Controlled information shall contain at a minimum: e. Final algorithm documentation. | essential | test | IR1 |
| PGS-0960 | PGS-0960-1-a-1 | The PGS shall send the DADS new algorithms. This delivery shall contain the following information at a minimum: a. Source code including version number. | essential | test | IR1 |
| | PGS-0960-1-a-2 | The PGS shall send the DADS new algorithms. This delivery shall contain the following information at a minimum: a.Source code including author, | essential | test | IR1 |
| | PGS-0960-1-b-1 | The PGS shall send the DADS new algorithms. This delivery shall contain the following information at a minimum: b. Benchmark test procedures. | essential | test | IR1 |
| | PGS-0960-1-b-2 | The PGS shall send the DADS new algorithms. This delivery shall contain the following information at a minimum: b. Benchmark test data | essential | test | IR1 |
| | PGS-0960-1-b-3 | The PGS shall send the DADS new algorithms. This delivery shall contain the following information at a minimum: b. Benchmark test results. | essential | test | IR1 |
| | PGS-0960-1-c-1 | The PGS shall send the DADS new algorithms. This delivery shall contain the following information at a minimum: c.Date of operational installation | essential | test | IR1 |
| | PGS-0960-1-c-2 | The PGS shall send the DADS new algorithms. This delivery shall contain the following information at a minimum: c.Time of operational installation. | essential | test | IR1 |
| | PGS-0960-1-d | The PGS shall send the DADS new algorithms. This delivery shall contain the following information at a minimum: d.Final algorithm documentation | essential | test | IR1 |
| | PGS-0960-1-e | The PGS shall send the DADS new or modified algorithms. This delivery shall contain the following information at a minimum: e.Calibration coefficient values | essential | test | IR1 |
| | PGS-0960-2-a-1 | The PGS shall send the DADS modified algorithms. This delivery shall contain the following information at a minimum: a. Source code including version number. | essential | test | IR1 |
| | PGS-0960-2-a-2 | The PGS shall send the DADS modified algorithms. This delivery shall contain the following information at a minimum: a.Source code including author. | essential | test | IR1 |
| | PGS-0960-2-b-1 | The PGS shall send the DADS modified algorithms. This delivery shall contain the following information at a minimum: b. Benchmark test procedures. | essential | test | IR1 |
| | PGS-0960-2-b-2 | The PGS shall send the DADS modified algorithms. This delivery shall contain the following information at a minimum: b. Benchmark test data. | essential | test | IR1 |
| | PGS-0960-2-b-3 | The PGS shall send the DADS modified algorithms. This delivery shall contain the following information at a minimum: b. Benchmark test results. | essential | test | IR1 |
| | PGS-0960-2-c-1 | The PGS shall send the DADS modified algorithms. This delivery shall contain the following information at a minimum: c. Date of operational installation. | essential | test | IR1 |
| | PGS-0960-2-c-2 | The PGS shall send the DADS modified algorithms. This delivery shall contain the following information at a minimum: c. Time of operational installation. | essential | test | IR1 |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | PGS-0960-2-d | The PGS shall send the DADS modified algorithms. This delivery shall contain the following information at a minimum: d.Final algorithm documentation | essential | test | IR1 |
| | PGS-0960-2-e | The PGS shall send the DADS modified algorithms. This delivery shall contain the following information at a minimum: e.Calibration coefficient values. | essential | test | IR1 |
| PGS-0970 | PGS-0970 | The PGS shall provide file access subroutines that enforce compliance with the adopted standard ECS formats. | essential | test | IR1 |
| PGS-0980 | PGS-0980 | The PGS shall provide job control routines that provide all required task parameters to the Standard Product software. | essential | test | IR1 |
| PGS-0990 | PGS-0990 | The PGS shall provide error logging subroutines for use by Standard Product software in notifying the system operators of conditions requiring their attention. | essential | test | IR1 |
| PGS-1000 | PGS-1000 | The PGS shall provide error logging subroutines for use by Standard Product software in notifying users of conditions requiring their attention. | essential | test | IR1 |
| PGS-1010 | PGS-1010 | The PGS shall provide mass storage allocation subroutines that provide algorithms with a means for dynamic allocation of storage for temporary files. | essential | test | IR1 |
| PGS-1015 | | The PGS shall provide ancillary data access subroutines that provide Standard Product software access to solar ephemeris data to perfrom interpolation operations. | | | |
| | PGS-1015-1-1-b | The PGS shall provide ancillary data access subroutines that provide Standard Product software access to solar ephemeris data to perform extrapolation operations. | essential | test | IR1 |
| | PGS-1015-1-1-c | The PGS shall provide ancillary data access subroutines that provide Standard Product software access to solar ephemeris data to perform coordinate system conversion operations. | essential | test | IR1 |
| | PGS-1015-1-2-a | The PGS shall provide ancillary data access subroutines that provide Standard Product software access to lunar ephemeris data to perform interpolation operations. | essential | test | IR1 |
| | PGS-1015-1-2-b | The PGS shall provide ancillary data access subroutines that provide Standard Product software access to lunar ephemeris data to perform extrapolation operations. | essential | test | IR1 |
| | PGS-1015-1-2-c | The PGS shall provide ancillary data access subroutines that provide Standard Product software access to lunar ephemeris data to perform coordinate system conversion operations. | essential | test | IR1 |
| | PGS-1015-1-3-a | The PGS shall provide ancillary data access subroutines that provide Standard Product software access to satellite ephemeris data to perform interpolation operations. | essential | test | IR1 |
| | PGS-1015-1-3-b | The PGS shall provide ancillary data access subroutines that provide Standard Product software access to satellite ephemeris data to perform extrapolation operations. | essential | test | IR1 |
| | PGS-1015-1-3-c | The PGS shall provide ancillary data access subroutines that provide Standard Product software access to satellite ephemeris data to perform coordinate system conversion. | essential | test | IR1 |
| | PGS-1015-2-a | The PGS shall provide ancillary data access subroutines that provide Standard Product software access to Earth rotation data to perform interpolation operations. | essential | test | IR1 |
| | PGS-1015-2-b | The PGS shall provide ancillary data access subroutines that provide Standard Product software access to Earth rotation data to perform extrapolation operations. | essential | test | IR1 |
| | PGS-1015-2-c | The PGS shall provide ancillary data access subroutines that provide Standard Product software access to Earth rotation data to perform coordinate system conversion. | essential | test | IR1 |
| | PGS-1015-3-a | The PGS shall provide ancillary data access subroutines that provide Standard Product software access to time and position measurement data to perform interoplation operations. | essential | test | IR1 |
| | PGS-1015-3-b | The PGS shall provide ancillary data access subroutines that provide Standard Product software access to time and position measurement data to perform extrapolation operations. | essential | test | IR1 |
| | PGS-1015-3-c | The PGS shall provide ancillary data access subroutines that provide Standard Product software access to time and position measurement data to perform coordinate system conversion. | essential | test | IR1 |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| PGS-1020 | PGS-1020-a | The PGS shall provide mathematical libraries including: a.Linear algebra and analysis (e.g., LINPAC, IMSL) | essential | test | IR1 |
| | PGS-1020-b | The PGS shall provide mathematical libraries including: b.Statistical calculations (e.g., SAS, SPSS) | essential | test | IR1 |
| PGS-1025 | PGS-1025-a | The PGS shall provide a Science Processing Library containing routines such as: a.Image processing routines | essential | test | IR1 |
| | PGS-1025-b | The PGS shall provide a Science Processing Library containing routines such as: b.Data visualization routines | essential | test | IR1 |
| | PGS-1025-c | The PGS shall provide a Science Processing Library containing routines such as: c.Graphics routines | essential | test | IR1 |
| PGS-1030 | PGS-1030 | The PGS shall provide a toolkit to the SCF containing versions of the routines specified in requirements PGS-0970 to PGS-1025. | essential | test | IR1 |
| PGS-1050 | PGS-1050-1 | The PGS shall provide the capability to perform automatic QA of generated products. | essential | test | A |
| | PGS-1050-2 | The PGS shall provide the capability to perform manual QA of generated products. | essential | test | A |
| PGS-1060 | PGS-1060 | The PGS shall have the capability to perform automatic QA of generated products utilizing algorithms provided by the scientists. | essential | test | A |
| PGS-1080 | PGS-1080-1 | The PGS shall have the capability to provide an inventory copy of generated products to the data product quality staff before the product is sent to the DADS for storage. | essential | test | A |
| | PGS-1080-2 | The PGS shall have the capability to provide a review copy of generated products to the data product quality staff before the product is sent to the DADS for storage. | essential | test | A |
| PGS-1090 | PGS-1090-1-1 | The PGS shall have the capability to provide the data product quality staff with the algorithms for the purpose of reviewing the quality of production. | essential | test | A |
| | PGS-1090-1-2 | The PGS shall have the capability to provide the data product quality staff with the algorithms for the purpose of analyzing the quality of production. | essential | test | A |
| | PGS-1090-2-1 | The PGS shall have the capability to provide the data product quality staff with the calibration coefficient tables for the purpose of reviewing the quality of production. | essential | test | A |
| | PGS-1090-2-2 | The PGS shall have the capability to provide the data product quality staff with the calibration coefficient tables for the purpose of analyzing the quality of production. | essential | test | A |
| | PGS-1090-3-1 | The PGS shall have the capability to provide the data product quality staff with the input data sets for the purpose of reviewing the quality of production. | essential | test | A |
| | PGS-1090-3-2 | The PGS shall have the capability to provide the data product quality staff with the input data sets for the purpose of analyzing the quality of production. | essential | test | A |
| | PGS-1090-4-1 | The PGS shall have the capability to provide the data product quality staff with the other information related to product processing for the purpose of reviewing the quality of production. | essential | test | A |
| | PGS-1090-4-2 | The PGS shall have the capability to provide the data product quality staff with the other information related to product processing for the purpose of analyzing the quality of production. | essential | test | A |
| PGS-1100 | PGS-1100 | The PGS shall have the capability to accept product quality data input. | essential | test | A |
| PGS-1110 | PGS-1110 | The PGS shall have the capability to associate data quality with a generated product. | essential | test | A |
| PGS-1120 | PGS-1120-a | The PGS shall send the DADS updated metadata provided by the data product quality staff relating to product QA review. This QA review metadata shall contain the following information at a minimum. a.Product ID | essential | test | A |
| | PGS-1120-b | The PGS shall send the DADS updated metadata provided by the data product quality staff relating to product QA review. This QA review metadata shall contain the following information at a minimum. b.QA Approval field | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | PGS-1120-c | The PGS shall send the DADS updated metadata provided by the data product quality staff relating to product QA review. This QA review metadata shall contain the following information at a minimum. c.Other metadata | essential | test | A |
| PGS-1130 | PGS-1130-a | The PGS shall receive product QA from the SCF which shall describe the results of the scientist's product quality review at an SCF. Product QA shall contain the following information at a minimum: a.Identification of product | essential | test | A |
| | PGS-1130-b | The PGS shall receive product QA from the SCF which shall describe the results of the scientist's product quality review at an SCF. Product QA shall contain the following information at a minimum: b.QA results | essential | test | A |
| | PGS-1130-c | The PGS shall receive product QA from the SCF which shall describe the results of the scientist's product quality review at an SCF. Product QA shall contain the following information at a minimum: c.Product storage and processing instructions | essential | test | A |
| PGS-1140 | PGS-1140 | The PGS shall have the capability to provide the data product quality staff with the Product QA data from the SCF. | essential | test | A |
| PGS-1150 | PGS-1150-1 | The PGS shall have the capability to accept the identifkcation of products that are not to be stored in the DADS due to inferior quality. | essential | test | A |
| | PGS-1150-2 | The PGS shall have the capability to accept the identification of products that are not to be stored in the DADS due to reasons other than inferrior quality. | essential | test | A |
| PGS-1160 | PGS-1160-1 | The PGS shall have the capability to accept from the product quality staff commands to suspend specified production processing due to inferior quality. | essential | test | A |
| | PGS-1160-2 | The PGS shall have the capability to accept from the product quality staff commands to suspend specified production processing due to other reasons in line with SMC guidelines. | essential | test | A |
| PGS-1170 | PGS-1170 | The PGS shall have the capability to identify data products awaiting QA that have not been reviewed within the amount of time allocated for QA. | essential | test | A |
| PGS-1175 | PGS-1175-1 | The PGS shall maintain a list of products requiring QA by SCF. | essential | test | A |
| | PGS-1175-2 | The PGS shall maintain a list of products requiring QA by the PGS. | essential | test | A |
| PGS-1180 | PGS-1180 | The PGS shall have the capability to update the processing status of a given product as a result of a QA timeout . | essential | test | A |
| PGS-1190 | PGS-1190-1 | The PGS shall have the capability to log the identification of all non-stored products to support the maintenance of performance statistics. | essential | test | A |
| | PGS-1190-2 | The PGS shall have the capability to suspended processing directed by the data product quality staff to support the maintenance of performance statistics. | essential | test | A |
| PGS-1200 | PGS-1200-1 | The PGS shall have the capability to generate a data quality assessment report including a description of the quality of each processed product. | essential | test | A |
| | PGS-1200-2 | The PGS shall have the capability to generate a data quality assessment report including a description of the quality of each of the product's input data sets. | essential | test | A |
| PGS-1210 | PGS-1210 | The PGS shall coordinate the disposition of PGS data stored temporarily in the DADS. | essential | test | A |
| PGS-1220 | PGS-1220-1-a | The PGS shall have the capability to receive GFE databases as required as inputs to product generation. | essential | test | IR1 |
| | PGS-1220-1-b | The PGS shall have the capability to receive COTS databases as required as inputs to product generation. | essential | test | IR1 |
| | PGS-1220-1-c | The PGS shall have the capability to receive public domain databases as inputs to product generation. | essential | test | IR1 |
| | PGS-1220-2-a | The PGS shall have the capability to receive GFE database tools as required as inputs to product generation. | essential | test | IR1 |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | PGS-1220-2-b | The PGS shall have the capability to receive COTS database tools as required as inputs to product generation. | essential | test | IR1 |
| | PGS-1220-2-c | The PGS shall have the capability to receive public domain database tools as required as inputs to product generation. | essential | test | IR1 |
| | PGS-1220-3-a | The PGS shall have the capability to maintain GFE databases as required as inputs to product generation. | essential | test | IR1 |
| | PGS-1220-3-b | The PGS shall have the capability to maintain COTS databases as inputs to product generation. | essential | test | IR1 |
| | PGS-1220-3-c | The PGS shall have the capability to maintain public domain databases as inputs to product generation. | essential | test | IR1 |
| | PGS-1220-4-a | The PGS shall have the capability to maintain GFE database tools as required as inputs to product generation. | essential | test | IR1 |
| | PGS-1220-4-b | The PGS shall have the capability to maintain COTS database tools as required as inupts to product generation. | essential | test | IR1 |
| | PGS-1220-4-c | The PGS shall have the capability to maintain public domain database tools as required as inputs to product generation. | essential | test | IR1 |
| PGS-1230 | PGS-1230-a | The PGS shall accept special data sets from the DADS. Received information shall contain at a minimum: a.Product identifocation | essential | test | IR1 |
| | PGS-1230-b | The PGS shall accept special data sets from the DADS. Received information shall contain at a minimum: b.Special data set | essential | test | IR1 |
| | PGS-1230-c | The PGS shall accept special data sets from the DADS. Received information shall contain at a minimum: c.Metadata required for processing | essential | test | IR1 |
| | PGS-1230-d-1 | The PGS shall accept special data sets from the DADS. Received information shall contain at a minimum: d.Current date | essential | test | IR1 |
| | PGS-1230-d-2 | The PGS shall accept special data sets from the DADS. Received information shall contain at a minimum: d.Current time | essential | test | IR1 |
| | PGS-1230-e | The PGS shall accept special data sets from the DADS. Received information shall contain at a minimum: e.DADS identification | essential | test | IR1 |
| PGS-1240 | PGS-1240-1-a | The PGS shall send the generated Level 1 Standard Products to the DADS. These products shall contain the following information at a minimum: a.Product identification | essential | test | A |
| | PGS-1240-1-b | The PGS shall send the generated Level 1 Standard Products to the DADS. These products shall contain the following information at a minimum: b.L1 data set | essential | test | A |
| | PGS-1240-1-c | The PGS shall send the generated Level 1 Standard Products to the DADS. These products shall contain the following information at a minimum: c.Product processing priority | essential | test | A |
| | PGS-1240-1-d-1 | The PGS shall send the generated Level 1 Standard Products to the DADS. These products shall contain the following information at a minimum: d.Current date | essential | test | A |
| | PGS-1240-1-d-2 | The PGS shall send the generated Level 1 Standard Products to the DADS. These products shall contain the following information at a minimum: d.Current time | essential | test | A |
| | PGS-1240-1-e | The PGS shall send the generated Level 1 Standard Products to the DADS. These products shall contain the following information at a minimum: e.Associated metadata | essential | test | A |
| | PGS-1240-2-a | The PGS shall send the generated Level 2 Standard Products to the DADS. These products shall contain the following information at a minimum: a.Product identification | essential | test | A |
| | PGS-1240-2-b | The PGS shall send the generated Level 2 Standard Products to the DADS. These products shall contain the following information at a minimum: b.L2 data set | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | PGS-1240-2-c | The PGS shall send the generated Level 2 Standard Products to the DADS. These products shall contain the following information at a minimum: c.Product processing priority | essential | test | A |
| | PGS-1240-2-d-1 | The PGS shall send the generated Level 2 Standard Products to the DADS. These products shall contain the following information at a minimum: d.Current date | essential | test | A |
| | PGS-1240-2-d-2 | The PGS shall send the generated Level 2 Standard Products to the DADS. These products shall contain the following information at a minimum: d.Current time | essential | test | A |
| | PGS-1240-2-e | The PGS shall send the generated Level 2 Standard Products to the DADS. These products shall contain the following information at a minimum: e.Associated metadata | essential | test | A |
| | PGS-1240-3-a | The PGS shall send the generated Level 3 Standard Products to the DADS. These products shall contain the following information at a minimum: a.Product identification | essential | test | A |
| | PGS-1240-3-b | The PGS shall send the generated Level 3 Standard Products to the DADS. These products shall contain the following information at a minimum: b.L3 data set | essential | test | A |
| | PGS-1240-3-c | The PGS shall send the generated Level 3 Standard Products to the DADS. These products shall contain the following information at a minimum: c.Product processing priority | essential | test | A |
| | PGS-1240-3-d-1 | The PGS shall send the generated Level 3 Standard Products to the DADS. These products shall contain the following information at a minimum: d.Current date | essential | test | A |
| | PGS-1240-3-d-2 | The PGS shall send the generated Level 3 Standard Products to the DADS. These products shall contain the following information at a minimum: d.Current time | essential | test | A |
| | PGS-1240-3-e | The PGS shall send the generated Level 3 Standard Products to the DADS. These products shall contain the following information at a minimum: e.Associated metadata | essential | test | A |
| | PGS-1240-4-a | The PGS shall send the generated Level 4 Standard Products to the DADS. These products shall contain the following information at a minimum: a.Product identification | essential | test | A |
| | PGS-1240-4-b | The PGS shall send the generated Level 4 Standard Products to the DADS. These products shall contain the following information at a minimum: b.L4 data set | essential | test | A |
| | PGS-1240-4-c | The PGS shall send the generated Level 4 Standard Products to the DADS. These products shall contain the following information at a minimum: c.Product processing priority | essential | test | A |
| | PGS-1240-4-d-1 | The PGS shall send the generated Level 4 Standard Products to the DADS. These products shall contain the following information at a minimum: d.Current date | essential | test | A |
| | PGS-1240-4-d-2 | The PGS shall send the generated Level 4 Standard Products to the DADS. These products shall contain the following information at a minimum: d.Current time | essential | test | A |
| | PGS-1240-4-e | The PGS shall send the generated Level 4 Standard Products to the DADS. These products shall contain the following information at a minimum: e.Associated metadata | essential | test | A |
| PGS-1250 | PGS-1250 | The PGS shall send the DADS the calibrated ancillary data . | essential | test | A |
| PGS-1260 | PGS-1260 | The PGS shall send the DADS quick-look products . | essential | test | A |
| PGS-1270 | PGS-1270-1 | The PGS design and implementation shall have the flexibility to accomodate PGS expansion up to a factor of 3 in the processing capacity with no changes to the processing design | fulfillment | analysis | A |
| | PGS-1270-2 | The PGS design and implementation shall have the flexibility to accomodate PGS expansion up to a factor of 10 without major changes to the processing design. | fulfillment | analysis | A |
| PGS-1300 | PGS-1300-1-a | Each PGS shall provide a processing capacity four times the size necessary to process all EOS science data for which it is responsible, including interdisciplinary investigator processing. The four times processing capacity accounts for: a.1 times to allow for normal processing demands | essential | analysis | A |
| | PGS-1300-1-b | Each PGS shall provide a processing capacity four times the size necessary to process all EOS science data for which it is responsible, including interdisciplinary investigator processing. The four times processing capacity accounts for: b.2 times to allow for reprocessing demands | essential | analysis | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | PGS-1300-1-c-1 | Each PGS shall provide a processing capacity four times the size necessary to process all EOS science data for which it is responsible, including interdisciplinary investigator processing. The four times processing capacity accounts for: c.1 times to allow for algorithm integration and test demands | essential | analysis | A |
| | PGS-1300-1-c-2 | Each PGS shall provide a processing capacity four times the size necessary to process all EOS science data for which it is responsible, including interdisciplinary investigator processing. The four times processing capacity accounts for: c.1 times to allow for production of prototype products. | essential | analysis | A |
| | PGS-1300-1-c-3 | Each PGS shall provide a processing capacity four times the size necessary to process all EOS science data for which it is responsible, including interdisciplinary investigator processing. The four times processing capacity accounts for: c.1 times to allow for ad hoc processing for "dynamic browse" | essential | analysis | A |
| | PGS-1300-1-c-4 | Each PGS shall provide a processing capacity four times the size necessary to process all EOS science data for which it is responsible, including interdisciplinary investigator processing. The four times processing capacity accounts for: c.1 times to allow for new search techniques developed by science users | essential | analysis | A |
| | PGS-1300-1-c-5 | Each PGS shall provide a processing capacity four times the size necessary to process all EOS science data for which it is responsible, including interdisciplinary investigator processing. The four times processing capacity accounts for: c.1 times to allow for quick-look processing | essential | analysis | A |
| | PGS-1300-1-c-6 | Each PGS shall provide a processing capacity four times the size necessary to process all EOS science data for which it is responsible, including interdisciplinary investigator processing. The four times processing capacity accounts for: c.1 times to allow for additional loads due to spacecraft overlap. | essential | analysis | A |
| | PGS-1300-2-1 | It shall be possible to effectively utilize the entire reprocessing capacity at each site on computers with similar architectural design (e.g., parallel processors), for a single algorithm. | essential | analysis | A |
| | PGS-1300-2-2 | It shall be possible to effectively utilize the entire reprocessing capacity at each site on computers with similar architectural design (e.g., parallel processors), for any mix of algorithms normally run at that site. | essential | analysis | A |
| PGS-1301 | PGS-1301 | The effective CPU processing rates used for sizing purposes in PGS-1300 shall not be greater than 25% of peak-related CPU capacity. | essential | analysis | A |
| PGS-1310 | PGS-1310-1 | The processing capacity necessary to process all EOS science data for which each PGS is responsible shall be based on the data volumes. | essential | analysis | A |
| | PGS-1310-2 | The processing capacity necessary to process all EOS science data for which each PGS is responsible shall be based on the at-launch instrument processing load requirements (MFLOPS) assigned to each DAAC. | essential | analysis | A |
| | PGS-1310-3 | The processing capacity necessary to process all EOS science data for which each PGS is responsible shall be based on 20% yearly product growth as specified in Appendix C. | essential | analysis | A |
| PGS-1315 | PGS-1315-1 | Each PGS shall have the capacity to support I/O to temporary storage as required by individual science algorithms. | essential | analysis | A |
| | PGS-1315-2 | Each PGS shall have the capacity to support I/O to intermediate storage as required by individual science algorithms. | essential | analysis | A |
| | PGS-1315-3 | Each PGS shall have the capacity to support multiple passes over input products as required by individual science algorithms. | essential | analysis | A |
| PGS-1400 | PGS-1400-1 | The PGS shall be developed with configuration-controlled application programming interfaces (APIs) that will be capable of supporting development of new algorithms developed at each DAAC to support DAAC value-added production. | fulfillment | test | A |
| | PGS-1400-2 | The PGS shall be developed with configuration-controlled application programming interfaces (APIs) that will be capable of supporting integration of new algorithms developed at each DAAC to support DAAC value-added production. | fulfillment | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| PGS-1410 | PGS-1410 | The PGS shall provide the capability for each DAAC to add to the data production environment toolkit DAAC-developed software required to support discipline specific needs. | fulfillment | test | A |
| SDPS0010 | SDPS0010-1 | The SDPS shall provide CSMS with operational status. | essential | test | IR1 |
| | SDPS0010-2 | The SDPS shall provide CSMS with data processing status. | essential | test | IR1 |
| | SDPS0010-3 | The SDPS shall provide CSMS with data quality status. | essential | test | IR1 |
| | SDPS0010-4 | The SDPS shall provide CSMS with accounting status. | essential | test | IR1 |
| SDPS0015 | SDPS0015-1 | The SDPS shall receive directives on priorities regarding schedule conflict resolutions, from the SMC. | essential | test | A |
| | SDPS0015-2 | The SDPS shall receive directives on policy regarding schedule conflict resolutions, from the SMC. | essential | test | A |
| SDPS0016 | SDPS0016-1 | The SDPS shall coordinate and resolve schedule conflicts between IMS and DADS . | essential | test | IR1 |
| | SDPS0016-2 | The SDPS shall coordinate and resolve schedule conflicts between IMS and PGS. | essential | test | IR1 |
| | SDPS0016-3 | The SDPS shall coordinate and resolve schedule conflicts between DADS and PGS. | essential | test | IR1 |
| | SDPS0016-4 | The SDPS shall coordinate and resolve schedule conflicts between IMS, DADS and PGS. | essential | test | IR1 |
| SDPS0020 | SDPS0020-1-1-1 | The SDPS shall receive EOS science data from the EDOS. | essential | test | IR1 |
| | SDPS0020-1-2-1 | The SDPS shall receive engineering data from the EDOS. | essential | test | IR1 |
| | SDPS0020-1-3-1 | The SDPS shall receive ancillary data from the EDOS. | essential | test | IR1 |
| | SDPS0020-1-4-1 | The SDPS shall receive quick-look data from the EDOS. | essential | test | IR1 |
| | SDPS0020-1-1-2 | The SDPS shall receive EOS science data from the SDPF. | essential | test | IR1 |
| | SDPS0020-1-2-2 | The SDPS shall receive engineering data from the SDPF. | essential | test | IR1 |
| | SDPS0020-1-3-2 | The SDPS shall receive ancillary data from the SDPF. | essential | test | IR1 |
| | SDPS0020-1-4-2 | The SDPF shall receive quick-look data from the SDPF. | essential | test | IR1 |
| | SDPS0020-1-1-3 | The SDPS shall receive EOS science data from the IPs. | essential | test | IR1 |
| | SDPS0020-1-2-3 | The SDPS shall receive engineering data from the IPs. | essential | test | IR1 |
| | SDPS0020-1-3-3 | The SDPS shall receive ancillary data from the IPs. | essential | test | IR1 |
| | SDPS0020-1-4-3 | The SDPS shall receive quick-look data from the IPs. | essential | test | IR1 |
| | SDPS0020-2-1-1 | The SDPS shall receive non-EOS data from ADCs. | critical | test | A |
| | SDPS0020-2-2-1 | The SDPS shall receive in situ data from ADCs. | critical | test | A |
| | SDPS0020-2-3-1 | The SDPS shall receive algorithms from ADCs. | critical | test | A |
| | SDPS0020-2-4-1 | The SDPS shall receive documentation from ADCs. | critical | test | A |
| | SDPS0020-2-5-1 | The SDPS shall receive correlative data from ADCs. | critical | test | A |
| | SDPS0020-2-6-1 | The SDPS shall receive ancillary data from ADCs. | critical | test | A |
| | SDPS0020-2-1-2 | The SDPS shall receive non-EOS data from EPDSs. | critical | test | A |
| | SDPS0020-2-2-2 | The SDPS shall receive in situ data from EPDSs. | critical | test | A |
| | SDPS0020-2-3-2 | The SDPS shall receive algorithms from EPDSs. | critical | test | A |
| | SDPS0020-2-4-2 | The SDPS shall receive documentation from EPDSs. | critical | test | A |
| | SDPS0020-2-5-2 | The SDPS shall receive correlative data from EPDSs. | critical | test | A |
| | SDPS0020-2-6-2 | The SDPS shall receive ancillary data from EPDSs. | critical | test | A |
| | SDPS0020-2-1-3 | The SDPS shall receive non-EOS data from ODCs. | critical | test | A |
| | SDPS0020-2-2-3 | The SDPS shall receive in situ data from ODCs. | critical | test | A |
| | SDPS0020-2-3-3 | The SDPS shall receive algorithms from ODCs. | critical | test | A |
| | SDPS0020-2-4-3 | The SDPS shall receive documentation from ODCs. | critical | test | A |
| | SDPS0020-2-5-3 | The SDPS shall receive correlative data from ODCs. | critical | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SDPS0020-2-6-3 | The SDPS shall receive ancillary data from ODCs. | critical | test | A |
| SDPS0025 | SDPS0025-1 | The SDPS shall accept scientific investigator supplied dataset specific data transformations. | essential | test | IR1 |
| | SDPS0025-2 | The SDPS shall accept non-scientific investigator supplied dataset specific data transformations. | essential | test | IR1 |
| SDPS0026 | SDPS0026 | The SDPS shall provide the capability for performing dataset specific data transformations. | essential | test | A |
| SDPS0030 | SDPS0030-1 | The SDPS shall produce Standard Products ( as listed in Appendix C, including prototype products on a time-available basis) for EOS instruments based on the algorithms source code supplied by EOS scientists. | essential | test | B |
| | SDPS0030-2 | The SDPS shall produce Standard Products ( as listed in Appendix C, including prototype products on a time-available basis) for EOS instruments based on the algorithms source code and calibration coefficients supplied by EOS scientists. | essential | test | B |
| SDPS0031 | SDPS0031-1 | The SDPS shall generate browse data for routing to the requesting users. | essential | test | A |
| | SDPS0031-2 | The SDPS shall generate metadata for routing to the requesting users. | essential | test | A |
| SDPS0032 | SDPS0032-1 | The SDPS shall provide the PIs with the updated metadata for the assessment of data product quality. | essential | test | A |
| | SDPS0032-2 | The SDPS shall provide other science users (not PIs) with the updated metadata for the assessment of data product quality. | essential | test | A |
| SDPS0035 | SDPS0035-1-2 | The SDPS shall produce derived ancillary products as Standard Products for EOS investigators based on algorithms and coefficients for conversion of selected engineering/housekeeping data parameters. | essential | test | B |
| | SDPS0035-1-3 | The SDPS shall produce derived ancillary products as Standard Products for EOS investigators based on algorithms for calibration of selected engineering/housekeeping data parameters. | essential | test | B |
| | SDPS0035-2-1 | The SDPS shall produce derived ancillary products as Standard Products for EOS investigators based on algorithms and coefficients for calibration of selected engineering/housekeeping data parameters. | essential | test | B |
| | SDPS0035-2-2 | The SDPS shall produce derived ancillary products as Standard Products for EOS investigators based on algorithms for transformation of selected engineering/housekeeping data parameters. | essential | test | B |
| | SDPS0035-2-3 | The SDPS shall produce derived ancillary products as Standard Products for EOS investigators based on algorithms and coefficients for transformation of selected engineering/housekeeping data parameters. | essential | test | B |
| | SDPS0035-1-1 | The SDPS shall produce derived ancillary products as Standard Products for EOS investigators based on algorithms for conversion of selected engineering/housekeeping data parameters. | essential | test | B |
| SDPS0040 | SDPS0040-1 | The SDPS shall generate quick-look products for use by the operational staff residing at ICCs. | essential | test | A |
| | SDPS0040-2 | The SDPS shall generate quick-look products for use by the operational staff residing at the PIs. | essential | test | A |
| | SDPS0040-3 | The SDPS shall generate quick-look products for use by other science users. | essential | test | A |
| SDPS0050 | SDPS0050-1-1 | The SDPS shall archive the generated data products. | essential | test | IR1 |
| | SDPS0050-1-2 | The SDPS shall manage the generated data products. | essential | test | IR1 |
| | SDPS0050-1-3 | The SDPS shall quality check the generated data products. | essential | test | IR1 |
| | SDPS0050-1-4 | The SDPS shall account for the generated data products. | essential | test | IR1 |
| | SDPS0050-2 | The SDPS shall distribute the data products to the appropriate destinations as required. | essential | test | IR1 |
| SDPS0080 | SDPS0080-1-1-1 | The SDPS shall archive all science data received from the IPs. | essential | test | A |
| | SDPS0080-1-2-1 | The SDPS shall manage all science data received from the IPs. | essential | test | A |
| | SDPS0080-1-3-1 | The SDPS shall quality check all science data received from the IPs. | essential | test | A |
| | SDPS0080-1-4-1 | The SDPS shall account for all science data received from the IPs. | essential | test | A |
| | SDPS0080-1-1-2 | The SDPS shall archive all science data received from the EPDSs. | essential | test | A |
| | SDPS0080-1-2-2 | The SDPS shall manage all science data received from the EPDSs. | essential | test | A |
| | SDPS0080-1-3-2 | The SDPS shall quality check all science data received from the EPDSs. | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SDPS0080-1-4-2 | The SDPS shall account for all science data received from the EPDSs. | essential | test | A |
| | SDPS0080-1-1-3 | The SDPS shall archive all science data recieved from the SCFs. | essential | test | A |
| | SDPS0080-1-2-3 | The SDPS shall manage all science data received from the SCFs. | essential | test | A |
| | SDPS0080-1-3-3 | The SDPS shall quality check all science data received from the SCFs. | essential | test | A |
| | SDPS0080-1-4-3 | The SDPS shall account for all science data received from the SCFs. | essential | test | A |
| | SDPS0080-1-1-4 | The SDPS shall archive all science data received from the ADCs. | essential | test | A |
| | SDPS0080-1-2-4 | The SDPS shall manage all science data received from the ADCs. | essential | test | A |
| | SDPS0080-1-3-4 | The SDPS shall quality check all science data received from the ADCs. | essential | test | A |
| | SDPS0080-1-4-4 | The SDPS shall account for all science data received from the ADCs. | essential | test | A |
| | SDPS0080-1-1-5 | The SDPS shall archive all science data received from the ODCs. | essential | test | A |
| | SDPS0080-1-2-5 | The SDPS shall manage all science data received from the ODCs. | essential | test | A |
| | SDPS0080-1-3-5 | The SDPS shall quality check all science data received from the ODCs. | essential | test | A |
| | SDPS0080-1-4-5 | The SDPS shall account for all science data received from the ODCs. | essential | test | A |
| | SDPS0080-1-1-6 | The SDPS shall archive all science data received from other DAAC. | essential | test | A |
| | SDPS0080-1-2-6 | The SDPS shall manage all science data received from other DAAC. | essential | test | A |
| | SDPS0080-1-3-6 | The SDPS shall quality check all science data received from other DAAC. | essential | test | A |
| | SDPS0080-1-4-6 | The SDPS shall account for all science data received from other DAAC. | essential | test | A |
| | SDPS0080-1-1-7 | The SDPS shall archive all science data received from PIs. | essential | test | A |
| | SDPS0080-1-2-7 | The SDPS shall manage all science data received from PIs. | essential | test | A |
| | SDPS0080-1-3-7 | The SDPS shall quality check all science data received from PIs. | essential | test | A |
| | SDPS0080-1-4-7 | The SDPS shall account for all science data received from PIs. | essential | test | A |
| | SDPS0080-1-1-8 | The SDPS shall archive all science data received from other EOS science users. | essential | test | A |
| | SDPS0080-1-2-8 | The SDPS shall manage all science data received from other EOS science users. | essential | test | A |
| | SDPS0080-1-3-8 | The SDPS shall quality check all science data received from other EOS science users. | essential | test | A |
| | SDPS0080-1-4-8 | The SDPS shall account for all science data received from other EOS science users. | essential | test | A |
| | SDPS0080-2-1-1 | The SDPS shall archive all ancillary data received from the IPs. | essential | test | A |
| | SDPS0080-2-2-1 | The SDPS shall manage all ancillary data from the IPs. | essential | test | A |
| | SDPS0080-2-3-1 | The SDPS shall quality check all ancillary data received from the IPs. | essential | test | A |
| | SDPS0080-2-4-1 | The SDPS shall account for all ancillary data received from the IPs. | essential | test | A |
| | SDPS0080-2-1-2 | The SDPS shall archive all ancillary data received from the EPDss. | essential | test | A |
| | SDPS0080-2-2-2 | The SDPS shall manage all ancillary data received from EPDSs. | essential | test | A |
| | SDPS0080-2-3-2 | The SDPS shall quality check all ancillary data received from the EPDSs. | essential | test | A |
| | SDPS0080-2-4-2 | The SDPS shall account for all ancillary data received from the EPDSs. | essential | test | A |
| | SDPS0080-2-1-3 | The SDPS shall archive all ancillary data received from the SCFs. | essential | test | A |
| | SDPS0080-2-2-3 | The SDPS shall manage all ancillary data received from the SCFs. | essential | test | A |
| | SDPS0080-2-3-3 | The SDPS shall quality check all ancillary data received from the SCFs. | essential | test | A |
| | SDPS0080-2-4-3 | The SDPS shall account for all ancillary data received from the SCFs. | essential | test | A |
| | SDPS0080-2-1-4 | The SDPS shall archive all ancillary data received from the ADCs. | essential | test | A |
| | SDPS0080-2-2-4 | The SDPS shall manage all ancillary data received from the ADCs. | essential | test | A |
| | SDPS0080-2-3-4 | The SDPS shall quality check all ancillary data recieved from the ADCs. | essential | test | A |
| | SDPS0080-2-4-4 | The SDPS shall account for all ancillary data received from the ADCs. | essential | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SDPS0080-2-1-5 | The SDPS shall archive all ancillary data received from the ODCs. | essential | test | A |
| | SDPS0080-2-2-5 | The SDPS shall manage all ancillary data received from the ODCs. | essential | test | A |
| | SDPS0080-2-3-5 | The SDPS shall account for all ancillary data received from the ODCs. | essential | test | A |
| | SDPS0080-2-4-5 | The SDPS shall account for all ancillary data received from the ODCs. | essential | test | A |
| | SDPS0080-2-1-6 | The SDPS shall archive all ancillary data received from other DAAC. | essential | test | A |
| | SDPS0080-2-2-6 | The SDPS shall manage all ancillary data received from other DAAC. | essential | test | A |
| | SDPS0080-2-3-6 | The SDPS shall quality check all ancillary data received from other DAAC. | essential | test | A |
| | SDPS0080-2-4-6 | The SDPS shall account for all ancillary data received from other DAAC. | essential | test | A |
| | SDPS0080-2-1-7 | The SDPS shall archive all ancillary data received from PIs. | essential | test | A |
| | SDPS0080-2-2-7 | The SDPS shall manage all ancillary data received from PIs. | essential | test | A |
| | SDPS0080-2-3-7 | The SDPS shall quality check all ancillary data received from PIs. | essential | test | A |
| | SDPS0080-2-4-7 | The SDPS shall account for all ancillary data received from PIs. | essential | test | A |
| | SDPS0080-2-1-8 | The SDPS shall archive all ancillary data received from other EOS science users. | essential | test | A |
| | SDPS0080-2-2-8 | The SDPS shall manage all ancillary data received from other EOS science users. | essential | test | A |
| | SDPS0080-2-3-8 | The SDPS shall quality check all ancillary data received from other EOS science users. | essential | test | A |
| | SDPS0080-2-4-8 | The SDPS shall account for all ancillary data received from other EOS science users. | essential | test | A |
| SDPS0090 | SDPS0090-1-1 | The SDPS shall interface with the PIs to support the development of data product algorithms. | essential | inspect. | A |
| | SDPS0090-1-2 | The SDPS shall interface with the PIs to support the testing of data products algortihms. | essential | inspect. | A |
| | SDPS0090-1-3 | The SDPS shall interface with the PIs to support the QA of produced data products. | essential | inspect. | A |
| | SDPS0090-2-1 | The SDPS shall interface with the other science users to support the development of data product algorithms. | essential | inspect. | A |
| | SDPS0090-2-2 | The SDPS shall interface with the other science users to support the testing of data product algorithms. | essential | inspect. | A |
| | SDPS0090-2-3 | The SDPS shall interface with the other science users to support the QA of produced data products. | essential | inspect. | A |
| SDPS0091 | SDPS0091-1-1 | The SDPS shall receive a quality report that is generated and transmitted by the PIs . | fulfillment | test | IR1 |
| | SDPS0091-1-2 | The SDPS shall receive a quality report that is generated and transmitted by the other science users. | fulfillment | test | IR1 |
| | SDPS0091-2 | The SDPS shall append the quality report to the data products being archived by the SDPS. | fulfillment | test | IR1 |
| SDPS0092 | SDPS0092 | The SDPS shall support science user development of new search techniques that dynamically browse the data and metadata. | fulfillment | inspect. | A |
| SDPS0093 | SDPS0093-1 | The SDPS shall permit general science user access to these new search techniques. | fulfillment | test | A |
| | SDPS0093-2 | The SDPS shall limit system resource usage to 10% of the information management data processing, archiving, and distribution resources otherwise used for production and distribution of Level 2 and Level 3 products whenever science users are using the new search techniques. | fulfillment | test | A |
| SDPS0094 | SDPS0094-1-1 | SDPS processing resources used for the development of science software for new search techniques shall be isolated to ensure no adverse impact to the correct operation of ECS components | critical | test | A |
| | SDPS0094-1-2 | SDPS processing resources used for the development of science software for new search techniques shall be isolated to ensure no adverse impact to system data integrity | critical | test | A |
| | SDPS0094-1-3 | SDPS processing resources used for the development of science software for new search techniques shall be isolated to ensure no adverse impact to the ability of ECS to meet production and distribution schedules | critical | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SDPS0094-2-1 | SDPS processing resources used for the execution of science software for new search techniques shall be isolated to ensure no adverse impact to the correct operation of ECS components. | critical | test | A |
| | SDPS0094-2-1 | SDPS processing resources used for the execution of science software for new search techniques shall be isolated to ensure no adverse impact to system data integrity. | critical | test | A |
| | SDPS0094-2-1 | SDPS processing resources used for the execution of science software for new search techniques shall be isolated to ensure no adverse impact to the ability of ECS to meet production and distribution schedules. | critical | test | A |
| SDPS0095 | SDPS0095-1 | The SDPS shall provide science user interfaces that are individually tailorable with settable preferences. | fulfillment | test | A |
| | SDPS0095-2. | The SDPS shall provide science user interfaces that are individually tailorable with user defined keywords. | fulfillment | test | A |
| | SDPS0095-3 | The SDPS shall provide science user interfaces that are individually tailorable with query save capabilities. | fulfillment | test | A |
| | SDPS0095-4 | he SDPS shall provide science user interfaces that are individually tailorable with screen layout preferences. | fulfillment | test | A |
| SDPS0100 | SDPS0100-1-1-1 | The SDPS shall be responsible for delivery of EOS data to the IPs via EOSDIS networks. | essential | test | B |
| | SDPS0100-1-2-1 | The SDPS shall be responsible for delivery of EOS data to the ADCs via EOSDIS networks. | essential | test | B |
| | SDPS0100-1-3-1 | The SDPS shall be responsible for delivery of EOS data to the ODCs via EOSDIS networks. | essential | test | B |
| | SDPS0100-1-4-1 | The SDPS shall be responsible for delivery of EOS data to the other science users via EOSDIS networks. | essential | test | B |
| | SDPS0100-1-1-2 | The SDPS shall be responsible for delivery of EOS data to the IPs on a variety of physical media. | essential | test | B |
| | SDPS0100-1-2-2 | The SDPS shall be responsible for delivery of EOS data to the ADCs on a variety of physical media. | essential | test | B |
| | SDPS0100-1-3-2 | The SDPS shall be responsible for delivery of EOS data to the ODCs on a variety of physical media. | essential | test | B |
| | SDPS0100-1-4-2 | The SDPS shall be responsible for delivery of EOS data to the other science users on a variety of physical media. | essential | test | B |
| | SDPS0100-2-1-1 | The SDPS shall be responsible for deliver of EOS data products to the IPs via EOSDIS networks. | essential | test | B |
| | SDPS0100-2-2-1 | The SDPS shall be responsible for delivery of EOS data to the ADCs via EOSDIS networks. | essential | test | B |
| | SDPS0100-2-3-1 | The SDPS shall be responsible for delivery of EOS data products to the ODCs via EOSDIS networks. | essential | test | B |
| | SDPS0100-2-4-1 | The SDPS shall be responsible for delivery of EOS data products to the other science users via EOSDIS networks. | essential | test | B |
| | SDPS0100-2-1-2 | The SDPS shall be responsible for delivery of EOS data products to the IPS on a variety of physical media. | essential | test | B |
| | SDPS0100-2-2-2 | The SDPS shall be responsible for delivery of EOS data products to the ADCs on a variety of physical media. | essential | test | B |
| | SDPS0100-2-3-2 | The SDPS shall be responsible for delivery of EOS data products to the ODCs on a variety of physical media. | essential | test | B |
| | SDPS0100-2-4-2 | The SDPS shall be responsible for delivery of EOS data products to the other science users on a variety of physical media. | essential | test | B |
| SDPS0110 | SDPS0110-1-1-1 | The SDPS shall be responsible for coordination of the transfer of production science data from EDOS. | essential | test | IR1 |
| | SDPS0110-1-1-2 | The SDPS shall be responsible for coordination of the transfer of production science data from SDPF. | essential | test | IR1 |
| | SDPS0110-1-1-3 | The SDPS shall be responsible for coordination of the transfer of production science data from the IPs. | essential | test | IR1 |
| | SDPS0110-1-2-1 | The SDPS shall be responsible for coordination of the transfer of production engineering data from EDOS. | essential | test | IR1 |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SDPS0110-1-2-2 | The SDPS shall be responsible for coordination of the transfer of production engineering data from SDPF. | essential | test | IR1 |
| | SDPS0110-1-2-3 | The SDPS shall be responsible for coordination of the transfer of production engineering data from IPs. | essential | test | IR1 |
| | SDPS0110-2-1-1 | The SDPS shall be responsible for coordination of the transfer of quick-look science data from EDOS. | essential | test | IR1 |
| | SDPS0110-2-1-2 | The SDPS shall be responsible for coordination of the transfer of quick-look science data from SDPF. | essential | test | IR1 |
| | SDPS0110-2-1-3 | The SDPS shall be responsible for coordination of the transfer of quick-look science data from IPs. | essential | test | IR1 |
| | SDPS0110-2-2-1 | The SDPS shall be responsible for coordination of the transfer of quick-look engineering data from EDOS. | essential | test | IR1 |
| | SDPS0110-2-2-2 | The SDPS shall be responsible for coordination of the transfer of quick-look engineering data from SDPF. | essential | test | IR1 |
| | SDPS0110-2-2-3 | The SDPS shall be responsible for coordination of the transfer of quick-look engineering data from the IPs. | essential | test | IR1 |
| SDPS0115 | SDPS0115-1 | The SDPS shall accept notification of the possible future availability of out-of- sequence data by the EDOS. | critical | test | A |
| | SDPS0115-2 | The SDPS shall schedule processing of out-of-sequence data accordingly. | critical | test | A |
| SDPS0120 | SDPS0120 | The SDPS shall be capable of operating in a 24-hour a day, 7-day a week mode. | essential | test | A |
| SDPS0130 | SDPS0130-1 | The SDPS shall provide the capability for DAACS to exchange data products. | essential | test | A |
| | SDPS0130-2 | The SDPS shall provide the capability for DAACS to exchange browse data. | essential | test | A |
| | SDPS0130-3 | The SDPS shall provide the capability for DAACS to exchange metadata. | essential | test | A |
| | SDPS0130-4 | The SDPS shall provide the capability for DAACS to exchange data quality information. | essential | test | A |
| | SDPS0130-5 | The SDPS shall provide the capability for DAACS to exchange research results. | essential | test | A |
| | SDPS0130-6 | The SDPS shall provide the capability for DAACS to exchange documentation. | essential | test | A |
| SDPS0140 | SDPS0140-1 | The SDPS shall support element test activities throughout the development phase. | essential | inspect. | IR1 |
| | SDPS0140-2 | The SDPS shall support system test activities throughout the development phase. | essential | inspect. | IR1 |
| | SDPS0140-3 | The SDPS shall suport subsystem test activities throughout the development phase. | essential | inspect. | IR1 |
| SDPS0150 | SDPS0150 | The SDPS shall have the capability of generating quick-look products within 6 hours of receipt of the necessary input data for 10% of the EOS instrument data requiring processing capacity of no more than 10% of the processing requirement for the equivalent standard product. | essential | test | B |
| SDPS0160 | SDPS0160 | The SDPS shall have the capability of generating quick-look products within 1 hour of receipt of the necessary input data for 1% of the EOS instrument data requiring processing capacity of no more than 1% of the processing requirement for the equivalent standard product. | essential | test | B |
| SDPS0170 | SDPS0170-1 | The SDPS shall accommodate growth in the instrument processing load without changes to the SDPS architecture or design. | essential | test | A |
| | SDPS0170-2 | The SDPS shall accommodate growth in the instrument storage capacity without changes to the SDPS architecture or design. | essential | test | A |
| SMC-0300 | SMC-0300 | The SMC shall be designed to accommodate 100 percent growth in processing speed without requiring modifications or upgrades to existing applications software. \\1324\\ | essential | analysis | B |
| | SMC-0300-1 | The SMC shall be designed to accommodate 100 percent growth in processing speed without requiring modifications to existing applications software. | essential | analysis | B |
| | SMC-0300-2 | The SMC shall be designed to accommodate 100 percent growth in processing speed without requiring upgrades to existing applications software. | essential | analysis | B |
| SMC-0310 | SMC-0310 | The SMC shall be designed to accommodate 100 percent growth in storage capacity without requiring modifications or upgrades to existing applications software. \\1324\\ | essential | analysis | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-0310-1 | The SMC shall be designed to accommodate 100 percent growth in storage capacity without requiring modifications to existing applications software. | essential | analysis | B |
| | SMC-0310-2 | The SMC shall be designed to accommodate 100 percent growth in storage capacity without requiring upgrades to existing applications software. | essential | analysis | B |
| SMC-0320 | SMC-0320 | The SMC shall be capable of scheduling ground activities to a minimum of one minute resolution. \\1339\\ | essential | test | B |
| SMC-0330 | SMC-0330 | The SMC shall be capable of executing events to a minimum of one minute resolution. \\1339\\ | essential | test | B |
| SMC-0340 | SMC-0340 | The SMC shall have the capability of responding to system faults within a maximum of five minutes. \\1249\\ | critical | test | B |
| SMC-0350 | SMC-0350 | The SMC shall have the capability of responding to security compromises within a maximum of five minutes. \\1249\\ | critical | test | B |
| SMC-1000 | SMC-1000-1-a | The SMC shall provide application programming interfaces (APIs) for the monitoring of managed resources. These APIs shall provide mechanisms for: a.Capturing, by an application, of management data | essential | test | B |
| | SMC-1000-2-a | The SMC shall provide application programming interfaces (APIs) for the control of managed resources. These APIs shall provide mechanisms for: a.Capturing, by an application, of management data | essential | test | B |
| | SMC-1000-1-b | The SMC shall provide application programming interfaces (APIs) for the monitoring of managed resources. These APIs shall provide mechanisms for: b.Exchanging management data between a managed application and its management agent | essential | test | B |
| | SMC-1000-2-b | The SMC shall provide application programming interfaces (APIs) for the control of managed resources. These APIs shall provide mechanisms for: b.Exchanging management data between a managed application and its management agent | essential | test | B |
| | SMC-1000-1-c | The SMC shall provide application programming interfaces (APIs) for the monitoring of managed resources. These APIs shall provide mechanisms for: c.Exchanging management data between a management agent and the LSM | essential | test | B |
| | SMC-1000-2-c | The SMC shall provide application programming interfaces (APIs) for the control of managed resources. These APIs shall provide mechanisms for: c.Exchanging management data between a management agent and the LSM | essential | test | B |
| | SMC-1000-1-d-1 | The SMC shall provide application programming interfaces (APIs) for the monitoring of managed resources. These APIs shall provide mechanisms for: d.Performing analyses using management data | essential | test | B |
| | SMC-1000-2-d-1 | The SMC shall provide application programming interfaces (APIs) for the control of managed resources. These APIs shall provide mechanisms for: d.Performing analyses using management data | essential | test | B |
| | SMC-1000-2-d-2 | The SMC shall provide application programming interfaces (APIs) for the control of managed resources. These APIs shall provide mechanisms for: d.Generating reports using management data | essential | test | B |
| SMC-1300 | SMC-1300-1-1-a-1 | The SMC shall support the ECS policies and procedures regarding instrument scheduling, including, at a minimum: a. guidelines | critical | test | A |
| | SMC-1300-1-1-a-2 | The SMC shall support the ECS policies and procedures regarding instrument scheduling, including, at a minimum: a. Science guidelines | critical | test | A |
| | SMC-1300-1-1-b-1 | The SMC shall support the ECS policies and procedures regarding instrument and scheduling, including, at a minimum: b. Directives for scheduling instrument data ingest | critical | test | A |
| | SMC-1300-1-1-b-2 | he SMC shall support the ECS policies and procedures regarding instrument scheduling, including, at a minimum: b. Directives for scheduling instrument data processing | critical | test | A |
| | SMC-1300-1-1-b-3 | The SMC shall support the ECS policies and procedures regarding instrument scheduling, including, at a minimum: b. Directives for scheduling instrument data reprocessing | critical | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-1300-1-1-b-4 | The SMC shall support the ECS policies and procedures regarding instrument scheduling, including, at a minimum: b. Directives for scheduling instrument data retrieval | critical | test | A |
| | SMC-1300-1-1-b-5 | The SMC shall support the ECS policies and procedures regarding instrument scheduling, including, at a minimum: b. Directives for scheduling instrument data distribution | critical | test | A |
| | SMC-1300-1-2-a-1 | The SMC shall support the ECS policies and procedures regarding ground event scheduling, including, at a minimum: a. guidelines | critical | test | A |
| | SMC-1300-1-2-a-2 | The SMC shall support the ECS policies and procedures regarding ground event scheduling, including, at a minimum: a. Science guidelines | critical | test | A |
| | SMC-1300-1-2-b-1 | The SMC shall support the ECS policies and procedures regarding ground event scheduling, including, at a minimum: b. Directives for scheduling instrument data ingest | critical | test | A |
| | SMC-1300-1-2-b-2 | The SMC shall support the ECS policies and procedures regarding ground event scheduling, including, at a minimum: b. Directives for scheduling instrument data processing | critical | test | A |
| | SMC-1300-1-2-b-3 | The SMC shall support the ECS policies and procedures regarding ground event scheduling, including, at a minimum: b. Directives for scheduling instrument data reprocessing | critical | test | A |
| | SMC-1300-1-2-b-4 | The SMC shall support the ECS policies and procedures regarding ground event scheduling, including, at a minimum: b. Directives for scheduling instrument data retrieval | critical | test | A |
| | SMC-1300-1-2-b-5 | The SMC shall support the ECS policies and procedures regarding ground event scheduling, including, at a minimum: b. Directives for scheduling instrument data distribution | critical | test | A |
| | SMC-1300-2-1-a-1 | The SMC shall maintain the ECS policies and procedures regarding instrument scheduling, including, at a minimum: a. guidelines | critical | test | A |
| | SMC-1300-2-1-a-2 | The SMC shall maintain the ECS policies and procedures regarding instrument scheduling, including, at a minimum: a. Science guidelines | critical | test | A |
| | SMC-1300-2-1-b-1 | The SMC shall maintain the ECS policies and procedures regarding instrument scheduling, including, at a minimum: b. Directives for scheduling instrument data ingest | critical | test | A |
| | SMC-1300-2-1-b-2 | The SMC shall maintain the ECS policies and procedures regarding instrument scheduling, including, at a minimum: b. Directives for scheduling instrument data processing | critical | test | A |
| | SMC-1300-2-1-b-3 | The SMC shall maintain the ECS policies and procedures regarding instrument scheduling, including, at a minimum: b. Directives for scheduling instrument data reprocessing | critical | test | A |
| | SMC-1300-2-1-b-4 | The SMC shall maintain the ECS policies and procedures regarding instrument scheduling, including, at a minimum: b. Directives for scheduling instrument data retrieval | critical | test | A |
| | SMC-1300-2-1-b-5 | The SMC shall maintain the ECS policies and procedures regarding instrument scheduling, including, at a minimum: b. Directives for scheduling instrument data distribution | critical | test | A |
| | SMC-1300-2-2-a-1 | The SMC shall maintain the ECS policies and procedures regarding ground event scheduling, including, at a minimum: a. guidelines | critical | test | A |
| | SMC-1300-2-2-a-2 | The SMC shall maintain the ECS policies and procedures regarding ground event scheduling, including, at a minimum: a. Science guidelines | critical | test | A |
| | SMC-1300-2-2-b-1 | The SMC shall maintain the ECS policies and procedures regarding ground event scheduling, including, at a minimum: b. Directives for scheduling instrument data ingest | critical | test | A |
| | SMC-1300-2-2-b-2 | The SMC shall maintain the ECS policies and procedures regarding ground event scheduling, including, at a minimum: b. Directives for scheduling instrument data processing | critical | test | A |
| | SMC-1300-2-2-b-3 | The SMC shall maintain the ECS policies and procedures regarding ground event scheduling, including, at a minimum: b. Directives for scheduling instrument data reprocessing | critical | test | A |
| | SMC-1300-2-2-b-4 | The SMC shall maintain the ECS policies and procedures regarding ground event scheduling, including, at a minimum: b. Directives for scheduling instrument data retrieval | critical | test | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-1300-2-2-b-5 | The SMC shall maintain the ECS policies and procedures regarding ground event scheduling, including, at a minimum: b. Directives for scheduling instrument data distribution | critical | test | A |
| SMC-1305 | SMC-1305 | The LSM shall provide SMC access to scheduling information from each element. | critical | test | C |
| SMC-1310 | SMC-1310-1 | The SMC shall support and maintain the allocation of ground event functions to each site and element. | essential | test | B |
| | SMC-1310-2 | The SMC shall support and maintain the allocation of ground event capabilities to each site and element. | essential | test | B |
| SMC-1315 | SMC-1315-a-1 | The LSM shall provide each elements scheduling function with access to the system-wide scheduling information, including, at a minimum: a. ECS policies and procedures regarding instrument scheduling | critical | test | C |
| | SMC-1315-a-2 | The LSM shall provide each elements scheduling function with access to the system-wide scheduling information, including, at a minimum: a. ECS policies and procedures regarding ground event scheduling | critical | test | C |
| | SMC-1315-b | The LSM shall provide each elements scheduling function with access to the system-wide scheduling information, including, at a minimum: b. Other elements plans and schedules | critical | test | C |
| | SMC-1315-c-1 | The LSM shall provide each elements scheduling function with access to the system-wide scheduling information, including, at a minimum: c. Element allocations of ground event functions | critical | test | C |
| | SMC-1315-c-2 | The LSM shall provide each elements scheduling function with access to the system-wide scheduling information, including, at a minimum: c. Element allocations of ground event capabilities | critical | test | C |
| | SMC-1315-d | The LSM shall provide each elements scheduling function with access to the system-wide scheduling information, including, at a minimum: d. Product generation information | critical | test | C |
| SMC-1320 | SMC-1320 | The SMC shall support and maintain priorities used in scheduling ground events. | essential | test | B |
| SMC-1325 | SMC-1325-a | The LSM shall provide the operations and management staff at a site or element the capability to communicate scheduling information to and receive scheduling information from the SMC, including, at a minimum: a. Routine scheduling information | critical | test | B |
| | SMC-1325-b | The LSM shall provide the operations and management staff at a site or element the capability to communicate scheduling information to and receive scheduling information from the SMC, including, at a minimum: b. Request scheduling information | critical | test | B |
| | SMC-1325-c | The LSM shall provide the operations and management staff at a site or element the capability to communicate scheduling information to and receive scheduling information from the SMC, including, at a minimum: c. Schedule conflict alert information | critical | test | B |
| | SMC-1325-d | The LSM shall provide the operations and management staff at a site or element the capability to communicate scheduling information to and receive scheduling information from the SMC, including, at a minimum: d. Emergency scheduling information. | critical | test | B |
| SMC-1330 | SMC-1330-1-a | The SMC shall support and maintain the information for end-to-end data ingest for each product, including, at a minimum: a. Product information | critical | test | B |
| | SMC-1330-1-b | The SMC shall support and maintain the information for end-to-end data ingest for each product, including, at a minimum: b. Product generation information | critical | test | B |
| | SMC-1330-1-c | The SMC shall support and maintain the information for end-to-end data ingest for each product, including, at a minimum: c. Product delivery information | critical | test | B |
| | SMC-1330-2-a | The SMC shall support and maintain the information for end-to-end data processing for each product, including, at a minimum: a. Product information | critical | test | B |
| | SMC-1330-2-b | The SMC shall support and maintain the information for end-to-end data processing for each product, including, at a minimum: b. Product generation information | critical | test | B |
| | SMC-1330-2-c | The SMC shall support and maintain the information for end-to-end data processing for each product, including, at a minimum: c. Product delivery information | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-1330-3-a | The SMC shall support and maintain the information for end-to-end data reprocessing for each product, including, at a minimum: a. Product information | critical | test | B |
| | SMC-1330-3-b | The SMC shall support and maintain the information for end-to-end data reprocessing for each product, including, at a minimum: b. Product generation information | critical | test | B |
| | SMC-1330-3-c | The SMC shall support and maintain the information for end-to-end data reprocessing for each product, including, at a minimum: c. Product delivery information | critical | test | B |
| | SMC-1330-4-a | The SMC shall support and maintain the information for end-to-end data archive for each product, including, at a minimum: a. Product information | critical | test | B |
| | SMC-1330-4-b | The SMC shall support and maintain the information for end-to-end data archive for each product, including, at a minimum: b. Product generation information | critical | test | B |
| | SMC-1330-4-c | The SMC shall support and maintain the information for end-to-end data archive for each product, including, at a minimum: c. Product delivery information | critical | test | B |
| | SMC-1330-5-a | The SMC shall support and maintain the information for end-to-end data distribution for each product, including, at a minimum: a. Product information | critical | test | B |
| | SMC-1330-5-b | The SMC shall support and maintain the information for end-to-end data distribution for each product, including, at a minimum: b. Product generation information | critical | test | B |
| | SMC-1330-5-c | The SMC shall support and maintain the information for end-to-end data distribution for each product, including, at a minimum: c. Product delivery information | critical | test | B |
| SMC-1335 | SMC-1335 | The LSM shall have the capability to automatically extract, process, and send to the SMC, pertinent scheduling information. | critical | test | B |
| SMC-1340 | SMC-1340-1-1 | The SMC shall generate scheduling directives for system level integration activities. | essential | test | A |
| | SMC-1340-1-2 | The SMC shall generate scheduling directives for system level testing activities. | essential | test | A |
| | SMC-1340-1-3 | The SMC shall generate scheduling directives for system level simulation activities. | essential | test | A |
| | SMC-1340-2-1 | The SMC shall generate scheduling directives for site-to-site integration activities. | essential | test | A |
| | SMC-1340-2-2 | The SMC shall generate scheduling directives for site-to-site testing activities. | essential | test | A |
| | SMC-1340-2-3 | The SMC shall generate scheduling directives for site-to-site simulation activities. | essential | test | A |
| | SMC-1340-3-1 | The SMC shall generate scheduling directives for element-to-element integration activities. | essential | test | A |
| | SMC-1340-3-2 | The SMC shall generate scheduling directives for element-to-element testing activities. | essential | test | A |
| | SMC-1340-3-3 | The SMC shall generate scheduling directives for element-to-element simulation activities. | essential | test | A |
| SMC-1345 | SMC-1345 | The LSM shall perform priority management services to resolve conflicts for ECS resources. | critical | test | B |
| SMC-1350 | SMC-1350-1 | The SMC shall generate scheduling directives for system level maintenance activities. | essential | test | B |
| | SMC-1350-2 | The SMC shall generate scheduling directives for site-to-site maintenance activities. | essential | test | B |
| | SMC-1350-3 | The SMC shall generate scheduling directives for element-to-element maintenance activities. | essential | test | B |
| SMC-1360 | SMC-1360 | The SMC shall generate ground resource scheduling directives, or recommendations for FOS elements, in response to emergency situations. | critical | test | B |
| SMC-1500 | SMC-1500-1 | The SMC shall perform schedule conflict analysis and resolution services in response to a schedule conflict involving sites and ECS elements, except for conflicts associated with flight operations. | essential | test | B |
| | SMC-1500-2 | The SMC shall perform schedule conflict analysis and resolution services in response to a schedule conflict involving external elements, agencies, or organizations, except for conflicts associated with flight operations. | essential | test | B |
| SMC-1600 | SMC-1600 | The SMC shall receive product generation schedules from the DAACs and analyze the schedules for cross-DAAC dependencies (e.g., inputs that must be generated and provided by one DAAC before a product can be generated at another DAAC). | essential | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| SMC-1610 | SMC-1610 | The SMC shall recommend adjustments in the product generation schedules to ensure that product generation functions and the DAAC-to-DAAC data transfers required, are accomplished in accordance with overall requirements (e.g., without the development of a product generation backlog at any DAAC). | essential | test | B |
| SMC-1620 | SMC-1620-1 | The SMC shall transmit the recommend schedules back to the DAACs for consideration and iterate with the DAACs as required. | essential | test | B |
| | SMC-1620-2 | The SMC shall develop a coordinated schedule for implementation with the DAACs. | essential | test | B |
| SMC-1630 | SMC-1630-1 | The SMC shall confirm that the coordinated schedule is implemented and monitor product generation for compliance with the coordinated schedule. | essential | test | B |
| | SMC-1630-2 | The SMC shall confirm that the coordinated schedule is implemented and monitor data transfers for compliance with the coordinated schedule. | essential | test | B |
| SMC-2100 | SMC-2100-a | The SMC shall have the capability to generate and send ground operations (i.e., non-instrument related) events to sites and elements for implementation. Ground operations events include, at a minimum, actions associated with: a. Configuring element resources | essential | test | B |
| | SMC-2100-b | The SMC shall have the capability to generate and send ground operations (i.e., non-instrument related) events to sites and elements for implementation. Ground operations events include, at a minimum, actions associated with: b. Fault recovery | essential | test | B |
| | SMC-2100-c | The SMC shall have the capability to generate and send ground operations (i.e., non-instrument related) events to sites and elements for implementation. Ground operations events include, at a minimum, actions associated with: c. Security | essential | test | B |
| | SMC-2100-d | The SMC shall have the capability to generate and send ground operations (i.e., non-instrument related) events to sites and elements for implementation. Ground operations events include, at a minimum, actions associated with: d. Maintenance | essential | test | B |
| | SMC-2100-e | The SMC shall have the capability to generate and send ground operations (i.e., non-instrument related) events to sites and elements for implementation. Ground operations events include, at a minimum, actions associated with: e. Testing | essential | test | B |
| | SMC-2100-f | The SMC shall have the capability to generate and send ground operations (i.e., non-instrument related) events to sites and elements for implementation. Ground operations events include, at a minimum, actions associated with: f. Simulations | essential | test | B |
| | SMC-2100-g | The SMC shall have the capability to generate and send ground operations (i.e., non-instrument related) events to sites and elements for implementation. Ground operations events include, at a minimum, actions associated with: g. Logistics | essential | test | B |
| | SMC-2100-h | The SMC shall have the capability to generate and send ground operations (i.e., non-instrument related) events to sites and elements for implementation. Ground operations events include, at a minimum, actions associated with: h. Training | fulfillment | test | B |
| | SMC-2100-i | The SMC shall have the capability to generate and send ground operations (i.e., non-instrument related) events to sites and elements for implementation. Ground operations events include, at a minimum, actions associated with: i. Accounting and accountability | essential | test | B |
| | SMC-2100-j | The SMC shall have the capability to generate and send ground operations (i.e., non-instrument related) events to sites and elements for implementation. Ground operations events include, at a minimum, actions associated with: j. General requests for information | fulfillment | test | B |
| SMC-2105 | SMC-2105-a | The LSM shall convey ground operations (i.e., non-instrument related) events to sites or elements for implementation. Ground operations events include, at a minimum, actions associated with: a. Configuring element resources | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-2105-b | The LSM shall convey ground operations (i.e., non-instrument related) events to sites or elements for implementation. Ground operations events include, at a minimum, actions associated with: b. Fault recovery | critical | test | B |
| | SMC-2105-c | The LSM shall convey ground operations (i.e., non-instrument related) events to sites or elements for implementation. Ground operations events include, at a minimum, actions associated with: c. Security | critical | test | B |
| | SMC-2105-d | The LSM shall convey ground operations (i.e., non-instrument related) events to sites or elements for implementation. Ground operations events include, at a minimum, actions associated with: d. Maintenance | critical | test | B |
| | SMC-2105-e | The LSM shall convey ground operations (i.e., non-instrument related) events to sites or elements for implementation. Ground operations events include, at a minimum, actions associated with: e. Testing | essential | test | B |
| | SMC-2105-f | The LSM shall convey ground operations (i.e., non-instrument related) events to sites or elements for implementation. Ground operations events include, at a minimum, actions associated with: f. Simulations | essential | test | B |
| | SMC-2105-g | The LSM shall convey ground operations (i.e., non-instrument related) events to sites or elements for implementation. Ground operations events include, at a minimum, actions associated with: g. Logistics | critical | test | B |
| | SMC-2105-h | The LSM shall convey ground operations (i.e., non-instrument related) events to sites or elements for implementation. Ground operations events include, at a minimum, actions associated with: h. Training classes | fulfillment | test | B |
| | SMC-2105-i | The LSM shall convey ground operations (i.e., non-instrument related) events to sites or elements for implementation. Ground operations events include, at a minimum, actions associated with: i. Accounting and accountability | essential | test | B |
| | SMC-2105-j | The LSM shall convey ground operations (i.e., non-instrument related) events to sites or elements for implementation. Ground operations events include, at a minimum, actions associated with: j. General requests for information | fulfillment | test | B |
| SMC-2110 | SMC-2110-1-a | The SMC shall have the capability to generate managerial directives affecting, at a minimum, an elements: a. Operational status | essential | demo | B |
| | SMC-2110-1-b | The SMC shall have the capability to generate managerial directives affecting, at a minimum, an elements: b. Resource allocation | essential | demo | B |
| | SMC-2110-1-c | The SMC shall have the capability to generate managerial directives affecting, at a minimum, an elements: c. Upgrade | essential | demo | B |
| | SMC-2110-2-a | The SMC shall have the capability to generate operational directives affecting, at a minimum, an elements: a. Operational status | essential | demo | B |
| | SMC-2110-2-b | The SMC shall have the capability to generate operational directives affecting, at a minimum, an elements: b. Resource allocation | essential | demo | B |
| | SMC-2110-2-c | The SMC shall have the capability to generate operational directives affecting, at a minimum, an elements: c. Upgrade | essential | demo | B |
| SMC-2115 | SMC-2115-1-1-1 | The LSM shall convey for site or element implementation, the managerial directives regarding the allocation of any elements hardware. | essential | analysis | B |
| | SMC-2115-1-1-2 | The LSM shall convey for site or element implementation, the managerial directives regarding the allocation of any elements scientific software. | essential | analysis | B |
| | SMC-2115-1-1-3 | The LSM shall convey for site or element implementation, the managerial directives regarding the allocation of any elements systems software. | essential | analysis | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-2115-1-2-1 | The LSM shall convey for site or element implementation, the managerial directives regarding the upgrade of any elements hardware. | essential | analysis | B |
| | SMC-2115-1-2-2 | The LSM shall convey for site or element implementation, the managerial directives regarding the upgrade of any elements scientific software. | essential | analysis | B |
| | SMC-2115-1-2-3 | The LSM shall convey for site or element implementation, the managerial directives regarding the upgrade of any elements systems software. | essential | analysis | B |
| | SMC-2115-2-1-1 | The LSM shall convey for site or element implementation, the operational directives regarding the allocation of any elements hardware. | essential | analysis | B |
| | SMC-2115-2-1-2 | The LSM shall convey for site or element implementation, the operational directives regarding the allocation of any elements scientific software. | essential | analysis | B |
| | SMC-2115-2-1-3 | The LSM shall convey for site or element implementation, the operational directives regarding the allocation of any elements systems software. | essential | analysis | B |
| | SMC-2115-2-2-1 | The LSM shall convey for site or element implementation, the operational directives regarding the upgrade of any elements hardware. | essential | analysis | B |
| | SMC-2115-2-2-2 | The LSM shall convey for site or element implementation, the operational directives regarding the upgrade of any elements scientific software. | essential | analysis | B |
| | SMC-2115-2-2-3 | The LSM shall convey for site or element implementation, the operational directives regarding the upgrade of any elements systems software. | essential | analysis | B |
| SMC-2120 | SMC-2120-1 | The SMC shall make available for automated distribution to authorized users all unlicensed toolkit software. | essential | demo | A |
| | SMC-2120-2 | The SMC shall make available for automated distribution to authorized users all toolkit software upgrades. | essential | demo | A |
| | SMC-2120-3 | The SMC shall make available for automated distribution to authorized users all unlicensed toolkit documentation. | essential | demo | A |
| SMC-2130 | SMC-2130-1 | The SMC shall administer licenses for deployed commercial-software funded by the ECS contract, including commercial software as authorized for specific users. | essential | demo | A |
| | SMC-2130-2 | The SMC shall distribute licenses for deployed commercial-software funded by the ECS contract, including commercial software as authorized for specific users. | essential | demo | A |
| SMC-2200 | SMC-2200-1 | The SMC shall assist each site or element, when necessary, in the performance of on-site preventive and corrective hardware maintenance. | essential | demo | B |
| | SMC-2200-2 | The SMC shall assist each site or element, when necessary, in the performance of on-site preventive and corrective systems software maintenance. | essential | demo | B |
| SMC-2205 | SMC-2205-1 | The LSM shall support on-site preventive and corrective hardware maintenance. | critical | analysis | B |
| | SMC-2205-2 | The LSM shall support on-site preventive and corrective systems software maintenance. | critical | analysis | B |
| SMC-2210 | SMC-2210-1 | The SMC shall coordinate with each site or element in the management of off-site corrective hardware maintenance. | essential | demo | B |
| | SMC-2210-2 | The SMC shall coordinate with each site or element in the management of off-site corrective systems software maintenance. | essential | demo | B |
| SMC-2215 | SMC-2215-1 | The LSM shall coordinate with the SMC in the management of off-site corrective hardware maintenance. | critical | analysis | B |
| | SMC-2215-2 | The LSM shall coordinate with the SMC in the management of off-site corrective systems software maintenance. | critical | analysis | B |
| SMC-2220 | SMC-2220-1 | The SMC shall monitor hardware maintenance status for off-site repair actions. | essential | demo | B |
| | SMC-2220-2 | The SMC shall monitor systems software maintenance status for off-site repair actions. | essential | demo | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| SMC-2300 | SMC-2300 | The SMC shall monitor the spares inventory within each element. | critical | demo | C |
| SMC-2305 | SMC-2305 | The LSM shall monitor the spares inventory within its element. | critical | demo | C |
| SMC-2310 | SMC-2310 | The SMC shall oversee the replenishment of spare parts for all elements. | critical | demo | C |
| SMC-2315 | SMC-2315 | he LSM shall manage the replenishment of spare parts within its element. | critical | demo | C |
| SMC-2320 | SMC-2320-a | The SMC shall monitor the consumable inventory within each element for items used by the system including, at a minimum: a. Computer tapes | essential | demo | C |
| | SMC-2320-b | The SMC shall monitor the consumable inventory within each element for items used by the system including, at a minimum: b. Computer disks | essential | demo | C |
| | SMC-2320-c | The SMC shall monitor the consumable inventory within each element for items used by the system including, at a minimum: c. Computer paper | essential | demo | C |
| SMC-2325 | SMC-2325-a | The LSM shall monitor the consumable inventory within its element for items used by the system including, at a minimum: a. Computer tapes | essential | demo | C |
| | SMC-2325-b | The LSM shall monitor the consumable inventory within its element for items used by the system including, at a minimum: b. Computer disks | essential | demo | C |
| | SMC-2325-c | The LSM shall monitor the consumable inventory within its element for items used by the system including, at a minimum: c. Computer paper | essential | demo | C |
| SMC-2330 | SMC-2330 | The SMC shall monitor the replenishment of consumable items for all elements. | essential | demo | C |
| SMC-2335 | SMC-2335 | The LSM shall manage the replenishment of consumable items for its element. | essential | demo | C |
| SMC-2400 | SMC-2400 | The SMC shall support the management of training and certification programs for ECS. | essential | demo | C |
| SMC-2405 | SMC-2405 | The LSM shall coordinate with the SMC in managing the training program for its element. | fulfillment | analysis | C |
| SMC-2410 | SMC-2410 | The SMC shall provide support for the development of schedules for training courses. | fulfillment | demo | A |
| SMC-2415 | SMC-2415 | The LSM shall receive from the SMC descriptions and schedules for training courses. | fulfillment | analysis | A |
| SMC-2420 | SMC-2420 | The SMC shall support the development of on-the-job training. | fulfillment | demo | A |
| SMC-2430 | SMC-2430 | The SMC shall support the development and use of training materials. | fulfillment | demo | A |
| SMC-2450 | SMC-2450 | The SMC shall support the evaluation of the effectiveness of the training programs. | fulfillment | demo | A |
| SMC-2500 | SMC-2500-1-a | The SMC shall establish and maintain a system-wide inventory of all hardware contained within ECS, including at a minimum: a. Hardware identification numbers | essential | test | B |
| | SMC-2500-1-b | The SMC shall establish and maintain a system-wide inventory of all hardware contained within ECS, including at a minimum: b. Version numbers and dates | essential | test | B |
| | SMC-2500-1-c | The SMC shall establish and maintain a system-wide inventory of all hardware contained within ECS, including at a minimum: c. Manufacturer | essential | test | B |
| | SMC-2500-1-d | The SMC shall establish and maintain a system-wide inventory of all hardware contained within ECS, including at a minimum: d. Part number | essential | test | B |
| | SMC-2500-1-e | The SMC shall establish and maintain a system-wide inventory of all hardware contained within ECS, including at a minimum: e. Serial number | essential | test | B |
| | SMC-2500-1-g | The SMC shall establish and maintain a system-wide inventory of all hardware contained within ECS, including at a minimum: g. Location where hardware is used | essential | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-2500-2-a | The SMC shall establish and maintain a system-wide inventory of all scientific software contained within ECS, including at a minimum: a. Software identification numbers | essential | test | B |
| | SMC-2500-2-b | The SMC shall establish and maintain a system-wide inventory of all scientific software contained within ECS, including at a minimum: b. Version numbers and dates | essential | test | B |
| | SMC-2500-2-c | The SMC shall establish and maintain a system-wide inventory of all scientific software contained within ECS, including at a minimum: c. Manufacturer | essential | test | B |
| | SMC-2500-2-d | The SMC shall establish and maintain a system-wide inventory of all scientific software contained within ECS, including at a minimum: d. Part number | essential | test | B |
| | SMC-2500-2-e | The SMC shall establish and maintain a system-wide inventory of all scientific software contained within ECS, including at a minimum: e. Serial number | essential | test | B |
| | SMC-2500-2-f | The SMC shall establish and maintain a system-wide inventory of all scientific software contained within ECS, including at a minimum: f. Name and locator information for software maintenance | essential | test | B |
| | SMC-2500-2-g | The SMC shall establish and maintain a system-wide inventory of all scientific software contained within ECS, including at a minimum: g. Location where software is used | essential | test | B |
| | SMC-2500-3-a | The SMC shall establish and maintain a system-wide inventory of all system software contained within ECS, including at a minimum: a. Software identification numbers | essential | test | B |
| | SMC-2500-3-b | The SMC shall establish and maintain a system-wide inventory of all system software contained within ECS, including at a minimum: b. Version numbers and dates | essential | test | B |
| | SMC-2500-3-c | The SMC shall establish and maintain a system-wide inventory of all system software contained within ECS, including at a minimum: c. Manufacturer | essential | test | B |
| | SMC-2500-3-d | The SMC shall establish and maintain a system-wide inventory of all system software contained within ECS, including at a minimum: d. Part number | essential | test | B |
| | SMC-2500-3-e | The SMC shall establish and maintain a system-wide inventory of all system software contained within ECS, including at a minimum: e. Serial number | essential | test | B |
| | SMC-2500-3-f | The SMC shall establish and maintain a system-wide inventory of all system software contained within ECS, including at a minimum: f. Name and locator information for software maintenance | essential | test | B |
| | SMC-2500-3-g | The SMC shall establish and maintain a system-wide inventory of all system software contained within ECS, including at a minimum: g. Location where software is used | essential | test | B |
| SMC-2505 | SMC-2505-1 | The LSM shall update the system-wide inventory data base consisting of all hardware contained within its element. | critical | test | C |
| | SMC-2505-2 | The LSM shall update the system-wide inventory data base consisting of all system software contained within its element. | critical | test | C |
| | SMC-2505-3 | The LSM shall update the system-wide inventory data base consisting of all scientific software contained within its element. | critical | test | C |
| SMC-2510 | SMC-2510-1-1 | The SMC shall provide at a minimum system-wide configuration management for the operational hardware contained within ECS. | essential | analysis | B |
| | SMC-2510-1-2 | The SMC shall provide at a minimum system-wide configuration management for the operational scientific software contained within ECS. | essential | analysis | B |
| | SMC-2510-1-3 | The SMC shall provide at a minimum system-wide configuration management for the operational system software contained within ECS. | essential | analysis | B |
| | SMC-2510-1-4 | The SMC shall provide at a minimum system-wide configuration management for the operational SMC toolkit contained within ECS. | essential | analysis | B |
| | SMC-2510-2-1 | The management system shall support the migration of hardware upgrades into the operational environment. | essential | analysis | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-2510-2-2 | The management system shall support the migration of software upgrades into the operational environment. | essential | analysis | B |
| SMC-2515 | SMC-2515-1-1 | The LSM shall provide configuration management for at least the operational hardware within its element. | critical | test | B |
| | SMC-2515-1-2 | The LSM shall provide configuration management for at least the operational system software within its element | critical | test | B |
| | SMC-2515-1-3 | The LSM shall provide configuration management for at least the operational scientific software within its element. | critical | test | B |
| | SMC-2515-2 | The LSM shall provide configuration management for the migration of enhancements into the operational system. | essential | test | B |
| SMC-2520 | SMC-2520-a | The SMC shall evaluate received system enhancement requests to determine, at a minimum: a. Technical feasibility | essential | analysis | B |
| | SMC-2520-b | The SMC shall evaluate received system enhancement requests to determine, at a minimum: b. Implementation schedule | essential | analysis | B |
| | SMC-2520-c | The SMC shall evaluate received system enhancement requests to determine, at a minimum: c. Expected costs | essential | analysis | B |
| | SMC-2520-d-1 | The SMC shall evaluate received system enhancement requests to determine, at a minimum: d. Existing system-wide hardware impacts | essential | analysis | B |
| | SMC-2520-d-2 | The SMC shall evaluate received system enhancement requests to determine, at a minimum: d. Existing system-wide software impacts | essential | analysis | B |
| SMC-2530 | SMC-2530-1 | Upon approval of a system enhancement, the SMC shall provide overall management of the implementation of the approved changes to the hardware. | essential | analysis | B |
| | SMC-2530-2 | Upon approval of a system enhancement, the SMC shall provide overall management of the implementation of the approved changes to the system software. | essential | analysis | B |
| SMC-2535 | SMC-2535-1 | Upon approval of an enhancement, the LSM shall facilitate the implementation of the approved changes within an elements hardware. | essential | analysis | B |
| | SMC-2535-2 | Upon approval of an enhancement, the LSM shall facilitate the implementation of the approved changes within an elements software. | essential | analysis | B |
| SMC-2540 | SMC-2540-1 | Upon approval to include a fully tested enhancement to the algorithms, the SMC shall provide overall management of the implementation of the approved software into the operational environment. | essential | analysis | B |
| | SMC-2540-2 | Upon approval to include a fully tested enhancement to the algorithms, the SMC shall provide overall management of the implementation of the modified software into the operational environment. | essential | analysis | B |
| SMC-2600 | SMC-2600-1-a | The SMC shall support ECS policies and procedures covering the following areas, at a minimum: a. Site or element responsibility and authority | fulfillment | inspect. | A |
| | SMC-2600-1-b | The SMC shall support ECS policies and procedures covering the following areas, at a minimum: b. Resource management | fulfillment | inspect. | A |
| | SMC-2600-1-c | The SMC shall support ECS policies and procedures covering the following areas, at a minimum: c. Fault recovery | fulfillment | inspect. | A |
| | SMC-2600-1-d | The SMC shall support ECS policies and procedures covering the following areas, at a minimum: d. Testing | fulfillment | inspect. | A |
| | SMC-2600-1-e | The SMC shall support ECS policies and procedures covering the following areas, at a minimum: e. Simulation | fulfillment | inspect. | A |
| | SMC-2600-1-f | The SMC shall support ECS policies and procedures covering the following areas, at a minimum: f. Maintenance | fulfillment | inspect. | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-2600-1-g | The SMC shall support ECS policies and procedures covering the following areas, at a minimum: g. Logistics | fulfillment | inspect. | A |
| | SMC-2600-1-h | The SMC shall support ECS policies and procedures covering the following areas, at a minimum: h. Performance evaluation | fulfillment | inspect. | A |
| | SMC-2600-1-j-1 | The SMC shall support ECS policies and procedures covering the following areas, at a minimum: j. Quality assurance | fulfillment | inspect. | A |
| | SMC-2600-1-j-2 | The SMC shall support ECS policies and procedures covering the following areas, at a minimum: j. Product assurance | fulfillment | inspect. | A |
| | SMC-2600-1-k | The SMC shall support ECS policies and procedures covering the following areas, at a minimum: k. Inventory management | fulfillment | inspect. | A |
| | SMC-2600-1-l | The SMC shall support ECS policies and procedures covering the following areas, at a minimum: l. System enhancements | fulfillment | inspect. | A |
| | SMC-2600-1-m | The SMC shall support ECS policies and procedures covering the following areas, at a minimum: m. Finance management | fulfillment | inspect. | A |
| | SMC-2600-1-n | The SMC shall support ECS policies and procedures covering the following areas, at a minimum: n. Administrative actions | fulfillment | inspect. | A |
| | SMC-2600-1-o | The SMC shall support ECS policies and procedures covering the following areas, at a minimum: o. Security | fulfillment | inspect. | A |
| | SMC-2600-2-a | The SMC shall control ECS policies and procedures covering the following areas, at a minimum: a. Site or element responsibility and authority | fulfillment | inspect. | A |
| | SMC-2600-2-b | The SMC shall control ECS policies and procedures covering the following areas, at a minimum: b. Resource management | fulfillment | inspect. | A |
| | SMC-2600-2-c | The SMC shall control ECS policies and procedures covering the following areas, at a minimum: c. Fault recovery | fulfillment | inspect. | A |
| | SMC-2600-2-d | The SMC shall control ECS policies and procedures covering the following areas, at a minimum: d. Testing | fulfillment | inspect. | A |
| | SMC-2600-2-e | The SMC shall control ECS policies and procedures covering the following areas, at a minimum: e. Simulation | fulfillment | inspect. | A |
| | SMC-2600-2-f | The SMC shall control ECS policies and procedures covering the following areas, at a minimum: f. Maintenance | fulfillment | inspect. | A |
| | SMC-2600-2-g | The SMC shall control ECS policies and procedures covering the following areas, at a minimum: g. Logistics | fulfillment | inspect. | A |
| | SMC-2600-2-h | The SMC shall control ECS policies and procedures covering the following areas, at a minimum: h. Performance evaluation | fulfillment | inspect. | A |
| | SMC-2600-2-i | The SMC shall control ECS policies and procedures covering the following areas, at a minimum: i. Training | fulfillment | inspect. | A |
| | SMC-2600-2-j-1 | The SMC shall control ECS policies and procedures covering the following areas, at a minimum: j. Quality assurance | fulfillment | inspect. | A |
| | SMC-2600-2-j-2 | The SMC shall control ECS policies and procedures covering the following areas, at a minimum: j. Product assurance | fulfillment | inspect. | A |
| | SMC-2600-2-k | The SMC shall control ECS policies and procedures covering the following areas, at a minimum: k. Inventory management | fulfillment | inspect. | A |
| | SMC-2600-2-l | The SMC shall control ECS policies and procedures covering the following areas, at a minimum: l. System enhancements | fulfillment | inspect. | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-2600-2-m | The SMC shall control ECS policies and procedures covering the following areas, at a minimum: m. Finance management | fulfillment | inspect. | A |
| | SMC-2600-2-n | The SMC shall control ECS policies and procedures covering the following areas, at a minimum: n. Administrative actions | fulfillment | inspect. | A |
| | SMC-2600-2-o | The SMC shall control ECS policies and procedures covering the following areas, at a minimum: o. Security | fulfillment | inspect. | A |
| | SMC-2600-3-a | The SMC shall maintain ECS policies and procedures covering the following areas, at a minimum: a. Site or element responsibility and authority | fulfillment | inspect. | A |
| | SMC-2600-3-b | The SMC shall maintain ECS policies and procedures covering the following areas, at a minimum: b. Resource management | fulfillment | inspect. | A |
| | SMC-2600-3-c | The SMC shall maintain ECS policies and procedures covering the following areas, at a minimum: c. Fault recovery | fulfillment | inspect. | A |
| | SMC-2600-3-d | The SMC shall maintain ECS policies and procedures covering the following areas, at a minimum: d. Testing | fulfillment | inspect. | A |
| | SMC-2600-3-e | The SMC shall maintain ECS policies and procedures covering the following areas, at a minimum: e. Simulation | fulfillment | inspect. | A |
| | SMC-2600-3-f | The SMC shall maintain ECS policies and procedures covering the following areas, at a minimum: f. Maintenance | fulfillment | inspect. | A |
| | SMC-2600-3-g | The SMC shall maintain ECS policies and procedures covering the following areas, at a minimum: g. Logistics | fulfillment | inspect. | A |
| | SMC-2600-3-h | The SMC shall maintain ECS policies and procedures covering the following areas, at a minimum: h. Performance evaluation | fulfillment | inspect. | A |
| | SMC-2600-3-i | The SMC shall maintain ECS policies and procedures covering the following areas, at a minimum: i. Training | fulfillment | inspect. | A |
| | SMC-2600-3-j-1 | The SMC shall maintain ECS policies and procedures covering the following areas, at a minimum: j. Quality assurance | fulfillment | inspect. | A |
| | SMC-2600-3-j-2 | The SMC shall maintain ECS policies and procedures covering the following areas, at a minimum: j. Product assurance | fulfillment | inspect. | A |
| | SMC-2600-3-k | The SMC shall maintain ECS policies and procedures covering the following areas, at a minimum: k. Inventory management | fulfillment | inspect. | A |
| | SMC-2600-3-l | The SMC shall maintain ECS policies and procedures covering the following areas, at a minimum: l. System enhancements | fulfillment | inspect. | A |
| | SMC-2600-3-m | The SMC shall maintain ECS policies and procedures covering the following areas, at a minimum: m. Finance management | fulfillment | inspect. | A |
| | SMC-2600-3-n | The SMC shall maintain ECS policies and procedures covering the following areas, at a minimum: n. Administrative actions | fulfillment | inspect. | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-2600-3-o | The SMC shall maintain ECS policies and procedures covering the following areas, at a minimum: o. Security | fulfillment | inspect. | A |
| SMC-2605 | SMC-2605-a | The LSM shall support the site and element in implementing ESDIS Project policies and procedures received from the SMC covering the following areas, at a minimum: a.Element responsibility and authority | fulfillment | analysis | B |
| | SMC-2605-b | The LSM shall support the site and element in implementing ESDIS Project policies and procedures received from the SMC covering the following areas, at a minimum: b.Resource management | fulfillment | analysis | B |
| | SMC-2605-c | The LSM shall support the site and element in implementing ESDIS Project policies and procedures received from the SMC covering the following areas, at a minimum: c.Fault recovery | fulfillment | analysis | B |
| | SMC-2605-d | The LSM shall support the site and element in implementing ESDIS Project policies and procedures received from the SMC covering the following areas, at a minimum: d.Testing | fulfillment | analysis | B |
| | SMC-2605-e | The LSM shall support the site and element in implementing ESDIS Project policies and procedures received from the SMC covering the following areas, at a minimum: e.Simulation | fulfillment | analysis | B |
| | SMC-2605-f | The LSM shall support the site and element in implementing ESDIS Project policies and procedures received from the SMC covering the following areas, at a minimum: f. Maintenance | fulfillment | analysis | B |
| | SMC-2605-g | The LSM shall support the site and element in implementing ESDIS Project policies and procedures received from the SMC covering the following areas, at a minimum: g. Logistics | fulfillment | analysis | B |
| | SMC-2605-h | The LSM shall support the site and element in implementing ESDIS Project policies and procedures received from the SMC covering the following areas, at a minimum: h. Performance evaluation | fulfillment | analysis | B |
| | SMC-2605-i | The LSM shall support the site and element in implementing ESDIS Project policies and procedures received from the SMC covering the following areas, at a minimum: i. Training | fulfillment | analysis | B |
| | SMC-2605-j-1 | The LSM shall support the site and element in implementing ESDIS Project policies and procedures received from the SMC covering the following areas, at a minimum: j. Quality assurance | fulfillment | analysis | B |
| | SMC-2605-j-2 | The LSM shall support the site and element in implementing ESDIS Project policies and procedures received from the SMC covering the following areas, at a minimum: j. Product assurance | fulfillment | analysis | B |
| | SMC-2605-k | The LSM shall support the site and element in implementing ESDIS Project policies and procedures received from the SMC covering the following areas, at a minimum: k. Inventory management | fulfillment | analysis | B |
| | SMC-2605-m | The LSM shall support the site and element in implementing ESDIS Project policies and procedures received from the SMC covering the following areas, at a minimum: l. System enhancements | fulfillment | analysis | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-2605-n | The LSM shall support the site and element in implementing ESDIS Project policies and procedures received from the SMC covering the following areas, at a minimum: n. Administrative actions | fulfillment | analysis | B |
| | SMC-2605-o | The LSM shall support the site and element in implementing ESDIS Project policies and procedures received from the SMC covering the following areas, at a minimum: o. Security | fulfillment | analysis | B |
| SMC-2610 | SMC-2610-1 | The SMC shall provide and maintain a bulletin board service with information on ECS status. | essential | demo | A |
| | SMC-2610-2 | The SMC shall provide and maintain a bulletin board service with information on ECS events. | essential | demo | A |
| | SMC-2610-3 | The SMC shall provide and maintain a bulletin board service with information on ECS news. | essential | demo | A |
| SMC-2620 | SMC-2620-1 | The SMC shall maintain via the ECS bulletin board service, the SMC toolkit consisting of a list of SDPS approved CASE tools for scientist use. | essential | inspect. | A |
| | SMC-2620-2 | The SMC shall maintain via the ECS bulletin board service, the SMC toolkit consisting of a list of SDPS approved references to standards for exchanging data for scientist use. | essential | inspect. | A |
| SMC-3300 | SMC-3300-1-a | The SMC shall monitor site and element hardware status to determine their operational states including, at a minimum: a. On-line | essential | demo | A |
| | SMC-3300-1-b | The SMC shall monitor site and element hardware status to determine their operational states including, at a minimum: b. Failed | essential | demo | A |
| | SMC-3300-1-c | The SMC shall monitor site and element hardware status to determine their operational states including, at a minimum: c. In maintenance | essential | demo | A |
| | SMC-3300-1-d | The SMC shall monitor site and element hardware status to determine their operational states including, at a minimum: d. In test mode | essential | demo | A |
| | SMC-3300-1-e | The SMC shall monitor site and element hardware status to determine their operational states including, at a minimum: e. In simulation mode | essential | demo | A |
| | SMC-3300-2-a | The SMC shall monitor site and element scientific software status to determine their operational states including, at a minimum: a. On-line | essential | demo | A |
| | SMC-3300-2-b | The SMC shall monitor site and element scientific software status to determine their operational states including, at a minimum: b. Failed | essential | demo | A |
| | SMC-3300-2-c | The SMC shall monitor site and element scientific software status to determine their operational states including, at a minimum: c. In maintenance | essential | demo | A |
| | SMC-3300-2-d | The SMC shall monitor site and element scientific software status to determine their operational states including, at a minimum: d. In test mode | essential | demo | A |
| | SMC-3300-2-e | The SMC shall monitor site and element scientific software status to determine their operational states including, at a minimum: e. In simulation mode | essential | demo | A |
| | SMC-3300-3-a | The SMC shall monitor site and element system software status to determine their operational states including, at a minimum: a. On-line | essential | demo | A |
| | SMC-3300-3-b | The SMC shall monitor site and element system software status to determine their operational states including, at a minimum: b. Failed | essential | demo | A |
| | SMC-3300-3-c | The SMC shall monitor site and element system software status to determine their operational states including, at a minimum: c. In maintenance | essential | demo | A |
| | SMC-3300-3-d | The SMC shall monitor site and element system software status to determine their operational states including, at a minimum: d. In test mode | essential | demo | A |
| | SMC-3300-3-e | The SMC shall monitor site and element system software status to determine their operational states including, at a minimum: e. In simulation mode | essential | demo | A |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| SMC-3305 | SMC-3305-1-a | The LSM shall monitor its elements hardware status to determine their operational states including, at a minimum: a. On-line | critical | test | B |
| | SMC-3305-1-b | The LSM shall monitor its elements hardware status to determine their operational states including, at a minimum: b. Failed | critical | test | B |
| | SMC-3305-1-c | The LSM shall monitor its elements hardware software status to determine their operational states including, at a minimum: c. In maintenance | critical | test | B |
| | SMC-3305-1-d | The LSM shall monitor its elements hardware status to determine their operational states including, at a minimum: d. In test mode | critical | test | B |
| | SMC-3305-1-e | The LSM shall monitor its elements hardware status to determine their operational states including, at a minimum: e. In simulation mode | critical | test | B |
| | SMC-3305-2-a | The LSM shall monitor its elements scientific software status to determine their operational states including, at a minimum: a. On-line | critical | test | B |
| | SMC-3305-2-b | The LSM shall monitor its elements scientific software status to determine their operational states including, at a minimum: b. Failed | critical | test | B |
| | SMC-3305-2-c | The LSM shall monitor its elements scientific software status to determine their operational states including, at a minimum: c. In maintenance | critical | test | B |
| | SMC-3305-2-d | The LSM shall monitor its elements scientific software status to determine their operational states including, at a minimum: d. In test mode | critical | test | B |
| | SMC-3305-2-e | The LSM shall monitor its elements scientific software status to determine their operational states including, at a minimum: e. In simulation mode | critical | test | B |
| | SMC-3305-3-a | The LSM shall monitor its elements system software status to determine their operational states including, at a minimum: a. On-line | critical | test | B |
| | SMC-3305-3-b | The LSM shall monitor its elements system software status to determine their operational states including, at a minimum: b. Failed | critical | test | B |
| | SMC-3305-3-c | The LSM shall monitor its elements system software status to determine their operational states including, at a minimum: c. In maintenance | critical | test | B |
| | SMC-3305-3-d | The LSM shall monitor its elements system software status to determine their operational states including, at a minimum: d. In test mode | critical | test | B |
| | SMC-3305-3-e | The LSM shall monitor its elements system software status to determine their operational states including, at a minimum: e. In simulation mode | critical | test | B |
| SMC-3310 | SMC-3310-1 | The SMC shall monitor each elements schedule of events. | essential | demo | A |
| | SMC-3310-2 | The SMC shall monitor each elements execution of events. | essential | demo | A |
| SMC-3315 | SMC-3315-1 | The LSM shall monitor its elements schedule events. | critical | demo | B |
| | SMC-3315-2 | The LSM shall monitor its elements execution of events. | critical | demo | B |
| SMC-3320 | SMC-3320 | The SMC shall monitor execution of ground operations events. | essential | demo | A |
| SMC-3325 | SMC-3325 | The LSM shall monitor execution of ground operations events. | critical | demo | B |
| SMC-3330 | SMC-3330-1-1 | The SMC shall compare system-wide actual schedule performance against planned schedule performance. | essential | demo | B |
| | SMC-3330-1-2 | The SMC shall compare site actual schedule performance against planned schedule performance. | essential | demo | B |
| | SMC-3330-1-3 | The SMC shall compare element actual schedule performance against planned schedule performance. | essential | demo | B |
| | SMC-3330-2-1 | The SMC shall evaluate system-wide actual schedule performance against planned schedule performance. | essential | demo | B |
| | SMC-3330-2-2 | The SMC shall evaluate site actual schedule performance against planned schedule performance. | essential | demo | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-3330-2-3 | The SMC shall evaluate element actual schedule performance against planned schedule performance. | essential | demo | B |
| SMC-3335 | SMC-3335-1 | The LSM shall compare its elements actual schedule performance against planned schedule performance. | critical | test | B |
| | SMC-3335-2 | The LSM shall evaluate its elements actual schedule performance against planned schedule performance. | critical | test | B |
| SMC-3340 | SMC-3340-a-1 | The SMC shall perform quality assurance for the overall ECS performance as well as programmatic areas that include, at a minimum: a. System quality testing for system enhancement implementations | critical | analysis | B |
| | SMC-3340-a-2 | The SMC shall perform quality assurance for the overall ECS performance as well as programmatic areas that include, at a minimum: a. System quality benchmarks for system enhancement implementations | critical | analysis | B |
| | SMC-3340-a-3 | The SMC shall perform quality assurance for the overall ECS performance as well as programmatic areas that include, at a minimum: a. System quality audits for system enhancement implementations | critical | analysis | B |
| | SMC-3340-b-1-1 | The SMC shall perform quality assurance for the overall ECS performance as well as programmatic areas that include, at a minimum: b. System quality checking of products processed | critical | analysis | B |
| | SMC-3340-b-1-2 | The SMC shall perform quality assurance for the overall ECS performance as well as programmatic areas that include, at a minimum: b. System quality checking of products delivered | critical | analysis | B |
| | SMC-3340-b-2-1 | The SMC shall perform quality assurance for the overall ECS performance as well as programmatic areas that include, at a minimum: b. System quality audits of products processed | critical | analysis | B |
| | SMC-3340-b-2-2 | The SMC shall perform quality assurance for the overall ECS performance as well as programmatic areas that include, at a minimum: b. System quality audits of products delivered | critical | analysis | B |
| | SMC-3340-c-1 | The SMC shall perform quality assurance for the overall ECS performance as well as programmatic areas that include, at a minimum: c. Quality testing of site and element resource performance. | critical | analysis | B |
| | SMC-3340-c-2 | The SMC shall perform quality assurance for the overall ECS performance as well as programmatic areas that include, at a minimum: c. Quality audits of site and element resource performance. | critical | analysis | B |
| SMC-3345 | SMC-3345-a-1 | The LSM shall perform quality assurance for its site/elements performance as well as programmatic areas that includes, at a minimum: a. Quality testing for element enhancement implementations | critical | analysis | B |
| | SMC-3345-a-2 | The LSM shall perform quality assurance for its site/elements performance as well as programmatic areas that includes, at a minimum: a. Quality benchmarks for element enhancement implementations | critical | analysis | B |
| | SMC-3345-a-3 | The LSM shall perform quality assurance for its site/elements performance as well as programmatic areas that includes, at a minimum: a. Quality audits for element enhancement implementations | critical | analysis | B |
| | SMC-3345-b-1-1 | The LSM shall perform quality assurance for its site/elements performance as well as programmatic areas that includes, at a minimum: b. Quality checking of products processed | critical | analysis | B |
| | SMC-3345-b-1-2 | The LSM shall perform quality assurance for its site/elements performance as well as programmatic areas that includes, at a minimum: b. Quality checking of products delivered | critical | analysis | B |
| | SMC-3345-b-2-1 | The LSM shall perform quality assurance for its site/elements performance as well as programmatic areas that includes, at a minimum: b. Quality audits of products processed | critical | analysis | B |
| | SMC-3345-b-2-2 | The LSM shall perform quality assurance for its site/elements performance as well as programmatic areas that includes, at a minimum: b. Quality audits of products delivered | critical | analysis | B |
| | SMC-3345-c-1 | The LSM shall perform quality assurance for its site/elements performance as well as programmatic areas that includes, at a minimum: c. Quality testing element resource performance | critical | analysis | B |
| | SMC-3345-c-2 | The LSM shall perform quality assurance for its site/elements performance as well as programmatic areas that includes, at a minimum: c. Quality audits of element resource performance | critical | analysis | B |
| SMC-3350 | SMC-3350-1-1-1-a | The SMC shall generate performance criteria and responses to performance deficiencies for system resources, such as: a. Data collection | critical | analysis | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-3350-1-1-1-b-1 | The SMC shall generate performance criteria and responses to performance deficiencies for system resources, such as: b. Product generation | critical | analysis | B |
| | SMC-3350-1-1-1-b-2 | The SMC shall generate performance criteria and responses to performance deficiencies for system resources, such as: b. Product QA | essential | analysis | B |
| | SMC-3350-1-1-1-b-3 | The SMC shall generate performance criteria and responses to performance deficiencies for system resources, such as: b. Product validation | essential | analysis | B |
| | SMC-3350-1-1-1-c | The SMC shall generate performance criteria and responses to performance deficiencies for system resources, such as: c. Reprocessing | essential | analysis | B |
| | SMC-3350-1-1-1-d-1 | The SMC shall generate performance criteria and responses to performance deficiencies for system resources, such as: d. Data delivery to DAACs | essential | analysis | B |
| | SMC-3350-1-1-1-d-2 | The SMC shall generate performance criteria and responses to performance deficiencies for system resources, such as: d. Data delivery to users | essential | analysis | B |
| | SMC-3350-1-1-1-e | The SMC shall generate performance criteria and responses to performance deficiencies for system resources, such as: e. Response to user requests | essential | analysis | B |
| | SMC-3350-1-1-1-f | The SMC shall generate performance criteria and responses to performance deficiencies for system resources, such as: f. Response to TOOs | essential | analysis | B |
| | SMC-3350-1-1-1-g | The SMC shall generate performance criteria and responses to performance deficiencies for system resources, such as: g. Response to field experiments | essential | analysis | B |
| | SMC-3350-1-1-1-h | The SMC shall generate performance criteria and responses to performance deficiencies for system resources, such as: h. Response to emergency situations | essential | analysis | B |
| | SMC-3350-1-1-2-a | The SMC shall generate performance criteria and responses to performance deficiencies for system activities, such as: a. Data collection | essential | analysis | B |
| | SMC-3350-1-1-2-b-1 | The SMC shall generate performance criteria and responses to performance deficiencies for system activities, such as: b. Product generation | essential | analysis | B |
| | SMC-3350-1-1-2-b-2 | The SMC shall generate performance criteria and responses to performance deficiencies for system activities, such as: b. Product QA | essential | analysis | B |
| | SMC-3350-1-3-2-d-1 | The SMC shall generate performance criteria and responses to performance deficiencies for element activities, such as: d. Data delivery to DAACs | essential | analysis | B |
| | SMC-3350-1-3-2-c | The SMC shall generate performance criteria and responses to performance deficiencies for element activities, such as: c. Reprocessing | essential | analysis | B |
| | SMC-3350-1-3-2-b-3 | The SMC shall generate performance criteria and responses to performance deficiencies for element activities, such as: b. Product validation | essential | analysis | B |
| | SMC-3350-1-3-2-b-2 | The SMC shall generate performance criteria and responses to performance deficiencies for element activities, such as: b. Product QA | essential | analysis | B |
| | SMC-3350-1-3-2-b-1 | The SMC shall generate performance criteria and responses to performance deficiencies for element activities, such as: b. Product generation | essential | analysis | B |
| | SMC-3350-1-3-2-a | The SMC shall generate performance criteria and responses to performance deficiencies for element activities, such as: a. Data collection | critical | analysis | B |
| | SMC-3350-1-3-1-h | The SMC shall generate performance criteria and responses to performance deficiencies for element resources, such as: h. Response to emergency situations | critical | analysis | B |
| | SMC-3350-1-3-1-g | The SMC shall generate performance criteria and responses to performance deficiencies for element resources, such as: g. Response to field experiments | critical | analysis | B |
| | SMC-3350-2-1-1-h | The SMC shall maintain performance criteria and responses to performance deficiencies for system resources, such as: h. Response to emergency situations | critical | analysis | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-3350-2-1-1-g | The SMC shall maintain performance criteria and responses to performance deficiencies for system resources, such as: g. Response to field experiments | critical | analysis | B |
| | SMC-3350-2-1-1-f | The SMC shall maintain performance criteria and responses to performance deficiencies for system resources, such as: f. Response to TOOs | critical | analysis | B |
| | SMC-3350-2-1-1-e | The SMC shall maintain performance criteria and responses to performance deficiencies for system resources, such as: e. Response to user requests | essential | analysis | B |
| | SMC-3350-2-1-1-d-2 | The SMC shall maintain performance criteria and responses to performance deficiencies for system resources, such as: d. Data delivery to users | essential | analysis | B |
| | SMC-3350-2-1-1-d-1 | The SMC shall maintain performance criteria and responses to performance deficiencies for system resources, such as: d. Data delivery to DAACs | essential | analysis | B |
| | SMC-3350-2-1-1-c | The SMC shall maintain performance criteria and responses to performance deficiencies for system resources, such as: c. Reprocessing | essential | analysis | B |
| | SMC-3350-2-1-1-b-3 | The SMC shall maintain performance criteria and responses to performance deficiencies for system resources, such as: b. Product generation, QA and validation | essential | analysis | B |
| | SMC-3350-2-2-1-c | The SMC shall maintain performance criteria and responses to performance deficiencies for site resources, such as: c. Reprocessing | essential | analysis | B |
| | SMC-3350-2-2-1-b-3 | The SMC shall maintain performance criteria and responses to performance deficiencies for site resources, such as: b. Product validation | essential | analysis | B |
| | SMC-3350-2-2-1-b-2 | The SMC shall maintain performance criteria and responses to performance deficiencies for site resources, such as: b. Product QA | critical | analysis | B |
| | SMC-3350-2-2-1-b-1 | The SMC shall maintain performance criteria and responses to performance deficiencies for site resources, such as: b. Product generation | critical | analysis | B |
| | SMC-3350-2-2-1-a | The SMC shall maintain performance criteria and responses to performance deficiencies for site resources, such as: a. Data collection | critical | analysis | B |
| | SMC-3350-2-1-2-h | The SMC shall maintain performance criteria and responses to performance deficiencies for system activities, such as: h. Response to emergency situations | critical | analysis | B |
| | SMC-3350-2-1-2-g | The SMC shall maintain performance criteria and responses to performance deficiencies for system activities, such as: g. Response to field experiments | critical | analysis | B |
| | SMC-3350-2-1-2-f | The SMC shall maintain performance criteria and responses to performance deficiencies for system activities, such as: f. Response to TOOs | critical | analysis | B |
| | SMC-3350-3-3-2-h | The SMC shall update performance criteria and responses to performance deficiencies for element activities, such as: h. Response to emergency situations | critical | analysis | B |
| | SMC-3350-3-3-2-g | The SMC shall update performance criteria and responses to performance deficiencies for element activities, such as: g. Response to field experiments | critical | analysis | B |
| | SMC-3350-3-3-2-f | The SMC shall update performance criteria and responses to performance deficiencies for element activities, such as: f. Response to TOOs | critical | analysis | B |
| | SMC-3350-3-3-2-e | The SMC shall update performance criteria and responses to performance deficiencies for element activities, such as: e. Response to user requests | essential | analysis | B |
| | SMC-3350-3-3-2-d-2 | The SMC shall update performance criteria and responses to performance deficiencies for element activities, such as: d. Data delivery to users | essential | analysis | B |
| | SMC-3350-3-3-2-d-1 | The SMC shall update performance criteria and responses to performance deficiencies for element activities, such as: d. Data delivery to DAACs | essential | analysis | B |
| | SMC-3350-3-3-2-c | The SMC shall update performance criteria and responses to performance deficiencies for element activities, such as: c. Reprocessing | essential | analysis | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-3350-3-3-2-b-3 | The SMC shall update performance criteria and responses to performance deficiencies for element activities, such as: b. Product validation | essential | analysis | B |
| | SMC-3350-3-3-2-b-2 | The SMC shall update performance criteria and responses to performance deficiencies for element activities, such as: b. Product QA | essential | analysis | B |
| | SMC-3350-3-3-2-b-1 | The SMC shall update performance criteria and responses to performance deficiencies for element activities, such as: b. Product generation | essential | analysis | B |
| | SMC-3350-3-3-2-a | The SMC shall update performance criteria and responses to performance deficiencies for element activities, such as: a. Data collection | critical | analysis | B |
| | SMC-3350-3-3-1-h | The SMC shall update performance criteria and responses to performance deficiencies for element resources, such as: h. Response to emergency situations | critical | analysis | B |
| | SMC-3350-3-3-1-g | The SMC shall update performance criteria and responses to performance deficiencies for element resources, such as: g. Response to field experiments | critical | analysis | B |
| | SMC-3350-3-3-1-f | The SMC shall update performance criteria and responses to performance deficiencies for element resources, such as: f. Response to TOOs | critical | analysis | B |
| | SMC-3350-3-3-1-e | The SMC shall update performance criteria and responses to performance deficiencies for element resources, such as: e. Response to user requests | essential | analysis | B |
| | SMC-3350-3-3-1-d-2 | The SMC shall update performance criteria and responses to performance deficiencies for element resources, such as: d. Data delivery to users | essential | analysis | B |
| | SMC-3350-3-3-1-d-1 | The SMC shall update performance criteria and responses to performance deficiencies for element resources, such as: d. Data delivery to DAACs | essential | analysis | B |
| | SMC-3350-3-3-1-c | The SMC shall update performance criteria and responses to performance deficiencies for element resources, such as: c. Reprocessing | essential | analysis | B |
| | SMC-3350-3-3-1-b-3 | The SMC shall update performance criteria and responses to performance deficiencies for element resources, such as: b. Product validation | essential | analysis | B |
| | SMC-3350-3-3-1-b-2 | The SMC shall update performance criteria and responses to performance deficiencies for element resources, such as: b. Product QA | essential | analysis | B |
| | SMC-3350-3-3-1-b-1 | The SMC shall update performance criteria and responses to performance deficiencies for element resources, such as: b. Product generation | essential | analysis | B |
| | SMC-3350-3-3-1-a | The SMC shall update performance criteria and responses to performance deficiencies for element resources, such as: a. Data collection | critical | analysis | B |
| | SMC-3350-3-2-2-h | The SMC shall update performance criteria and responses to performance deficiencies for site activities, such as: h. Response to emergency situations | critical | analysis | B |
| | SMC-3350-3-2-2-g | The SMC shall update performance criteria and responses to performance deficiencies for site activities, such as: g. Response to field experiments | critical | analysis | B |
| | SMC-3350-3-2-2-f | The SMC shall update performance criteria and responses to performance deficiencies for site activities, such as: f. Response to TOOs | critical | analysis | B |
| | SMC-3350-3-2-2-e | The SMC shall update performance criteria and responses to performance deficiencies for site activities, such as: e. Response to user requests | essential | analysis | B |
| | SMC-3350-3-2-2-d-2 | The SMC shall update performance criteria and responses to performance deficiencies for site activities, such as: d. Data delivery to users | essential | analysis | B |
| | SMC-3350-3-2-2-d-1 | The SMC shall update performance criteria and responses to performance deficiencies for site activities, such as: d. Data delivery to DAACs | essential | analysis | B |
| | SMC-3350-3-2-2-c | The SMC shall update performance criteria and responses to performance deficiencies for site activities, such as: c. Reprocessing | essential | analysis | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-3350-3-2-2-b-3 | The SMC shall update performance criteria and responses to performance deficiencies for site activities, such as: b. Product validation | essential | analysis | B |
| | SMC-3350-3-2-2-b-2 | The SMC shall update performance criteria and responses to performance deficiencies for site activities, such as: b. Product QA | essential | analysis | B |
| | SMC-3350-3-2-2-b-1 | The SMC shall update performance criteria and responses to performance deficiencies for site activities, such as: b. Product generation | essential | analysis | B |
| | SMC-3350-3-2-2-a | The SMC shall update performance criteria and responses to performance deficiencies for site activities, such as: a. Data collection | critical | analysis | B |
| | SMC-3350-3-2-1-h | The SMC shall update performance criteria and responses to performance deficiencies for site resources, such as: h. Response to emergency situations | critical | analysis | B |
| | SMC-3350-3-2-1-g | The SMC shall update performance criteria and responses to performance deficiencies for site resources, such as: g. Response to field experiments | critical | analysis | B |
| | SMC-3350-3-2-1-f | The SMC shall update performance criteria and responses to performance deficiencies for site resources, such as: f. Response to TOOs | critical | analysis | B |
| | SMC-3350-3-2-1-c | The SMC shall update performance criteria and responses to performance deficiencies for site resources, such as: e. Response to user requests | essential | analysis | B |
| | SMC-3350-3-2-1-d-2 | The SMC shall update performance criteria and responses to performance deficiencies for site resources, such as: d. Data delivery to users | essential | analysis | B |
| | SMC-3350-3-2-1-d-1 | The SMC shall update performance criteria and responses to performance deficiencies for site resources, such as: d. Data delivery to DAACs | essential | analysis | B |
| | SMC-3350-3-2-1-c | The SMC shall update performance criteria and responses to performance deficiencies for site resources, such as: c. Reprocessing | essential | analysis | B |
| | SMC-3350-3-2-1-b-3 | The SMC shall update performance criteria and responses to performance deficiencies for site resources, such as: b. Product validation | essential | analysis | B |
| | SMC-3350-3-2-1-b-2 | The SMC shall update performance criteria and responses to performance deficiencies for site resources, such as: b. Product QA | essential | analysis | B |
| | SMC-3350-3-2-1-b-1 | The SMC shall update performance criteria and responses to performance deficiencies for site resources, such as: b. Product generation | essential | analysis | B |
| | SMC-3350-3-2-1-a | The SMC shall update performance criteria and responses to performance deficiencies for site resources, such as: a. Data collection | critical | analysis | B |
| | SMC-3350-3-1-2-h | The SMC shall update performance criteria and responses to performance deficiencies for system activities, such as: h. Response to emergency situations | critical | analysis | B |
| | SMC-3350-3-1-2-g | The SMC shall update performance criteria and responses to performance deficiencies for system activities, such as: g. Response to field experiments | critical | analysis | B |
| | SMC-3350-3-1-2-f | The SMC shall update performance criteria and responses to performance deficiencies for system activities, such as: f. Response to TOOs | critical | analysis | B |
| | SMC-3350-3-1-2-e | The SMC shall update performance criteria and responses to performance deficiencies for system activities, such as: e. Response to user requests | essential | analysis | B |
| | SMC-3350-3-1-2-d-2 | The SMC shall update performance criteria and responses to performance deficiencies for system activities, such as: d. Data delivery to users | essential | analysis | B |
| | SMC-3350-3-1-2-d-1 | The SMC shall update performance criteria and responses to performance deficiencies for system activities, such as: d. Data delivery to DAACs | essential | analysis | B |
| | SMC-3350-3-1-2-c | The SMC shall update performance criteria and responses to performance deficiencies for system activities, such as: c. Reprocessing | essential | analysis | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-3350-3-1-2-b-3 | The SMC shall update performance criteria and responses to performance deficiencies for system activities, such as: b. Product validation | essential | analysis | B |
| | SMC-3350-3-1-2-b-2 | The SMC shall update performance criteria and responses to performance deficiencies for system activities, such as: b. Product QA | essential | analysis | B |
| | SMC-3350-3-1-2-b-1 | The SMC shall update performance criteria and responses to performance deficiencies for system activities, such as: b. Product generation | essential | analysis | B |
| | SMC-3350-3-1-2-a | The SMC shall update performance criteria and responses to performance deficiencies for system activities, such as: a. Data collection | critical | analysis | B |
| | SMC-3350-3-1-1-h | The SMC shall update performance criteria and responses to performance deficiencies for system resources, such as: h. Response to emergency situations | critical | analysis | B |
| | SMC-3350-3-1-1-g | The SMC shall update performance criteria and responses to performance deficiencies for system resources, such as: g. Response to field experiments | critical | analysis | B |
| | SMC-3350-3-1-1-f | The SMC shall update performance criteria and responses to performance deficiencies for system resources, such as: f. Response to TOOs | critical | analysis | B |
| | SMC-3350-3-1-1-e | The SMC shall update performance criteria and responses to performance deficiencies for system resources, such as: e. Response to user requests | essential | analysis | B |
| | SMC-3350-3-1-1-d-2 | The SMC shall update performance criteria and responses to performance deficiencies for system resources, such as: d. Data delivery to users | essential | analysis | B |
| | SMC-3350-3-1-1-d-1 | The SMC shall update performance criteria and responses to performance deficiencies for system resources, such as: d. Data delivery to DAACs | essential | analysis | B |
| | SMC-3350-3-1-1-c | The SMC shall update performance criteria and responses to performance deficiencies for system resources, such as: c. Reprocessing | essential | analysis | B |
| | SMC-3350-3-1-1-b-3 | The SMC shall update performance criteria and responses to performance deficiencies for system resources, such as: b. Product validation | essential | analysis | B |
| | SMC-3350-3-1-1-b-2 | The SMC shall update performance criteria and responses to performance deficiencies for system resources, such as: b. Product generation, QA | essential | analysis | B |
| | SMC-3350-3-1-1-b-1 | The SMC shall update performance criteria and responses to performance deficiencies for system resources, such as: b. Product generation | essential | analysis | B |
| | SMC-3350-3-1-1-a | The SMC shall update performance criteria and responses to performance deficiencies for system resources, such as: a. Data collection | critical | analysis | B |
| | SMC-3350-2-3-2-h | The SMC shall maintain performance criteria and responses to performance deficiencies for element activities, such as: h. Response to emergency situations | critical | analysis | B |
| | SMC-3350-2-3-2-g | The SMC shall maintain performance criteria and responses to performance deficiencies for element activities, such as: g. Response to field experiments | critical | analysis | B |
| | SMC-3350-2-3-2-f | The SMC shall maintain performance criteria and responses to performance deficiencies for element activities, such as: f. Response to TOOs | critical | analysis | B |
| | SMC-3350-2-3-2-e | The SMC shall maintain performance criteria and responses to performance deficiencies for element activities, such as: e. Response to user requests | essential | analysis | B |
| | SMC-3350-2-3-2-d-2 | The SMC shall maintain performance criteria and responses to performance deficiencies for element activities, such as: d. Data delivery to users | essential | analysis | B |
| | SMC-3350-2-3-2-d-1 | The SMC shall maintain performance criteria and responses to performance deficiencies for element activities, such as: d. Data delivery to DAACs | essential | analysis | B |
| | SMC-3350-2-3-2-c | The SMC shall maintain performance criteria and responses to performance deficiencies for element activities, such as: c. Reprocessing | essential | analysis | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-3350-2-3-2-b-3 | The SMC shall maintain performance criteria and responses to performance deficiencies for element activities, such as: b. Product validation | essential | analysis | B |
| | SMC-3350-2-3-2-b-2 | The SMC shall maintain performance criteria and responses to performance deficiencies for element activities, such as: b. Product generation, QA | essential | analysis | B |
| | SMC-3350-2-3-2-b-1 | The SMC shall maintain performance criteria and responses to performance deficiencies for element activities, such as: b. Product generation | essential | analysis | B |
| | SMC-3350-2-3-2-a | The SMC shall maintain performance criteria and responses to performance deficiencies for element activities, such as: a. Data collection | critical | analysis | B |
| | SMC-3350-2-3-1-h | The SMC shall maintain performance criteria and responses to performance deficiencies for element resources, such as: h. Response to emergency situations | critical | analysis | B |
| | SMC-3350-2-3-1-g | The SMC shall maintain performance criteria and responses to performance deficiencies for element resources, such as: g. Response to field experiments | critical | analysis | B |
| | SMC-3350-2-3-1-f | The SMC shall maintain performance criteria and responses to performance deficiencies for element resources, such as: f. Response to TOOs | critical | analysis | B |
| | SMC-3350-2-3-1-e | The SMC shall maintain performance criteria and responses to performance deficiencies for element resources, such as: e. Response to user requests | essential | analysis | B |
| | SMC-3350-2-3-1-d-2 | The SMC shall maintain performance criteria and responses to performance deficiencies for element resources, such as: d.Data delivery to users | essential | analysis | B |
| | SMC-3350-2-3-1-d-1 | The SMC shall maintain performance criteria and responses to performance deficiencies for element resources, such as: d. Data delivery to DAACs | essential | analysis | B |
| | SMC-3350-2-3-1-c | The SMC shall maintain performance criteria and responses to performance deficiencies for element resources, such as: c. Reprocessing | essential | analysis | B |
| | SMC-3350-2-3-1-b-3 | The SMC shall maintain performance criteria and responses to performance deficiencies for element resources, such as: b. Product validation | essential | analysis | B |
| | SMC-3350-2-3-1-b-2 | The SMC shall maintain performance criteria and responses to performance deficiencies for element resources, such as: b. Product QA | essential | analysis | B |
| | SMC-3350-2-3-1-b-1 | The SMC shall maintain performance criteria and responses to performance deficiencies for element resources, such as: b. Product generation | essential | analysis | B |
| | SMC-3350-2-3-1-a | The SMC shall maintain performance criteria and responses to performance deficiencies for element resources, such as: a. Data collection | critical | analysis | B |
| | SMC-3350-2-2-2-h | The SMC shall maintain performance criteria and responses to performance deficiencies for site activities, such as: h. Response to emergency situations | critical | analysis | B |
| | SMC-3350-2-2-2-g | The SMC shall maintain performance criteria and responses to performance deficiencies for site activities, such as: g. Response to field experiments | critical | analysis | B |
| | SMC-3350-2-2-2-f | The SMC shall maintain performance criteria and responses to performance deficiencies for site activities, such as: f. Response to TOOs | critical | analysis | B |
| | SMC-3350-2-2-2-e | The SMC shall maintain performance criteria and responses to performance deficiencies for site activities, such as: e. Response to user requests | essential | analysis | B |
| | SMC-3350-2-2-2-d-2 | The SMC shall maintain performance criteria and responses to performance deficiencies for site activities, such as: d. Data delivery to users | essential | analysis | B |
| | SMC-3350-2-2-2-d-1 | The SMC shall maintain performance criteria and responses to performance deficiencies for site activities, such as: d. Data delivery to DAACs | essential | analysis | B |
| | SMC-3350-2-2-2-c | The SMC shall maintain performance criteria and responses to performance deficiencies for site activities, such as: c. Reprocessing | essential | analysis | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-3350-2-2-2-b-3 | The SMC shall maintain performance criteria and responses to performance deficiencies for site activities, such as: b. Product validation | essential | analysis | B |
| | SMC-3350-2-2-2-b-2 | The SMC shall maintain performance criteria and responses to performance deficiencies for site activities, such as: b. Product QA | essential | analysis | B |
| | SMC-3350-2-2-2-b-1 | The SMC shall maintain performance criteria and responses to performance deficiencies for site activities, such as: b. Product generation | critical | analysis | B |
| | SMC-3350-2-2-2-a | The SMC shall maintain performance criteria and responses to performance deficiencies for site activities, such as: a. Data collection | critical | analysis | B |
| | SMC-3350-2-2-1-h | The SMC shall maintain performance criteria and responses to performance deficiencies for site resources, such as: h. Response to emergency situations | critical | analysis | B |
| | SMC-3350-2-2-1-g | The SMC shall maintain performance criteria and responses to performance deficiencies for site resources, such as: g. Response to field experiments | critical | analysis | B |
| | SMC-3350-2-2-1-f | The SMC shall maintain performance criteria and responses to performance deficiencies for site resources, such as: f. Response to TOOs | critical | analysis | B |
| | SMC-3350-2-2-1-e | The SMC shall maintain performance criteria and responses to performance deficiencies for site resources, such as: e. Response to user requests | essential | analysis | B |
| | SMC-3350-2-2-1-d-2 | The SMC shall maintain performance criteria and responses to performance deficiencies for site resources, such as: d. Data delivery to users | essential | analysis | B |
| | SMC-3350-2-2-1-d-1 | The SMC shall maintain performance criteria and responses to performance deficiencies for site resources, such as: d. Data delivery to DAACs | essential | analysis | B |
| | SMC-3350-2-1-2-e | The SMC shall maintain performance criteria and responses to performance deficiencies for system activities, such as: e. Response to user requests | essential | analysis | B |
| | SMC-3350-2-1-2-d-2 | The SMC shall maintain performance criteria and responses to performance deficiencies for system activities, such as: d. Data delivery to users | essential | analysis | B |
| | SMC-3350-2-1-2-d-1 | The SMC shall maintain performance criteria and responses to performance deficiencies for system activities, such as: d. Data delivery to DAACs | essential | analysis | B |
| | SMC-3350-2-1-2-c | The SMC shall maintain performance criteria and responses to performance deficiencies for system activities, such as: c. Reprocessing | essential | analysis | B |
| | SMC-3350-2-1-2-b-3 | The SMC shall maintain performance criteria and responses to performance deficiencies for system activities, such as: b. Product validation | essential | analysis | B |
| | SMC-3350-2-1-2-b-2 | The SMC shall maintain performance criteria and responses to performance deficiencies for system activities, such as: b. Product QA | essential | analysis | B |
| | SMC-3350-2-1-2-b-1 | he SMC shall maintain performance criteria and responses to performance deficiencies for system activities, such as: b. Product generation | essential | analysis | B |
| | SMC-3350-2-1-2-a | The SMC shall maintain performance criteria and responses to performance deficiencies for system activities, such as: a. Data collection | critical | analysis | B |
| | SMC-3350-2-1-1-b-2 | The SMC shall maintain performance criteria and responses to performance deficiencies for system resources, such as: b. Product QA | essential | analysis | B |
| | SMC-3350-2-1-1-b-1 | The SMC shall maintain performance criteria and responses to performance deficiencies for system resources, such as: b. Product generation | critical | analysis | B |
| | SMC-3350-2-1-1-a | The SMC shall maintain performance criteria and responses to performance deficiencies for system resources, such as: a. Data collection | critical | analysis | B |
| | SMC-3350-1-3-2-h | The SMC shall generate performance criteria and responses to performance deficiencies for element activities, such as: h. Response to emergency situations | critical | analysis | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-3350-1-3-2-g | The SMC shall generate performance criteria and responses to performance deficiencies for element activities, such as: g. Response to field experiments | critical | analysis | B |
| | SMC-3350-1-3-2-f | The SMC shall generate performance criteria and responses to performance deficiencies for element activities, such as: f. Response to TOOs | critical | analysis | B |
| | SMC-3350-1-3-2-e | The SMC shall generate performance criteria and responses to performance deficiencies for element activities, such as: e. Response to user requests | essential | analysis | B |
| | SMC-3350-1-3-2-d-2 | The SMC shall generate performance criteria and responses to performance deficiencies for element activities, such as: d. Data delivery to users | essential | analysis | B |
| | SMC-3350-1-3-1-f | The SMC shall generate performance criteria and responses to performance deficiencies for element resources, such as: f. Response to TOOs | critical | analysis | B |
| | SMC-3350-1-1-2-b-3 | The SMC shall generate performance criteria and responses to performance deficiencies for system activities, such as: b. Product validation | essential | analysis | B |
| | SMC-3350-1-1-2-c | The SMC shall generate performance criteria and responses to performance deficiencies for system activities, such as: c. Reprocessing | essential | analysis | B |
| | SMC-3350-1-1-2-d-1 | The SMC shall generate performance criteria and responses to performance deficiencies for system activities, such as: d. Data delivery to DAACs | essential | analysis | B |
| | SMC-3350-1-1-2-d-2 | The SMC shall generate performance criteria and responses to performance deficiencies for system activities, such as: d. Data delivery to users | essential | analysis | B |
| | SMC-3350-1-1-2-e | The SMC shall generate performance criteria and responses to performance deficiencies for system activities, such as: e. Response to user requests | essential | analysis | B |
| | SMC-3350-1-1-2-ef | The SMC shall generate performance criteria and responses to performance deficiencies for system activities, such as: f. Response to TOOs | essential | analysis | B |
| | SMC-3350-1-1-2-g | The SMC shall generate performance criteria and responses to performance deficiencies for system activities, such as: g. Response to field experiments | essential | analysis | B |
| | SMC-3350-1-1-2-h | The SMC shall generate performance criteria and responses to performance deficiencies for system activities, such as: h. Response to emergency situations | essential | analysis | B |
| | SMC-3350-1-2-1-a | The SMC shall generate performance criteria and responses to performance deficiencies for site resources, such as: a. Data collection | essential | analysis | B |
| | SMC-3350-1-2-1-b-1 | The SMC shall generate performance criteria and responses to performance deficiencies for site resources, such as: b. Product generation | essential | analysis | B |
| | SMC-3350-1-2-1-b-2 | The SMC shall generate performance criteria and responses to performance deficiencies for site resources, such as: b. Product QA | essential | analysis | B |
| | SMC-3350-1-2-1-b-3 | The SMC shall generate performance criteria and responses to performance deficiencies for site resources, such as: b. Product validation | essential | analysis | B |
| | SMC-3350-1-2-1-c | The SMC shall generate performance criteria and responses to performance deficiencies for site resources, such as: c. Reprocessing | essential | analysis | B |
| | SMC-3350-1-2-1-c | The SMC shall generate performance criteria and responses to performance deficiencies for site resources, such as: d. Data delivery to DAACs | essential | analysis | B |
| | SMC-3350-1-2-1-d-2 | The SMC shall generate performance criteria and responses to performance deficiencies for site resources, such as: d. Data delivery to users | essential | analysis | B |
| | SMC-3350-1-3-1-e | The SMC shall generate performance criteria and responses to performance deficiencies for element resources, such as: e. Response to user requests | essential | analysis | B |
| | SMC-3350-1-3-1-d-2 | The SMC shall generate performance criteria and responses to performance deficiencies for element resources, such as: d. Data delivery to users | essential | analysis | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-3350-1-3-1-d-1 | The SMC shall generate performance criteria and responses to performance deficiencies for element resources, such as: d. Data delivery to DAACs | essential | analysis | B |
| | SMC-3350-1-3-1-c | The SMC shall generate performance criteria and responses to performance deficiencies for element resources, such as: c. Reprocessing | essential | analysis | B |
| | SMC-3350-1-3-1-b-3 | The SMC shall generate performance criteria and responses to performance deficiencies for element resources, such as: b. Product validation | critical | analysis | B |
| | SMC-3350-1-3-1-b-2 | The SMC shall generate performance criteria and responses to performance deficiencies for element resources, such as: b . Product QA | critical | analysis | B |
| | SMC-3350-1-3-1-b-1 | The SMC shall generate performance criteria and responses to performance deficiencies for element resources, such as: b. Product generation | critical | analysis | B |
| | SMC-3350-1-3-1-a | The SMC shall generate performance criteria and responses to performance deficiencies for element resources, such as: a. Data collection | critical | analysis | B |
| | SMC-3350-1-2-2-h | The SMC shall generate performance criteria and responses to performance deficiencies for site activities, such as: h. Response to emergency situations | critical | analysis | B |
| | SMC-3350-1-2-2-g | The SMC shall generate performance criteria and responses to performance deficiencies for site activities, such as: g. Response to field experiments | critical | analysis | B |
| | SMC-3350-1-2-2-f | The SMC shall generate performance criteria and responses to performance deficiencies for site activities, such as: f. Response to TOOs | critical | analysis | B |
| | SMC-3350-1-2-2-e | The SMC shall generate performance criteria and responses to performance deficiencies for site activities, such as: e. Response to user requests | essential | analysis | B |
| | SMC-3350-1-2-2-d-2 | The SMC shall generate performance criteria and responses to performance deficiencies for site activities, such as: d. Data delivery to users | essential | analysis | B |
| | SMC-3350-1-2-2-d-1 | The SMC shall generate performance criteria and responses to performance deficiencies for site activities, such as: d. Data delivery to DAACs | essential | analysis | B |
| | SMC-3350-1-2-2-c | he SMC shall generate performance criteria and responses to performance deficiencies for site activities, such as: c. Reprocessing | essential | analysis | B |
| | SMC-3350-1-2-2-b-3 | The SMC shall generate performance criteria and responses to performance deficiencies for site activities, such as: b. Product validation | essential | analysis | B |
| | SMC-3350-1-2-2-b-2 | The SMC shall generate performance criteria and responses to performance deficiencies for site activities, such as: b. Product QA | essential | analysis | B |
| | SMC-3350-1-2-2-b-1 | The SMC shall generate performance criteria and responses to performance deficiencies for site activities, such as: b. Product generation | essential | analysis | B |
| | SMC-3350-1-2-1-e | The SMC shall generate performance criteria and responses to performance deficiencies for site resources, such as: e. Response to user requests | essential | analysis | B |
| | SMC-3350-1-2-1-f | The SMC shall generate performance criteria and responses to performance deficiencies for site resources, such as: f. Response to TOOs | essential | analysis | B |
| | SMC-3350-1-2-1-g | The SMC shall generate performance criteria and responses to performance deficiencies for site resources, such as: g. Response to field experiments | essential | analysis | B |
| | SMC-3350-1-2-1-h | The SMC shall generate performance criteria and responses to performance deficiencies for site resources, such as: h. Response to emergency situations | essential | analysis | B |
| | SMC-3350-1-2-2-a | The SMC shall generate performance criteria and responses to performance deficiencies for site activities, such as: a. Data collection | essential | analysis | B |
| SMC-3355 | SMC-3355 | The LSM shall implement the performance criteria from SMC (including parametric limits and operational threshold levels) for evaluating element resource performance. | essential | analysis | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| SMC-3370 | SMC-3370-a | For each performance parameter, the SMC shall have the capability of establishing multiple levels of thresholds to include, at a minimum: a. On/off | essential | analysis | A |
| | SMC-3370-b | For each performance parameter, the SMC shall have the capability of establishing multiple levels of thresholds to include, at a minimum: b. Pass/fail | essential | analysis | A |
| | SMC-3370-c | For each performance parameter, the SMC shall have the capability of establishing multiple levels of thresholds to include, at a minimum: c. Various levels of degradation | essential | analysis | A |
| SMC-3375 | SMC-3375-a | For each limit checked parameter, the LSM (including those thresholds directed by the SMC) shall have the capability of evaluating multiple levels of thresholds including, at a minimum: a. On/off | critical | test | B |
| | SMC-3375-b | For each limit checked parameter, the LSM (including those thresholds directed by the SMC) shall have the capability of evaluating multiple levels of thresholds including, at a minimum: b. Pass/fail | critical | test | B |
| | SMC-3375-c | For each limit checked parameter, the LSM (including those thresholds directed by the SMC) shall have the capability of evaluating multiple levels of thresholds including, at a minimum: c. Various levels of degradation | critical | test | B |
| SMC-3380 | SMC-3380 | The SMC shall evaluate overall system performance. | essential | analysis | B |
| SMC-3385 | SMC-3385 | The LSM shall evaluate system performance against the ESDIS project established performance criteria. | critical | analysis | B |
| SMC-3390 | SMC-3390-1 | The SMC shall generate alert indicators of fault conditions with the corrective actions. | critical | test | C |
| | SMC-3390-2 | The SMC shall generate alert indicators of degraded conditions with the corrective actions. | critical | test | C |
| SMC-3395 | SMC-3395-1 | The LSM shall generate, in response to each limit check threshold, alert indicators of fault conditions with the appropriate corrective actions. | critical | test | C |
| | SMC-3395-2 | The LSM shall generate, in response to each limit check threshold, alert indicators of degraded conditions with the appropriate corrective actions. | critical | test | C |
| SMC-3397 | SMC-3397-a | The LSM shall generate, as needed, requests for performance testing, including, at a minimum: a. Resource to be tested | critical | test | B |
| | SMC-3397-b | The LSM shall generate, as needed, requests for performance testing, including, at a minimum: b. Test purpose | critical | test | B |
| | SMC-3397-c | The LSM shall generate, as needed, requests for performance testing, including, at a minimum: c. Requested test priority | critical | test | B |
| | SMC-3397-d | The LSM shall generate, as needed, requests for performance testing, including, at a minimum: d. Required test environment | critical | test | B |
| | SMC-3397-e | The LSM shall generate, as needed, requests for performance testing, including, at a minimum: e. Impacts to operations | critical | test | B |
| | SMC-3397-f | The LSM shall generate, as needed, requests for performance testing, including, at a minimum: f. Expected test results | critical | test | B |
| SMC-3400 | SMC-3400-a | The SMC shall generate, as needed, requests for performance testing that includes, at a minimum: a. Resource to be tested | essential | demo | B |
| | SMC-3400-b | The SMC shall generate, as needed, requests for performance testing that includes, at a minimum: b. Test purpose | essential | demo | B |
| | SMC-3400-c | The SMC shall generate, as needed, requests for performance testing that includes, at a minimum: c. Requested test priority | essential | demo | B |
| | SMC-3400-d | The SMC shall generate, as needed, requests for performance testing that includes, at a minimum: d. Required test environment | essential | demo | B |
| | SMC-3400-e | The SMC shall generate, as needed, requests for performance testing that includes, at a minimum: e. Impacts to operations | essential | demo | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-3400-f | The SMC shall generate, as needed, requests for performance testing that includes, at a minimum: f. Expected test results | essential | demo | B |
| SMC-3410 | SMC-3410-1-1-a | The SMC shall perform short-term trend analysis of system performance to include, at a minimum: a. Operational status | essential | analysis | B |
| | SMC-3410-1-1-b | The SMC shall perform short-term trend analysis of system performance to include, at a minimum: b. Performance of a particular resource | essential | analysis | B |
| | SMC-3410-1-1-c | The SMC shall perform short-term trend analysis of system performance to include, at a minimum: c. Maintenance activities (e.g., number of repairs per item) | essential | analysis | B |
| | SMC-3410-1-2-a | The SMC shall perform short-term trend analysis of site performance to include, at a minimum: a. Operational status | essential | analysis | B |
| | SMC-3410-1-2-b | The SMC shall perform short-term trend analysis of site performance to include, at a minimum: b. Performance of a particular resource | essential | analysis | B |
| | SMC-3410-1-2-c | The SMC shall perform short-term trend analysis of site performance to include, at a minimum: c. Maintenance activities (e.g., number of repairs per item) | essential | analysis | B |
| | SMC-3410-1-3-a | The SMC shall perform short-term trend analysis of element performance to include, at a minimum: a. Operational status | essential | analysis | B |
| | SMC-3410-1-3-b | The SMC shall perform short-term trend analysis of element performance to include, at a minimum: b. Performance of a particular resource | essential | analysis | B |
| | SMC-3410-1-3-c | The SMC shall perform short-term trend analysis of element performance to include, at a minimum: c. Maintenance activities (e.g., number of repairs per item) | essential | analysis | B |
| | SMC-3410-2-1-a | The SMC shall perform long-term trend analysis of system performance to include, at a minimum: | essential | analysis | B |
| | SMC-3410-2-1-b | The SMC shall perform long-term trend analysis of system performance to include, at a minimum: b. Performance of a particular resource | essential | analysis | B |
| | SMC-3410-2-1-c | The SMC shall perform long-term trend analysis of system performance to include, at a minimum: c. Maintenance activities (e.g., number of repairs per item) | essential | analysis | B |
| | SMC-3410-2-2-a | The SMC shall perform long-term trend analysis of site performance to include, at a minimum: a. Operational status | essential | analysis | B |
| | SMC-3410-2-2-b | The SMC shall perform long-term trend analysis of site performance to include, at a minimum: b. Performance of a particular resource | essential | analysis | B |
| | SMC-3410-2-2-c | The SMC shall perform long-term trend analysis of site performance to include, at a minimum: c. Maintenance activities (e.g., number of repairs per item) | essential | analysis | B |
| | SMC-3410-2-3-a | The SMC shall perform long-term trend analysis of element performance to include, at a minimum: a. Operational status | essential | analysis | B |
| | SMC-3410-2-3-b | The SMC shall perform long-term trend analysis of element performance to include, at a minimum: b. Performance of a particular resource | essential | analysis | B |
| | SMC-3410-2-3-c | The SMC shall perform long-term trend analysis of element performance to include, at a minimum: c. Maintenance activities (e.g., number of repairs per item) | essential | analysis | B |
| SMC-3415 | SMC-3415-1-a | The LSM shall perform short-term trend analysis of element performance, including, at a minimum: a. Operational status | essential | test | B |
| | SMC-3415-1-b | The LSM shall perform short-term trend analysis of element performance, including, at a minimum: b. Performance of a particular resource | essential | test | B |
| | SMC-3415-1-c | The LSM shall perform short-term trend analysis of element performance, including, at a minimum: c. Maintenance activities (e.g., number of repairs per item) | essential | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-3415-2-a | The LSM shall perform long-term trend analysis of element performance, including, at a minimum: a. Operational status | essential | test | B |
| | SMC-3415-2-b | The LSM shall perform long-term trend analysis of element performance, including, at a minimum: b. Performance of a particular resource | essential | test | B |
| | SMC-3415-2-c | The LSM shall perform long-term trend analysis of element performance, including, at a minimum: c. Maintenance activities (e.g., number of repairs per item) | essential | test | B |
| SMC-3420 | SMC-3420-1-1-a-1 | The SMC shall perform short term trend analysis of system performance to determine the impact on resources of, at a minimum: a. Modifying system activity allocations | essential | analysis | B |
| | SMC-3420-1-1-b-1 | The SMC shall perform short term trend analysis of system performance to determine the impact on resources of, at a minimum: b. Potential enhancements to system | essential | analysis | B |
| | SMC-3420-1-2-a-2 | The SMC shall perform short term trend analysis of site performance to determine the impact on resources of, at a minimum: a. Modifying site activity allocations | essential | analysis | B |
| | SMC-3420-1-2-b-2 | The SMC shall perform short term trend analysis of site performance to determine the impact on resources of, at a minimum: b. Potential enhancements to site | essential | analysis | B |
| | SMC-3420-1-3-a-3 | The SMC shall perform short term trend analysis of element performance to determine the impact on resources of, at a minimum: a. Modifying element activity allocations | essential | analysis | B |
| | SMC-3420-1-3-b-3 | The SMC shall perform short term trend analysis of element performance to determine the impact on resources of, at a minimum: b. Potential enhancements to element | essential | analysis | B |
| | SMC-3420-2-1-a-1 | The SMC shall perform long term trend analysis of system performance to determine the impact on resources of, at a minimum: a. Modifying system, site, or element activity allocations | essential | analysis | B |
| | SMC-3420-2-1-b-1 | The SMC shall perform long term trend analysis of system performance to determine the impact on resources of, at a minimum: b. Potential enhancements to system | essential | analysis | B |
| | SMC-3420-2-2-a-2 | The SMC shall perform long term trend analysis of site performance to determine the impact on resources of, at a minimum: a. Modifying site activity allocations | essential | analysis | B |
| | SMC-3420-2-2-b-2 | The SMC shall perform long term trend analysis of site performance to determine the impact on resources of, at a minimum: b. Potential enhancements to site | essential | analysis | B |
| | SMC-3420-2-3-a-3 | The SMC shall perform long term trend analysis of element performance to determine the impact on resources of, at a minimum: a. Modifying element activity allocations | essential | analysis | B |
| | SMC-3420-2-3-b-3 | The SMC shall perform long term trend analysis of element performance to determine the impact on resources of, at a minimum: b. Potential enhancements to element | essential | analysis | B |
| SMC-3421 | SMC-3421-1 | The SMC shall analyze user feedback information supporting the development of recommended remedial actions. | essential | analysis | B |
| | SMC-3421-2 | The SMC shall analyze user feedback information supporting the development of recommended enhancement actions. | fulfillment | analysis | B |
| SMC-4300 | SMC-4300-1-a | The SMC shall support system fault management policies and procedures including, at a minimum: a. Fault identification | essential | demo | B |
| | SMC-4300-1-b | The SMC shall support system fault management policies and procedures including, at a minimum: b. Fault priorities | essential | demo | B |
| | SMC-4300-1-c | The SMC shall support system fault management policies and procedures including, at a minimum: c. Recovery or corrective actions | essential | demo | B |
| | SMC-4300-2-a | The SMC shall maintain system fault management policies and procedures including, at a minimum: a. Fault identification | essential | demo | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-4300-2-b | The SMC shall maintain system fault management policies and procedures including, at a minimum: b. Fault priorities | essential | demo | B |
| | SMC-4300-2-c | The SMC shall maintain system fault management policies and procedures including, at a minimum: c. Recovery or corrective actions | essential | demo | B |
| | SMC-4300-3-a | The SMC shall update system fault management policies and procedures including, at a minimum: a. Fault identification | essential | demo | B |
| | SMC-4300-3-b | The SMC shall update system fault management policies and procedures including, at a minimum: b. Fault priorities | essential | demo | B |
| | SMC-4300-3-c | The SMC shall update system fault management policies and procedures including, at a minimum: c. Recovery or corrective actions | essential | demo | B |
| SMC-4305 | SMC-4305 | The LSM shall maintain fault management policies and procedures for its element. | essential | analysis | A |
| SMC-4310 | SMC-4310-a | The SMC shall perform fault analysis including, at a minimum: a. Isolation | essential | analysis | B |
| | SMC-4310-b | The SMC shall perform fault analysis including, at a minimum: b. Location | essential | analysis | B |
| | SMC-4310-c | The SMC shall perform fault analysis including, at a minimum: c. Identification | essential | analysis | B |
| | SMC-4310-d | The SMC shall perform fault analysis including, at a minimum: d. Characterization | essential | analysis | B |
| SMC-4311 | SMC-4311-a | The SMC shall have the capability to perform fault analysis to the level of, at a minimum: a. Subsystem | essential | demo | C |
| | SMC-4311-b | The SMC shall have the capability to perform fault analysis to the level of, at a minimum: b. Equipment | essential | demo | C |
| SMC-4315 | SMC-4315-1-1 | The LSM shall, at a minimum, isolate faults within its element | critical | test | C |
| | SMC-4315-1-2 | The LSM shall, at a minimum, locate faults within its element. | critical | test | C |
| | SMC-4315-1-3 | The LSM shall, at a minimum, identify faults within its element. | critical | test | C |
| | SMC-4315-2-1 | The LSM shall, at a minimum, identify subsystem faults within its element. | critical | test | C |
| | SMC-4315-2-2 | The LSM shall, at a minimum, identify equipment faults within its element. | critical | test | C |
| | SMC-4315-2-3 | The LSM shall, at a minimum, identify software faults within its element. | critical | test | C |
| | SMC-4315-3 | The LSM shall, at a minimum, identify the nature of the faults within its element. | critical | test | C |
| SMC-4320 | SMC-4320-a-1 | SMC shall support fault diagnosis testing to include, at a minimum: a. Software tolerance testing | essential | demo | C |
| | SMC-4320-a-2 | SMC shall support fault diagnosis testing to include, at a minimum: a. Hardware tolerance testing | essential | demo | C |
| | SMC-4320-b | SMC shall support fault diagnosis testing to include, at a minimum: b. Resource-to-resource connectivity testing | essential | demo | C |
| SMC-4325 | SMC-4325-a-1 | The LSM shall request fault diagnosis testing be performed, including, at a minimum: a. Software tolerance testing | essential | demo | A |
| | SMC-4325-a-2 | The LSM shall request fault diagnosis testing be performed, including, at a minimum: a. Hardware tolerance testing | essential | demo | A |
| | SMC-4325-b | The LSM shall request fault diagnosis testing be performed, including, at a minimum: b. Resource-to-resource connectivity testing within its element | essential | demo | A |
| SMC-4330 | SMC-4330-1-1 | SMC shall have the capability to generate fault recovery commands to sites except for faults directly related to flight operations. | essential | test | B |
| | SMC-4330-1-2 | SMC shall have the capability to generate fault recovery commands to elements except for faults directly related to flight operations. | essential | test | B |
| | SMC-4330-2-1 | SMC shall have the capability to generate fault recovery directives to sites except for faults directly related to flight operations. | essential | test | B |
| | SMC-4330-2-2 | SMC shall have the capability to generate fault recovery directive to elements except for faults directly related to flight operations. | essential | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-4330-3-1 | SMC shall have the capability to generate fault recovery instructions to sites except for faults directly related to flight operations. | essential | test | B |
| | SMC-4330-3-2 | SMC shall have the capability to generate fault recovery instructions to elements except for faults directly related to flight operations. | essential | test | B |
| SMC-4335 | SMC-4335-1 | The LSM shall generate fault recovery commands within its element. | critical | test | C |
| | SMC-4335-2 | The LSM shall generate fault recovery directives within its element. | critical | test | C |
| | SMC-4335-3 | The LSM shall generate fault recovery instructions within its element. | essential | demo | C |
| SMC-5300 | SMC-5300-1-a | The SMC shall, in conjunction with sites and elements, establish security policies and procedures to include, at a minimum: a. Physical security | essential | analysis | B |
| | SMC-5300-1-b | The SMC shall, in conjunction with sites and elements, establish security policies and procedures to include, at a minimum: b. Password management | essential | analysis | B |
| | SMC-5300-1-c | The SMC shall, in conjunction with sites and elements, establish security policies and procedures to include, at a minimum: c. Operational security | essential | analysis | B |
| | SMC-5300-1-d | The SMC shall, in conjunction with sites and elements, establish security policies and procedures to include, at a minimum: d. Data security | essential | analysis | B |
| | SMC-5300-1-e | The SMC shall, in conjunction with sites and elements, establish security policies and procedures to include, at a minimum: e. Privileges | essential | analysis | B |
| | SMC-5300-1-f | The SMC shall, in conjunction with sites and elements, establish security policies and procedures to include, at a minimum: f. Network security | essential | analysis | B |
| | SMC-5300-1-g | The SMC shall, in conjunction with sites and elements, establish security policies and procedures to include, at a minimum: g. Compromise mitigation | essential | analysis | B |
| | SMC-5300-2-a | The SMC shall, in conjunction with sites and elements, support security policies and procedures to include, at a minimum: a. Physical security | essential | analysis | B |
| | SMC-5300-2-b | The SMC shall, in conjunction with sites and elements, support security policies and procedures to include, at a minimum: b. Password management | essential | analysis | B |
| | SMC-5300-2-c | The SMC shall, in conjunction with sites and elements, support security policies and procedures to include, at a minimum: c. Operational security | essential | analysis | B |
| | SMC-5300-2-d | The SMC shall, in conjunction with sites and elements, support security policies and procedures to include, at a minimum: d. Data security | essential | analysis | B |
| | SMC-5300-2-e | The SMC shall, in conjunction with sites and elements, support security policies and procedures to include, at a minimum: e. Privileges | essential | analysis | B |
| | SMC-5300-2-f | The SMC shall, in conjunction with sites and elements, support security policies and procedures to include, at a minimum: f. Network security | essential | analysis | B |
| | SMC-5300-2-g | The SMC shall, in conjunction with sites and elements, support security policies and procedures to include, at a minimum: g. Compromise mitigation | essential | analysis | B |
| | SMC-5300-3-a | The SMC shall, in conjunction with sites and elements, maintain security policies and procedures to include, at a minimum: a. Physical security | essential | analysis | B |
| | SMC-5300-3-b | The SMC shall, in conjunction with sites and elements, maintain security policies and procedures to include, at a minimum: b. Password management | essential | analysis | B |
| | SMC-5300-3-c | The SMC shall, in conjunction with sites and elements, maintain security policies and procedures to include, at a minimum: c. Operational security | essential | analysis | B |
| | SMC-5300-3-d | The SMC shall, in conjunction with sites and elements, maintain security policies and procedures to include, at a minimum: d. Data security | essential | analysis | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-5300-3-e | The SMC shall, in conjunction with sites and elements, maintain security policies and procedures to include, at a minimum: e. Privileges | essential | analysis | B |
| | SMC-5300-3-f | The SMC shall, in conjunction with sites and elements, maintain security policies and procedures to include, at a minimum: f. Network security | essential | analysis | B |
| | SMC-5300-3-g | The SMC shall, in conjunction with sites and elements, maintain security policies and procedures to include, at a minimum: g. Compromise mitigation | essential | analysis | B |
| | SMC-5300-4-a | The SMC shall, in conjunction with sites and elements, update security policies and procedures to include, at a minimum: a. Physical security | essential | analysis | B |
| | SMC-5300-4-b | The SMC shall, in conjunction with sites and elements, update security policies and procedures to include, at a minimum: b. Password management | essential | analysis | B |
| | SMC-5300-4-c | The SMC shall, in conjunction with sites and elements, update security policies and procedures to include, at a minimum: c. Operational security | essential | analysis | B |
| | SMC-5300-4-d | The SMC shall, in conjunction with sites and elements, update security policies and procedures to include, at a minimum: d. Data security | essential | analysis | B |
| | SMC-5300-4-e | The SMC shall, in conjunction with sites and elements, update security policies and procedures to include, at a minimum: e. Privileges | essential | analysis | B |
| | SMC-5300-4-f | The SMC shall, in conjunction with sites and elements, update security policies and procedures to include, at a minimum: f. Network security | essential | analysis | B |
| | SMC-5300-4-g | The SMC shall, in conjunction with sites and elements, update security policies and procedures to include, at a minimum: g. Compromise mitigation | essential | analysis | B |
| SMC-5305 | SMC-5305-a | The LSM shall maintain security policies and procedures, including, at a minimum: a. Physical security | critical | analysis | B |
| | SMC-5305-b | The LSM shall maintain security policies and procedures, including, at a minimum: b. Password management | critical | analysis | B |
| | SMC-5305-c | The LSM shall maintain security policies and procedures, including, at a minimum: c. Operational security | critical | analysis | B |
| | SMC-5305-d | The LSM shall maintain security policies and procedures, including, at a minimum: d. Data classifications | critical | analysis | B |
| | SMC-5305-e | The LSM shall maintain security policies and procedures, including, at a minimum: e. Access/privileges | critical | analysis | B |
| | SMC-5305-f | The LSM shall maintain security policies and procedures, including, at a minimum: f. Compromise mitigation | critical | analysis | B |
| SMC-5320 | SMC-5320-1 | The SMC shall establish access privileges for ECS scientific users. | critical | test | A |
| | SMC-5320-2 | The SMC shall maintain access privileges for ECS scientific users. | critical | test | A |
| | SMC-5320-3 | The SMC shall authenticate access privileges for ECS scientific users. | critical | test | A |
| SMC-5325 | SMC-5325-1-1-1 | The LSM shall promulgate user accesses. | critical | test | B |
| | SMC-5325-1-1-2 | The LSM shall promulgate user privileges. | critical | test | B |
| | SMC-5325-1-2-1 | The LSM shall promulgate device accesses. | critical | test | B |
| | SMC-5325-1-2-2 | The LSM shall promulgate device privileges. | critical | test | B |
| | SMC-5325-2-1-1 | The LSM shall maintain user accesses. | critical | test | B |
| | SMC-5325-2-1-2 | The LSM shall maintain user privileges. | critical | test | B |
| | SMC-5325-2-2-1 | The LSM shall maintain device accesses. | critical | test | B |
| | SMC-5325-2-2-2 | The LSM shall maintain device privileges. | critical | test | B |
| | SMC-5325-3-1-1 | The LSM shall authenticate user accesses. | critical | test | B |
| | SMC-5325-3-1-2 | The LSM shall authenticate user privileges. | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-5325-3-2-1 | The LSM shall authenticate device accesses. | critical | test | B |
| | SMC-5325-3-2-2 | The LSM shall authenticate device privileges. | critical | test | B |
| | SMC-5325-4-1-1 | The LSM shall monitor user accesses. | critical | test | B |
| | SMC-5325-4-1-2 | The LSM shall monitor user privileges. | critical | test | B |
| | SMC-5325-4-2-1 | The LSM shall monitor device accesses. | critical | test | B |
| | SMC-5325-4-2-2 | The LSM shall monitor device privileges. | critical | test | B |
| SMC-5330 | SMC-5330-1-1 | The SMC shall support security testing that includes, at a minimum, password checking. | critical | test | A |
| | SMC-5330-1-2 | The SMC shall support security testing that includes, at a minimum, control of site and element internal privileges. | critical | test | A |
| | SMC-5330-2-1 | The SMC shall manage security testing that includes, at a minimum, password checking. | critical | test | A |
| | SMC-5330-2-2 | The SMC shall manage security testing that includes, at a minimum, control of site and element internal privileges. | critical | test | A |
| | SMC-5330-3-1 | The SMC shall maintain security testing that includes, at a minimum, password checking. | critical | test | A |
| | SMC-5330-3-2 | The SMC shall maintain security testing that includes, at a minimum, control of site and element internal privileges. | critical | test | A |
| | SMC-5330-4-1 | The SMC shall request security testing that includes, at a minimum, password checking. | critical | test | A |
| | SMC-5330-4-2 | The SMC shall request security testing that includes, at a minimum, control of site and element internal privileges. | critical | test | A |
| SMC-5335 | SMC-5335-1 | The LSM shall perform security testing that includes, at a minimum, password auditing. | critical | test | B |
| | SMC-5335-2 | The LSM shall perform security testing that includes, at a minimum, element internal access/privileges checking. | critical | test | B |
| SMC-5340 | SMC-5340-1 | The SMC shall perform security risk analyses. | critical | analysis | B |
| | SMC-5340-2 | The SMC shall perform security compromise detection. | critical | analysis | B |
| SMC-5345 | SMC-5345-1 | The LSM shall perform compromise (e.g., virus or worm penetration) risk analysis. | critical | analysis | B |
| | SMC-5345-2 | The LSM shall perform compromise (e.g., virus or worm penetration) risk detection. | critical | analysis | B |
| SMC-5350 | SMC-5350 | The SMC shall have the capability to initiate recovery procedures in response to a detected security compromise. | critical | demo | B |
| SMC-5355 | SMC-5355-1 | The LSM shall isolate the compromised area until the compromise has been eliminated. | critical | test | A |
| | SMC-5355-2 | The LSM shall detach the compromised input I/O until the compromise has been eliminated. | critical | test | A |
| | SMC-5355-3 | The LSM shall detach the compromised areas output I/O until the compromise has been eliminated | critical | test | A |
| SMC-5360 | SMC-5360 | SMC shall have the capability to manage encrypted information, including keys. | essential | demo | B |
| SMC-5365 | SMC-5365 | The LSM shall generate recovery actions in response to the detection of compromises. | critical | test | B |
| SMC-6300 | SMC-6300-1 | The SMC shall support accounting and accountability policies and procedures based on ESDIS Project policies and procedures. | essential | analysis | B |
| | SMC-6300-2 | The SMC shall maintain accounting and accountability policies and procedures based on ESDIS Project policies and procedures. | essential | analysis | B |
| | SMC-6300-3 | The SMC shall update accounting and accountability policies and procedures based on ESDIS Project policies and procedures. | essential | analysis | B |
| SMC-6301 | SMC-6301-1-a | The SMC accounting policies and procedures shall conform with accounting principles including: a. General Accounting Office (GAO) Title 2-Accounting and Title 3-Audit | essential | analysis | B |
| | SMC-6301-1-b | The SMC accounting policies and procedures shall conform with accounting principles including: b. Office of Management and Budget (OMB) Circular No. A-127, Financial Management Systems | essential | analysis | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-6301-1-c | The SMC accounting policies and procedures shall conform with accounting principles including: c. OMB Circular No. A-130, Management of Federal Information Resources | essential | analysis | B |
| | SMC-6301-2-a | The SMC accounting policies and procedures shall conform with accounting standards including: a. General Accounting Office (GAO) Title 2-Accounting and Title 3-Audit | essential | analysis | B |
| | SMC-6301-2-b | The SMC accounting policies and procedures shall conform with accounting standards including: b. Office of Management and Budget (OMB) Circular No. A-127, Financial Management Systems | essential | analysis | B |
| | SMC-6301-2-c | The SMC accounting policies and procedures shall conform with accounting standards including: c. OMB Circular No. A-130, Management of Federal Information Resources | essential | analysis | B |
| | SMC-6301-3-a | The SMC accounting policies and procedures shall conform with accounting facilities including: a. General Accounting Office (GAO) Title 2-Accounting and Title 3-Audit | essential | analysis | B |
| | SMC-6301-3-b | The SMC accounting policies and procedures shall conform with accounting facilities including: b. Office of Management and Budget (OMB) Circular No. A-127, Financial Management Systems | essential | analysis | B |
| | SMC-6301-3-c | The SMC accounting policies and procedures shall conform with accounting facilities including: c. OMB Circular No. A-130, Management of Federal Information Resources | essential | analysis | B |
| SMC-6310 | SMC-6310 | The SMC shall perform, as needed, security audit trails. | essential | demo | A |
| SMC-6315 | SMC-6315 | The LSM shall perform, as needed, security audit trails within its element. | essential | demo | A |
| SMC-6320 | SMC-6320-1 | The SMC shall perform, as needed, data audit trails. | essential | demo | B |
| | SMC-6320-2 | The SMC shall perform, as needed, user audit trails. | essential | demo | B |
| SMC-6325 | SMC-6325-1 | The LSM shall perform, as needed, data audit trails within its element. | essential | demo | B |
| | SMC-6325-2 | The LSM shall perform, as needed, user audit trails within its element. | essential | demo | B |
| SMC-6330 | SMC-6330-1-a | The SMC shall establish a data tracking system that, at a minimum: a. Tracks data transport from system input to system output | essential | test | B |
| | SMC-6330-1-b | The SMC shall establish a data tracking system that, at a minimum: b. Allows the status of all product-production activities to be determined | essential | test | B |
| | SMC-6330-2-a | The SMC shall maintain a data tracking system that, at a minimum: a. Tracks data transport from system input to system output | essential | test | B |
| | SMC-6330-2-b | The SMC shall maintain a data tracking system that, at a minimum: b. Allows the status of all product-production activities to be determined | essential | test | B |
| | SMC-6330-3-a | The SMC shall update a data tracking system that, at a minimum: a. Tracks data transport from system input to system output | essential | test | B |
| | SMC-6330-3-b | The SMC shall update a data tracking system that, at a minimum: b. Allows the status of all product-production activities to be determined | essential | test | B |
| SMC-6335 | SMC-6335-1-a | The LSM shall, as needed, maintain a data tracking system that, at a minimum: a. Tracks data transport from element input to element output | essential | demo | B |
| | SMC-6335-1-b | The LSM shall, as needed, maintain a data tracking system that, at a minimum: b. Allows the status of all product-production activities to be determined | essential | demo | B |
| | SMC-6335-2-a | The LSM shall, as needed, update a data tracking system that, at a minimum: a. Tracks data transport from element input to element output | essential | demo | B |
| | SMC-6335-2-b | The LSM shall, as needed, update a data tracking system that, at a minimum: b. Allows the status of all product-production activities to be determined | essential | demo | B |
| SMC-6340 | SMC-6340-a | The SMC shall track system configuration that, at a minimum, audits: a. Hardware resources | essential | demo | B |
| | SMC-6340-b | The SMC shall track system configuration that, at a minimum, audits: b. Software resources | essential | demo | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| SMC-6345 | SMC-6345-1 | The LSM shall, as needed, perform configuration accountability to include, at a minimum, the audit of hardware resources within its element. | essential | demo | B |
| | SMC-6345-2 | The LSM shall, as needed, perform configuration accountability to include, at a minimum, the audit of software resources within its element. | essential | demo | B |
| SMC-6360 | SMC-6360-1 | The SMC shall maintain ESDIS project authorized billing algorithms used to calculate resource utilization costs. | essential | demo | B |
| | SMC-6360-2 | The SMC shall maintain ESDIS project authorized billing rates used to calculate resource utilization costs. | essential | demo | B |
| SMC-6370 | SMC-6370 | The SMC shall make the billing algorithms available to other elements for the purpose of informing science users of the cost of ECS services. | essential | demo | B |
| SMC-6380 | SMC-6380 | The SMC shall calculate the resource unit costs associated with processing information from system input to system output. | essential | test | B |
| SMC-6385 | SMC-6385 | The LSM shall, as needed, calculate the resource unit cost associated with processing information from element input to element output. | essential | test | B |
| SMC-6390 | SMC-6390-1-a | The SMC shall establish resource utilization account information for, at a minimum: a. Individuals | essential | test | B |
| | SMC-6390-1-b | The SMC shall establish resource utilization account information for, at a minimum: b. Groups | essential | test | B |
| | SMC-6390-1-c | The SMC shall establish, maintain, and update resource utilization account information for, at a minimum: c. Processes | essential | test | B |
| | SMC-6390-2-a | The SMC shall maintain resource utilization account information for, at a minimum: a. Individuals | essential | test | B |
| | SMC-6390-2-b | The SMC shall maintain resource utilization account information for, at a minimum: b. Groups | essential | test | B |
| | SMC-6390-2-c | The SMC shall maintain resource utilization account information for, at a minimum: c. Processes | essential | test | B |
| | SMC-6390-3-a | The SMC shall update resource utilization account information for, at a minimum: a. Individuals | essential | test | B |
| | SMC-6390-3-b | The SMC shall update resource utilization account information for, at a minimum: b. Groups | essential | test | B |
| | SMC-6390-3-c | The SMC shall update resource utilization account information for, at a minimum: c. Processes | essential | test | B |
| SMC-6400 | SMC-6400 | The SMC shall generate invoices, including billing information for ECS. | essential | demo | B |
| SMC-6410 | SMC-6410-1 | The SMC shall perform on a periodic basis the generation of bills. | essential | demo | B |
| | SMC-6410-2 | The SMC shall perform on a periodic basis the distribution of bills. | essential | demo | B |
| SMC-6420 | SMC-6420-1 | The SMC shall perform the accounts payable accounting function for ECS. | essential | test | B |
| | SMC-6420-2 | The SMC shall perform the accounts receivable accounting function for ECS. | essential | test | B |
| | SMC-6420-3 | The SMC shall perform the disposition of receipt accounting function for ECS. | essential | test | B |
| SMC-7300 | SMC-7300-1-a | The SMC shall establish the authorized users inventory to include, at a minimum: a.Users identifications | critical | test | A |
| | SMC-7300-2-a | The SMC shall maintain the authorized users inventory to include, at a minimum: a.Users identifications | critical | test | A |
| | SMC-7300-3-a | The SMC shall update the authorized users inventory to include, at a minimum: a.Users identifications | critical | test | A |
| | SMC-7300-1-b | The SMC shall establish the authorized users inventory to include, at a minimum: b.Addresses | critical | test | A |
| | SMC-7300-2-b | The SMC shall maintain the authorized users inventory to include, at a minimum: b.Addresses | critical | test | A |
| | SMC-7300-3-b | The SMC shall update the authorized users inventory to include, at a minimum: b.Addresses | critical | test | A |
| | SMC-7300-1-c | The SMC shall establish the authorized users inventory to include, at a minimum: c.Allowed privileges | critical | test | A |
| | SMC-7300-2-c | The SMC shall maintain update the authorized users inventory to include, at a minimum: c.Allowed privileges | critical | test | A |
| | SMC-7300-3-c | The SMC shall update the authorized users inventory to include, at a minimum: c.Allowed privileges | critical | test | A |
| SMC-7310 | SMC-7310-a | The SMC shall establish, maintain, and update the approved facility and equipment inventory to include, at a minimum: a. Facility and equipment identification | essential | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-7310-b | The SMC shall establish, maintain, and update the approved facility and equipment inventory to include, at a minimum: b. Addresses | essential | test | B |
| | SMC-7310-c | The SMC shall establish, maintain, and update the approved facility and equipment inventory to include, at a minimum: c. Allowed accesses to privileges | essential | test | B |
| SMC-7320 | SMC-7320-1-a | The SMC shall establish the system profile, as opposed to science data profile, inventory to include, at a minimum: a.Data identifications | essential | test | B |
| | SMC-7320-2-a | The SMC shall maintain the system profile, as opposed to science data profile, inventory to include, at a minimum: a.Data identifications | essential | test | B |
| | SMC-7320-3-a | The SMC shall update the system profile, as opposed to science data profile, inventory to include, at a minimum: a.Data identifications | essential | test | B |
| | SMC-7320-1-b | The SMC shall establish the system profile, as opposed to science data profile, inventory to include, at a minimum: b.Data purposes | essential | test | B |
| | SMC-7320-2-b | The SMC shall maintain the system profile, as opposed to science data profile, inventory to include, at a minimum: b.Data purposes | essential | test | B |
| | SMC-7320-3-b | The SMC shall update the system profile, as opposed to science data profile, inventory to include, at a minimum: b.Data purposes | essential | test | B |
| | SMC-7320-1-c | The SMC shall establish the system profile, as opposed to science data profile, inventory to include, at a minimum: c.Data locations | essential | test | B |
| | SMC-7320-2-c | The SMC shall maintain the system profile, as opposed to science data profile, inventory to include, at a minimum: c.Data locations | essential | test | B |
| | SMC-7320-3-c | The SMC shall update the system profile, as opposed to science data profile, inventory to include, at a minimum: c.Data locations | essential | test | B |
| | SMC-7320-1-d | The SMC shall establish the system profile, as opposed to science data profile, inventory to include, at a minimum: d.Data classifications (proprietary, open, confidential, etc.) | essential | test | B |
| | SMC-7320-2-d | The SMC shall maintain the system profile, as opposed to science data profile, inventory to include, at a minimum: d.Data classifications (proprietary, open, confidential, etc.) | essential | test | B |
| | SMC-7320-3-d | The SMC shall update the system profile, as opposed to science data profile, inventory to include, at a minimum: d.Data classifications (proprietary, open, confidential, etc.) | essential | test | B |
| | SMC-7320-1-e | The SMC shall establish the system profile, as opposed to science data profile, inventory to include, at a minimum: e.Data priorities | essential | test | B |
| | SMC-7320-2-e | The SMC shall maintain the system profile, as opposed to science data profile, inventory to include, at a minimum: e.Data priorities | essential | test | B |
| | SMC-7320-3-e | The SMC shall update the system profile, as opposed to science data profile, inventory to include, at a minimum: e.Data priorities | essential | test | B |
| SMC-8300 | SMC-8300-a | The SMC shall have a generalized report generator with the capability to customize output reports, covering, at a minimum data previously captured in a management DBMS including : a.All or portions of the system | essential | test | B |
| | SMC-8300-b | The SMC shall have a generalized report generator with the capability to customize output reports, covering, at a minimum data previously captured in a management DBMS including : b.Variable amounts of time | essential | test | B |
| SMC-8305 | SMC-8305-1 | The LSM shall have the same report generator capability as for the SMC, except it shall be limited to generating reports covering only its particular site. | essential | test | B |
| | SMC-8305-2 | The LSM shall have the same report generator capability as for the SMC, except it shall be limited to generating reports covering only its particular element. | essential | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| SMC-8700 | SMC-8700-1-a-1 | The SMC shall have the capability to generate a functional allocation report which gives the current allocation of ground segment functions to the sites, including, at a minimum: a.The allocation of generation function by standard product to each active archive | essential | test | B |
| | SMC-8700-1-a-2 | The SMC shall have the capability to generate a functional allocation report which gives the current allocation of ground segment functions to the sites, including, at a minimum: a.The allocation of storage function by standard product to each active archive | essential | test | B |
| | SMC-8700-1-b | The SMC shall have the capability to generate a functional allocation report which gives the current allocation of ground segment functions to the sites, including, at a minimum: b.The allocation of instrument responsibility to each ICC | essential | test | B |
| | SMC-8700-2-a-1 | The SMC shall have the capability to generate a functional allocation report which gives the current allocation of ground segment functions to the elements, including, at a minimum: a.The allocation of generation function by standard product to each active archive | essential | test | B |
| | SMC-8700-2-a-2 | The SMC shall have the capability to generate a functional allocation report which gives the current allocation of ground segment functions to the elements, including, at a minimum: a.The allocation of storage function by standard product to each active archive | essential | test | B |
| | SMC-8700-2-b | The SMC shall have the capability to generate a functional allocation report which gives the current allocation of ground segment functions to the elements, including, at a minimum: b.The allocation of instrument responsibility to each ICC | essential | test | B |
| SMC-8705 | SMC-8705-1 | The LSM shall have the capability to generate the same types of reports listed under the SMC report generation service, except that each report shall cover only its particular site. | essential | test | B |
| | SMC-8705-2 | The LSM shall have the capability to generate the same types of reports listed under the SMC report generation service, except that each report shall cover only its particular element. | essential | test | B |
| SMC-8710 | SMC-8710-1-a-1 | The SMC shall have the capability to generate detailed configuration status reports that includes, at a minimum: a.Current status of all hardware | essential | test | B |
| | SMC-8710-1-a-2 | The SMC shall have the capability to generate detailed configuration status reports that includes, at a minimum: a.Current status of all system software | essential | test | B |
| | SMC-8710-1-a-3 | The SMC shall have the capability to generate detailed configuration status reports that includes, at a minimum: a.Current status of all scientific software | essential | test | B |
| | SMC-8710-1-b | The SMC shall have the capability to generate detailed configuration status reports that includes, at a minimum: b.Reason why item not currently operational | essential | test | B |
| | SMC-8710-2-a-1 | The SMC shall have the capability to generate summary configuration status reports that includes, at a minimum: a.Current status of all hardware | essential | test | B |
| | SMC-8710-2-a-2 | The SMC shall have the capability to generate summary configuration status reports that includes, at a minimum: a.Current status of all system software | essential | test | B |
| | SMC-8710-2-a-3 | The SMC shall have the capability to generate summary configuration status reports that includes, at a minimum: a.Current status of all scientific software | essential | test | B |
| | SMC-8710-2-b | The SMC shall have the capability to generate summary configuration status reports that includes, at a minimum: b.Reason why item not currently operational | essential | test | B |
| SMC-8730 | SMC-8730-1-1-a | The SMC shall have the capability to generate reports showing detailed information about the maintenance schedule for system hardware, including, at a minimum: a.Routine maintenance schedules | essential | test | B |
| | SMC-8730-1-2-a | The SMC shall have the capability to generate reports showing detailed information about the maintenance schedule for system software, including, at a minimum: a.Routine maintenance schedules | essential | test | B |
| | SMC-8730-1-3-a | The SMC shall have the capability to generate reports showing detailed information about the maintenance schedule for scientific software, including, at a minimum: a.Routine maintenance schedules | essential | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-8730-1-1-b | The SMC shall have the capability to generate reports showing detailed information about the maintenance schedule for system hardware, including, at a minimum: b.Non-routine maintenance schedules | essential | test | B |
| | SMC-8730-1-2-b | The SMC shall have the capability to generate reports showing detailed information about the maintenance schedule for system software, including, at a minimum: b.Non-routine maintenance schedules | essential | test | B |
| | SMC-8730-1-3-b | The SMC shall have the capability to generate reports showing detailed information about the maintenance schedule for scientific software, including, at a minimum: b.Non-routine maintenance schedules | essential | test | B |
| | SMC-8730-1-1-c | The SMC shall have the capability to generate reports showing detailed information about the maintenance schedule for system hardware, including, at a minimum: c.Upgrade maintenance schedule | essential | test | B |
| | SMC-8730-1-2-c | The SMC shall have the capability to generate reports showing detailed information about the maintenance schedule for system software, including, at a minimum: c.Upgrade maintenance schedule | essential | test | B |
| | SMC-8730-1-3-c | The SMC shall have the capability to generate reports showing detailed information about the maintenance schedule for scientific software, including, at a minimum: c.Upgrade maintenance schedule | essential | test | B |
| | SMC-8730-2-1-a | The SMC shall have the capability to generate reports showing summary information about the maintenance schedule for system hardware, including, at a minimum: a.Routine maintenance schedules | essential | test | B |
| | SMC-8730-2-2-a | The SMC shall have the capability to generate reports showing summary information about the maintenance schedule for system software, including, at a minimum: a.Routine maintenance schedules | essential | test | B |
| | SMC-8730-2-3-a | The SMC shall have the capability to generate reports showing summary information about the maintenance schedule for scientific software, including, at a minimum: a.Routine maintenance schedules | essential | test | B |
| | SMC-8730-2-1-b | The SMC shall have the capability to generate reports showing summary information about the maintenance schedule for system hardware, including, at a minimum: b.Non-routine maintenance schedules | essential | test | B |
| | SMC-8730-2-2-b | The SMC shall have the capability to generate reports showing summary information about the maintenance schedule for system software, including, at a minimum: b.Non-routine maintenance schedules | essential | test | B |
| | SMC-8730-2-3-b | The SMC shall have the capability to generate reports showing summary information about the maintenance schedule for scientific software, including, at a minimum: b.Non-routine maintenance schedules | essential | test | B |
| | SMC-8730-2-1-c | The SMC shall have the capability to generate reports showing summary information about the maintenance schedule for system hardware, including, at a minimum: c.Upgrade maintenance schedule | essential | test | B |
| | SMC-8730-2-2-c | The SMC shall have the capability to generate reports showing summary information about the maintenance schedule for system software, including, at a minimum: c.Upgrade maintenance schedule | essential | test | B |
| | SMC-8730-2-3-c | The SMC shall have the capability to generate reports showing summary information about the maintenance schedule for scientific software, including, at a minimum: c.Upgrade maintenance schedule | essential | test | B |
| SMC-8750 | SMC-8750-1-a | The SMC shall have the capability to generate detailed training reports, including, at a minimum: a.Training programs | fulfillment | analysis | B |
| | SMC-8750-1-b | The SMC shall have the capability to generate detailed training reports, including, at a minimum: b.Training course schedules | fulfillment | analysis | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-8750-1-c | The SMC shall have the capability to generate detailed training reports, including, at a minimum: c.Training course contents | fulfillment | analysis | B |
| | SMC-8750-1-d | The SMC shall have the capability to generate detailed training reports, including, at a minimum: d.Training course locations | fulfillment | analysis | B |
| | SMC-8750-1-e | The SMC shall have the capability to generate detailed training reports, including, at a minimum: e.Training attendees | fulfillment | analysis | B |
| | SMC-8750-2-a | The SMC shall have the capability to generate summary training reports, including, at a minimum: a.Training programs | fulfillment | analysis | B |
| | SMC-8750-2-b | The SMC shall have the capability to generate summary training reports, including, at a minimum: b.Training course schedules | fulfillment | analysis | B |
| | SMC-8750-2-c | The SMC shall have the capability to generate summary training reports, including, at a minimum: c.Training course contents | fulfillment | analysis | B |
| | SMC-8750-2-d | The SMC shall have the capability to generate summary training reports, including, at a minimum: d.Training course locations | fulfillment | analysis | B |
| | SMC-8750-2-e | The SMC shall have the capability to generate summary training reports, including, at a minimum: e.Training attendees | fulfillment | analysis | B |
| SMC-8770 | SMC-8770-1-a-1 | The SMC shall have the capability to generate, at a minimum, detailed reports showing the inventory of: a.Hardware | essential | test | B |
| | SMC-8770-1-a-2 | The SMC shall have the capability to generate, at a minimum, detailed reports showing the inventory of: a.System software | essential | test | B |
| | SMC-8770-1-a-3 | The SMC shall have the capability to generate, at a minimum, detailed reports showing the inventory of: a.Scientific software | essential | test | B |
| | SMC-8770-1-b-1 | The SMC shall have the capability to generate, at a minimum, detailed reports showing the inventory of: b.Spares | essential | test | B |
| | SMC-8770-1-b-2 | The SMC shall have the capability to generate, at a minimum, detailed reports showing the inventory of: b.Consumables | essential | test | B |
| | SMC-8770-2-a-1 | The SMC shall have the capability to generate, at a minimum, summary reports showing the inventory of: a.Hardware | essential | test | B |
| | SMC-8770-2-a-3 | The SMC shall have the capability to generate, at a minimum, summary reports showing the inventory of: a.Scientific software | essential | test | B |
| | SMC-8770-2-b-1 | The SMC shall have the capability to generate, at a minimum, summary reports showing the inventory of: b.Spares | essential | test | B |
| | SMC-8770-2-b-2 | The SMC shall have the capability to generate, at a minimum, summary reports showing the inventory of: b.Consumables | essential | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| SMC-8790 | SMC-8790-a | The SMC shall have the capability to generate, as necessary, a list of proposed enhancements with at least these elements: a.Proposal name | fulfillment | analysis | B |
| | SMC-8790-b | The SMC shall have the capability to generate, as necessary, a list of proposed enhancements with at least these elements: b.Description of enhancement | fulfillment | analysis | B |
| | SMC-8790-c | The SMC shall have the capability to generate, as necessary, a list of proposed enhancements with at least these elements: c.Rationale | fulfillment | analysis | B |
| | SMC-8790-d | The SMC shall have the capability to generate, as necessary, a list of proposed enhancements with at least these elements: d.Impacts | fulfillment | analysis | B |
| | SMC-8790-e | The SMC shall have the capability to generate, as necessary, a list of proposed enhancements with at least these elements: e.Costs | fulfillment | analysis | B |
| | SMC-8790-f | The SMC shall have the capability to generate, as necessary, a list of proposed enhancements with at least these elements: f.Milestone schedule | fulfillment | analysis | B |
| SMC-8800 | SMC-8800-1-a-1 | The SMC shall have the capability to generate detailed reports indicating the overall performance of the ECS. At a minimum, they shall include: a.Scheduled versus actual data collection of routine data | essential | test | B |
| | SMC-8800-1-a-2 | The SMC shall have the capability to generate detailed reports indicating the overall performance of the ECS. At a minimum, they shall include: a.Scheduled versus actual data processing of routine data | essential | test | B |
| | SMC-8800-1-a-3 | The SMC shall have the capability to generate detailed reports indicating the overall performance of the ECS. At a minimum, they shall include: a.Scheduled versus actual data retrieval of routine data | essential | test | B |
| | SMC-8800-1-a-4 | The SMC shall have the capability to generate detailed reports indicating the overall performance of the ECS. At a minimum, they shall include: a.Scheduled versus actual data delivery of routine data | essential | test | B |
| | SMC-8800-1-b-1 | The SMC shall have the capability to generate detailed reports indicating the overall performance of the ECS. At a minimum, they shall include: b.Scheduled versus actual data collection of user requested data | essential | test | B |
| | SMC-8800-1-b-2 | The SMC shall have the capability to generate detailed reports indicating the overall performance of the ECS. At a minimum, they shall include: b.Scheduled versus actual data processing of user requested data | essential | test | B |
| | SMC-8800-1-b-3 | The SMC shall have the capability to generate detailed reports indicating the overall performance of the ECS. At a minimum, they shall include: b.Scheduled versus actual data retrieval of user requested data | essential | test | B |
| | SMC-8800-1-b-4 | The SMC shall have the capability to generate detailed reports indicating the overall performance of the ECS. At a minimum, they shall include: b.Scheduled versus actual data delivery of user requested data | essential | test | B |
| | SMC-8800-1-c | The SMC shall have the capability to generate detailed reports indicating the overall performance of the ECS. At a minimum, they shall include: c.Reason(s) for failure to meet schedules | essential | test | B |
| | SMC-8800-1-d | The SMC shall have the capability to generate detailed reports indicating the overall performance of the ECS. At a minimum, they shall include: d.Quality of the data | essential | test | B |
| | SMC-8800-1-e | The SMC shall have the capability to generate detailed reports indicating the overall performance of the ECS. At a minimum, they shall include: e.Ground operations event execution | essential | test | B |
| | SMC-8800-1-f-1 | The SMC shall have the capability to generate detailed reports indicating the overall performance of the ECS. At a minimum, they shall include: f.Number of interactive user requests | essential | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-8800-1-f-2 | The SMC shall have the capability to generate detailed reports indicating the overall performance of the ECS. At a minimum, they shall include: f.Timeliness of response | essential | test | B |
| | SMC-8800-1-g | The SMC shall have the capability to generate detailed reports indicating the overall performance of the ECS. At a minimum, they shall include: g.User feedback | essential | test | B |
| | SMC-8800-2-a-1 | The SMC shall have the capability to generate summary reports indicating the overall performance of the ECS. At a minimum, they shall include: a.Scheduled versus actual data collection of routine data | essential | test | B |
| | SMC-8800-2-a-2 | The SMC shall have the capability to generate summary reports indicating the overall performance of the ECS. At a minimum, they shall include: a.Scheduled versus actual data processing of routine data | essential | test | B |
| | SMC-8800-2-a-3 | The SMC shall have the capability to generate summary reports indicating the overall performance of the ECS. At a minimum, they shall include: a.Scheduled versus actual data retrieval of routine data | essential | test | B |
| | SMC-8800-2-a-4 | The SMC shall have the capability to generate summary reports indicating the overall performance of the ECS. At a minimum, they shall include: a.Scheduled versus actual data delivery of routine data | essential | test | B |
| | SMC-8800-2-b-1 | The SMC shall have the capability to generate summary reports indicating the overall performance of the ECS. At a minimum, they shall include: b.Scheduled versus actual data collection of user requested data | essential | test | B |
| | SMC-8800-2-b-2 | The SMC shall have the capability to generate summary reports indicating the overall performance of the ECS. At a minimum, they shall include: b.Scheduled versus actual data processing of user requested data | essential | test | B |
| | SMC-8800-2-b-3 | The SMC shall have the capability to generate summary reports indicating the overall performance of the ECS. At a minimum, they shall include: b.Scheduled versus actual data retrieval of user requested data | essential | test | B |
| | SMC-8800-2-b-4 | The SMC shall have the capability to generate summary reports indicating the overall performance of the ECS. At a minimum, they shall include: b.Scheduled versus actual data delivery of user requested data | essential | test | B |
| | SMC-8800-2-c | The SMC shall have the capability to generate summary reports indicating the overall performance of the ECS. At a minimum, they shall include: c.Reason(s) for failure to meet schedules | essential | test | B |
| | SMC-8800-2-d | The SMC shall have the capability to generate summary reports indicating the overall performance of the ECS. At a minimum, they shall include: d.Quality of the data | essential | test | B |
| | SMC-8800-2-e | The SMC shall have the capability to generate summary reports indicating the overall performance of the ECS. At a minimum, they shall include: e.Ground operations event execution | essential | test | B |
| | SMC-8800-2-f-1 | The SMC shall have the capability to generate summary reports indicating the overall performance of the ECS. At a minimum, they shall include: f.Number of interactive user requests | essential | test | B |
| | SMC-8800-2-f-2 | The SMC shall have the capability to generate summary reports indicating the overall performance of the ECS. At a minimum, they shall include: f.Timeliness of response | essential | test | B |
| | SMC-8800-2-g | The SMC shall have the capability to generate summary reports indicating the overall performance of the ECS. At a minimum, they shall include: g.User feedback | essential | test | B |
| SMC-8820 | SMC-8820-1-1 | The SMC shall have the capability to generate detailed reports indicating the product generation status made in processing all standard products. | essential | test | C |
| | SMC-8820-1-2 | The SMC shall have the capability to generate detailed reports indicating the product generation status made in reprocessing all standard products. | essential | test | C |
| | SMC-8820-1-3 | The SMC shall have the capability to generate detailed reports indicating the product generation status made in storage of all standard products. | essential | test | C |
| | SMC-8820-1-4 | The SMC shall have the capability to generate detailed reports indicating the product generation status made in processing quick-look data. | essential | test | C |
| | SMC-8820-2-1 | The SMC shall have the capability to generate summary reports indicating the product generation status made in processing all standard products. | essential | test | C |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-8820-2-2 | The SMC shall have the capability to generate summary reports indicating the product generation status made in reprocessing all standard products. | essential | test | C |
| | SMC-8820-2-3 | The SMC shall have the capability to generate summary reports indicating the product generation status made in storage of all standard products. | essential | test | C |
| | SMC-8820-2-4 | The SMC shall have the capability to generate summary reports indicating the product generation status made in processing quick-look data. | essential | test | C |
| SMC-8840 | SMC-8840-1-a | The SMC shall have the capability to generate detailed reports indicating the performance of ground resources, including, at a minimum: a.Resource availability | essential | test | B |
| | SMC-8840-1-b | The SMC shall have the capability to generate detailed reports indicating the performance of ground resources, including, at a minimum: b.Reason for down time | essential | test | B |
| | SMC-8840-1-c | The SMC shall have the capability to generate detailed reports indicating the performance of ground resources, including, at a minimum: c.Resource utilization | essential | test | B |
| | SMC-8840-1-d | The SMC shall have the capability to generate detailed reports indicating the performance of ground resources, including, at a minimum: d.Ability of resource to meet performance criteria | essential | test | B |
| | SMC-8840-1-e-1-1 | The SMC shall have the capability to generate detailed reports indicating the performance of ground resources, including, at a minimum: e.Short-term trend analysis results | essential | test | B |
| | SMC-8840-2-a | The SMC shall have the capability to generate summary reports indicating the performance of ground resources, including, at a minimum: a.Resource availability | essential | test | B |
| | SMC-8840-2-b | The SMC shall have the capability to generate summary reports indicating the performance of ground resources, including, at a minimum: b.Reason for down time | essential | test | B |
| | SMC-8840-2-c | The SMC shall have the capability to generate summary reports indicating the performance of ground resources, including, at a minimum: c.Resource utilization | essential | test | B |
| | SMC-8840-2-d | The SMC shall have the capability to generate summary reports indicating the performance of ground resources, including, at a minimum: d.Ability of resource to meet performance criteria | essential | test | B |
| | SMC-8840-1-e-1-2 | The SMC shall have the capability to generate detailed reports indicating the performance of ground resources, including, at a minimum: e.Short-term capacity planning results | essential | test | B |
| | SMC-8840-1-e-2-1 | The SMC shall have the capability to generate detailed reports indicating the performance of ground resources, including, at a minimum: e.Long-term trend analysis results | essential | test | B |
| | SMC-8840-1-e-2-2 | The SMC shall have the capability to generate detailed reports indicating the performance of ground resources, including, at a minimum: e.Long-term capacity planning results | essential | test | B |
| | SMC-8840-2-e-1-1 | The SMC shall have the capability to generate summary reports indicating the performance of ground resources, including, at a minimum: e.Short-term trend analysis results | essential | test | B |
| | SMC-8840-2-e-1-2 | The SMC shall have the capability to generate summary reports indicating the performance of ground resources, including, at a minimum: e.Short-term capacity planning results | essential | test | B |
| | SMC-8840-2-e-2-1 | The SMC shall have the capability to generate summary reports indicating the performance of ground resources, including, at a minimum: e.Long-term trend analysis results | essential | test | B |
| | SMC-8840-2-e-2-2 | The SMC shall have the capability to generate summary reports indicating the performance of ground resources, including, at a minimum: e.Long-term capacity planning results | essential | test | B |
| SMC-8841 | SMC-8841-1-a | The SMC shall have the capability to generate detailed user feedback analysis reports describing the results of analyzing user satisfaction queries, including, at a minimum: a.User information | essential | test | B |
| | SMC-8841-1-b | The SMC shall have the capability to generate detailed user feedback analysis reports describing the results of analyzing user satisfaction queries, including, at a minimum: b.Type of transaction | essential | test | B |
| | SMC-8841-1-c | The SMC shall have the capability to generate detailed user feedback analysis reports describing the results of analyzing user satisfaction queries, including, at a minimum: c.Satisfaction statistics | essential | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-8841-1-d | The SMC shall have the capability to generate detailed user feedback analysis reports describing the results of analyzing user satisfaction queries, including, at a minimum: d.User recommendations | essential | test | B |
| | SMC-8841-2-a | The SMC shall have the capability to generate summary user feedback analysis reports describing the results of analyzing user satisfaction queries, including, at a minimum: a.User information | essential | test | B |
| | SMC-8841-1-e | The SMC shall have the capability to generate detailed user feedback analysis reports describing the results of analyzing user satisfaction queries, including, at a minimum: e.SMC recommendations | essential | test | B |
| | SMC-8841-2-b | The SMC shall have the capability to generate summary user feedback analysis reports describing the results of analyzing user satisfaction queries, including, at a minimum: b.Type of transaction | essential | test | B |
| | SMC-8841-2-c | The SMC shall have the capability to generate summary user feedback analysis reports describing the results of analyzing user satisfaction queries, including, at a minimum: c.Satisfaction statistics | essential | test | B |
| | SMC-8841-2-d | The SMC shall have the capability to generate summary user feedback analysis reports describing the results of analyzing user satisfaction queries, including, at a minimum: d.User recommendations | essential | test | B |
| | SMC-8841-2-e | The SMC shall have the capability to generate summary user feedback analysis reports describing the results of analyzing user satisfaction queries, including, at a minimum: e.SMC recommendations | essential | test | B |
| SMC-8860 | SMC-8860-1-a | The SMC shall have the capability to generate detailed fault management reports describing the fault management of ground resources, including, at a minimum: a.Fault type and description | essential | test | B |
| | SMC-8860-1-b | The SMC shall have the capability to generate detailed fault management reports describing the fault management of ground resources, including, at a minimum: b.Time of occurrence of fault | essential | test | B |
| | SMC-8860-1-c | The SMC shall have the capability to generate detailed fault management reports describing the fault management of ground resources, including, at a minimum: c.Effect on system | essential | test | B |
| | SMC-8860-1-d | The SMC shall have the capability to generate detailed fault management reports describing the fault management of ground resources, including, at a minimum: d.Status of fault resolution | essential | test | B |
| | SMC-8860-1-e | The SMC shall have the capability to generate detailed fault management reports describing the fault management of ground resources, including, at a minimum: e.Fault statistics | essential | test | B |
| | SMC-8860-2-a | The SMC shall have the capability to generate summary fault management reports describing the fault management of ground resources, including, at a minimum: a.Fault type and description | essential | test | B |
| | SMC-8860-2-b | The SMC shall have the capability to generate summary fault management reports describing the fault management of ground resources, including, at a minimum: b.Time of occurrence of fault | essential | test | B |
| | SMC-8860-2-c | The SMC shall have the capability to generate summary fault management reports describing the fault management of ground resources, including, at a minimum: c.Effect on system | essential | test | B |
| | SMC-8860-2-d | The SMC shall have the capability to generate summary fault management reports describing the fault management of ground resources, including, at a minimum: d.Status of fault resolution | essential | test | B |
| | SMC-8860-2-e | The SMC shall have the capability to generate summary fault management reports describing the fault management of ground resources, including, at a minimum: e.Fault statistics | essential | test | B |
| SMC-8880 | SMC-8880-1-1-a | The SMC shall have the capability to generate detailed security compromise reports indicating security compromises of ground resources, including, at a minimum: a.Security compromise type and description | critical | test | B |
| | SMC-8880-1-2-a | The SMC shall have the capability to generate detailed security compromise reports indicating security compromises of ground facilities, including, at a minimum: a.Security compromise type and description | critical | test | B |
| | SMC-8880-2-1-a | The SMC shall have the capability to generate summary security compromise reports indicating security compromises of ground resources, including, at a minimum: a.Security compromise type and description | critical | test | B |
| | SMC-8880-2-2-a | The SMC shall have the capability to generate summary security compromise reports indicating security compromises of ground facilities, including, at a minimum: a.Security compromise type and description | critical | test | B |
| | SMC-8880-1-1-b | The SMC shall have the capability to generate detailed security compromise reports indicating security compromises of ground resources, including, at a minimum: b.Time of occurrence | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-8880-1-2-b | The SMC shall have the capability to generate detailed security compromise reports indicating security compromises of ground facilities, including, at a minimum: b.Time of occurrence | critical | test | B |
| | SMC-8880-2-1-b | The SMC shall have the capability to generate summary security compromise reports indicating security compromises of ground resources, including, at a minimum: b.Time of occurrence | critical | test | B |
| | SMC-8880-2-2-b | The SMC shall have the capability to generate summary security compromise reports indicating security compromises of ground facilities, including, at a minimum: b.Time of occurrence | critical | test | B |
| | SMC-8880-1-1-c | The SMC shall have the capability to generate detailed security compromise reports indicating security compromises of ground resources, including, at a minimum: c.Cause of security compromise | critical | test | B |
| | SMC-8880-1-2-c | The SMC shall have the capability to generate detailed security compromise reports indicating security compromises of ground facilities, including, at a minimum: c.Cause of security compromise | critical | test | B |
| | SMC-8880-2-1-c | The SMC shall have the capability to generate summary security compromise reports indicating security compromises of ground resources, including, at a minimum: c.Cause of security compromise | critical | test | B |
| | SMC-8880-2-2-c | The SMC shall have the capability to generate summary security compromise reports indicating security compromises of ground facilities, including, at a minimum: c.Cause of security compromise | critical | test | B |
| | SMC-8880-1-1-d | The SMC shall have the capability to generate detailed security compromise reports indicating security compromises of ground resources, including, at a minimum: d.Impact on system | critical | test | B |
| | SMC-8880-1-2-d | The SMC shall have the capability to generate detailed security compromise reports indicating security compromises of ground facilities, including, at a minimum: d.Impact on system | critical | test | B |
| | SMC-8880-2-1-d | The SMC shall have the capability to generate summary security compromise reports indicating security compromises of ground resources, including, at a minimum: d.Impact on system | critical | test | B |
| | SMC-8880-2-2-d | The SMC shall have the capability to generate summary security compromise reports indicating security compromises of ground facilities, including, at a minimum: d.Impact on system | critical | test | B |
| | SMC-8880-1-1-e | The SMC shall have the capability to generate detailed security compromise reports indicating security compromises of ground resources, including, at a minimum: e.Status of security compromise resolution | critical | test | B |
| | SMC-8880-1-2-e | The SMC shall have the capability to generate detailed security compromise reports indicating security compromises of ground facilities, including, at a minimum: e.Status of security compromise resolution | critical | test | B |
| | SMC-8880-2-1-e | The SMC shall have the capability to generate summary security compromise reports indicating security compromises of ground resources, including, at a minimum: e.Status of security compromise resolution | critical | test | B |
| | SMC-8880-2-2-e | The SMC shall have the capability to generate summary security compromise reports indicating security compromises of ground facilities, including, at a minimum: e.Status of security compromise resolution | critical | test | B |
| | SMC-8880-1-1-f | The SMC shall have the capability to generate detailed security compromise reports indicating security compromises of ground resources, including, at a minimum: f.Security compromise statistics | critical | test | B |
| | SMC-8880-1-2-f | The SMC shall have the capability to generate detailed security compromise reports indicating security compromises of ground facilities, including, at a minimum: f.Security compromise statistics | critical | test | B |
| | SMC-8880-2-1-f | The SMC shall have the capability to generate summary security compromise reports indicating security compromises of ground resources, including, at a minimum: f.Security compromise statistics | critical | test | B |
| | SMC-8880-2-2-f | The SMC shall have the capability to generate summary security compromise reports indicating security compromises of ground facilities, including, at a minimum: f.Security compromise statistics | critical | test | B |
| | SMC-8880-1-1-g | The SMC shall have the capability to generate detailed security compromise reports indicating security compromises of ground resources, including, at a minimum: g.Results of security compromise risk analysis | critical | test | B |
| | SMC-8880-1-2-g | The SMC shall have the capability to generate detailed security compromise reports indicating security compromises of ground facilities, including, at a minimum: g.Results of security compromise risk analysis | critical | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-8880-2-1-g | The SMC shall have the capability to generate summary security compromise reports indicating security compromises of ground resources, including, at a minimum: g.Results of security compromise risk analysis | critical | test | B |
| | SMC-8880-2-2-g | The SMC shall have the capability to generate summary security compromise reports indicating security compromises of ground facilities, including, at a minimum: g.Results of security compromise risk analysis | critical | test | B |
| SMC-8890 | SMC-8890-1-1 | The SMC shall have the capability to generate detailed accountability reports describing the results of accounting audits of ground resources. | essential | test | B |
| | SMC-8890-1-2 | The SMC shall have the capability to generate detailed accountability reports describing the results of accounting audits of security. | essential | test | B |
| | SMC-8890-1-3 | The SMC shall have the capability to generate detailed accountability reports describing the results of accounting audits of work-in-process. | essential | test | B |
| | SMC-8890-1-4 | The SMC shall have the capability to generate detailed accountability reports describing the results of accounting audits of data. | essential | test | B |
| | SMC-8890-1-5 | The SMC shall have the capability to generate detailed accountability reports describing the results of accounting audits of users of the system. | essential | test | B |
| | SMC-8890-2-1 | The SMC shall have the capability to generate summary accountability reports describing the results of accounting audits of ground resources. | essential | test | B |
| | SMC-8890-2-2 | The SMC shall have the capability to generate summary accountability reports describing the results of accounting audits of security. | essential | test | B |
| | SMC-8890-2-3 | The SMC shall have the capability to generate summary accountability reports describing the results of accounting audits of work-in-process. | essential | test | B |
| | SMC-8890-2-4 | The SMC shall have the capability to generate summary accountability reports describing the results of accounting audits of data. | essential | test | B |
| | SMC-8890-2-5 | The SMC shall have the capability to generate summary accountability reports describing the results of accounting audits of users of the system. | essential | test | B |
| SMC-8920 | SMC-8920-1-1-a-1-1 | The SMC shall have the capability to generate detailed reports indicating the financial accounting of ground segment resource utilization by ECS users, including, at a minimum: a.Account authorization by users | essential | test | B |
| | SMC-8920-1-1-a-1-2 | The SMC shall have the capability to generate detailed reports indicating the financial accounting of ground segment resource utilization by ECS users, including, at a minimum: a.Account authorization by groups | essential | test | B |
| | SMC-8920-1-1-a-2-1 | The SMC shall have the capability to generate detailed reports indicating the financial accounting of ground segment resource utilization by ECS users, including, at a minimum: a.Account balances by users | essential | test | B |
| | SMC-8920-1-1-a-2-2 | The SMC shall have the capability to generate detailed reports indicating the financial accounting of ground segment resource utilization by ECS users, including, at a minimum: a.Account balances by groups | essential | test | B |
| | SMC-8920-1-2-a-1-1 | The SMC shall have the capability to generate detailed reports indicating the financial accounting of ground segment resource utilization by external users, including, at a minimum: a.Account authorization by users | essential | test | B |
| | SMC-8920-1-2-a-1-2 | The SMC shall have the capability to generate detailed reports indicating the financial accounting of ground segment resource utilization by external users, including, at a minimum: a.Account authorization by groups | essential | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-8920-1-2-a-2-1 | The SMC shall have the capability to generate detailed reports indicating the financial accounting of ground segment resource utilization by external users, including, at a minimum: a.Account balances by users | essential | test | B |
| | SMC-8920-1-2-a-2-2 | The SMC shall have the capability to generate detailed reports indicating the financial accounting of ground segment resource utilization by external users, including, at a minimum: a.Account balances by groups | essential | test | B |
| | SMC-8920-2-1-a-1-1 | The SMC shall have the capability to generate summary reports indicating the financial accounting of ground segment resource utilization by ECS users, including, at a minimum: a.Account authorization by users | essential | test | B |
| | SMC-8920-2-1-a-1-2 | The SMC shall have the capability to generate summary reports indicating the financial accounting of ground segment resource utilization by ECS users, including, at a minimum: a.Account authorization by groups | essential | test | B |
| | SMC-8920-2-1-a-2-1 | The SMC shall have the capability to generate summary reports indicating the financial accounting of ground segment resource utilization by ECS users, including, at a minimum: a.Account balances by users | essential | test | B |
| | SMC-8920-2-1-a-2-2 | The SMC shall have the capability to generate summary reports indicating the financial accounting of ground segment resource utilization by ECS users, including, at a minimum: a.Account balances by groups | essential | test | B |
| | SMC-8920-2-2-a-1-1 | The SMC shall have the capability to generate summary reports indicating the financial accounting of ground segment resource utilization by external users, including, at a minimum: a.Account authorization by users | essential | test | B |
| | SMC-8920-2-2-a-1-2 | The SMC shall have the capability to generate summary reports indicating the financial accounting of ground segment resource utilization by external users, including, at a minimum: a.Account authorization by groups | essential | test | B |
| | SMC-8920-2-2-a-2-1 | The SMC shall have the capability to generate summary reports indicating the financial accounting of ground segment resource utilization by external users, including, at a minimum: a.Account balances by users | essential | test | B |
| | SMC-8920-2-2-a-2-2 | The SMC shall have the capability to generate summary reports indicating the financial accounting of ground segment resource utilization by external users, including, at a minimum: a.Account balances by groups | essential | test | B |
| | SMC-8920-1-1-b | The SMC shall have the capability to generate detailed reports indicating the financial accounting of ground segment resource utilization by ECS users, including, at a minimum: b.Resource utilization costs by service rendered | essential | test | B |
| | SMC-8920-1-2-b | The SMC shall have the capability to generate detailed reports indicating the financial accounting of ground segment resource utilization by external users, including, at a minimum: b.Resource utilization costs by service rendered | essential | test | B |
| | SMC-8920-2-1-b | The SMC shall have the capability to generate summary reports indicating the financial accounting of ground segment resource utilization by ECS users, including, at a minimum: b.Resource utilization costs by service rendered | essential | test | B |
| | SMC-8920-2-2-b | The SMC shall have the capability to generate summary reports indicating the financial accounting of ground segment resource utilization by external users, including, at a minimum: b.Resource utilization costs by service rendered | essential | test | B |

## *Table A-1. Requirements by Release (Continued)*

| Level 3 Requirement Source ID | Requirement-by-Release Source ID | Requirement Text | Req. Category | Verif. Method | Rel. |
|---|---|---|---|---|---|
| | SMC-8920-1-1-c | The SMC shall have the capability to generate detailed reports indicating the financial accounting of ground segment resource utilization by ECS users, including, at a minimum: c.End-to-end cost accounting information by standard product | essential | test | B |
| | SMC-8920-1-2-c | The SMC shall have the capability to generate detailed reports indicating the financial accounting of ground segment resource utilization by external users, including, at a minimum: c.End-to-end cost accounting information by standard product | essential | test | B |
| | SMC-8920-2-1-c | The SMC shall have the capability to generate summary reports indicating the financial accounting of ground segment resource utilization by ECS users, including, at a minimum: c.End-to-end cost accounting information by standard product | essential | test | B |
| | SMC-8920-2-2-c | The SMC shall have the capability to generate summary reports indicating the financial accounting of ground segment resource utilization by external users, including, at a minimum: c.End-to-end cost accounting information by standard product | essential | test | B |
| | SMC-8920-1-1-d-1 | The SMC shall have the capability to generate detailed reports indicating the financial accounting of ground segment resource utilization by ECS users, including, at a minimum: d.User accounts payable/accounts receivable information | essential | test | B |
| | SMC-8920-1-1-d-2 | The SMC shall have the capability to generate detailed reports indicating the financial accounting of ground segment resource utilization by ECS users, including, at a minimum: d.Group accounts payable/accounts receivable information | essential | test | B |
| | SMC-8920-1-2-d-1 | The SMC shall have the capability to generate detailed reports indicating the financial accounting of ground segment resource utilization by external users, including, at a minimum: d.User accounts payable/accounts receivable information | essential | test | B |
| | SMC-8920-1-2-d-2 | The SMC shall have the capability to generate detailed reports indicating the financial accounting of ground segment resource utilization by external users, including, at a minimum: d.Group accounts payable/accounts receivable information | essential | test | B |
| | SMC-8920-2-1-d-1 | The SMC shall have the capability to generate summary reports indicating the financial accounting of ground segment resource utilization by ECS users, including, at a minimum: d.User accounts payable/accounts receivable information | essential | test | B |
| | SMC-8920-2-1-d-2 | The SMC shall have the capability to generate summary reports indicating the financial accounting of ground segment resource utilization by ECS users, including, at a minimum: d.Group accounts payable/accounts receivable information | essential | test | B |
| | SMC-8920-2-2-d-1 | The SMC shall have the capability to generate summary reports indicating the financial accounting of ground segment resource utilization by external users, including, at a minimum: d.User accounts payable/accounts receivable information | essential | test | B |
| | SMC-8920-2-2-d-2 | The SMC shall have the capability to generate summary reports indicating the financial accounting of ground segment resource utilization by external users, including, at a minimum: d.Group accounts payable/accounts receivable information | essential | test | B |