Release 6B
Implementation Earth Science Data Model for the ECS Project

Technical Paper

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Abstract

This technical paper contains the Earth Science Data (Conceptual) Model, which organizes and describes the metadata, for the Earth Observation System Data and Information Core System (ECS), for Release 6B Implementation Design. The Data Model includes diagrams that graphically illustrate the relationships between classes, and the attribute specifications. The relationships and information among data objects are described as they are understood and utilized within the Earth Science Community. In addition, the Data Model includes diagrams that graphically illustrate the relationships of classes, the attributes contained within the classes, the characteristics of the relationships between classes, and the attribute specifications. The diagrams and specifications which were previously products of the Interactive Development Environment (IDE)/Object Modeling Technique (OMT) Computer Aided Software Engineering (CASE) Tool, have changed to products of Power Designer, an Entity Relationship Diagram (ERD) representation. The specifications are defined in alphabetical order for cross-reference to the diagrams. This document has incorporated updated material from addendums/erratas from B.0 Implementation Data Model dated May 1997 through Release 6A Data Model dated May 2002.

The relationships and information among the data objects are described as they are understood and used within the Earth Science Community. In conclusion, this technical paper continues to remain under the control of the ECS Configuration Control Board.

Keywords: Attributes, Conceptual, CSDT, Database, Design, Dictionary, Domains, Specifications, ESDT, Files, Valids
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# Change Information Page

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Abstract

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1. Introduction

1.1 Purpose

The purpose of this technical document is to provide modifications to the Release 6B Earth Science Data Model for the ECS Project (420-TP-023-001) which illustrate, specify, and communicate the design of the ECS earth science metadata. This technical paper represents the Release 6B Implementation design of the ECS earth science data model, useful to designers, developers, scientists and managers. The earth science metadata model represented in this document is a practical means of assuring the consistency of data requirements across subsystems, and supporting the data standardization necessary for total system interoperability within a heterogeneous open systems environment.

1.2 Organization

This paper is organized in accordance with ESDIS standard format. A description of the document content follows:

- Section 2 contains the Release 6A Implementation Earth Science object model, class descriptions, attribute specifications and Valids.

If you have any questions regarding technical information contained within this Paper should be addressed to the following ECS contacts:

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Upper Marlboro, MD 20774-5301
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2. Release 6B Implementation Earth Science Data Model

2.1 Release 6B Implementation Earth Science Data Model: ERD Diagrams

The Release 6B Implementation Earth Science Data Model consists primarily of metadata that can be mapped to the upper layers of the data pyramid. This metadata describes the details of large amounts of data that are generally associated with the remaining levels of the data pyramid and archived in various media and format. Data other than metadata are pointed to in the diagrams (e.g., Granules for Levels 0 through 4, Documents, Algorithms, Production History, and Statistics.)

Historical primary implementation modifications since the Release 2 Earth Science Data Model for the ECS Project (420-TP-015-003) to Release 6B are listed below:

- Added new Valids and/or Keywords from MODIS
- Added new Valids and/or Keywords from AMSR, Landsat-7 and Aura
- Added new Valids and/or Keywords from HIRDLS, MLS, OMI and TES on the Aura satellite
- Added new Valids and/or Keywords from GLAS

The Earth Science Data Model is very large and not suited to be displayed legibly in a single diagram (global diagram – Figure 2-2); therefore, it is logically segmented into modules for the purpose of readability. The eight modules, when concatenated, represent the entire Earth Science Data Model.

Offpage connectors are included in the global diagram (Figure 2-2), as required, to allow for relationships to classes within various other modules. Offpage connectors are not, however, included in the diagrams of the submodels (Figures 2-3 through 2-10). Offpage connectors are also used to relate the data that involve classes of data that are not in the Earth Science Data Model. Those attributes having the term “pointer” included in the attribute name indicate that a data object is external to the metadata and a link to the data object must exist.

In this section the various modules are represented by Entity-Relationship Diagrams (ERD) diagrams (Figures 2-2 through 2-10), generated from the Power Designer tool. The specifications for the attributes within each class are found in Section 2.1.1.

An explanation of the differences in representation between ERD (Power Designer) and OMT is presented in Figure 2-1.


**ERD Mapping (Power Designor to OMT)**

<table>
<thead>
<tr>
<th>Multiplicity of Associations</th>
<th>Power Designor</th>
<th>OMT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exactly One</td>
<td><img src="image" alt="Exactly One" /></td>
<td><img src="image" alt="Exactly One" /></td>
</tr>
<tr>
<td>Many (zero or more)</td>
<td><img src="image" alt="Many" /></td>
<td><img src="image" alt="Many" /></td>
</tr>
<tr>
<td>Optional (zero or one)</td>
<td><img src="image" alt="Optional" /></td>
<td><img src="image" alt="Optional" /></td>
</tr>
<tr>
<td>One or More</td>
<td><img src="image" alt="One or More" /></td>
<td><img src="image" alt="One or More" /></td>
</tr>
<tr>
<td>Inheritance</td>
<td><img src="image" alt="Inheritance" /></td>
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<tr>
<td>Dependence</td>
<td><img src="image" alt="Dependence" /></td>
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**Terminology Mapping**

<table>
<thead>
<tr>
<th>Power Designor</th>
<th>OMT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entity</td>
<td>Class</td>
</tr>
<tr>
<td>Data Item</td>
<td>Attribute</td>
</tr>
<tr>
<td>Entity Relationship Design (ERD)</td>
<td>Object-Modeling Technique (OMT)</td>
</tr>
<tr>
<td>Relationship</td>
<td>Association</td>
</tr>
<tr>
<td>Inheritance</td>
<td>Inheritance</td>
</tr>
<tr>
<td>Domain (list of valids)</td>
<td>Domain Value</td>
</tr>
</tbody>
</table>

*Figure 2-1. ERD Mapping*
Available in hardcopy only.

Figure 2-2. Release 6B Implementation Global Model
Table 2-1. Attribute Data Type Definitions

<table>
<thead>
<tr>
<th>Conceptual Data Type</th>
<th>Code in DEF File</th>
<th>What It Stores</th>
<th>Translation Example For SQL Anywhere</th>
</tr>
</thead>
<tbody>
<tr>
<td>Character</td>
<td>A</td>
<td>Character strings of fixed length</td>
<td>char</td>
</tr>
<tr>
<td>Variable Characters</td>
<td>VA</td>
<td>Character strings of variable length</td>
<td>varchar</td>
</tr>
<tr>
<td>Boolean</td>
<td>BL</td>
<td>Two opposing values (true/false; yes/no; 1/0)</td>
<td>numeric(1)</td>
</tr>
<tr>
<td>Text</td>
<td>TXT</td>
<td>Character strings of variable length</td>
<td>long varchar</td>
</tr>
<tr>
<td>Short Integer</td>
<td>SI</td>
<td>16-bit integer</td>
<td>smallint</td>
</tr>
<tr>
<td>Integer</td>
<td>I</td>
<td>32-bit integer</td>
<td>integer</td>
</tr>
<tr>
<td>Number</td>
<td>N</td>
<td>Number with a fixed decimal point</td>
<td>numeric</td>
</tr>
<tr>
<td>Float</td>
<td>F</td>
<td>32-bit floating decimal number</td>
<td>float</td>
</tr>
<tr>
<td>Short Float</td>
<td>SF</td>
<td>Less than 32-bit floating decimal numbers</td>
<td>real</td>
</tr>
<tr>
<td>Long Float</td>
<td>LF</td>
<td>64-bit floating decimal numbers</td>
<td>double</td>
</tr>
<tr>
<td>Date</td>
<td>D</td>
<td>Day, month, and year</td>
<td>date</td>
</tr>
<tr>
<td>Time</td>
<td>T</td>
<td>Hour, minute, and second</td>
<td>time</td>
</tr>
<tr>
<td>Date &amp; Time</td>
<td>DT</td>
<td>Date and time</td>
<td>timestamp</td>
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</table>
Figure 2-3. Data Originator
Figure 2-4. ECSCollection
Figure 2-5. ECSDataGranule
Figure 2-6. LocalitySpatial
Figure 2-7. LocalityTemporal
Figure 2-8. Contact
AlgorithmPackage

PGVersion
AlgorithmPackageVersion
SWVersion
AlgorithmPackageAcceptanceDate
AlgorithmPackageMaturityCode
AlgorithmPackageName
DeliveryPurpose
PGEName
PGIdentifier
PGEFuntion
PGEDateLastModified
SWDateLastModified

SSAPComponent

ComponentType
ComponentName
SSAPAlgorithmPackageName
SSAPInsertDate

SSAPComponentAPVersion
SSAPAlgPackageVersion

Figure 2-9. DeliveredAlgorithmPackage
Figure 2-10. Document
### 2.1.1 Class Definitions

The table below provides a reference list of all classes in the Data Model. Following this table are the class descriptions and list of attributes pertaining to that class.

<table>
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<tr>
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<tr>
<td>2.</td>
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<td>4.</td>
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### Table 2-2. Class Reference Table (4 of 4)

| 114. | StorageMediumClass |
| 115. | SWDevelopmentStandard |
| 116. | SystemDescription |
| 117. | Telephone |
| 118. | Temporal |
| 119. | TemporalKeywordClass |
| 120. | TemporalType |
| 121. | TestPlan |
| 122. | UserCommentDocument |
| 123. | UserGuide |
| 124. | ValidationDocument |
| 125. | VerticalCoordinateSystemContainer |
| 126. | VerticalSpatialDomain |
| 127. | ZoneIdentifierClass |

---

### AdditionalAttributes

#### Description
This class identifies the product specific attributes (i.e. attributes used to describe the unique characteristics of the collection which extend beyond those defined in this model). The 'values' of attributes defined using this mechanism are contained in the class InformationContent.

#### Annotation

#### Attribute List

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<td>AdditionalAttributeDescription</td>
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### AdvertisementDescription

#### Description
This class provides a Description of the Advertisement.
Annotation

Attribute List

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<tbody>
<tr>
<td>SequenceNumber</td>
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<tr>
<td>Description</td>
</tr>
</tbody>
</table>

AdvertisementMaster

Description
Master for all kinds of Advertisements (product, provider and service).

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>UniqueID</td>
</tr>
<tr>
<td>Title</td>
</tr>
<tr>
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</tr>
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<td>ExpirationDate</td>
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AlgorithmDescription

Description
A class providing parameter components for search of the documents and software associated with the SSAP.

Annotation

Attribute List

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<tr>
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<tbody>
<tr>
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</table>
AlgorithmPackage

Description
This class provides the common characteristics of the algorithms used in product generation. These characteristics include the algorithm package name, date, version, maturity code and generating system characteristics for the package.

Annotation

Attribute List

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<td>AlgorithmPackageVersion</td>
</tr>
<tr>
<td>SWVersion</td>
</tr>
<tr>
<td>AlgorithmPackageAcceptanceDate</td>
</tr>
<tr>
<td>AlgorithmPackageMaturityCode</td>
</tr>
<tr>
<td>AlgorithmPackageName</td>
</tr>
<tr>
<td>DeliveryPurpose</td>
</tr>
<tr>
<td>PGEName</td>
</tr>
<tr>
<td>PGEIdentifier</td>
</tr>
<tr>
<td>PGEFunction</td>
</tr>
<tr>
<td>PGEDateLastModified</td>
</tr>
<tr>
<td>SWDateLastModified</td>
</tr>
</tbody>
</table>

AltitudeSystemDefinition

Description
The reference frame or system from which altitudes (elevations) are measured. The term 'altitude' is used instead of the common term 'elevation' to conform to the terminology in Federal Information Processing Standards 70-1 and 173. The class contains the datum name, distance units and encoding method, which provide the definition for the system.

Annotation
## Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AltitudeDatumName</td>
</tr>
<tr>
<td>AltitudeDistanceUnits</td>
</tr>
<tr>
<td>AltitudeEncodingMethod</td>
</tr>
<tr>
<td>AltitudeResolution</td>
</tr>
</tbody>
</table>

### AnalysisSource

#### Description
This class is used to describe the data acquisition or data processing processes, which characterize a collection. Collections can have both data acquisition and data processing processes associated with them. An example would be a weather analysis collection which included data collected using the NWS ASOS network (PlatformType=Network, PlatformShortName=ASOS) which was processed using an NMC analysis model (e.g. AnalysisType=Model, AnalysisShortName=RAFS, AnalysisDescription=Regional Area Forecast System, AnalysisTechnique=Regional Optimal Interpolation.).

#### Annotation

## Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AnalysisType</td>
</tr>
<tr>
<td>AnalysisLongName</td>
</tr>
<tr>
<td>AnalysisShortName</td>
</tr>
<tr>
<td>AnalysisTechnique</td>
</tr>
</tbody>
</table>

### AnalysisSourceGuide

#### Description
This class contains a logical pointer to Analysis Source guides.

#### Annotation
**AncillaryInputGranule**

**Description**
This class contains the logical pointer to the ancillary input used in creation of the granule. Many such objects (i.e., files) may occur per granule.

**Annotation**

**ArchiveCenterGuide**

**Description**
This class contains the logical pointer to the archive center guide.

**Annotation**

**ATBD**

**Description**
This class contains the logical pointer for the Algorithm Theoretical Basis Document.
Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATBDPointer</td>
</tr>
</tbody>
</table>

Author

Description
This class contains the name and affiliation of the author of the document.

Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AuthorName</td>
</tr>
<tr>
<td>AuthorAffiliation</td>
</tr>
</tbody>
</table>

BoundingRectangle

Description
This class contains area coverage for ECS collections or granules. This area coverage is expressed by latitude and longitude values in the order western, eastern, northern, and southern-most. For data sets that include a complete band of latitude around the Earth, the west coord = -180.0 and the east= 180.0. Latitude values are -90.0 to +90.0.

Annotation
Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>EastBoundingCoordinate</td>
</tr>
<tr>
<td>NorthBoundingCoordinate</td>
</tr>
<tr>
<td>SouthBoundingCoordinate</td>
</tr>
<tr>
<td>WestBoundingCoordinate</td>
</tr>
</tbody>
</table>

Browse

Description
This class contains the Description and size of a Browse product. The logical pointer to the actual Browse product instance is also included in this class. Its association with the collection indicates that it can apply to a collection as a whole while its association with a granule indicates that browse products may also occur one or more per granule.

Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BrowsePointer</td>
</tr>
<tr>
<td>BrowseSize</td>
</tr>
<tr>
<td>BrowseDescription</td>
</tr>
<tr>
<td>BrowseProductionDateTime</td>
</tr>
</tbody>
</table>

Campaign

Description
This class contains attributes describing the scientific endeavor(s) to which the collection is associated. Scientific endeavors include campaigns, projects, interdisciplinary science investigations, missions, field experiments, etc.

Annotation
Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CampaignShortName</td>
</tr>
<tr>
<td>CampaignStartDate</td>
</tr>
<tr>
<td>CampaignEndDate</td>
</tr>
<tr>
<td>CampaignLongName</td>
</tr>
<tr>
<td>CampaignGuide</td>
</tr>
</tbody>
</table>

**CampaignGuide**

**Description**
This class contains a logical pointer to campaign guides.

**Annotation**

 Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CampaignGuidePointer</td>
</tr>
</tbody>
</table>

**Circle**

**Description**
This class identifies the characteristics required to specify the area coverage for a granule or collection as a circle consisting of latitude center, longitude center, radius units, and radius value.

**Annotation**

 Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CenterLatitude</td>
</tr>
<tr>
<td>CenterLongitude</td>
</tr>
<tr>
<td>RadiusUnits</td>
</tr>
<tr>
<td>RadiusValue</td>
</tr>
</tbody>
</table>
**CollectionAssociation**

**Description**
This class is used to describe collections associated with the instance of a collection; i.e., the name and other details of input collections, collections associated (in science data terms) with the instance and/or collections dependent on the collection in some way.

**Annotation**

**Attribute List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CollectionType</td>
</tr>
<tr>
<td>CollectionUse</td>
</tr>
</tbody>
</table>

**CollectionDescriptionClass**

**Description**
This class contains brief description of all collections, also includes the short and long names, and the version of the collection.

**Annotation**

**Attribute List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>LongName</td>
</tr>
<tr>
<td>ShortName</td>
</tr>
<tr>
<td>CollectionDescription</td>
</tr>
<tr>
<td>VersionID</td>
</tr>
</tbody>
</table>

**Contact**

**Description**
This class describes the basic characteristics for a person or an organization type of contact. These contacts may provide information about a Collection, Delivered Algorithm Package, PGE.
or Data Originator. The role attribute specifies the type of contact and serves to differentiate the use of the module for the various classes associated with it from other modules. System and user profile contact information is held elsewhere.

**Annotation**


**Attribute List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role</td>
</tr>
<tr>
<td>HoursofService</td>
</tr>
<tr>
<td>ContactInstructions</td>
</tr>
</tbody>
</table>

**Contact Address**

**Description**

This class contains the address details for each contact.

**Annotation**


**Attribute List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>StreetAddress</td>
</tr>
<tr>
<td>City</td>
</tr>
<tr>
<td>StateProvince</td>
</tr>
<tr>
<td>PostalCode</td>
</tr>
<tr>
<td>Country</td>
</tr>
</tbody>
</table>

**ContactOrganization**

**Description**

This class contains the name of the contact organization. This class is used optionally with ContactPerson. In some instances, ContactOrganization is the primary point of contact.
Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ContactOrganizationName</td>
</tr>
</tbody>
</table>

ContactPerson

Description
This class contains the contact person's name and position. This class is used optionally with ContactOrganization. In some instances, ContactPerson is the primary point of contact.

Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ContactFirstName</td>
</tr>
<tr>
<td>ContactMiddleName</td>
</tr>
<tr>
<td>ContactLastName</td>
</tr>
<tr>
<td>ContactJobPosition</td>
</tr>
</tbody>
</table>

CoordinateRepresentation

Description
This class contains the abscissa and ordinate resolutions for the planar coordinates.

Annotation
### Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AbscissaResolution</td>
</tr>
<tr>
<td>OrdinateResolution</td>
</tr>
</tbody>
</table>

### CoordinateSystemContainer

**Description**
A container class (no data content) covering the range of descriptive information held at the collection level concerning the spatial system used for each granule in the collection. Primarily used to establish context within the module.

**Annotation**

### Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
</tr>
</tbody>
</table>

### CSDTDescription

**Description**
The class exists to provide a Description of the data organization of the product (i.e. a generalized granule Description in terms of internal structure). There are many possible structures. All should be describable by one of the PrimaryCSDTs (fixed domain), but the specific Implementation has an unbounded domain indicating the range at the lower structured level. While many CSDTs may exist in a granule, only the primary or dominant CSDT is described (e.g. PrimaryCSDT = swath, Implementation = HDF-EOS). The indirect reference is used for collection specific data organization labels. A comment field is provided for further explanation.

**Annotation**
**DepthSystemDefinition**

**Description**

This class contains the characteristics of the reference frame or system from which depths are measured.

**Annotation**


**Attribute List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>DepthDatumName</td>
</tr>
<tr>
<td>DepthDistanceUnits</td>
</tr>
<tr>
<td>DepthEncodingMethod</td>
</tr>
<tr>
<td>DepthResolution</td>
</tr>
</tbody>
</table>

**DetailedDesign**

**Description**

This class contains the logical pointer to detailed design and/or implementation documents.

**Annotation**


**Attribute List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>DetailedDesignPointer</td>
</tr>
</tbody>
</table>
DistanceandBearingRepresentation

Description
This class contains the resolutions units, direction, and meridian for the planar coordinate system. A method of encoding the position of a point by measuring its distance and direction (azimuth angle) from another point.

Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BearingReferenceDirection</td>
</tr>
<tr>
<td>BearingReferenceMeridian</td>
</tr>
<tr>
<td>BearingResolution</td>
</tr>
<tr>
<td>BearingUnits</td>
</tr>
<tr>
<td>DistanceResolution</td>
</tr>
</tbody>
</table>

Document

Description
The document class contains common attributes used to specify the title, version, created and update dates for all document types.

Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>DocumentVersion</td>
</tr>
<tr>
<td>DocumentUpdated</td>
</tr>
<tr>
<td>Title</td>
</tr>
<tr>
<td>DocumentCreated</td>
</tr>
</tbody>
</table>
ECSCollection

Description
This class provides further Description of the collection to include media, revision date, usage, and processing and archive centers. It is associated with many other collection level descriptive classes and modules.

Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ArchiveCenter</td>
</tr>
<tr>
<td>ProcessingCenter</td>
</tr>
<tr>
<td>RevisionDate</td>
</tr>
<tr>
<td>SuggestedUsage</td>
</tr>
<tr>
<td>VersionDescription</td>
</tr>
<tr>
<td>DatasetDisclaimerPointer</td>
</tr>
</tbody>
</table>

ECSCollectionGuide

Description
This class contains a logical pointer to collection guides.

Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECSCollectionGuidePointer</td>
</tr>
</tbody>
</table>

ECSDataGranule

Description
This class provides the descriptive characteristics associated with a granule.
**Attribute List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SizeMBECSDataGranule</td>
</tr>
<tr>
<td>ReprocessingActual</td>
</tr>
<tr>
<td>ReprocessingPlanned</td>
</tr>
<tr>
<td>DayNightFlag</td>
</tr>
<tr>
<td>GranulePointer</td>
</tr>
<tr>
<td>LocalGranuleID</td>
</tr>
<tr>
<td>LocalVersionID</td>
</tr>
<tr>
<td>ProductionDateTime</td>
</tr>
<tr>
<td>PGEVersion</td>
</tr>
</tbody>
</table>

**ECSPParameter**

**Description**

This class contains keywords, associated with the collection, that provide a more specific Description than provided by the class ECSVariable.

**Annotation**


<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECSParameterKeyword</td>
</tr>
</tbody>
</table>

**ECSScienceKeywords**

**Description**

This class provides the discipline keyword(s) associated with a collection.

**Annotation**

to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR March 2001, Build B.0. Revisions to the Discipline, Topic and Term Classes have been made to consolidate the three classes into one.

### Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECSDisciplineKeyword</td>
</tr>
<tr>
<td>ECSTopicKeyword</td>
</tr>
<tr>
<td>ECSTermKeyword</td>
</tr>
<tr>
<td>ECSVariableKeyword</td>
</tr>
</tbody>
</table>

### Email

**Description**

This class contains the electronic mail address of the contact or document author.

**Annotation**


### Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ElectronicMailAddress</td>
</tr>
</tbody>
</table>

### GeodeticModel

**Description**

This class contains the parameters describing the shape of the Earth.

**Annotation**


### Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>DenominatorofFlatteningRatio</td>
</tr>
<tr>
<td>EllipsoidName</td>
</tr>
<tr>
<td>HorizontalDatumName</td>
</tr>
</tbody>
</table>
**Name**
SemiMajorAxis

**GeographicCoordinateSystem**

**Description**
This class contains the latitude and longitude resolution and coordinate units which define the position of a point on the Earth's surface with respect to a reference spheroid.

**Annotation**

**Attribute List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>GeographicCoordinateUnits</td>
</tr>
<tr>
<td>LatitudeResolution</td>
</tr>
<tr>
<td>LongitudeResolution</td>
</tr>
<tr>
<td>GeographicCoordinateInformation</td>
</tr>
<tr>
<td>GeographicCoordinateDescription</td>
</tr>
</tbody>
</table>

**GPolygon**

**Description**
This class contains the G-Ring attribute for the exclusion ring flag, which is added to each polygon definition to describe whether the polygon is an 'inner' or 'outer' ring of coverage. Outer rings describe the full coverage extent, while inner rings denote areas of missing coverage within the outer ring.

**Annotation**

**Attribute List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ExclusionGRingFlag</td>
</tr>
</tbody>
</table>
**GPolygonContainer**

**Description**

This class contains the G-Ring characteristics which denote the latitude and longitude of a clockwise series of points, which when connected form a polygon. The minimum number of segments is 3. The exclusion ring flag is added to each polygon definition to describe whether the polygon is an 'inner' or 'outer' ring of coverage- outer rings describe the full coverage extent, while inner rings denote areas of missing of coverage within the outer ring. Each set of values must contain exactly two sets of point values (one for latitude and one for longitude).

**Annotation**


**Attribute List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
</tr>
</tbody>
</table>

**GPolygonPoint**

**Description**

This class contains the G-Ring attributes, which denote the latitude, and longitude of the start point of each of a set of geolocation segments, which when combined form a polygon. The sequence numbers determine how to connect the starting points to form the polygon. Each set of values must contain exactly two sets of point values (one for latitude and one for longitude) and a sequence number.

**Annotation**


**Attribute List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRingPointLatitude</td>
</tr>
<tr>
<td>GRingPointLongitude</td>
</tr>
<tr>
<td>GRingPointSequenceNo</td>
</tr>
</tbody>
</table>
**GranuleLocality**

**Description**
This class contains the value for the granules locality.

**Annotation**

**Attribute List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>LocalityValue</td>
</tr>
</tbody>
</table>

**GridCoordinateSystem**

**Description**
This class contains the name of the grid coordinate system.

**Annotation**

**Attribute List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>GridCoordinateSystemName</td>
</tr>
</tbody>
</table>

**Guide**

**Description**
This class contains the name and data center location of the Guide. This class provides these basic attributes for all guides.

**Annotation**
Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>GuideName</td>
</tr>
<tr>
<td>DataCenter</td>
</tr>
</tbody>
</table>

**HorizontalCoordinateSystemContainer**

**Description**
A container class (no data content). This class is used to add context to the module.

**Annotation**

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
</tr>
</tbody>
</table>

**HorizontalSpatialDomainContainer**

**Description**
A container class (no data content). This class is used to add context to the module.

**Annotation**

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
</tr>
</tbody>
</table>

**InformationContent**

**Description**
This class captures the actual values associated with the Additional Attribute class. This is an abstract class since the datatype varies depending on the value of AdditionalAttributeDatatype.
Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ParameterValue</td>
</tr>
</tbody>
</table>

InputGranule

Description
This class contains the logical pointer to the input granule.

Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>InputPointer</td>
</tr>
</tbody>
</table>

InstallableServiceAdvertisement

Description
This class contains the information required to install software related to an installable service.

Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>FtpURL</td>
</tr>
<tr>
<td>PackageSize</td>
</tr>
</tbody>
</table>
Instrument

Description
This class defines the device used to measure or record data, including direct human observation. Included in this class are defined EOS Instruments. In cases where instruments have a single sensor or the instrument and sensor are used synonomously (e.g. AVHRR) the both Instrument and sensor should be recorded.

Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>InstrumentShortName</td>
</tr>
<tr>
<td>NumberofSensors</td>
</tr>
<tr>
<td>InstrumentLongName</td>
</tr>
<tr>
<td>InstrumentTechnique</td>
</tr>
</tbody>
</table>

InstrumentCharacteristic

Description
This class is used to define the characteristics of instrument specific attributes. It should not be used to define attributes of new objects.

Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>InstrumentCharacteristicUnit</td>
</tr>
<tr>
<td>InstrumentCharacteristicDataType</td>
</tr>
<tr>
<td>InstrumentCharacteristicDescription</td>
</tr>
<tr>
<td>InstrumentCharacteristicName</td>
</tr>
</tbody>
</table>
**InstrumentCharacteristicValueClass**

**Description**

This abstract class is intended to capture the value of the attribute defined using the attributes in the class InstrumentCharacteristics. Instrument specific attributes defined in this way may vary by datatype but must be single values.

**Annotation**


**Attribute List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>InstrumentCharacteristicValue</td>
</tr>
</tbody>
</table>

**InstrumentGuide**

**Description**

The class contains a logical pointer to instrument guides.

**Attribute List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>InstrumentGuidePointer</td>
</tr>
</tbody>
</table>

**JournalArticle**

**Description**

This class contains the Journal Article name and logical pointer to the article.

**Annotation**

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>JournalArticlePointer</td>
</tr>
<tr>
<td>JournalArticleName</td>
</tr>
</tbody>
</table>

**LocalCoordinateSystem**

**Description**

This class contains a description of the coordinate system and georeference information.

**Annotation**


Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>LocalCoordinateSystemDescription</td>
</tr>
<tr>
<td>LocalGeoreferenceInformation</td>
</tr>
</tbody>
</table>

**Locality**

**Description**

This class is used at the collection level to describe the labelling of granules with compounded time/space text values and which are subsequently used to define more phenomenologically-based collections, thus the locality type and description are contained in this class.

**Annotation**


Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>LocalityType</td>
</tr>
<tr>
<td>LocalityDescription</td>
</tr>
</tbody>
</table>
LocalPlanarCoordinateSystem

Description
This class contains a description of the system and georeference information.

Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>LocalPlanarCoordinateSystemDescription</td>
</tr>
<tr>
<td>LocalPlanarGeoreferenceInformation</td>
</tr>
</tbody>
</table>

MapProjection

Description
This class contains the name of the map projection [the systematic representation of all or part of the surface of the Earth on a plane or developable surface], and a logical pointer to the map projection details, which are specified separately. ECS currently supports a number of projections which are specified separately.

Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MapProjectionName</td>
</tr>
<tr>
<td>MapProjectionPointer</td>
</tr>
</tbody>
</table>

MeasuredParameter

Description
This class contains the name of the geophysical parameter expressed in the data.
Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ParameterName</td>
</tr>
</tbody>
</table>

MimeServiceAdvertisement

Description
Readable service through web.

Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ServiceURL</td>
</tr>
</tbody>
</table>

MiscellaneousInformation

Description
The EDG client as the hypertext links uses this class for corresponding URLs. The MiscellaneousInformation is included within a dataset being distributed to the user, the metadata file (.met file) that accompanies the distribution will include, in addition to the product information the UserGuide (ECSCollectionGuide) and the DatasetDisclaimer (DatasetDisclaimer), if available for the dataset.

Annotation
Attribute List

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>MiscellaneousInformationPointer</td>
<td>VA200</td>
</tr>
<tr>
<td>MiscellaneousInformationPointerComment</td>
<td>VA255</td>
</tr>
</tbody>
</table>

**MultipleDateTimePeriod**

**Description**

This class contains the name of the multiple date period. Multiple version of SingleDateTime, generally used at the collection level.

**Annotation**


Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MultipleDateName</td>
</tr>
</tbody>
</table>

**MultipleTypeCollection**

**Description**

This class contains the value, relationship and type for the multiple type collection. This class is used only when aggregating single type or other multiple type collections has developed the collection and/or granules using criteria, which is recorded using the aggregation attributes.

**Annotation**


Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AggregationRelationship</td>
</tr>
<tr>
<td>AggregationType</td>
</tr>
<tr>
<td>AggregationValue</td>
</tr>
</tbody>
</table>
OperationModeClass

Description
This class identifies the instrument's operational modes associated with the channel, wavelength, and FOV (e.g., launch, survival, initialization, safe, diagnostic, standby, crosstrack, biaxial, solar calibration).

Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>OperationMode</td>
</tr>
</tbody>
</table>

OperationsManual

Description
This class contains a logical pointer to the operations manual.

Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>OperationsManualPointer</td>
</tr>
</tbody>
</table>

OrbitCalculatedSpatialDomain

Description
This class is used to describe the characteristics of the orbit calculated spatial domain to include the model name, orbit number, start and stop orbit number, equator crossing date and time, and equator crossing longitude.
Annotation


Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>EquatorCrossingDate</td>
</tr>
<tr>
<td>EquatorCrossingLongitude</td>
</tr>
<tr>
<td>EquatorCrossingTime</td>
</tr>
<tr>
<td>OrbitalModelName</td>
</tr>
<tr>
<td>OrbitNumber</td>
</tr>
<tr>
<td>StartOrbitNumber</td>
</tr>
<tr>
<td>StopOrbitNumber</td>
</tr>
</tbody>
</table>

OrbitParametersGranule

Description

This class contains the logical pointer to the orbit parameter granule. This class contains orbit data for which an association with the granule database exists.

Annotation


Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>OrbitParametersPointer</td>
</tr>
</tbody>
</table>

PerformanceTestResults

Description

This class contains a logical pointer to the performance test results.

Annotation

to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PerformanceTestResultsPointer</td>
</tr>
</tbody>
</table>

**PhysicalParameterDetails**

**Description**

This class is used to provide further information about the physical or geophysical parameters specified in the AdditionalAttributes and ECSParameters. It contains the units of measurement, range, accuracy, explanation and resolution.

**Annotation**


Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ParameterMeasurementResolution</td>
</tr>
<tr>
<td>ParameterRangeBegin</td>
</tr>
<tr>
<td>ParameterUnitsofMeasurement</td>
</tr>
<tr>
<td>ParameterValueAccuracy</td>
</tr>
<tr>
<td>ParameterValueAccuracyExplanation</td>
</tr>
<tr>
<td>ParameterRangeEnd</td>
</tr>
</tbody>
</table>

**PlanarCoordinateInformation**

**Description**

This class contains information about the coordinate system developed on the planar surface to include the distance units and encoding method.

**Annotation**

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PlanarCoordinateEncodingMethod</td>
</tr>
<tr>
<td>PlanarDistanceUnits</td>
</tr>
</tbody>
</table>

**PlanarCoordinateSystem**

**Description**

This class is used to add context to the module (no data content). This container is made up of the distance and angles, which define the position of a point on a reference plane to which the surface of the Earth has been projected.

**Annotation**


Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
</tr>
</tbody>
</table>

**PlanarCoordinateSystemContainer**

**Description**

This class is used to add context to the module (no data content). This container is made up of the distance and angles, which define the position of a point on a reference plane to which the surface of the Earth has been projected.

**Annotation**

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
</tr>
</tbody>
</table>

Platform

Description

This class describes the relevant platforms associated with the acquisition of the collection or granule. Platform types include Spacecraft, Aircraft, Vessel, Buoy, Platform, Station, Network or Human. In cases where Human is the platform type it should be of scientific relevancy to the collection. If an instrument is hand held and that is relevant to the collection of the data then PlatformType=Human. In cases where an instrument is hand-held but the human is associated with another platform then all relevant platforms should be associated with the collection. Humans can be both Platforms and Instruments (e.g. if a human is standing on the ground and makes a visual observation then: PlatformType=Human, Instrument=HumanObservation, SensorShortName=HumanVisual).

Annotation


Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PlatformShortName</td>
</tr>
<tr>
<td>PlatformType</td>
</tr>
<tr>
<td>PlatformLongName</td>
</tr>
</tbody>
</table>

PlatformCharacteristic

Description

This class is used to define the characteristics of platform specific attributes. It should not be used to define attributes of new objects.

Annotation

### PlatformCharacteristicValueClass

**Description**

This abstract class is intended to capture the value of the attribute defined using the attributes in the class PlatformCharacteristics. Platform specific attributes defined in this way may vary by datatype but must be single values.

**Annotation**


#### Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PlatformCharacteristicValue</td>
</tr>
</tbody>
</table>

### PlatformGuide

**Description**

This class contains a logical pointer to platform guides.

**Annotation**


#### Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PlatformGuidePointer</td>
</tr>
</tbody>
</table>
Point

Description
This class identifies the characteristics of the point area coverage to include the latitude and longitude.

Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PointLatitude</td>
</tr>
<tr>
<td>PointLongitude</td>
</tr>
</tbody>
</table>

ProcessingCenterGuide

Description
This class contains a logical pointer to processing center guides.

Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProcessingCenterGuidePointer</td>
</tr>
</tbody>
</table>

ProcessingFileDescription

Description
This class contains a logical pointer to the processing file description which details the file and record layouts for each PGE.
Annotation


Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProcessingFileDescriptionPointer</td>
</tr>
</tbody>
</table>

ProcessingLevel

Description

The processing level class contains the level identifier and level description of the collection.

Annotation


Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProcessingLevelDescription</td>
</tr>
<tr>
<td>ProcessingLevelID</td>
</tr>
</tbody>
</table>

ProcessingQA

Description

This class contains the name of the attribute in error in addition to a brief description of the error that occurred during processing.

Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProcessingQADescription</td>
</tr>
<tr>
<td>ProcessingQAAttribute</td>
</tr>
</tbody>
</table>

**ProcessingErrorReport**

**Description**
This class contains a logical pointer to the processing error report which is produced by the ECS Planning Subsystem.

**Annotation**

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProcessingErrorReportPointer</td>
</tr>
</tbody>
</table>

**ProcessingReport**

**Description**
This class contains the type and period of the processing report which is produced by the ECS Planning Subsystem.

**Annotation**

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProcessingReportType</td>
</tr>
<tr>
<td>ProcessingReportPeriod</td>
</tr>
</tbody>
</table>
ProcessingResourceUsageReport

Description
This class contains the logical pointer to the processing resource usage report.

Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProcessingResourceUsageReportPointer</td>
</tr>
</tbody>
</table>

ProcessingStatusReport

Description
This class contains a logical pointer to the processing status report produced by the ECS Planning Subsystem.

Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProcessingStatusReportPointer</td>
</tr>
</tbody>
</table>

ProductAdvertisement

Description
Advertisement about the data in ECS or non-ECS data

Annotation
to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

### Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
</tr>
</tbody>
</table>

### ProductionHistory

#### Description

The Processing History class contains a logical pointer to the processing history, which provides information about the processing of each granule, associated with the granule database. This includes the input products and granules used to generate the product.

#### Annotation


### Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProductionHistoryPointer</td>
</tr>
</tbody>
</table>

### ProductionPlan

#### Description

This class contains the dates, forecast, description, and planned data sets associated with the production plan in addition to the logical pointer to the production plan. This class has searchable attributes plus a pointer to a specification for the plans produced by the ECS Planning Subsystem.

#### Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProductionPlanPointer</td>
</tr>
<tr>
<td>ProductionPlanStartDate</td>
</tr>
<tr>
<td>DAACName</td>
</tr>
<tr>
<td>PlannedDataSets</td>
</tr>
<tr>
<td>ProductionPlanDescription</td>
</tr>
<tr>
<td>ProductionPlanEndDate</td>
</tr>
<tr>
<td>ProductionPlanForecast</td>
</tr>
</tbody>
</table>

ProgrammersGuide

Description
This class contains the logical pointer to the programmers guide.

Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProgrammersGuidePointer</td>
</tr>
</tbody>
</table>

ProviderAdvertisement

Description
This class describes the person or organization that provides the Advertisement. This class must be populated if ServiceAdvertisement or ProductAdvertisement are populated.

Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProviderURL</td>
</tr>
</tbody>
</table>
**QAFlags**

**Description**
This class contains the science, operational and automatic quality flags which indicate the overall quality assurance levels of specific parameter values within a granule.

**Annotation**

**Attribute List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AutomaticQualityFlag</td>
</tr>
<tr>
<td>OperationalQualityFlag</td>
</tr>
<tr>
<td>ScienceQualityFlagExplanation</td>
</tr>
<tr>
<td>ScienceQualityFlag</td>
</tr>
<tr>
<td>OperationalQualityFlagExplanation</td>
</tr>
<tr>
<td>AutomaticQualityFlagExplanation</td>
</tr>
</tbody>
</table>

---

**QAGranule**

**Description**
This class specifies the logical pointer to the QA granule. This class contains material for a separate file or files containing user specified QA information about the granule.

**Annotation**

**Attribute List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>QAGranulePointer</td>
</tr>
</tbody>
</table>
QAStats

Description
This class contains measures of quality for the granule. The parameters used to set these measures are not preset and will be determined by the data producer. Each set of measures can occur many times either for the granule as a whole or for individual parameters.

Annotation

Attribute List
<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>QAPercentInterpolatedData</td>
</tr>
<tr>
<td>QAPercentMissingData</td>
</tr>
<tr>
<td>QAPercentOutOfBoundsData</td>
</tr>
<tr>
<td>QAPercentCloudCover</td>
</tr>
</tbody>
</table>

QualityTextComment

Description
A class containing a logical pointer to documents which record details of quality measurement and other comments concerning the collection.

Annotation

Attribute List
<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>QualityTextCommentPointer</td>
</tr>
</tbody>
</table>

RangeDateTime

Description
This class specifies the start and end date/time of a granule or collection.
Annotation


Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>RangeBeginningDate</td>
</tr>
<tr>
<td>RangeBeginningTime</td>
</tr>
<tr>
<td>RangeEndingDate</td>
</tr>
<tr>
<td>RangeEndingTime</td>
</tr>
</tbody>
</table>

ReferencePaper

Description

The reference paper class defines the common properties of the underlying reference material, and inherits further attributes from the Document Class.

Annotation


Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ReferencePaperType</td>
</tr>
<tr>
<td>AbstractPointer</td>
</tr>
<tr>
<td>AccessInstructions</td>
</tr>
<tr>
<td>DateofReferencePaperPublication</td>
</tr>
<tr>
<td>ReferencePaperReference</td>
</tr>
</tbody>
</table>

RegionalAreaDefinitionGuide

Description

This class contains the geographic region name and the logical pointer to the regional area definition guides.
**Annotation**


**Attribute List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>GeographicalRegionName</td>
</tr>
<tr>
<td>RegionalAreaDefinitionGuidePointer</td>
</tr>
</tbody>
</table>

**RegularPeriodic**

**Description**

This class contains the name of the temporal period in addition to the date, time, duration unit, and value, and cycle duration unit and value. Used at the collection level to describe a collection having granules, which cover a regularly occurring period.

**Annotation**


**Attribute List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period1stDate</td>
</tr>
<tr>
<td>Period1stTime</td>
</tr>
<tr>
<td>PeriodCycleDurationUnit</td>
</tr>
<tr>
<td>PeriodCycleDurationValue</td>
</tr>
<tr>
<td>PeriodDurationUnit</td>
</tr>
<tr>
<td>PeriodDurationValue</td>
</tr>
<tr>
<td>PeriodName</td>
</tr>
</tbody>
</table>

**Review**

**Description**

This class provides for dates and status as applicable for collections, which are active.
Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>FutureReviewDate</td>
</tr>
<tr>
<td>ScienceReviewDate</td>
</tr>
<tr>
<td>ScienceReviewStatus</td>
</tr>
</tbody>
</table>

Sensor

Description
This class is used to describe sensory subcomponents of an instrument. In cases where instruments have a single sensor or the Instrument and Sensor are used synonymously (e.g. AVHRR) both the Instrument and Sensor should be recorded.

Annotation

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SensorShortName</td>
</tr>
<tr>
<td>SensorLongName</td>
</tr>
<tr>
<td>SensorTechnique</td>
</tr>
</tbody>
</table>

SensorCharacteristic

Description
This class is used to define the characteristics of sensor specific attributes. It should not be used to define attributes of new objects.

Annotation
Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SensorCharacteristicUnit</td>
</tr>
<tr>
<td>SensorCharacteristicDataType</td>
</tr>
<tr>
<td>SensorCharacteristicDescription</td>
</tr>
<tr>
<td>SensorCharacteristicName</td>
</tr>
<tr>
<td>SensorCharacteristicValueClass</td>
</tr>
</tbody>
</table>

**SensorCharacteristicValueClass**

**Description**

This abstract class is intended to capture the value of the attribute defined using the attributes in the class SensorCharacteristics. Sensor specific attributes defined in this way may vary by datatype but must be single values.

**Annotation**


Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SensorCharacteristicValue</td>
</tr>
</tbody>
</table>

**SensorGuide**

**Description**

This class contains a logical pointer to the sensor guides.

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SensorGuidePointer</td>
</tr>
</tbody>
</table>

**ServiceAdvertisement**

**Description**

Description of software typically accessing data found in ProductAdvertisement.

**Annotation**

to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
</tr>
</tbody>
</table>

**SignatureServiceAdvertisement**

**Description**

This class contains information that describes services, which are executed using an argument list.

**Annotation**


Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ServiceClass</td>
</tr>
<tr>
<td>ServiceName</td>
</tr>
<tr>
<td>GIParameterList</td>
</tr>
<tr>
<td>AdvertisementUR</td>
</tr>
<tr>
<td>Internal Name</td>
</tr>
</tbody>
</table>

**SingleDateTime**

**Description**

This class contains the time of day and calendar date for an ECS granule. This class provides a means of encoding a single date and time for a granule occurring at that time or during the period covered by the time (e.g. one-day for a single date excluding the time within the day).

**Annotation**

**Attribute List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CalendarDate</td>
</tr>
<tr>
<td>TimeOfDay</td>
</tr>
</tbody>
</table>

**SingleTypeCollection**

**Description**

This class provides a description specific to a single, as opposed to a multitype collection, to include citation of external publication, collection state, maintenance and update frequency, and access constraints. The definition of a singletype collection is stated below. The management and development of singletype collections is the subject of other documentation. A single type collection contains a set of granules for which the dominant variation in the value of metadata attributes is in the space and time attributes. For example, most level 0, 1, and many level 2 collections conform to this definition.

**Annotation**


**Attribute List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AccessConstraints</td>
</tr>
<tr>
<td>CitationforExternalPublication</td>
</tr>
<tr>
<td>CollectionState</td>
</tr>
<tr>
<td>MaintenanceandUpdateFrequency</td>
</tr>
</tbody>
</table>

**Spatial**

**Description**

Largely a container class, but carrying an attribute indicating the general type of coverage.

**Annotation**

Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SpatialCoverageType</td>
</tr>
</tbody>
</table>

**SpatialDomainContainer**

**Description**

A container class (no data content) used to add context to the module.

**Annotation**


Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
</tr>
</tbody>
</table>

**SpatialKeywordClass**

**Description**

This class contains the spatial keywords associated with the ECS collection.

**Annotation**


Attribute List

<table>
<thead>
<tr>
<th>Name</th>
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</thead>
<tbody>
<tr>
<td>SpatialKeyword</td>
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</tbody>
</table>

**SSAPComponent**

**Description**

Defines a piece of an SSAP (Science Software Algorithm Package).
Annotation


Attribute List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ComponentType</td>
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<td>ComponentName</td>
</tr>
<tr>
<td>SSAPAlgorithmPackageName</td>
</tr>
<tr>
<td>SSAPInterDate</td>
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</table>

**SSAPComponentAPVersion**

**Description**

Defines the versions (of the Algorithm Package) associated with a software component.

Annotation


Attribute List

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</tr>
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<tbody>
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</table>

**StandaloneDocument**

**Description**

This class contains the logical pointer to the stand-alone document, which is a document not published in journals.

Annotation

Attribute List

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**StorageMediumClass**

**Description**

This class contains the medium on which the data are stored.

**Annotation**


Attribute List

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**SWDevelopmentStandard**

**Description**

This class contains a logical pointer to the software development standard. Separate document.

**Annotation**


Attribute List

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**SystemDescription**

**Description**

Separately specified description of science software processing system.
Annotation


Attribute List

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<thead>
<tr>
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Telephone

Description

This class contains the telephone details associated with the contact.

Annotation


Attribute List

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<tbody>
<tr>
<td>TelephoneNumberType</td>
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<tr>
<td>TelephoneNumber</td>
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Temporal

Description

This class contains attributes, which describe the basis of the time system used in other classes.

Annotation


Attribute List

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<tr>
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<td>---------------------</td>
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<tr>
<td>TimeType</td>
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<tr>
<td>EndsatPresentFlag</td>
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<tr>
<td>PrecisionofSeconds</td>
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**TemporalKeywordClass**

**Description**

This class identifies the type of temporal characterization for a granule or collection.

**Annotation**


**Attribute List**

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**TemporalType**

**Description**

This class contains the type (range or single) of temporal being used for a granule or collection.

**Annotation**


**Attribute List**

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**TestPlan**

**Description**

This class contains the logical pointer to the test plan for the PGE.
Annotation


Attribute List

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UserCommentDocument

Description
A class containing a logical pointer to documents used to record user comments on the collection

Annotation


Attribute List

<table>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>UserCommentDocumentPointer</td>
</tr>
</tbody>
</table>

UserGuide

Description
The EDG Client as the hypertext uses this class for the corresponding URLs. The user can then access the user’s guide and miscellaneous data before he or she places an order. As an order is placed for a specific product, corresponding dataset disclaimer message will be presented to the user.

Annotation


Attribute List

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<th>Value</th>
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<tr>
<td>UserGuidePointerComment</td>
<td>VA255</td>
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</tbody>
</table>
**ValidationDocument**

**Description**
A class containing a logical pointer to a document used to record details of validation steps used for the assessment of granule and overall collection quality.

**Annotation**

**Attribute List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ValidationDocumentPointer</td>
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**VerticalCoordinateSystemContainer**

**Description**
A container class (no data content). This class is used to add context to the module. The reference frame or system from which vertical distances (altitudes or depths are measured).

**Annotation**

**Attribute List**

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**VerticalSpatialDomain**

**Description**
This class contains the domain value and type for the vertical spatial domain.

**Annotation**
to provide updated details for the Data Server and CIDM subsystems). Additionally, updates from Release B, (311-CD-008-001), CCR January 31, 1997, Build B.0.

**Attribute List**

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**ZonelIdentifierClass**

**Description**

This class contains the zone identifier of the various zones in the associated grid coordinate system. See domain values of coordinate system for constraints on the zone numbers.

**Annotation**


**Attribute List**

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2.2 Earth Science Metadata Specifications

Descriptions of the attribute specifications found within the Power Designer tool are presented in the following section. Each attribute will contain all relevant information for that attribute.

Table 2-2 provides an attribute with appropriate datatypes (DT).

Data Item List

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<td>3. AccessConstraints</td>
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<td>4. Access Instructions</td>
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<td>6. AdditionalAttributeDescription</td>
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### Table 2-3. Attribute Reference (5 of 8)

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AbscissaResolution

Description
The (nominal) minimum distance between the 'x' or column values of two adjacent points, expressed in Planar Distance Units of measure. Planar Distance Units of measure are units used for distances whose domain values are meters, international feet, and survey feet.
Annotation

Reference List

<table>
<thead>
<tr>
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<td>CoordinateRepresentation</td>
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AbstractPointer

Description
Pointer to the reference paper article abstract.

Content Source: DP
Constraints: if abstract exists (must for all papers), this must exist.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
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AccessConstraints

Description
Restrictions and legal prerequisites for accessing the collection. These include any access constraints applied to assure the protection of privacy or intellectual property, and any special restrictions or limitations on obtaining the collection.

These restrictions differ from Use Restrictions in that they only apply to access.
Content Source: DP; DAAC

Annotation

Reference List

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<tr>
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**Description**

Free Text
Unknown
None

**AccessInstructions**

**Description**

Instructions describing how to obtain electronic access to a stand-alone document. May simply be an anonymous ftp site address, or a World Wide Web homepage URL. Data Provider Sites may establish additional instruction requirements.

Content Source: DP; DAAC
Constraints: if reference papers utilized, this must exist.

**Annotation**


**Reference List**

<table>
<thead>
<tr>
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**Description**

Free Text

**AdditionalAttributeDatatype**

**Description**

Data type of ParameterValue.

Content Source: DP

**Annotation**


**Reference List**

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<tr>
<th>Name</th>
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<td>AdditionalAttributes</td>
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**Description**

int

varchar
float
date
time
datetime

**AdditionalAttributeDescription**

**Description**
This attribute provides a description for the AdditionalAttributeName.

Content Source: DP
Constraints: If AdditionalAttributeName exists then AdditionalAttribute must exist.

**Annotation**

**Reference List**

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**Description**
Free Text

**AdditionalAttributeName**

**Description**
Data type of AdditionalAttributeName.

Content Source: DP
Constraints: If AdditionalAttributeName exists then AdditionalAttributeDatatype must exist.

**Annotation**

**Reference List**

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Description

ALBEDOTABLEID
AVERAGEREFLDISCRIMINATION
AVERAGERMSE
AscendingDescendingFlg
AveragedBlackbodyTemperature
BAND1_GAIN
BAND1_GAIN_CHANGE
BAND1_SL_GAIN_CHANGE
BAND2_GAIN
BAND2_GAIN_CHANGE
BAND2_SL_GAIN_CHANGE
BAND3_GAIN
BAND3_GAIN_CHANGE
BAND3_SL_GAIN_CHANGE
BAND4_GAIN
BAND4_GAIN_CHANGE
BAND4_SL_GAIN_CHANGE
BAND5_GAIN
BAND5_GAIN_CHANGE
BAND5_SL_GAIN_CHANGE
BAND6_GAIN
BAND6_GAIN_CHANGE_F1
BAND6_GAIN_CHANGE_F2
BAND6_GAIN_F1
BAND6_GAIN_F2
BAND6_SL_GAIN_CHANGE_F1
BAND6_SL_GAIN_CHANGE_F2
BAND7_GAIN
BAND7_GAIN_CHANGE
BAND7_SL_GAIN_CHANGE
BAND8_GAIN
BAND8_GAIN_CHANGE
BAND8_SL_GAIN_CHANGE
BRDFCODEID
CLOUDPERCENT
CirrusCloudDetectedPct_IR
ClearPct250m
CloudCoverFractionPct_VIS
CloudCoverPct250m
CloudPct_IR
CloudPhaseUncertainPct_IR
DayProcessedPct
ECOREGIONLABELS
ECSMSDBAArchivedOn
ECSMSDBADatabaseName
ECSMSDBADatafileName
ECSMSDBASchemaVersionID
ECSMSDBAServerName
ECSMSDBATableName
ECSMSDBATablessetName
ECSMSSLGHostName
ECSMSSLGMode
EndDataDay
ExeInsertDate
ExePGEName
ExePGESSWVersion
ExePlatformOS
ExePlatformOSVersion
FIREPIXELS
FailedPGEInsertDateTime
FailedPGEName
FailedPGEVersion
F1_F2_SCENE_CORNERS
GLOBALECOTYPE1ACCURACY
GLOBALECOTYPE1ACCURACYTABLE
GLOBALECOTYPE1KAPPA
GLOBALECOTYPE2ACCURACY
GLOBALECOTYPE2ACCURACYTABLE
GLOBALECOTYPE2KAPPA
GLOBALLANDCOVERACCURACY
GLOBALLANDCOVERACCURACYTABLE
GLOBALLANDCOVERKAPPA
GRANULENUMBER
HighCloudDetectedPct_IR
HighConfidentClearPct
IceCloudDetectedPct_IR
IceCloudDetectedPct_VIS
LANDCOVERCLASSESPRESENTINTILE
LandCoverFractionPct
LandProcessedPct
LowCloudDetectedPct_IR
LowConfidentClearPct
MODELDEFFILEID
MaxSolarZenithAngle
MidCloudDetectedPct_IR
MinSolarZenithAngle
MixedCloudDetectedPct_IR
NightProcessedPct
NonCloudObstructionFoundPct
ORIG_PARTIAL_WRS_SCENES
ORIG_TOTAL_WRS_SCENES
OceanCoverFractionPct
OpaqueCloudDetectedPct_IR
PCD_START_TIME
PCD_STOP_TIME
PDS_ID
PERCENTANCREFS
PERCENTBARE
PERCENTBROADLEAF
PERCENTCHANGEDPIXELS
PERCENTDECIDUOUS
PERCENTEVERGREEN
PERCENTFOREST
PERCENTHERBACEOUS
PERCENTLANDINTILE
PERCENTMODELFIXEDBRDFS
PERCENTMODERATEQUALITY
PERCENTNEARNADIR15REFS
PERCENTNEEDLELEAF
PERCENTNEWBRDFS
PERCENTNONFORESTVEG
PERCENTNOTPRODUCED
PERCENTPOORQUALITY
PERCENTSHAPEFIXEDBRDFS
PERCENTSUBSTITUTEBRDFS
PERCENTWOODY
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PRODUCT_LR_CORNERS_LON
PRODUCT_UL_CORNERS_LAT
PRODUCT_UL_CORNERS_LON
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PRODUCT_UP_CORNERS_LON
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QA_BAND6_PRESENT_F1
QA_BAND6_PRESENT_F2
QA_BAND7_PRESENT
QA_BAND8_PRESENT
QA_DAY_NIGHT_FLAG
QA_ENTIRELY_FILLED_SCANS
QA_ETM_TIMECODE_ERRORS
QA_FILLED_PCD_MAJOR_FRAMES
QA_FILLED_PCD_MINOR_FRAMES
QA_FULL_APERTURE_CAL_FLAG
QA_FULL_OR_PARTIAL_SCENE
QA_HORIZONTAL_DISPLAY_SHIFT
QA_LL_QUAD_CCA
QA_LR_QUAD_CCA
QA_MISSING_ATTITUDE_POINTS
QA_MISSING_EPHMERIS_POINTS
QA_PARTIALLY_FILLED_SCANS
QA_REJECTED_ATTITUDE_POINTS
QA_REJECTED_EPHMERIS_POINTS
QA_SCENE_CCA
QA_SCENE_QUALITY
VerModis_lcw
VerModis_rayleigh
VerModis_white
VerModisst_coeffs
VerOZONE
VerParm_CZCS_pigment
VerParm_Eps_78
VerParm_K_490
VerParm_absorp_coef_gelb
VerParm_aer_model1
VerParm_aer_model2
VerParm_arp
VerParm_calcite_conc
VerParm_chlor_MODIS
VerParm_chlor_a_2
VerParm_chlor_a_3
VerParm_chlor_absorb
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VerParm_nLw_443
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VerParm_nLw_551
VerParm_nLw_667
VerParm_nLw_678
VerParm_phycoeryth_conc
VerParm_phycou_conc
VerParm_pigment_c1_total
VerParm_sst
VerParm_sst4
VerParm_tot_absorb_1
VerParm_tot_absorb_2
VerParm_tot_absorb_3
VerParm_tot_absorb_4
VerParm_tot_absorb_5
VerReynolds
VerShallow
VerSpectra
VeryHighConfidentClearPct
WRS_SCENE_NO
WaterCloudDetectedPct_IR
WaterCloudDetectedPct_VIS
WaterProcessedPct

**AdvertisementType**

**Description**
Type of advertisement (product, provider, or service).

**Reference List**

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<th>Name</th>
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<tr>
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**AdvertisementUR**

**Description**
Universal Reference to the server that can execute a service.

Content Source: IOS

**Reference List**

<table>
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<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SignatureServiceAdvertisement</td>
</tr>
</tbody>
</table>

**AggregationRelationship**

**Description**
This attribute identifies the relationship between the aggregation attribute and its corresponding value. This relationship may be expressed as boolean operations i.e. '=' '<', '>', 'ne'

Content Source: DP
Constraints: If AggregationType and AggregationValue exist then AggregationRelationship must exist.

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MultipleTypeCollection</td>
</tr>
</tbody>
</table>
**Description**

'=' - Equal

GT - Greater Than

LT - Less Than

NE - Not Equal

GE - Greater Than or Equal

LE - Less Than or Equal

**AggregationType**

**Description**

This attribute will contain the criteria by which multiple type collections have been grouped. It will describe the major categorization which applies to the data therein. Possible collection groupings include: INSTRUMENT, for all collections associated with a given collecting instrument such as CERES--this is a common aggregation criteria for ECS 'datasets'; PROJECT, for all data associated with a given project that may or may not be related to a single instrument, such as FIRE--this is again a common aggregation criteria for ECS 'datasets'; PARAMETER, for all granules that reflect measurements of a single specific (or related group of specific) geophysical parameters, such as CLOUD PROPERTIES--this is often an aggregation criteria for ECS 'products'; SUPERGRANULE, for collections of granules that a data provider wishes to be orderable as a single related grouping, such as SSM/I TIME SERIES-- this is a concept adopted from MSFC use; EVENT, for a predetermined/tagged set of granules that have been found to be related to a particular geophysical phenomena or event, such as MIDWEST FLOOD '93 or OZONE HOLE or MT. PINATUBO--this is a new ECS concept, also suggested by the University of Virginia Atmospheric researchers.

Content Source: DP

Constraints: If AggregationValue and AggregationRelationship exist then AggregationType must exist.

**Annotation**


**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MultipleTypeCollection</td>
</tr>
</tbody>
</table>
**Description**

Instrument

Project

Parameter

Supergranule

Event

Season

Region

**AggregationValue**

**Description**

Attribute Description: This attribute contains the value associated with the aggregation type. An example may be EVENT (aggregation type) = MIDWEST FLOOD '93 (aggregation value). MIDWEST FLOOD '93 would be the value associated with the event or aggregation type.

Content Source: DP

Constraints: If AggregationType and AggregationRelationship exist then AggregationValue must exist.

**Annotation**


**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MultipleTypeCollection</td>
</tr>
</tbody>
</table>

**Description**

Free Text

**AlgorithmPackageAcceptanceDate**

**Description**

This attribute specifies the date that this package version successfully passed AI&T procedures and was accepted as ECS standard algorithm.

Content Source: AI&T

Constraints:
If Delivered Algorithm Package is utilized then AlgorithmPackageAcceptanceDate must exist.

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AlgorithmPackage</td>
</tr>
</tbody>
</table>

**AlgorithmPackageMaturityCode**

**Description**
This specifies the maturity of the algorithm package as a whole. Maturity code plus version number tells version state.

Content Source: DP

Constraints:
If Delivered Algorithm Package is utilized then AlgorithmPackageMaturityCode must exist.

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AlgorithmPackage</td>
</tr>
</tbody>
</table>

**Description**

pre-launch - preflight development code

PREL - Preliminary. EOS platform is flying development code at best; frequently changing, not stable.

OPL - Operational. Production code, will change, but not frequently; preliminary validation has been done.

stable - code stable and has been fully validated.

final - final version of code, mission is over.
AlgorithmPackageName

Description
This attribute is the name given to the complete delivered package submitted for algorithm integration and test.

Content Source: DP
Constraints:
If Delivered Algorithm Package is utilized then AlgorithmPackageName must exist.

Annotation

Reference List
<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AlgorithmPackage</td>
</tr>
</tbody>
</table>

AlgorithmPackageVersion

Description
This attribute specifies the version of the full package being delivered.

Content Source: DP
Constraints:
If Delivered Algorithm Package is utilized then AlgorithmPackageVersion must exist.

Annotation

Reference List
<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AlgorithmPackage</td>
</tr>
</tbody>
</table>

AltitudeDatumName

Description
The identification given to the level surface taken as the surface of reference from which altitudes are measured.

Content Source: DP
AltitudeSystemDefinition

AltitudeDistanceUnits

- Description
  Units in which altitudes are recorded.

- Content Source: DP

AltitudeEncodingMethod

- Description
  The means used to encode the altitudes.
Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AltitudeSystemDefinition</td>
</tr>
</tbody>
</table>

Description
Explicit elevation coordinate included with horizontal coordinates
Implicit coordinate
Attribute Values

AltitudeResolution

Description
The minimum distance possible between two adjacent altitude values, expressed in Altitude Distance Units of measure.

Content Source: DP

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AltitudeSystemDefinition</td>
</tr>
</tbody>
</table>

AnalysisLongName

Description
The expanded or long name of the analysis source identified using AnalysisShortName. AnalysisLongName is intended to categorize collections by the processes, which collected (e.g. census survey) or produced them (e.g. NMC 16-level Nested Grid Model).

Content Source: DP (Collection)

Annotation
Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AnalysisSource</td>
</tr>
</tbody>
</table>

**AnalysisShortName**

**Description**
AnalysisShortName is the unique identifier of the collection or analysis process(s) which best characterize the ECSCollection or Granule. ECSCollections or Granules may be characterized by both a collection and an analysis data set which included data collected using the NWS ASOS network (PlatformType=Network, PlatformShort-Name= ASOS) which was processed using an NMC analysis model (e.g. AnalysisType=Model, AnalysisShortName= RAFS, AnalysisDescription= Regional Area Forecast System, AnalysisTechnique= Regional Optimal Interpolation.)

Content Source: DP (Collection); PGE (Granule)

**Annotation**

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AnalysisSource</td>
</tr>
</tbody>
</table>

**AnalysisSourceGuidePointer**

**Description**
Logical pointer to the Analysis Source Guide.

Content Source: DAAC

**Annotation**

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AnalysisSourceGuide</td>
</tr>
</tbody>
</table>
AnalysisTechnique

Description
The technique or process used to produce the analysis source. (e.g. 16 layer nested grid model)

Content Source: DP (Collection)

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AnalysisSource</td>
</tr>
</tbody>
</table>

AnalysisType

Description
The defined type of analysis source.

Content Source: DP (Collection)

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AnalysisSource</td>
</tr>
</tbody>
</table>

Description
Standard
Model
Report
Map
Survey
Chart
Publication

AncillaryInputPointer

Description
Data model logical reference to ancillary input data.
Content Source: DSS
Constraints: If ancillary data exists then AncillaryInputPointer exists.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AncillaryInputGranule</td>
</tr>
</tbody>
</table>

AncillaryInputType

Description
This attribute specifies the type of ancillary input granule.

Content Source: DP

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AncillaryInputGranule</td>
</tr>
</tbody>
</table>

Description
Algorithm
Climatology
Geolocation
Instrument
Meteorological

ArchiveCenter

Description
Center where collection is archived.

Content Source: DAAC
Constraints:

Annotation
Reference: 420-TP-015-001, February 1997
## Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECSCollection</td>
</tr>
</tbody>
</table>

## Description

GSFC - Goddard Space Flight Center  
LaRC - Langley Research Center  
ORNL - Oak Ridge National Laboratory  
EDC - EROS Data Center  
NSIDC - National Snow and Ice Data Center  
JPL - Jet Propulsion Laboratory  
CIESIN - Consortium for International Earth Science Information Network

## ArchiveCenterGuidePointer

### Description

Logical pointer to the Archive Center Guide.

Content Source: DAAC

### Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ArchiveCenterGuide</td>
</tr>
</tbody>
</table>

## ATBDPointer

### Description

Data model reference to the document specification.

Content Source: DSS  
Constraints: If ATBD exists then ATBDPointer exists.

### Annotation


### Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATBD</td>
</tr>
</tbody>
</table>
**AuthorAffiliation**

**Description**
The name of an agency or center with which the author of the document works for or is affiliated with.

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author</td>
</tr>
</tbody>
</table>

**AuthorName**

**Description**
The name of the author of the document.

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author</td>
</tr>
</tbody>
</table>

**Description**
Free Text

**AutomaticQualityFlag**

**Description**
The granule level flag applying generally to the granule and specifically to parameters the granule level. When applied to parameter, the flag refers to the quality of that parameter for the granule (as applicable). The parameters determining whether the flag is set are defined by the developer and documented in the Quality Flag Explanation.

Content Source: PGE; DP
Constraints: One flag from QAFlags must exist.
Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>QAFlags</td>
<td></td>
</tr>
</tbody>
</table>

Description
Passed - The granule (forparameter) has passed a specified automatic test.

Failed - The granule (forparameter) has failed a specified automatic test.

Suspect - May be okay; could not clearly define.

AutomaticQualityFlagExplanation

Description
A text explanation of the criteria used to set automatic quality flag; including thresholds or other criteria.

Content Source:

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>QAFlags</td>
</tr>
</tbody>
</table>

Description
Free Text

BearingReferenceDirection

Description
Direction from which the bearing is measured clockwise.

Content Source: DP

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>DistanceandBearingRepresentation</td>
</tr>
</tbody>
</table>
**Description**

North

South

**BearingReferenceMeridian**

**Description**

Axis from which the bearing is measured.

Content Source: DP

Constraints: BearingReferenceMeridian is mandatory if distanceandBearingRepresentation class is applicable.

**Annotation**


**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>DistanceandBearingRepresentation</td>
</tr>
</tbody>
</table>

**Description**

Assumed

Grid

Magnetic

Astronomic

Geodetic

**BearingResolution**

**Description**

The minimum angle measurable between two points, expressed in Bearing Units of measure.

Content Source: DP

Constraints: BearingResolution > 0.0

Constraints: BearingResolution is mandatory if DistanceandBearingRepresentation class is applicable.
**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>DistanceandBearingRepresentation</td>
</tr>
</tbody>
</table>

**BearingUnits**

**Description**
Units of measure used for angles.

Content Source: DP
Constraints: BearingUnits is mandatory if DistanceandBearingRepresentation class is applicable.

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>DistanceandBearingRepresentation</td>
</tr>
</tbody>
</table>

**Description**
Decimal degrees

Decimal minutes

Decimal seconds

Degrees and decimal minutes

Degrees, minutes, and decimal seconds

Radians

Grads

**BrowseDescription**

**Description**
Textual description of the Browse granule.

Content Source: DP
Constraints: Must exist if browse produced.

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Browse</td>
</tr>
</tbody>
</table>

**BrowsePointer**

**Description**
Data model specific logical reference to the browse.

Content Source: DSS
Constraints: If browse product exists then BrowsePointer exists.

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Browse</td>
</tr>
</tbody>
</table>

**BrowseProductionDateTime**

**Description**
The date and time a Browse was produced.

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Browse</td>
</tr>
</tbody>
</table>

**BrowseSize**

**Description**
Size of Browse Product in MB.

Content Source: DSS
Constraints: assumed that BrowseSize < 1.0 MB
Constraints: BrowseSize > 0.0 MB
Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Browse</td>
</tr>
</tbody>
</table>

Description
Free Numerics

CalendarDate

Description
The year (and optionally month, or month and day). This attribute is used to specify a single date covered by a data collection, granule, or event.

Content Source: DP(collection);PGE(granule)
Constraints: CalendarDate is mandatory if SingleDateTime class is used.

CampaignEndDate

Description
The ending date of the campaign.

Content Source: DP (Collection)
Constraints: Must be after campaign start date.

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SingleDateTime</td>
</tr>
</tbody>
</table>

Campaign

CampaignGuidePointer

Description
Logical pointer to the Campaign Guide.

Content Source: DAAC

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CampaignGuide</td>
</tr>
</tbody>
</table>

CampaignLongName

Description
The expanded name of the campaign/experiment (e.g. Global Climate Observing System).

Content Source: DP (Collection)

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campaign</td>
</tr>
</tbody>
</table>

Description
Active Cavity Radiometer Irradiance Monitor

CampaignShortName

Description
The unique identifier by which a campaign/project/experiment is known. The campaign/project is the scientific endeavor associated with the acquisition of the collection. Collections may be associated with multiple campaigns.

Content Source: DP (Collection); PGE (Granule)

Annotation
**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campaign</td>
</tr>
</tbody>
</table>

**Description**

ACRIM

**CampaignStartDate**

**Description**

The starting date of a campaign/project/experiment.

Content Source: DP (Collection)
Constraints: Must be before campaign end date.

**Annotation**


**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campaign</td>
</tr>
</tbody>
</table>

**CenterLatitude**

**Description**

Geodetic latitude of center of locality.

Content Source: DP(collection);PGE(granule)
Constraints: West,East,North,South Bounding Coordinate not allowed with center lat/lon
Constraints: CenterLatitude => -90.0
Constraints: CenterLatitude <= +90.0

**Annotation**


**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circle</td>
</tr>
</tbody>
</table>
CenterLongitude

Description
Longitude of approximate center of locality.

Content Source: DP(collection);PGE(granule)
Constraints: Not to be used with West, East, North, South Bounding Coordinates. Constraints:
CenterLongitude <= +180.0
Constraints: CenterLongitude => -180.0

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circle</td>
</tr>
</tbody>
</table>

CitationforExternalPublication

Description
The recommended reference to be used when referring to this collection in publications. Its
format is free text, but should include: Originator (the name of an organization or individual that
developed the data set, where Editor(s)' names are followed by (ed.) and Compiler(s)' names are
followed by (comp.)); Publication date (the date of publication or release of the data set); Title
(the name by which document can be referenced).

Content Source: DP
Alias: Edition

Originator
or Publication Date

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SingleTypeCollection</td>
</tr>
</tbody>
</table>

Description
Free Text
City

Description
The city of the person or organization.
Content Source: DP
Constraints:

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
<th>ContactAddress</th>
</tr>
</thead>
</table>

CollectionDescription

Description
This attribute identifies the major emphasis of the content of the collection. Some examples are: 'cloud top products generated from instrument X', or 'all products containing the parameter sea surface temperature as skin temp'.
Content Source: DP

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
<th>CollectionDescription</th>
</tr>
</thead>
</table>

Description
Free Text

CollectionState

Description
This attribute describes the state of the collection, whether it is planned but not yet existent, partially complete due to continual additions from remotely sensed data/processing/reprocessing, or is considered a complete product/dataset.
Content Source: DP
Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SingleTypeCollection</td>
</tr>
</tbody>
</table>

Description
Completed - All currently planned collection, processing, and reprocessing are complete for this product/dataset/collection.

In Work - Data is currently either being collected, processed, or reprocessed for this product/dataset/collection.

Planned - Data has not yet been collected or processed for this product/dataset/collection, possible candidate for consideration in the collection.

Unknown
None

CollectionType

Description
Type of associated collection being described. Used to describe the 'genealogy' of the collection in terms of other collections and supports production history.

Content Source: DP
Constraints: Must exist when Collection Use is used.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CollectionAssociation</td>
</tr>
</tbody>
</table>

Description
Input - Collection used as input or ancillary to this collection.
Dependent - Collections which use this collection as input, including browse.
Science Associated - Collections with which this collection is associated in science terms.
Elevation- Required for GLAS
Range Corrections
Collection Use

Description
Additional comments for all types of associated collections, such as the importance of the input and its use.

Content Source: DP
Constraints: Must exist when Collection Type is used.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Association</td>
</tr>
</tbody>
</table>

Description
Free Text

Component Name

Description
Name of the Component.

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSAPComponent</td>
</tr>
</tbody>
</table>

Component Type

Description
Name of the Component Type.

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSAPComponent</td>
</tr>
</tbody>
</table>
ContactFirstName

Description
First name of the individual which the contact role (producer, archiver, distributor, or data originator) applies. People are points of contact, rather than organizations, in cases where the association of the person to the data set is more significant than the association of the organization to the data set. They may also be included if both a single person and organization are provided as points of contact.

Content Source: DP
Alias: Contact Person Primary

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ContactPerson</td>
</tr>
</tbody>
</table>

ContactInstructions

Description
Supplemental instructions on how or when to contact the individual or organization.

Content Source: DP

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact</td>
</tr>
</tbody>
</table>

Description
Free Text

ContactJobPosition

Description
The title of the individual, i.e. Team Leader, Principal Investigator.

Content Source: DP; DAAC
Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ContactPerson</td>
</tr>
</tbody>
</table>

Description
Free Text

ContactLastName

Description
Last name of the individual which the contact role (producer, archiver, distributor, or data originator) applies. People are points of contact, rather than organizations, in cases where the association of the person to the data set is more significant than the association of the organization to the data set. They may also be included if both a single person and organization are provided as points of contact.

Content Source: DP
Alias: Contact Person Primary
    Contact Person

Constraints:
Mandatory if applicable.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ContactPerson</td>
</tr>
</tbody>
</table>

ContactMiddleName

Description
Middle name of the individual which the contact role (producer, archiver, distributor, or data originator) applies. People are points of contact, rather than organizations, in cases where the association of the person to the data set is more significant than the association of the organization to the data set. They may also be included if both a single person and organization are provided as points of contact.

Content Source: DP
Alias: Contact Person Primary
    Contact Person
Constraints:
Mandatory if applicable.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ContactPerson</td>
</tr>
</tbody>
</table>

ContactOrganizationName

Description
The organization and the member of the organization, associated with the data set. Used in cases where the association of the organization to the data set is more significant than the association of the person to the data set.

Content Source: DP
Alias: Contact Organization
Contact Organization Primary
Constraints:
Mandatory if applicable.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ContactOrganization</td>
</tr>
</tbody>
</table>

Country

Description
The country of the address.

Content Source: DP

Annotation
Reference List

<table>
<thead>
<tr>
<th>Name</th>
<th>Contact</th>
<th>Address</th>
</tr>
</thead>
</table>

Description

AFG - Afghanistan
ALB - Albania
DZA - Algeria
ASM - American Samoa
AND - Andorra
AGO - Angola
AIA - Anguilla
ATA - Antarctica
ATG - An Tigua And Barbuda
ARG - Argentina
ARM - Armenia
ABW - Aruba
AUS - Australia
AUT - Austria
AZE - Azerbaijan
BHS - Bahamas
BHR - Bahrain
BGD - Bangladesh
BRB - Barbados
BLR - Belarus
BEL - Belgium
BLZ - Belize
BEN - Benin
BMU - Bermuda
BTN - Bhutan
BOL - Bolivia
BIH - Bosnia And Herzegovina
BWA - Botswana
BVT - Bouvet Island
BRA - Brazil
IOT - British Indian Ocean Territory
BRN - Brunei Darussalam
BGR - Bulgaria
BFA - Burkina Faso
BDI - Burundi
KHM - Cambodia
CMR - Cameroon
CAN - Canada
CPV - Cape Verde
CYM - Cayman Islands
CAF - Central African Republic
TCD - Chad
CHL - Chile
CHN - China
CXR - Christmas Island
CCK - Cocos (Keeling) Islands
COL - Colombia
COM - Comoros
COG - Congo
COK - Cook Islands
CRI - Costa Rica
CIV - Cote D'ivoire
HRV - Croatia (Local Name: Hrvatska)
CUB - Cuba
CYP - Cyprus
CZE - Czech Republic
DNK - Denmark
DJI - Djibouti
DMA - Dominica
DOM - Dominican Republic
TMP - East Timor
ECU - Ecuador
EGY - Egypt
SLV - El Salvador
GNQ - Equatorial Guinea
ERI - Eritrea
EST - Estonia
ETH - Ethiopia
FLK - Falkland Islands (Malvinas)
FRO - Faroe Islands
FJI - Fiji
FIN - Finland
FRA - France
FXX - France, Metropolitan
GUF - French Guiana
PYF - French Polynesia
ATF - French Southern Territories
GAB - Gabon
GMB - Gambia
GEO - Georgia
DEU - Germany
GHA - Ghana
GIB - Gibraltar
GRC - Greece
GRL - Greenland
GRD - Grenada
GLP - Guadeloupe
GUM - Guam
GTM - Guatemala
GIN - Guinea
GNB - Guinea-Bissau
GUY - Guyana
HTI - Haiti
HMD - Heard And McDonald Islands
VAT - Holy See (Vatican City State)
HND - Honduras
HKG - Hong Kong
HUN - Hungary
ISL - Iceland
IND - India
IDN - Indonesia
IRN - Iran (Islamic Republic Of)
IRQ - Iraq
IRL - Ireland
ISR - Israel
ITA - Italy
JAM - Jamaica
JPN - Japan
JOR - Jordan
KAZ - Kazakhstan
KEN - Kenya
KIR - Kiribati
PRK - Korea, Democratic People's Republic Of
KOR - Korea, Republic Of
KWT - Kuwait
KGZ - Kyrgyzstan
LAO - Lao People's Democratic Republic
LVA - Latvia
LBN - Lebanon
LSO - Lesotho
LBR - Liberia
LBY - Libyan Arab Jamahiriya
LIE - Liechtenstein
LTU - Lithuania
LUX - Luxembourg
MAC - Macau
MKD - Macedonia, The Former Yugoslav Republic Of
MDG - Madagascar
MWI - Malawi
MYS - Malaysia
MDV - Maldives
MLI - Mali
MLT - Malta
MHL - Marshall Islands
MTQ - Martinique
MRT - Mauritania
MUS - Mauritius
MYT - Mayotte
MEX - Mexico
FSM - Micronesia, Federated States Of
MDA - Moldova, Republic Of
MCO - Monaco
MNG - Mongolia
MSR - Montserrat
MAR - Morocco
MOZ - Mozambique
MMR - Myanmar
NAM - Namibia
NRU - Nauru
NPL - Nepal
NLD - Netherlands
ANT - Netherlands Antilles
NCL - New Caledonia
NZL - New Zealand
NIC - Nicaragua
NER - Niger
NGA - Nigeria
NIU - Niue
NFK - Norfolk Island
MNP - Northern Mariana Islands
NOR - Norway
OMN - Oman
PAK - Pakistan
PLW - Palau
PAN - Panama
PNG - Papua New Guinea
PRY - Paraguay
PER - Peru
PHL - Philippines
PCN - Pitcairn
POL - Poland
PRT - Portugal
PRI - Puerto Rico
QAT - Qatar
REU - Reunion
ROM - Romania
RUS - Russian Federation
RWA - Rwanda
KNA - Saint Kitts And Nevis
LCA - Saint Lucia
VCT - Saint Vincent And The Grenadines
WSM - Samoa
SMR - San Marino
STP - Sao Tome And Principe
SAU - Saudi Arabia
SEN - Senegal
SYC - Seychelles
SLE - Sierra Leone
SGP - Singapore
SVK - Slovakia (Slovak Republic)
SVN - Slovenia
SLB - Solomon Islands
SOM - Somalia
ZAF - South Africa
SGS - South Georgia And The South Sandwich Islands
ESP - Spain
LKA - Sri Lanka
SHN - St. Helena
SPM - St. Pierre And Miquelon
SDN - Sudan
SUR - Suriname
SJM - Svalbard And Jan Mayen Islands
SWZ - Swaziland
SWE - Sweden
CHE - Switzerland
SYR - Syrian Arab Republic
TWN - Taiwan, Province Of China
TJK - Tajikistan
TZA - Tanzania, United Republic Of
THA - Thailand
TGO - Togo
TKL - Tokelau
TON - Tonga
TTO - Trinidad And Tobago
TUN - Tunisia
TUR - Turkey
TKM - Turkmenistan
TCA - Turks And Caicos Islands
TUV - Tuvalu
UGA - Uganda
UKR - Ukraine
ARE - United Arab Emirates
GBR - United Kingdom
USA - United States
UMI - United States Minor Outlying Islands
URY - Uruguay
UZB - Uzbekistan
VUT - Vanuatu
VEN - Venezuela
VNM - Viet Nam
VGB - Virgin Islands (British)
VIR - Virgin Islands (U.S.)
WLF - Wallis And Futuna Islands
ESH - Western Sahara
YEM - Yemen
YUG - Yugoslavia
ZAR - Zaire
ZMB - Zambia
ZWE – Zimbabwe

CSDTComments

Description
A free text field for the user to add comments clarifying the data structure.
Content Source:

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSDTDescription</td>
</tr>
</tbody>
</table>

DAACName

Description
The name of the Distributed Active Archive Center that is responsible for the production plan.
Content Source: DAAC
**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProductionPlan</td>
</tr>
</tbody>
</table>

**Description**
GSFC - Goddard Space Flight Center  
LaRC - Langley Research Center  
ORNL - Oak Ridge National Laboratory  
EDC - EROS Data Center  
NSIDC - National Snow and Ice Data Center  
JPL - Jet Propulsion Laboratory  
CIESIN - Consortium for International Earth Science Information Network  
SAR - Alaska SAR Facility

**DataCenter**

**Description**
The data center is supporting the information for which the guide is applicable.

Content Source: DAAC

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guide</td>
</tr>
</tbody>
</table>

**DatasetDisclaimerPointer**

**Description**
This attribute is used to provide hypertext links information. As an order is placed for a specific product, the corresponding data set disclaimer message will be presented to the user. The user is required to acknowledge that he or she understands and agrees with the disclaimer before a product order can proceed. As the data set is distributed to the user, the metadata file (.met file)
that accompanies the distribution will include, in addition to the product information, the user’s
guide (ECSCollectionGuide), the miscellaneous information (MiscellaneousInformation), and
the disclaimer, if available for the data set.

**Annotation**
311-CD-604-001, March 2001, Release 6A.03 Science Data Processing Segment (SDPS)
Database Design and Database Schema Specifications for the ECS Project which are changes to
provide updated details for the Data Server and CIDM subsystems.

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECSCollection</td>
</tr>
</tbody>
</table>

**DateofReferencePaperPublication**

**Description**
Contains the date of formal/informal publication of the reference paper.

Content Source: DP
Constraints: if reference papers utilized, this must exist.

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ReferencePaper</td>
</tr>
</tbody>
</table>

**DateType**

**Description**
This attribute specifies the type of date represented by the value in the date attributes of the
temporal subclasses.

Content Source: DP

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporal</td>
</tr>
</tbody>
</table>
Description
Julian - (JD)- the internal of time in days and fraction of day since 4713 B.C. January 1, Greenwich noon, Julian proleptic calendar.
Gregorian - Standard calendar dates using B.C., A.D. year, and January 1 through December 31 month and day delineation.
J2000

DayNightFlag

Description
This attribute is used to identify if a granule was collected during the day, night (between sunset and sunrise) or both.

Content Source: PGE
Alias: NA
Constraints: TBD

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECSDataGranule</td>
</tr>
</tbody>
</table>

Description
Day - between sunrise and sunset
Night - between sunset and sunrise
Both - Includes both 'Day' and 'Night'
NA
D - Day (between sunrise and sunset)
N - Night (between sunset and sunrise)

DeliveryPurpose

Description
This attribute describes the purpose of the delivery e.g., an initial release, modification, etc.

Content Source: DP
Constraints: If Delivered Algorithm Package is utilized then DeliveryPurpose must exist.
Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AlgorithmPackage</td>
</tr>
</tbody>
</table>

Description

Initial Delivery

Early Delivery

ENGRG MOD - Engineering Modification

Operational

Enhancement

SW Patch

DenominatorofFlatteningRatio

Description

The ratios of the Earth’s major axis to the difference between the major and the minor.

Content Source: DP

Constraints: DenominatorofFlatteningRatio > 0.0

Constraints: DenominatorofFlatteningRatio is mandatory if GeodeticModel class is applicable.

Annotation


Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>GeodeticModel</td>
</tr>
</tbody>
</table>

DepthDatumName

Description

The identification given to surface of reference from which depths are measured.

Content Source: DP

Constraints: DepthDatumName is mandatory if DepthSystemDefinition class is applicable.
Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>DepthSystemDefinition</td>
</tr>
</tbody>
</table>

Description
Approximate lowest astronomical tide
Chart datum; datum for sounding reduction
Columbia River datum
Equatorial springs low water
Gulf Coast low water datum
High-water full and charge
High water
Higher high water
Highest astronomical tide
Indian spring low water
Land survey datum
Local Surface
Low-water full and charge
Low water
Low water datum
Lower low water
Lowest astronomical tide
Lowest low water
Lowest normal low water
Mean high water (MHW)
Mean high water neap
Mean high water springs
Mean higher high water
Mean higher low water
Mean low water (MLW)
Mean low water neap
Mean low water springs
Mean lower high water
Mean lower low water
Mean lower low water springs
Mean sea level (MSL)
Mean tide level
Neap tide
No correction
Spring tide
Tropic lower low water
**DepthDistanceUnits**

**Description**
Units in which depths are recorded.

Content Source: DP
Constraints: DepthDistanceUnits are mandatory if DepthSystemDefinition class is applicable.

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>DepthSystemDefinition</td>
</tr>
</tbody>
</table>

**DepthEncodingMethod**

**Description**
The means used to encode depths.

Content Source: DP
Constraints: DepthEncodingMethod is mandatory if DepthSystemDefinition class is applicable.

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>DepthSystemDefinition</td>
</tr>
</tbody>
</table>

**Description**
Attribute Values
Explicit depth coordinate included with horizontal coordinates
Implicit coordinate
**DepthResolution**

**Description**
The minimum distance possible between two adjacent depth values, expressed in depth distance units of measure.

Content Source: DP  
Constraints: DepthResolution > 0.0  
Constraints: DepthResolution is mandatory if DepthSystemDefinition class is applicable.

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>DepthSystemDefinition</td>
</tr>
</tbody>
</table>

**Description**

**Description**
Description of the Advertisement.

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AdvertisementDescription</td>
</tr>
</tbody>
</table>

**DescriptionType**

**Description**
Contains the type of algorithm description.

Content Source: DAAC

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AlgorithmDescription</td>
</tr>
</tbody>
</table>
**Description**

System Description  
Processing File Description  
ATBD  
Test Plan  
Operations Manual  
SW Development Standard  
Programmers Guide  
Detailed Design  
Performance Test Results

**DetailedDesignPointer**

**Description**

Data model logical reference to detailed design document.

Content Source: DSS  
Constraints: If Detailed Design Document exist then DetailedDesignPointer must exist.

**Annotation**


**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>DetailedDesign</td>
</tr>
</tbody>
</table>

**DistanceResolution**

**Description**

The minimum distance measurable between two points, expressed in Planar Distance Units of measure.

Content Source: DP  
Constraints: DistanceResolution > 0.0  
Constraints: DistanceResolution is mandatory if DistanceandBearingRepresentation class is applicable.

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>DistanceAndBearingRepresentation</td>
</tr>
</tbody>
</table>

**Document Created**

**Description**
The date on which the document was created.

Content Source: DP  
Constraints: mandatory for all documents

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document</td>
</tr>
</tbody>
</table>

**Document Updated**

**Description**
The date on which the document was last revised or updated.

Content Source: DP  
Constraints: mandatory for all documents

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document</td>
</tr>
</tbody>
</table>

**Document Version**

**Description**
The version or revision level of the document.

Content Source: DP  
Constraints: mandatory for all documents
Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document</td>
</tr>
</tbody>
</table>

**EastBoundingCoordinate**

**Description**
Eastern-most limit of coverage expressed in longitude.

Content Source: DP(collection);PGE(granule)
Constraints: EastBoundingCoordinate not null for collection only.
Constraints: EastBoundingCoordinate => -180.0
Constraints: EastBoundingCoordinate <= +180.0

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BoundingRectangle</td>
</tr>
</tbody>
</table>

**ECSCollectionGuidePointer**

**Description**
This attribute provides the URL of the user's guide document that describes the data set.
Content Source: DAAC, DP

Annotation
311-CD-604-001, March 2001, Release 6A.03 Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project which are changes to provide updated details for the Data Server and CIDM subsystems.

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECSCollectionGuide</td>
</tr>
</tbody>
</table>

**ECSDisciplineKeyword**
**Description**
Keyword used to describe the general discipline area of the collection. A collection can conceivably cover several disciplines.

Content Source: DP
Constraints:

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECSDiscipline</td>
</tr>
</tbody>
</table>

**Description**
Earth Science

**ECSPparameterKeyword**

**Description**
Keyword used to describe specific characteristics of a collection at a higher level of detail than provided by ECSVariableKeyword.

Content Source: DP
Alias: NA
Constraints: Controlled keyword

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECSPparameter</td>
</tr>
</tbody>
</table>

**Description**
Absorbed radiation by phytoplankton (ARP)  
Aerosol Backscatter Cross Section Profile  
Aerosol Extinction Cross Section Profile  
Aerosol model  
Aerosol Optical Depth  
Aerosol optical thickness at 865 nm (Tau 865)  
Aerosol radiance at 765 nm  
Aerosol radiance ratio (Clear water epsilon 531nm/667nm)
Aerosol radiance ratio (Epsilon 765nm/865nm)
Aerosol Type
Albedo
Angstrom Coefficient
Asymmetry Factor
Backscattering Ratio
Bidirectional Reflectance
Calcite
Calcium Carbonate
Canopy Density
Carbon Export
Chlorophyll absorption coefficient at 675 nm
Chlorophyll pigment corrected for the presence of coccoliths
Chlorophyll fluorescence baseline
Chlorophyll fluorescence efficiency
Chlorophyll fluorescence line height
Cirrus Reflectance
Cloud Backscatter Cross Section Profile
Cloud Extinction Cross Section Profile
Cloud Fraction
Cloud Ice Path
Cloud Layer Heights
Cloud Liquid Water Path
Cloud Optical Depth
Cloud Particle Effective Radius
Cloud Presence
Cloud Shadow
Cloud Water Path
Contour Line
CZCS total pigment concentration
Daytime Brightness Temperature from Mid-IR Bands
Daytime Brightness Temperature from Thermal Bands
Daytime Infrared Radiance from Mid-IR Bands
Daytime Infrared Radiance from Thermal Bands
Daytime SST from MODIS bands 22 and 23 (Mid IR)
Daytime SST from MODIS bands 31 and 32 (Thermal IR)
DEM
Detached coccolith concentration
Diffuse attenuation coefficient at 490 nm (K490)
Digital Contours
Digital Mapping
Digital Terrain Elevation Data
Digital Terrain Model
Dissolved Organic Matter
Dissolved organic matter absorption at 400 nm (gelbstoff)
Effective Optical Depth
Effective Radius
Elevation Data
Elevation Distribution
Fire Characteristics
Fire Intensity
Fire Temperature
Gelbstoff
Glint radiance
GPS (Global Positioning System)
Ice Sheet Range
Infrared
Instantaneous photosynthetically available radiation (IPAR)
Land Cover Change
Land Range
Laser Reflectance
LIDAR Profile
Low Level
LPA (Laser Pulse Array)
Mass Concentration
Mixed Layer Depth
MODIS chlorophyll-a pigment concentration
MODIS chlorophyll-a pigment concentration (3 band)
MODIS total pigment concentration
New Nitrogen Production
Nighttime Brightness Temperature from Mid-IR Bands
Nighttime Brightness Temperature from Thermal Bands
Nighttime Infrared Radiance from Mid-IR Bands
Nighttime Infrared Radiance from Thermal Bands
Nighttime SST from MODIS bands 22 and 23 (Mid IR)
Nighttime SST from MODIS bands 31 and 32 (Thermal IR)
Nitrogen Trioxide
Normalized water-leaving radiance at 412 nm
Normalized water-leaving radiance at 443 nm
Normalized water-leaving radiance at 488 nm
Normalized water-leaving radiance at 531 nm
Normalized water-leaving radiance at 551 nm
Normalized water-leaving radiance at 667 nm
Normalized water-leaving radiance at 678 nm
Ocean Range
Optical Depth
Photosynthetically Available Radiation (PAR)
Phycoerythrobilin
Phycoerythrobilin-rich phycoerythrin concentration (PEB)
Phycourobilin
Phycourobilin-rich phycoerythrin concentration (PUB)
Planetary Boundary Layer Height
Planetary Boundary Layer Optical Depth
Primary Production
Range
Rayleigh radiance
Reflectance
Reflected Flux
Roughness
Satellite azimuth
Satellite zenith
Sea Ice Range
SeaWiFS chlorophyll-a pigment concentration
SeaWiFS chlorophyll-a pigment concentration (2 band)
Shadow Mask
Slope
Solar azimuth
Solar zenith
SRS (Stellar Reference System)
ST (Star Tracker)
Surface Albedo
Surface Elevation
Surface Emissivity
Surface Reflectance
Surface Roughness
Surface Slope
Temperature
Texture Indicies
Total absorption coefficient at 412 nm
Total absorption coefficient at 443 nm
Total absorption coefficient at 488 nm
Total absorption coefficient at 531 nm
Total absorption coefficient at 551 nm
Total Column
Transmitted Flux
Upper Level
U wind component
V wind component
Vegetation Cover Change
Vertical Profile
Visible
Voltage
Waveform
Whitecap radiance
Wind Speed

2-135 420-TP-023-001
532nm Attenuated Backscatter
1064nm Attenuated Backscatter

ECSTermKeyword

Description
Keyword used to describe the science parameter area of the collection. A collection can conceivably cover many such parameters.

Content Source: DP

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECSTerm</td>
</tr>
</tbody>
</table>

Description
Aerosols
Air Quality
Altitude
Aquatic Habitat
Atmospheric Backscatter
Atmospheric Chemistry
Atmospheric Phenomena
Atmospheric Pressure
Atmospheric Radiation
Atmospheric Temperature
Atmospheric Water Vapor
Atmospheric Winds
Attitudes, Preferences, Behavior
Bathymetry
Boundaries
Boundary Layer
Clouds
Coastal Processes
Ecological Dynamics
Economic Resources
Engineering/Sensor Quantities
Environmental Effects
Environmental Impacts
Erosion/Sedimentation
Food Resources
Fungi
Gamma Ray
Geochemistry
Geodetics/Gravity
Geologic Time
Geomagnetism
Geophysical Fields
Geothermal
Ground Water
Human Health
Ice Core Records
Ice Sheet
Infrared Wavelengths
Infrastructure
Land Records
Land Slope
Land Temperature
Land Use/Land Cover
Landscape
Marine Geophysics
Marine Sediments
Microbiota
Microbiota Taxonomy
Microwave
Natural Hazards
Natural Resources
Ocean Acoustics
Ocean Chemistry
Ocean Circulation
Ocean Heat Budget
Ocean Optics
Ocean Pressure
Ocean Temperature
Ocean Water Budget
Ocean Waves
Ocean Winds
Ocean/Lake Records
Platform Characteristics
Planetary Boundary Layer
Plant Taxonomy
Population
Precipitation
Radar
Radiation Budget
Radiative Properties
Radio Wave  
Rocks/Minerals  
Salinity/Density  
Sea Ice  
Sea Surface  
Sea Surface Height  
Seismology  
Sensor Characteristics  
Snow/Ice  
Soils  
Solar Activity  
Solar Energetic Particles  
Surface Radiative Properties  
Surface Water  
Tectonics  
Temperature  
Terrestrial Habitat  
Tides  
Topography  
Transmission  
Ultraviolet Wavelengths  
Vegetation  
Viewing Geometry  
Visible Wavelengths  
Volcanoes  
Water Quality  
Wetlands  
X-Ray  
Zoology  

**ECSTopicKeyword**

**Description**
Keyword used to describe the general topic area of the collection. A collection can conceivably cover several topics.

Content Source: DP

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECSTopic</td>
</tr>
</tbody>
</table>

2-138 420-TP-023-001
**Description**

Atmosphere  
Biosphere  
Cryosphere  
Human Dimensions  
Hydrosphere  
Land Surface  
Oceans  
Paleoclimate  
Radiance or Imagery  
Solar Physics  
Solar-terrestrial Interactions  
Solid Earth  

**ECSVariableKeyword**

**Description**

Keyword used to describe the specific science parameter content of the collection. A collection can conceivably cover many specific parameters. The keyword valids are the lowest level physical parameter terms which are normally searched by a user; i.e. a user enters a keyword which when found may connect with one or more parameters from collections. The keywords are also the lowest level words, which describe product content without being the server specific measurement (held in Parameter class). While there is a controlled list of these parameters held by GCMD, additions can be made by an as yet unspecified configuration control process.

Content Source: DP

**Annotation**


**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECSVariable</td>
</tr>
</tbody>
</table>

**Description**

Ablation  
Absorption  
Abyssal Hills/Plains  
Acid Deposition  
Acid Rain  
Acoustic Attenuation  
Acoustic Frequency  
Acoustic Reflectivity
Acoustic Scattering
Acoustic Tomography
Acoustic Velocity
Adaptation
Administrative Divisions
Advection
Aerosol Backscatter
Aerosol Extinction
Aerosol Layer Heights
Aerosol Optical Depth/Thickness
Aerosol Particle Properties
Aerosol Radiance
Afforestation/Reforestation
Age Determinations
Agricultural Expansion
Agricultural Land
Agriculture
Air Temperature
Albedo
Algae
Alkalinity
Alpha Particles
Alpine/Tundra
Ambient Noise
Ammonia
Amoebae
Amphibians
Anatomical Parameters
Anemones
Anisotrophy
Anisotropy
Antenna Temperature
Anticyclones/Cyclones
Aphotic Zone
Aquaculture
Aquifer Recharge
Aquifers
Arachnids
Arthropods
Atmospheric Emitted Radiation
Atmospheric Heating
Atmospheric Pressure
Atmospheric Stability
Atmospheric Winds
Attitude Characteristics
Attenuated Backscatter
Attenuation/Transmission
Avalanche
Bacteria
Baroclinic Mode
Barometric Altitude
Barotropic Mode
Barrier Islands
Beaches
Bedrock Lithology
Benthic Habitat
Benthic Heat Flow
Benthic Index
Bioaccumulation
Bioavailability
Biogeochemical Cycles
Bioluminescence
Biomass
Biomass Burning
Biomedical Chemicals
Bioturbation
Birds
Blue-Green Algae
Boundary Layer Temperature
Bowen Ratio
Brightness Temperature
Brine Production
Bromine Monoxide
Buildings
Buoy Position
Cambrian
Canopy Characteristics
Carbon
Carbon Dioxide
Carbon Monoxide
Chlorine Nitrate
Carbonaceous Aerosols
Carbonate
Carbonate Sediments
Carboniferous
Carcinogens
Cave Deposits
Caves
Cenozoic
Centipedes
Chemical Weathering
Chemosynthesis
Chlorine Dioxide
Chlorine Monoxide
Chlorofluorocarbons
Chlorophyll
Ciliates
Cloud Amount
Cloud Amount/Frequency
Cloud Asymmetry
Cloud Ceiling
Cloud Cleared Radiance
Cloud Condensation Nuclei
Cloud Emissivity
Cloud Forcing
Cloud Height
Cloud Ice
Cloud Liquid Water
Cloud Liquid Water/Ice
Cloud Optical Depth/Thickness
Cloud Optical Thickness
Cloud Precipitable Water
Cloud Reflectance
Cloud Top Pressure
Cloud Top Temperature
Cloud Types
Cloud Vertical Distribution
Coal
Coastal Elevation
Coastal Habitat
Coccolithophore
Communications
Community Structure
Competition
Condensation
Conduction
Conductivity
Conifers
Consumer Behavior
Consumption
Contaminants
Continental Drift
Continental Rises/Slopes
Continental Shelves
Continental Tectonics
Dissolved Solids
Diurnal Movements
Divergence
Dome Temperature
Domesticated Animals
Domesticated Plants
Dominance
Dominant Species
Doppler Speed
Downwelling
Drainage
Droplet Concentration/Size
Droplet Size
Drought
Dunes
Dust/Ash
Earthquake Dynamics
Earthquake Occurrences
Earthquake Predictions
Echinoderms
Eddies
Electric Field
Electrical Properties
Electricity
Electron Flux
Elevation Distribution
Emissions
Emissivity
Endangered Species
Energetic Particles
Energy Deposition
Entrainment
Eocene
Erosion
Eruption Dynamics
Estuaries
Estuarine Habitat
Estuarine Wetlands
Eutrophication
Evaporation
Evaporites
Evapotranspiration
Excretion
Exotic Species
Exotic Vegetation
Extinction
Extinction Coefficients
Faults
Feeding Habitat
Ferns
Fetch
Filaments
Fires
Fire Characteristics
Fire Occurrence
Fish
Fixation
Fjords
Flagellates
Flatworms
Floods
Fluorescence
Fog
Folds
Food-web Dynamics
Food Production
Foraminifers
Forest Composition/ Structure
Forest Habitat
Fossil Fuel Burning
Fracture Zones
Freeze
Freeze/Thaw
Freezing Rain
Fresh Water Flux
Fronts
Frost
Gamma Ray
Gas Flaring
Gelbstoff
Geomagnetic Forecasts
Geomagnetic Indices
Geomagnetic Induction
Geopotential Height
Geothermal Energy
Geothermal Temperature
Glaciation
Glaciers
Grassland
Gravity
Ice Pack
Ice Roughness
Ice Sheet Elevation
Ice Sheet Reflectance
Ice Sheets
Ice Sheet Slope
Ice Temperature
Ice Types
Ice Velocity
Icebergs
Igneous Rocks
Importance Value
Incoming Shortwave Radiation
Indigenous Species
Indigenous Vegetation
Industrial Emissions
Industrialization
Infiltration
Infrared Flux
Infrared Imagery
Infrared Radiance
Infrared Radiation
Inlets
Inorganic Carbon
Inorganic Matter
Insects
Instability
Internal Waves
Intertidal Zone
Inundation
Inversion Height
Invertebrates
Ion Exchange
Ions
Irradiance
Irrigation
Island Arcs
Islands
Isostatic Rebound
Isotopes
Jellyfish
Jurassic
Kinetic Energy
Lacustrine Wetlands
Lagoons
Marine Gravity Field
Marine Magnetics
Marshes
Maximum/Minimum Temperature
Mesoscale Convective Complex
Mesozoic
Metals
Metamorphic Rocks
Methane
Methane Burden
Meteorites
Microalgae
Microfossils
Microphyte
Microwave Imagery
Mid-Ocean Ridges
Migratory Rates/Routes
Millipedes
Mine Drainage
Minerals
Miocene
Mixing Height
Molds
Mollusks
Momentum
Monsoons
Montane Habitat
Mosses
Mushrooms
Mutation
Mutualism
Natural Gas
Neotectonics
Net Radiation
Nitrate
Nitrate Particles
Nitric Acid
Nitrite
Nitrogen
Nitrogen Compounds
Nitrogen Dioxide
Nitrogen Oxides
Nitrous Oxide
Non-Metallic Minerals
Non-Methane Hydrocarbons
Nuclear Radiation
Nucleation
Nutrient Cycling
Nutrients
Observed Radiance
Ocean Color
Ocean Crust Deformation
Ocean Currents
Ocean Mixed Layer
Ocean Plateaus/Ridges
Ocean Tracers
Oil Spill
Oligocene
Optical Depth/Thickness
Optical Depth
Optical Thickness
Orbital Characteristics
Ordovician
Organic Carbon
Organic Matter
Organic Particles
Oscillations
Outgoing Longwave Radiation
Overturning
Oxidation/Reduction
Oxygen
Oxygen Demand
Oxygen Isotopes
Ozone
Ozone Burden
Ozone Profile
Paleocene
Paleomagnetic Data
Paleomagnetism
Paleosols
Paleovegetation
Paleozoic
Palustrine Wetlands
Parasitism
Particle Composition
Particle Density
Particle Distribution Functions
Particle Flux
Particle Speed
Particle Temperature
Particulate Matter
Particulates
Peatlands
Pelagic Habitat
Percolation
Permafrost
Permian
Petroleum
pH
Phase and Amplitude
Phosphate
Phosphorus
Photic Zone
Photolysis Rates
Photosynthesis
Photosynthetically Active Radiation
Physiological Parameters
Phytoplankton
Pigments
Pipelines
Planetary Boundary Layer
Planetary Boundary Layer Height
Plankton
Plant Characteristics
Pleistocene
Pliocene
Polar Motion
Political Divisions
Pollen
Polynyas
Population Dynamics
Position Characteristics
Post-Breeding
Potential Density
Potential Temperature
Precambrian
Precipitable Water
Precipitation Amount
Precipitation Anomalies
Precipitation Rate
Predation
Pressure Anomalies
Pressure Tendency
Pressure Thickness
Primary Production
Scattering
Scavenging
Sea Ice Concentration
Sea Ice Elevation
Sea Ice Motion
Sea Level Pressure
Sea Level Rise
Sea State
Sea Surface Height
Sea Surface Reflectance
Sea Surface Slope
Sea Surface Temperature
Seafloor Spreading
Seafloor Topography
Seamounts
Secchi Depth
Secondary Production
Sediment Chemistry
Sediment Composition
Sediment Grain Size
Sediment Transport
Sedimentary Rocks
Sedimentation
Sediments
Segmented worms
Seiches
Seismic Body Waves
Seismic Profile
Seismic Surface Waves
Selection
Sensor Counts
Sensor Measurements
Sewage
Shoals
Shoreline Displacement
Shorelines
Shortwave Radiation
Shrubland/Scrub
Sigma N Marchht
Significant Wave Height
Silicate
Siliceous Sediments
Silurian
Sink Temperature
Sinkholes
Skin Temperature
Sleet
Slime molds
Smog
Snow
Snow Cover
Snow Depth
Snow Energy Balance
Snow Facies
Snow Melt
Snow Water Equivalent
Snow/Ice Temperature
Social Behavior
Soil Absorption
Soil Bulk Density
Soil Chemistry
Soil Color
Soil Compaction
Soil Consistence
Soil Depth
Soil Fertility
Soil Heat Budget
Soil Horizons/Profile
Soil Impedance
Soil Mechanics
Soil Moisture/Water Content
Soil Moisture
Soil Plasticity
Soil Porosity
Soil Productivity
Soil Respiration
Soil Structure
Soil Temperature
Soil Texture
Soil Types
Solar Active Regions
Solar Events
Solar Flares
Solar Imagery
Solar Irradiance
Solar Oscillations
Solar Prominences
Solar Radiation
Solar Radio Waves
Solar Ultraviolet
Solar X-Rays
Sponges
Sporozoans
Springs
Stability
Stable Isotopes
Stage Height
Static Pressure
Static Temperature
Station Height
Storm Surge
Storms
Strain
Stratigraphic Sequence
Stratopause
Stream Chemistry
Streamfunctions
Stress
Subduction
Sublimation
Submarine Canyons
Succession
Sulfate Particles
Sulfur Dioxide
Sulfur Oxides
Sunshine
Sunspots
Surf Beat
Surface Air Temperature
Surface Pressure
Surface Roughness
Surface Winds
Surveys
Survival
Suspended Solids
Swamps
Swells
Symbiosis
Synoptic Maps
Temperate Profile
Temperature Anomalies
Terrain Elevation
Terrigenous Sediments
Tertiary
Thermal Conductivity
Thermal Infrared
Thermal Properties
Thermocline
Thermohaline Circulation
Tidal Components
Tidal Currents
Tidal Height
Tidal Range
Topographic Effects
Tornados
Total Surface Water
Toxic Chemicals
Toxicity
Trace Elements
Trace Gases
Trace Metals
Transmittance
Transportation
Tree Rings
Trenches
Triassic
Trophic Dynamics
Tropopause
Tropospheric Ozone
Tsunamis
Turbidity
Turbulence
Typhoons
Ultraviolet Flux
Ultraviolet Radiation
Ultraviolet Sensor Temperature
Upper Level Winds
Upwelling
Urban Land
Urbanization
Varve Deposits
Vegetation Cover
Vegetation Index
Vegetation Species
Velocity Fields
Vertebrates
Vertical Wind Motion
Viewing Geometry
Virtual Temperature
Visibility
Visible Flux
Visible Imagery
Visible Radiance
Visible Radiation
Vital Statistics
Volatile Organic Compounds
Volcanic Ash/Dust
Volcanic Deposits
Volcanic Gases
Vorticity
Water-Leaving Radiance
Water Channels
Water Depth
Water Management
Water Masses
Water Pressure
Water Table
Water Temperature
Water Vapor
Water Vapor Burden
Water Vapor Profile
Water Yield
Wave Frequency
Wave Height
Wave Length
Wave Period
Wave Spectra
Wave Speed/Direction
Wave Types
Weathering
Wetlands
Whiteout
Wind-Driven Circulation
Wind Chill
Wind Shear
Wind Stress
Wind Waves
X-Ray
Yeast
Zooplankton
ElectronicMailAddress

Description
The address of the electronic mailbox of the organization or individual. The address, following
NASA Global Change Master Directory format, should be of the form 'network name>network
address'. Examples of network names are NSN, SPAN, telemail, ARPANET, and Internet.
Examples of network addresses are NSSDCA::NG, MIKEMARTIN/NASA,
MMARTIN@JPL.MILVAX, or mikem@eos.hitc.com.

Content Source: DP
Alias: Email address

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email</td>
</tr>
</tbody>
</table>

EllipsoidName

Description
Identification given to established representation of the Earth's shape.

Content Source: DP
Constraints: EllipsoidName is mandatory if GeodeticModel class is applicable.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>GeodeticModel</td>
</tr>
</tbody>
</table>

Description
Airy 1940 - applies to UK
Australian National 1965 - applies to Australia
Bessel 1841
Clarke 1866
Clarke 1880
Everest 1830 - applies to Asia
Geodetic Reference System 1980 (GRS80)
Hough
IAU 1976 - International Astronomical Union
International 1909 (Hayford)
Krassovsky 1940 - applies to former USSR
Mercury 1960 (Fischer 1960) - supports early heritage NASA satellite
Modified Airy - applies to UK
Modified Everest - applies to Asia
Modified Mercury 1968 (Modified Fischer 1960) - supports early heritage NASA satellite
New International 1967
World Geodetic System of 1966 (WGS66)
World Geodetic System of 1972 (WGS72)
World Geodetic System of 1984 (WGS84)

EndsatPresentFlag

Description
This attribute will denote that a data collection which covers, temporally, a discontinuous range, currently ends at the present date. This way, the granules, which comprise the data collection, that are continuously being added to inventory need not update the data collection metadata for each one. Note that MODIS granules may be added several thousand times a day, making the update of the data collection metadata impractical.
Content Source: DSS

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporal</td>
</tr>
</tbody>
</table>

Description
Y = Yes, does end at present time.

N = No, does not end at present time.

EquatorCrossingDate

Description
This attribute represents the date of the descending equator crossing.
Content Source: PGE
**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>OrbitCalculatedSpatialDomain</td>
</tr>
</tbody>
</table>

**EquatorCrossingLongitude**

**Description**
This attribute represents the terrestrial longitude of the descending equator crossing.

Content Source: PGE

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>OrbitCalculatedSpatialDomain</td>
</tr>
</tbody>
</table>

**EquatorCrossingTime**

**Description**
This attribute represents the time of the descending equator crossing.

Content Source: PGE

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>OrbitCalculatedSpatialDomain</td>
</tr>
</tbody>
</table>

**ExclusionGRingFlag**

**Description**
Flag which determines if the coordinates represent the Outer or Exclusion G-Ring.

Content Source: PGE(granule); DP(collection)
Constraints: ExclusionGRingFlag is mandatory if GRing class is applicable.
Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPolygon</td>
</tr>
</tbody>
</table>

Description
Y - Value denotes geodetic latitude or longitude of the starting point of arc of an inner (exclusion) G-Ring.

N - Value denotes geodetic latitude or longitude of the starting point of an arc of an outer G-Ring.

ExpirationDate

Description
Date Advertisement expired.

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AdvertisementMaster</td>
</tr>
</tbody>
</table>

FtpURL

Description
Universal Resource Locator that contains a reference to the location of an installable package.

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>InstallableServiceAdvertisement</td>
</tr>
</tbody>
</table>

FutureReviewDate

Description
Date of next planned QA peer review.

Content Source: DP; PGE

Annotation

2-161 420-TP-023-001
**GeographicalRegionName**

**Description**
Contains a name for the geographical region the Regional Area Definition Guide applies to. Example values could be: Nile Delta, Sahel Zone, Mississippi Valley, Sudanian Zone, Amazon Basin, Grand Canyon.

Content Source: DP
Constraints: if class utilized, this must exist.

**Annotation**

<table>
<thead>
<tr>
<th>Name</th>
<th>Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>RegionalAreaDefinitionGuide</td>
<td></td>
</tr>
</tbody>
</table>

**GeographicCoordinateDescription**

**Description**
Free Text

<table>
<thead>
<tr>
<th>Name</th>
<th>Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td></td>
</tr>
<tr>
<td>GeographicCoordinateSystem</td>
<td></td>
</tr>
</tbody>
</table>

**GeographicCoordinateInformation**

**Description**
Free Text

<table>
<thead>
<tr>
<th>Name</th>
<th>Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td></td>
</tr>
<tr>
<td>GeographicCoordinateSystem</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>GeographicCoordinateSystem</td>
<td></td>
</tr>
</tbody>
</table>
**GeographicCoordinateUnits**

**Description**
Units of measure used for the geodetic latitude and longitude resolution values. For lat, a 2 digit decimal number from 0-90; for lon, a 3 digit decimal number from 0-180. + or absence of - for values north of equator or values west of prime meridian; - for all others.

Content Source: DP
Constraints: GeographicCoordinateUnits are mandatory if GeographicCoordinateSystem class is applicable.

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>GeographicCoordinateSystem</td>
</tr>
</tbody>
</table>

**GIPParameterList**

**Description**
Describes the parameters that should be passed to a service when the service is executed. The content of the list is dependent upon the type of service (i.e. acquire, browse, subset, etc.).

Content Source: IOS

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SignatureServiceAdvertisement</td>
</tr>
</tbody>
</table>
**GranulePointer**

**Description**
Pointer to a granule specification.

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECSDataGranule</td>
</tr>
</tbody>
</table>

**GridCoordinateSystemName**

**Description**
Name of the Grid Coordinate System. A plane-rectangular coordinate system usually based on, and mathematically adjusted to a map projection so that geographic positions can be readily transformed to and from plane coordinates. The zone identifier can be allocated per granule; hence the class 'ZoneIdentifier'.

Content Source: DP
Constraints:
If GridCoordinateSystem is used, zone identifier must be used.

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>GridCoordinateSystem</td>
</tr>
</tbody>
</table>

**Description**
Universal Transverse Mercator (UTM) - Requires UTM zone number, 1-60 for Northern Hemisphere, -60 to -1 for Southern Hemisphere

Other Grid System - Requires description in lieu of zone identifier which includes name, parameters and values, and citation of the specification for the algorithms that describe the mathematical relationship between the Earth and the coordinates of the grid system.
**GRingPointLatitude**

**Description**
The geodetic latitude of a point of the G-ring.

Content Source: DP(collection);PGE(granule)
Constraints: GRingPointLatitude <= +90.0
Constraints: GRingPointLatitude is mandatory if GRingPoint class is applicable. Constraints: GRingPointLatitude => -90.0

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPolygonPoint</td>
</tr>
</tbody>
</table>

**GRingPointLongitude**

**Description**
The longitude of a point of the G-Ring.

Content Source: DP(collection);PGE(granule)
Constraints: GRingPointLongitude is mandatory if GRingPoint class is applicable. Constraints: GRingPointLongitude <= +180.0
Constraints: GRingPointLongitude >= -180.0

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPolygonPoint</td>
</tr>
</tbody>
</table>

**GRingPointSequenceNo**

**Description**
Value denotes the numerical sequence position of a G-Ring point.
Content Source: DP(collection);PGE(granule)
Constraints: GRingPointSequenceNo is mandatory if GRingPoint class is applicable.
Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPolygonPoint</td>
</tr>
</tbody>
</table>

GuideName

Description
The name of the guide document.
Content Source: DAAC

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guide</td>
</tr>
</tbody>
</table>

Description
Regional Area Definition Guide
Archive Center Guide
Processing Center Guide
Campaign Guide
Platform Guide
Instrument Guide
ECS Collection Guide
Sensor Guide
Analysis Guide

HorizontalDatumName

Description
The identification given to the reference system used for defining the coordinates of points.

Content Source: DP
Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>GeodeticModel</td>
</tr>
</tbody>
</table>

Description

NAD27 - North American Datum of 1927
NAD83 - North American Datum of 1983

HoursofService

Description

Time period when individuals can speak to the organization or individuals.

Content Source: DAAC

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact</td>
</tr>
</tbody>
</table>

Implementation

Description

The name of the implemented form of the CSDT (standard formats, industry standards etc.), including lowest level object description.

Content Source:

Constraints:

Annotation


Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSDTDescription</td>
</tr>
</tbody>
</table>
**Description**
HDF-EOS - HDF-EOS Datatypes for implementation: HDF Attribute, HDF Attributes, HDF Vdata, HDF (RIS8, RIS24), HDF SDS, SDS with attributes, multiple HDF SDSs, multiple Vdatas.

ASCII

HDF

Binary

netCDF

NMC GRIB

NMC BUFR

CCSDS - Consultative Committee for Space Data Systems establishes variety of standard formats e.g. time, telemetry packages, metadata, etc.

**IndirectReference**

**Description**
Name of object by which data are organized. Name is the ESDT related or other local name other than the formal CSDT reference. i.e. 2.5 degree bins for CERES, 5 degree bins for CERES, and source packets for level 0.

Content Source: DP

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSDTDescription</td>
</tr>
</tbody>
</table>

**InputPointer**

**Description**
Data model logical reference to Input Granule.
**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>InputGranule</td>
</tr>
</tbody>
</table>

**InstrumentCharacteristicDataType**

**Description**
The datatype of the instrument characteristic/attribute defined by InstrumentCharacteristicName.

Content Source: DP (Collection)
Constraints: Must exist if SensorCharacteristicValue exists

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>InstrumentCharacteristic</td>
</tr>
</tbody>
</table>

**Description**
int
varchar
datetime
date
time
float

**InstrumentCharacteristicDescription**

**Description**
The description of the instrument attribute.

Content Source: DP (Collection)

**Annotation**
### InstrumentCharacteristicName

**Description**
The name of the instrument characteristic attribute. Instrument characteristic are instrument-specific attributes.

Content Source: DP (Collection)

Constraints: Must conform to ECS attribute naming guidelines. Primary Key.

**Annotation**

### InstrumentCharacteristicUnit

**Description**
The units of the attribute defined with InstrumentCharacteristic.

Content Source: DP (Collection)

**Annotation**

### InstrumentCharacteristicValue

**Description**
The value of the Instrument/attribute defined in InstrumentCharacteristic. Attributes must have single values.

Content Source: DP (Collection)

Constraints: Abstract class instantiated as either int:string:date:float.
Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>InstrumentCharacteristicValueClass</td>
</tr>
</tbody>
</table>

InstrumentGuidePointer

Description
Logical pointer to the Instrument Guide.

Content Source: DAAC

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>InstrumentGuide</td>
</tr>
</tbody>
</table>

InstrumentLongName

Description
The expanded name of the primary sensory instrument. (e.g. Advanced Spaceborne Thermal Emission and Reflective Radiometer, Clouds and the Earth's Radiant Energy System, Human Observation)

Content Source: DP (Collection)

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instrument</td>
</tr>
</tbody>
</table>

Description
Active Cavity Radiometer Irradiance Monitor
Advanced Spaceborne Thermal Emission and Reflection Radiometer
Advanced Microwave Scanning Radiometer
Advanced Microwave Scanning Radiometer- EOS
Advanced Microwave Sounding Unit
Atmospheric Infrared Sounder
Clouds and the Earth's Radiant Energy System
Clouds and the Earth's Radiant Energy System Flight Model 1
Clouds and the Earth's Radiant Energy System Flight Model 2
Enhanced Thematic Mapper Plus
Geoscience Laser Altimeter System
Geostationary Operational Environmental Satellite Imager
Global Positioning System Receiver
High Resolution Dynamics Limb Sounder
Humidity Sounder Brazil
Land Remote-Sensing Satellite
Lightning Imaging Sensor
Moderate-Resolution Imaging Spectroradiometer
Measurements of Pollution In The Troposphere
Multispectral Imaging Radiometer
Microwave Limb Sounder
Multi-Angle Imaging SpectroRadiometer
Multispectral Imaging Radiometer
Special Sensor Microwave/Imager
Stratospheric Aerosol and Gas Experiment III
Tropospheric Emission Spectrometer
Visible and Infrared Spin Scan Radiometer

**InstrumentShortName**

**Description**
The unique identifier of an instrument. (e.g. ASTER, AVHRR-3, CERES, Human)

Content Source: DP (Collection); PGE (Granule)

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instrument</td>
</tr>
</tbody>
</table>

**Description**
ACRIM
AIRS
AMSR
AMSR-E
AMSU-A
Instrument Technique

Description
The instrument method or procedure. (e.g. radiometer, manual enumeration)

Content Source: DP (Collection)

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instrument</td>
</tr>
</tbody>
</table>

Description
Broadband scanning radiometry
Correlation Spectrometry
Cross-Track Scanning Sounding
Cross-Track Scanning Microwave Sounding
Cross-Track Scanning Multichannel Infrared Sounding
Cross-Track Scanning Multichannel Microwave Sounding
Imaging Radiometry
Imaging Spectroradiometry
Infrared Limb Sounding
Infrared Sounding
Earth Limb-Scanning Grating Spectroradiometry
Laser Altimetry
Laser Altimetry and Light Detection and Radar
Limb and Nadir viewing Infrared Fourier Transform Spectrometer
Microwave Limb Sounding
Lunar Occultation
Multi-Angle Imaging Spectroradiometry
Passive Microwave
Pyrheliometry
Radionavigation
Scanning Radiometry
Self-calibrating solar/lunar occultation grating spectrometry
Solar Occultation

**Internal Name**

**Description**
Internal service name for ECS subsystem use only.

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SignatureServiceAdvertisement</td>
</tr>
</tbody>
</table>

**JournalArticleName**

**Description**
The name of the journal article.

Content Source: DP
Constraints: must exist if article does.

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>JournalArticle</td>
</tr>
</tbody>
</table>
**JournalArticlePointer**

**Description**
Data model logical reference to Journal Article.

Content Source: DSS
Constraints: if journal article exists, this must exist.

**Annotation**

<table>
<thead>
<tr>
<th>Reference List</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
</tr>
<tr>
<td>JournalArticle</td>
</tr>
</tbody>
</table>

**LatitudeResolution**

**Description**
The minimum difference between two adjacent latitude values expressed in Geographic Coordinate Units of measure.

Content Source: DP
Constraints: LatitudeResolution > 0.0
Constraints: LatitudeResolution is mandatory if GeographicCoordinateSystem class is applicable.

**Annotation**

<table>
<thead>
<tr>
<th>Reference List</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
</tr>
<tr>
<td>GeographicCoordinateSystem</td>
</tr>
</tbody>
</table>

**LocalCoordinateSystemDescription**

**Description**
A description of the coordinate system and its orientation to the surface of the Earth.

Content Source: DP
Constraints: LocalCoordinateSystemDescription is mandatory if LocalCoordinateSystem class is applicable.

**Annotation**
Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>LocalCoordinateSystem</td>
</tr>
</tbody>
</table>

Description

Free Text

Central Body, Fixed (CBF)

Central Body, Inertial (CBI)

Local Horizontal (LH)

Vertical Vehicle Local Horizontal (VVLH)

LocalGeoreferenceInformation

Description

A description of the information provided to register the local system to the Earth (e.g. control points, satellite ephemeral data, inertial navigation data).

Content Source: DP

Constraints: LocalGeoreferenceInformation is mandatory if LocalCoordinateSystem class is applicable.

Annotation


Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>LocalCoordinateSystem</td>
</tr>
</tbody>
</table>

LocalGranuleID

Description

Unique identifier for locally produced granule that ECS ingests and is required to capture.

Annotation


Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECSDataGranule</td>
</tr>
</tbody>
</table>
**LocalityDescription**

**Description**
This attribute provides the rationale behind including this locality definition in ECS. It should include the area of Earth Science research that requires such a definition, a description of what the locality represents in general terms, and a brief description or reference to a description of the method used as the source of the definition.
Content Source: DP
Constraints: must exist if locality type does.

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locality</td>
</tr>
</tbody>
</table>

**LocalityType**

**Description**
Type of entity for which space/time extent is defined. Spatial and temporal domain will be used to define coverage of the data granule; or to define the varying spatial extent over time, of some geophysical event/ phenomena eg. Mid-west Flood of 93, or of certain seasons throughout the world, eg. monsoon season, or spring. It may be used to define the spatial and/or temporal extent of a 'region', be it geophysical or geopolitical in nature. The value is applied at the granule level.
Content Source: DP
Constraints: mandatory if class is applicable and if granule locality is used.

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locality</td>
</tr>
</tbody>
</table>

**LocalityValue**

**Description**
Provides name which spatial/temporal entity is known. This could change on a granule by granule basis. This attribute is paralleled by the AggregationType which applies at the collection level although locality has a more restricted usage. Several locality measures could be included in each granule.
Content Source: PGE

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>GranuleLocality</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada/R</td>
<td>Regional Canada sites</td>
</tr>
<tr>
<td>Cryos</td>
<td>Cryosphere</td>
</tr>
<tr>
<td>Global</td>
<td>Land - Global land surface</td>
</tr>
<tr>
<td></td>
<td>Land/Cryos - Land ice and Snow regions.</td>
</tr>
<tr>
<td></td>
<td>Land/CZ - Land w/ Coastal Zone</td>
</tr>
<tr>
<td></td>
<td>Land/L - Local land sites</td>
</tr>
<tr>
<td></td>
<td>Land/R - Regional land sites</td>
</tr>
<tr>
<td></td>
<td>Limb - Limb sounding</td>
</tr>
<tr>
<td></td>
<td>Local Surface - Local sites</td>
</tr>
<tr>
<td></td>
<td>Ocean/Cryos - Regions with sea ice</td>
</tr>
<tr>
<td></td>
<td>Ocean/I - Ocean with Case I sediments</td>
</tr>
<tr>
<td></td>
<td>Ocean/II - Ocean with Case II sediments</td>
</tr>
<tr>
<td></td>
<td>Ocean/L - Local oceanic sites</td>
</tr>
<tr>
<td></td>
<td>Ocean/R - Regional oceanic sites</td>
</tr>
<tr>
<td></td>
<td>Ocean/S - Southern Ocean</td>
</tr>
<tr>
<td></td>
<td>Ocean/SA - Southern &amp; Eastern North Atlantic</td>
</tr>
<tr>
<td></td>
<td>Polar - Latitudes &gt; 60 degrees N and S</td>
</tr>
<tr>
<td></td>
<td>Tropic - Zonal Band 35 degrees N to 35 degrees S</td>
</tr>
<tr>
<td></td>
<td>Wetlands - Global wetlands</td>
</tr>
</tbody>
</table>

**LocalPlanarCoordinateSystemDescription**

**Description**
A description of the local planar coordinate system.

Content Source: DP
Constraints: LocalPlanarCoordinateSystemDescription is mandatory if LocalPlanarCoordinateSystem class is applicable.

**Annotation**
Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>LocalPlanarCoordinateSystem</td>
</tr>
</tbody>
</table>

Description

Free Text

LocalPlanarGeoreferenceInformation

Description

A description of the information provided to register the local planar system to the Earth (e.g. control points, satellite ephemeral data, and inertial navigation data)

Content Source: DP

Constraints: LocalGeoreferenceInformation is mandatory if LocalCoordinateSystem class is applicable.

Annotation


Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>LocalPlanarCoordinateSystem</td>
</tr>
</tbody>
</table>

LocalVersionID

Description

Local version identifier for PGE defined granule versions.

Annotation


Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECSDataGranule</td>
</tr>
</tbody>
</table>

LongitudeResolution

Description

The minimum difference between two adjacent longitude values expressed in Geographic Coordinate Units of measure.
Content Source: DP
Constraints: LongitudeResolution > 0.0
Constraints: LongitudeResolution is mandatory if GeographicCoordinateSystem class is applicable.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>GeographicCoordinateSystem</td>
</tr>
</tbody>
</table>

### LongName

#### Description
This attribute will identify the long name associated with the collection. This includes dataset name/product name. This is the reference name used in describing the scientific contents of the data collection; it is not the 'id' of the data. The existing SPSO product names provide a start point.

Content Source: DP
Alias: dataset name
product name
Constraints: must be unique

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CollectionDescriptionClass</td>
</tr>
</tbody>
</table>

#### Description
reference RTM ECS ESDT LongName Baseline and proposed ESDT LongName Baseline on EDHS

### MaintenanceAndUpdateFrequency

#### Description
The frequency with which changes and additions are made to the collection after the initial dataset begins to be collected/processed.

None Planned - The collection is complete and therefore will not be updated further.
**Name**
- Continually - The collection is updated more frequently than once a day.
- Daily - The collection is updated once per day, every day.
- Weekly - The collection is updated once per week.
- Monthly - The collection is updated once per calendar month.
- Annually - The collection is updated once per year; the first date of update is usually one year after the first date of receipt of data from this collection's source.
- Unknown
- As Needed - The collection is updated as determined by the Principal Investigator or according to on-demand requests from end users.
- Irregular - The collection is updated on an unscheduled but periodic basis.
- None Planned - The collection is complete and therefore will not be updated further.

**MapProjectionName**

**Description**
The name of the systematic representation of all or part of the surface of the Earth on a plane or developable surface.

Content Source: DP
Constraints: MapProjectionName is mandatory if MapProjection class is applicable.

**Annotation**
### Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MapProjection</td>
</tr>
</tbody>
</table>

### Description

**Lambert Azimuthal Equal Area** - Requires standard parallel, longitude and scale factor of central meridian, latitude/longitude and scale factor of projection origin, false easting and northing, scale factor at equator & center line, height of perspective point above the surface, latitude/longitude of projection center, oblique line azimuth (angle+lat of origin), oblique line point (lat/lon), straight vertical longitude from pole.

**Polar Stereographic** - Requires standard parallel, longitude and scale factor of central meridian, latitude/longitude and scale factor of projection origin, false easting and northing, scale factor at equator & center line, height of perspective point above the surface, latitude/longitude of projection center, oblique line azimuth (angle+lat of origin), oblique line point (lat/lon), straight vertical longitude from pole.

**Space Oblique Mercator B** - Requires standard parallel, longitude and scale factor of central meridian, latitude/longitude and scale factor of projection origin, false easting and northing, scale factor at equator & center line, height of perspective point above the surface, latitude/longitude of projection center, oblique line azimuth (angle+lat of origin), oblique line point (lat/lon), straight vertical longitude from pole, plus the Landsat Satellite Number and the Path Number reflecting the orbit if the Landsat satellite.

**Transverse Mercator** - Requires standard parallel, longitude and scale factor of central meridian, latitude/longitude and scale factor of projection origin, false easting and northing, scale factor at equator & center line, height of perspective point above the surface, latitude/longitude of projection center, oblique line azimuth (angle+lat of origin), oblique line point (lat/lon), straight vertical longitude from pole.

**Lambert Conformal Conic**

**Mercator**

**Polyconic**

**Integerized Sinusoidal Grid**

**Interrupted Goode Homolosine** - A pseudocylindrical composite derived form the Sinusoidal and Mollweide projections.

**Equirectangular** - The meridians and parallels are all equidistant straight parallel lines, the two sets crossing at right angles. A form of the Equidistant Cylindrical and Equidistant Conic projection where the two standard parallels are symmetrical about the Equator. However, if the Equator is made the standard parallel, true to scale and free of distortion, the meridians are spaced at the same distances as the parallels, and the graticule appears square. This form is called the Plate Caree.
Equidistant Conic - The simplest kind of conic projection with its equally spaced straight meridians and equally spaced circular parallels. If the one standard parallel is the Equator, the Equidistant Conic projection becomes the Plate Caree form of the Equidistant Cylindrical, but the formulas must be changed. If the two standard parallels are symmetrical about the Equator, the Equirectangular results. If the standard parallel is the pole, the Azimuthal Equidistant projection is obtained.

Azimuthal Equidistant - It has the azimuthal characteristic that all directions or azimuths are correct when measured from the center of the projection. As its special feature, all distances are at true scale when measured between this center and any other point on the map. The polar aspect, like other polar azimuthals, has circles for parallels of latitude, all centered about the North or South Pole, and equally spaced radii of these circles for meridians. The parallels are spaced equidistantly on the spherical form.

MapProjectionPointer

Description
This is a data modeling logical reference to a map projection.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MapProjection</td>
</tr>
</tbody>
</table>

MiscellaneousInformationCommentPointer

Description
This attribute is used to provide the text displayed on the client for the MiscellaneousInformationPointer.

Annotation
311-CD-604-001, March 2001, Release 6A.03 Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project which are changes to provide updated details for the Data Server and CIDM subsystems.

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MiscellaneousInformation</td>
</tr>
</tbody>
</table>
**MiscellaneousInformation**

**Description**
This attribute provides the additional information about the data set that is not in the guide document.

**Annotation**
311-CD-604-001, March 2001, Release 6A.03 Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project which are changes to provide updated details for the Data Server and CIDM subsystems.

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MiscellaneousInformation</td>
</tr>
</tbody>
</table>

**MultipleDateTimeName**

**Description**
The name of the collection of discrete date/time events. e.g. 'LIS 10/93 series'

Content Source: DP

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MultipleDateTimePeriod</td>
</tr>
</tbody>
</table>

**NorthBoundingCoordinate**

**Description**
Northern-most coordinate of the limit of coverage expressed in geodetic latitude.

Content Source: DP(collection);PGE(granule)
Constraints: NorthBoundingCoordinate not null for collection only.
Constraints: NorthBoundingCoordinate <= +90.0
Constraints: NorthBoundingCoordinate => -90.0
Constraints: NorthBoundingCoordinate => SouthBoundingCoordinate
Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BoundingRectangle</td>
</tr>
</tbody>
</table>

**NumberOfSensors**

**Description**
The number of discrete (if any) sensors on an instrument.

Content Source: DP (Collection)
Constraints: Must correspond to sensors associated via SensorShortName

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instrument</td>
</tr>
</tbody>
</table>

**OperationalQualityFlag**

**Description**
The granule level flag applying both generally to a granule and specifically to parameters at the granule level. When applied to parameter, the flag refers to the quality of that parameter for the granule (as applicable). The parameters determining whether the flag is set are defined by the developers and documented in the QualityFlagExplanation.

Content Source: DAAC
Constraints: One flag from QAFlags must exist.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>QAFlags</td>
</tr>
</tbody>
</table>
**Description**

Passed - The granule (for parameter) has passed a specified operational test.
Failed - The granule (for parameter) has failed a specified operational test.
Being Investigated - The granule (for parameter) is suspect and being investigated using a operational test.
Not Investigated - The granule (for parameter) has not been investigated by DAAC operational staff.
Inferred Passed
Inferred Failed
Suspect

**OperationalQualityFlagExplanation**

**Description**

A text explanation of the criteria used to set operational quality flag; including thresholds or other criteria.

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>QAFlags</td>
</tr>
</tbody>
</table>

**Description**

Free Text

**OperationMode**

**Description**

Mode of operation of the instrument. Each instrument will have 1 to n modes which may be static for the collection, or change on a granule-by-granule basis. (e.g. domains: launch, survival, initialization, safe, diagnostic, roll, tilt, standby, routine, test, calibration).

Content Source: DP(collection);PGE(granule)

**Annotation**


**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>OperationModeClass</td>
</tr>
</tbody>
</table>

**Description**

Calibration
Diagnostic
Fixed azimuth scan - Fixed azimuth plane scan.
Initialization
Launch
Normal
Roll
Rot. azimuth scan - Rotating azimuth plane scan
Routine
Safe
Solar calibration
Standby
Survival
Test
Tilt
IR&Visible
IR
Both
Other

**OperationsManualPointer**

**Description**
Data model logical reference to Operations Manual.

Content Source:

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>OperationsManual</td>
</tr>
</tbody>
</table>

**OrbitalModelName**

**Description**
The reference to the orbital model to be used to calculate the geolocation of this data in order to determine global spatial extent.

Content Source: DP
Constraints: OrbitModelName is mandatory if OrbitCalculatedSpatialDomain class is applicable.
Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>OrbitCalculatedSpatialDomain</td>
</tr>
</tbody>
</table>

Description
Free Text

**OrbitNumber**

Description
The orbit number to be used in calculating the spatial extent of this data.

Content Source: PGE
Constraints: constraints should be provided per satellite
Constraints: OrbitNumber is mandatory if OrbitCalculatedSpatialDomain class is applicable.
Constraints: OrbitNumber > 0

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>OrbitCalculatedSpatialDomain</td>
</tr>
</tbody>
</table>

**OrbitParametersPointer**

Description
Data model reference to the orbit parameter information.

Content Source: DSS
Constraints: Orbit file must exist if OrbitParametersPointer is used.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>OrbitParametersGranule</td>
</tr>
</tbody>
</table>
OrdinateResolution

Description
The (nominal) minimum distance between the 'y' or row values of two adjacent points, expressed in Planar Distance Units of measure. Planar Distance Units of measure are units for distances whose domain values are meters, international feet, and survey feet.

Content Source: DP
Constraints: OrdinateResolution > 0.0

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CoordinateRepresentation</td>
</tr>
</tbody>
</table>

PackageSize

Description
Size of Package for the Installable Service. Each package size contains 'x' bytes.

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>InstallableServiceAdvertisement</td>
</tr>
</tbody>
</table>

ParameterMeasurementResolution

Description
This attribute will be used to identify the smallest unit increment to which the parameter value is measured.

Content Source: DP

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PhysicalParameterDetails</td>
</tr>
</tbody>
</table>
ParameterName

Description
The measured science parameter expressed in the data granule.

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MeasuredParameter</td>
</tr>
</tbody>
</table>

ParameterRangeBegin

Description
The minimum value of the range.

Content Source: DP

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PhysicalParameterDetails</td>
</tr>
</tbody>
</table>

ParameterRangeEnd

Description
The maximum value of the range.

Content Source: DP

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PhysicalParameterDetails</td>
</tr>
</tbody>
</table>

ParameterUnitsofMeasurement

Description
The standard units of measurement for a non-core attribute. AVHRR: Units of Geophysical Parameter=Units of Geophysical Parameter

Content Source: DP
Constraints: If ParameterValue exists then ParameterUnitsofMeasurement exist.
Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PhysicalParameterDetails</td>
</tr>
</tbody>
</table>

Description
Free Text

ParameterValue

Description
The values that can be assigned to a parameter name used at collection and granule level. The datatype for this attribute is the value of the attribute ParameterDatatype. The unit for this attribute is the value of the attribute ParameterUnitsofMeasurement.

Content Source: DP(collection); PGE(granule)
Constraints: If ParameterValue exists then the class ECSParameter must exist. Constraints: If parameter is physical then units must exist.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>InformationContent</td>
</tr>
</tbody>
</table>

ParameterValueAccuracy

Description
An estimate of the accuracy of the assignment of attribute value. i.e. AVHRR: Measurement Error or Precision=Measurement error or precision of a data product parameter. This can be specified in percent or the units with which the parameter is measured.

Content Source: DP

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PhysicalParameterDetails</td>
</tr>
</tbody>
</table>
ParameterValueAccuracyExplanation

Description
This defines the method used for determining the Parameter Value Accuracy that is given for this non core attribute.
Content Source: DP

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PhysicalParameterDetails</td>
</tr>
</tbody>
</table>

PerformanceTestResultsPointer

Description
Data model logical reference to Performance Test Results document.
Content Source: DSS
Constraints: If Performance Test Results exist then PerformanceTestResultsPointer must exist.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PerformanceTestResults</td>
</tr>
</tbody>
</table>

Period1stDate

Description
This attribute provides the date of the first occurrence of this regularly occurring period which is relevant to the collection, granule, or event coverage.
Content Source: DP
Constraints: Period1stDate is mandatory if RegularPeriodic class is used.

Annotation
Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>RegularPeriodic</td>
</tr>
</tbody>
</table>

**Period1stTime**

**Description**
This attribute denotes the time of the first occurrence of this regularly occurring period which is relevant to the collection, granule, or event coverage.

Content Source: DP

Constraints:
Period1stTime is mandatory if RegularPeriodic class is used.

**Annotation**

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>RegularPeriodic</td>
</tr>
</tbody>
</table>

**PeriodCycleDurationUnit**

**Description**
The unit specification of the period cycle duration.

*Example values include:*
decade,
year,
month,
week,
day,
hour,
minute,
second,
microsecond,
millisecond

Content Source: DP


2-193 | 420-TP-023-001
Constraints:
PeriodCycleDurationUnit is mandatory if RegularPeriodic class is used.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>RegularPeriodic</td>
</tr>
</tbody>
</table>

PeriodCycleDurationValue

Description
The number of PeriodCycleDurationUnits in the period cycle.
e.g. the RegularPeriodic event 'Spring-North Hemi' might have a PeriodDurationUnit='month'
PeriodDurationValue=3.0
PeriodCycleDurationUnit='year'
PeriodCycleDurationValue='1.0
indicating that Spring-North Hemi lasts for 3.0 months and has a cycle duration of 1.0 year.
The unit for this attribute is the value of the attribute PeriodCycleDurationUnit.

Content Source: DP
Constraints:
PeriodCycleDurationValue > 0.0 if used.
Constraints:
PeriodCycleDurationValue is mandatory if RegularPeriodic class is used.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>RegularPeriodic</td>
</tr>
</tbody>
</table>

PeriodDurationUnit

Description
The unit specification for the period duration.
Example values include:
decade,
year,
month,
week,
day,
hour,
minute,
second,
microsecond,
millisecond

Content Source: DP
Constraints:
PeriodDurationUnit is mandatory if RegularPeriodic class is used.

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>RegularPeriodic</td>
</tr>
</tbody>
</table>

**Description**
Free Text

**PeriodDurationValue**

**Description**
The number of PeriodDurationUnits in the RegularPeriodic period.
e.g. the RegularPeriodic event 'Spring-North Hemi' might have a PeriodDurationUnit='month'
PeriodDurationValue=3.0
PeriodCycleDurationUnit='year'
PeriodCycleDurationValue='1.0'
indicating that Spring-North Hemi lasts for 3.0 months and has a cycle duration of 1.0 year.
The unit for the attribute is the value of the attribute PeriodDurationValue.

Content Source: DP
Constraints:
PeriodDurationValue > 0.0 if used.
Constraints:
PeriodDurationValue is mandatory if RegularPeriodic class is used.

**Annotation**
Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>RegularPeriodic</td>
</tr>
</tbody>
</table>

**PeriodName**

**Description**
The name given to the recurring time period.
e.g. 'spring - north hemi.'

Content Source: DP
Constraints:
PeriodName is mandatory if RegularPeriodic class is used.

**Annotation**

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>RegularPeriodic</td>
</tr>
</tbody>
</table>

**Description**
Free Text

**PGEDateLastModified**

**Description**
Date when PGE information was last modified.

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AlgorithmPackage</td>
</tr>
</tbody>
</table>

**PGEFunction**

**Description**
Function(s) performed by PGE.

Content Source: DP
Constraints:
If Delivered Algorithm Package is utilized then PGEFunction must exist.
Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AlgorithmPackage</td>
</tr>
</tbody>
</table>

PGEIdentifier

Description
Each PGE is to have a unique identifier assigned by the SDPS/W developer. This unique identifier may be one component of a longer name that includes instrument acronym, PGE version number, and release date.

Content Source: DP; DAAC

Constraints:
If Delivered Algorithm Package is utilized then PGEIdentifier exists.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AlgorithmPackage</td>
</tr>
</tbody>
</table>

PGENName

Description
Name of Product Generation Executive.

Content Source: DP

Constraints:
If Delivered Algorithm Package is utilized then PGENName exists.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AlgorithmPackage</td>
</tr>
</tbody>
</table>

Description
Free Text
**PGEVersion**

**Description**
Version of PGE, updated whenever code or any static is input in the Delivered Algorithm Package.

Content Source: DP

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AlgorithmPackage</td>
</tr>
</tbody>
</table>

**PlanarCoordinateEncodingMethod**

**Description**
The means used to represent horizontal positions in the planar coordinate system.

Content Source: DP

Constraints: PlanarCoordinateEncodingMethod is mandatory if map projection, grid coordinate system, or local planar coordinate system is used.

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PlanarCoordinateInformation</td>
</tr>
</tbody>
</table>

Coordinate Pair - Will require description of encoding method in 'Coordinate Representation' in terms of abscissa and ordinate resolutions.

Distance and Bearing - Will require encoding method description using 'Distance and Bearing Representation', in terms of distance resolution, bearing resolution, bearing units, bearing reference direction, and bearing reference meridian.

Row and Column - Will require encoding method description using 'Coordinate Representation', in terms of abscissa and ordinate resolutions.
**PlanarDistanceUnits**

**Description**
Units of measure used for planar coordinate description distances.

Content Source: DP

Constraints: PlanarDistanceUnits are mandatory if map projection, grid coordinate system, or local planar coordinate system is used.

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PlanarCoordinateInformation</td>
</tr>
</tbody>
</table>

**PlannedDataSets**

**Description**
Copy of content of line 5 of Production Plans; containing collection ShortName to be produced.

Content Source: PLS

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProductionPlan</td>
</tr>
</tbody>
</table>

**PlatformCharacteristicDataType**

**Description**
The datatype of the Platform Characteristic/attribute defined by PlatformCharacteristicName.

Content Source: DP (Collection).
Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PlatformCharacteristic</td>
</tr>
</tbody>
</table>

Description
int
varchar
datetime
date
time
float

PlatformCharacteristicDescription

Description
Description of the Platform Characteristic attribute.

Content Source: DP (Collection)

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PlatformCharacteristic</td>
</tr>
</tbody>
</table>

PlatformCharacteristicName

Description
The name of the Platform Characteristic attribute.

Content Source: DP (Collection)

Annotation
**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PlatformCharacteristic</td>
</tr>
</tbody>
</table>

**PlatformCharacteristicUnit**

**Description**
Units associated with the Platform Characteristic attribute value.

Content Source: DP (Collection)

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PlatformCharacteristic</td>
</tr>
</tbody>
</table>

**PlatformCharacteristicValue**

**Description**
The value of the characteristic/attribute defined in PlatformCharacteristic. Attributes must have single values. (e.g. Model Number = 209).

Content Source: DP (Collection)

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PlatformCharacteristic</td>
</tr>
</tbody>
</table>

**PlatformGuidePointer**

**Description**
Logical pointer to the Platform Guide.

Content Source: DAAC

**Annotation**
Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PlatformGuide</td>
</tr>
</tbody>
</table>

PlatformLongName

Description
The expanded or long name of the platform associated with an instrument.

Content Source: DP (Collection)

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platform</td>
</tr>
</tbody>
</table>

Description
Active Cavity Radiometer Irradiance Monitor Satellite
Advanced Earth Observing Satellite II
Ante Meridian-1
Aqua EOS Polar Orbiting Satellite, 1:30 PM Ascending Equator Crossing
EOS Aura Mission Satellite Landsat-7
Meteor-3M
First EOS Chemistry Mission Satellite, 1:45 PM Ascending Equator Crossing
First EOS Polar Orbiting Satellite, 10:30 AM Descending Equator Crossing
First EOS Polar Orbiting Satellite, 1:30 PM Ascending Equator Crossing
Geostationary Meteorological Satellite-1
Geostationary Meteorological Satellite-2
Geostationary Meteorological Satellite-3
Geostationary Meteorological Satellite-4
Geostationary Meteorological Satellite-5
Geostationary Operational Environmental Satellite-1
Geostationary Operational Environmental Satellite-2
Geostationary Operational Environmental Satellite-3
Geostationary Operational Environmental Satellite-4
Geostationary Operational Environmental Satellite-5
Geostationary Operational Environmental Satellite-6
Geostationary Operational Environmental Satellite-7
Geostationary Operational Environmental Satellite-8
Geostationary Operational Environmental Satellite-9
Ice, Cloud and Land Elevation Satellite
PlatformShortName

Description
The unique platform name. (e.g. GOES-8)

Content Source: DP(Collection); PGE(Granule)

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platform</td>
</tr>
</tbody>
</table>

Description
ACRIMSAT
ADEOS-II
AM-1
Aqua
Aura
CHEM-1
L7 - Landsat-7
Meteor-3M
GMS-1
GMS-2
GMS-3
GMS-4
GMS-5
GOES-1
GOES-2
GOES-3
GOES-4
GOES-5
GOES-6
GOES-7
GOES-8
GOES-9
METEOSAT-1
METEOSAT-2
METEOSAT-3
METEOSAT-4
METEOSAT-5
METEOSAT-6
METEOSAT-7
NOAA-6
NOAA-7
NOAA-8
NOAA-9
NOAA-10
NOAA-11
NOAA-12
NOAA-14
Terra
TIROS-N
TRMM
DMSP-F11
DMSP-F13
ICESat

**PlatformType**

**Description**

The most relevant platform type.

Content Source: DP (Collection); PGE (Granule)
Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platform</td>
</tr>
</tbody>
</table>

Description

Aircraft - including balloons
Buoy
Human
Network
Other - e.g. animal mounted instruments
Platform
Spacecraft
Station
Vehicle
Vessel (Ship)

PointLatitude

Description

A single geodetic latitudinal value.

Content Source: DP(collection);PGE(granule)
Constraints: PointLatitude is mandatory if Point class is applicable.
Constraints: PointLatitude => -90.0 Constraints: PointLatitude <= +90.0

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Point</td>
</tr>
</tbody>
</table>

PointLongitude

Description

A single longitudinal value.

Content Source: DP(collection);PGE(granule)
Alias: Decimal Degrees
Constraints: PointLongitude is mandatory if Point class is applicable.
Constraints: PointLongitude => -180.0 Constraints: PointLongitude <= +180.0

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Point</td>
</tr>
</tbody>
</table>

PostalCode

Description
The zip or other postal code of the address.

Content Source: DP; DAAC

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ContactAddress</td>
</tr>
</tbody>
</table>

Description
Free Text

PrecisionofSeconds

Description
The precision (position in number of places to right of decimal point) of seconds used in measurement.

Content Source: DP
Constraints:
PrecisionofSeconds => 0

Annotation
**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporal</td>
</tr>
</tbody>
</table>

**Primary CSDT**

**Description**
The name of the CSDT type of data organization (data type and sub type). Computer Science Data Types are the physical storage types required to support Earth Science Data Types (ESDTs), the logical objects seen in pyramid views.

Content Source: DP; DAAC
Alias: Data Format

Constraints:

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSDTDescription</td>
</tr>
</tbody>
</table>

**Description**
Plain ASCII Text - Free-form textual structure for storing labels or long descriptions for display.
RTF Formatted ASCII Text - Formatted text for transfer in Rich Text Format.
HTML Formatted ASCII Text - Formatted text for transfer in HyperText Markup Language.
PS Formatted ASCII Text - Formatted text for transfer in Postscript.
PDF Formatted ASCII Text - Formatted text for transfer in Portable Document Format.
Binary ASCII Text - Text and graphics document in document processing application proprietary format.
P=V Metadata - 'Label=Value' where label is a field name and value is either a single value or list of values.
Standard Science Data Table - Binary and/or ASCII tabular data.
Indexed Science Data Table - Binary and/or ASCII tabular data which includes indices to other data objects.
Image - 2D raster data type.
n-Dim Array of Records - Binary n-dimensional array of cells that consist of records. A record can consist of multiple fields of varying type such as integer, floating point and string.
n-Dim Array of Scalars - Binary n-dimensional array of cells that consist of scalars of a single type. (e.g., one of 8-, 16- or 32-bit signed or unsigned integers; or 32- or 64-bit floating point). Can be conceptually viewed as an instantiation of the Array of Records where each record is a single field.

Projected Grid - Data which has been projected and binned into a rectangular grid using a known methodology. Metadata such as projection name, projection limits, and geometry are included in order to identify geo-location and coverage of grid cells.

Structured Grid - Data which has been projected and binned into a non-rectilinear data structure using a known methodology. Metadata such as projection name, projection limits, and geometry are included in order to identify geo-location and coverage of data structure cells.

Simple Swath - Typically, swath data arrays will be two dimensional arrays, corresponding to a 2D 'image' of the ground along the orbital track. Sometimes, though, swath data arrays may be 1D arrays, where there is one element per scan (time, altitude, etc.). Additionally, swath data arrays could have 3 or more dimensions, where the additional dimensions are channel number or altitude. A 'simple' swath structure is designated where every data array is of the same size and resolution.

Complex Swath - Created by a sensor making N observations in the across-track direction. The along-track direction causes the footprint to form a ribbon of M scans along the subnadir track. The data forms an array of observations N by M by L (where L is the number of spectral band values taken for each observation time). An additional array of geo-location or observation time data is provided at a resolution equal or lower than the observations. The Complex Swath may have observations of varying resolution.

Standard Point - Data made up of records and fields with some set of fields constituting a point location. Fields can be of any type. The location fields, taken together, can be considered the 'location record'. Metadata constituting 'header' data which applies to the entire table is included.

Indexed Point - Data made up of records and fields with some set of fields constituting a point location. Fields can be of any type including pointers. The location fields, taken together, can be considered the 'location record'. Some fields may be repeated for a set of observations; these fields may be separated as part of a 'header', table which would include pointers, offsets, and counts to the repeating data table or tables.

Structure - Group of datatypes. e.g. HDF Vgroup

CCSDS Packets

**ProcessingCenter**

**Description**

Center where collection was or is being processed. i.e. name of DAAC or SCF.

Content Source: DP; DAAC
Annotation


Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECSCollection</td>
</tr>
</tbody>
</table>

Description

GSFC - Goddard Space Flight Center
LaRC - Langley Research Center
Landsat 7 MOC
ORNL - Oak Ridge National Laboratory
EDC - EROS Data Center
NSIDC - National Snow and Ice Data Center
JPL - Jet Propulsion Laboratory
CIESIN - Consortium for International Earth Science Information Network
EDOS - EOS Data and Operations System
MISR SCF - MISR Science Computing Facility
SAGE III SCF - SAGE III Science Computing Facility
SAGE III MOC - SAGE III Mission Operations Center
ERSDAC - Earth Remote Sensing Data Analysis Center in Japan
AMES
NCDC
NCEP
NESDIS
LIS SCF
MODAPS- MODIS Data Processing Center
ACRIM SCF- ACRIM Science Computing Facility
HATOYAMA
GSFC I-SIPS
AIRS-TLSCF- Atmospheric InfraRed Sounder Team Leader Science Computing Facility
MLS IPS
ASTER_OSF
TES SIPS
AMSR-E SIPS-GHCC
AMSR-E SIPS-GHCC+B54
AMSR-E SIPS-GHRC
AMSR-E SIPS-RSS
HIRDLS SIPS
NASDA/EOC
**ProcessingCenterGuidePointer**

**Description**
Logical pointer to the Processing Center Guide.

Content Source: DAAC

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProcessingCenterGuide</td>
</tr>
</tbody>
</table>

**ProcessingErrorReportPointer**

**Description**
Data model reference to Processing Error Report specification.

Content Source: PLS

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProcessingErrorReport</td>
</tr>
</tbody>
</table>

**ProcessingFileDescriptionPointer**

**Description**
Data model logical reference to Processing File Description document.

Content Source: DSS
Constraints: If Processing File Description exists then ProcessingFileDescriptionPointer must exist.

**Annotation**
**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProcessingFileDescription</td>
</tr>
</tbody>
</table>

**ProcessingLevelDescription**

**Description**
This attribute provides a set of characteristics that can be combined to define science processing levels which do not conform to the standards found in ProcessingLevelID.

Content Source: DP

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProcessingLevel</td>
</tr>
</tbody>
</table>

**Description**
Ancillary Input- For AIRS (Static Ancillary)
RAW - Raw instruments.
CNTS - Converted to counts.
RADCORR - Radiometrically corrected.
GEOQUANT - Counts converted to geophysical quantities.
GEOLOC - Geolocated.
GRID - Gridded.
Sensor Measurements
Radiometric Counts
Telemetry Data
Transmissions
Level 1B Radiances
Geophysical Quantities at the sensor resolution or geolocated

**ProcessingLevelID**

**Description**
This attribute reflects the classification of the science data processing level, which defines in general terms the characteristics of the output of the processing performed.

Content Source: DP

**Annotation**
## Reference List

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProcessingLevel</td>
<td></td>
</tr>
</tbody>
</table>

### Description

0 - Row instrument data at original resolution, time ordered, with duplicate packets removed.

1A - Level 0 data, which may have been reformatted or transformed reversibly, located to a coordinate system, and packaged with needed ancillary and engineering data.

1B - Radiometrically corrected and calibrated data in physical units at full instrument resolution as acquired.

2 - Retrieved environmental variables (e.g., ocean wave height, soil moisture, ice concentration) at the same location and similar resolution as the Level 1 source data.

2G – Similar to Level 2 but contains pixel to grid mappings within the product files.

3 - Data or retrieved environmental variables that have been spatially and/or temporarily resampled (i.e., derived from Level 1 or Level 2 data products). Such resampling may include averaging and compositing.

4 - Model output and/or variables derived from lower level data which are not directly measured by the instruments. For example, new variables based upon a time series of Level 2 or Level 3 data.

NA - Not Applicable - Under review by AHWGP.

### ProcessingQAAttribute

#### Description

This attribute identifies the non-science QA attribute which did not meet pre-defined parameter thresholds during validation processing.

Content Source: PDPS

#### Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProcessingQA</td>
</tr>
</tbody>
</table>

Description

CalendarDate
EquatorCrossingDate
EquatorCrossingLongitude
EquatorCrossingTime
LocalityValue
OrbitalModelName
OrbitNumber
ParameterValue
RangeBeginningDate
RangeBeginningTime
RangeEndingDate
RangeEndingTime
ReprocessingActual
ReprocessingPlanning
ShortName
SizeMBECSDataGranule
StartOrbitNumber
StopOrbitNumber
TimeofDay
VerticalSpatialDomainType
VerticalSpatialDomainValue

ProcessingQADescription

Description
This attribute provides description of the error encountered during processing for the specified Processing QA Attribute

Content Source: PDPS

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProcessingQA</td>
</tr>
</tbody>
</table>
Description
Free Text

**ProcessingReportPeriod**

**Description**
Period of processing report.
Content Source: PLS

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProcessingReport</td>
</tr>
</tbody>
</table>

**Description**
90
30
7
3
1

**ProcessingReportType**

**Description**
Type of processing report supplied by Planning Subsystem.

Content Source: PLS

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProcessingReport</td>
</tr>
</tbody>
</table>
**ProcessingResourceUsageReportPointer**

**Description**
Data model logical reference to the Processing Resource Usage Report.

Content Source: PLS

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProcessingResourceUsageReport</td>
</tr>
</tbody>
</table>

**ProcessingStatusReportPointer**

**Description**
Data model logical reference to the Processing Status Report.

Content Source: PLS

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProcessingStatusReport</td>
</tr>
</tbody>
</table>

**ProductionDateTime**

**Description**
The date and time a specific granule was produced by a PGE.

Content Source: DP
**ProductionHistoryPointer**

**Description**
Data model logical reference to the granule level production history file.

Content Source: DSS
Constraints: Production History log must exist.

**Annotation**

---

### Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECSDataGranule</td>
</tr>
</tbody>
</table>

---

**ProductionPlanDescription**

**Description**
The description of the production plan.

Content Source: PLS

**Annotation**

---

### Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProductionPlan</td>
</tr>
</tbody>
</table>

**Description**
Free Text
**ProductionPlanEndDate**

**Description**
The ending date for which the production plan is applicable.

Content Source: PLS

**Annotation**

<table>
<thead>
<tr>
<th>Reference List</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
</tr>
<tr>
<td>ProductionPlan</td>
</tr>
</tbody>
</table>

**ProductionPlanForecast**

**Description**
The span of time within the plan (measured in days). i.e. the forecast horizon within the production plan.

Content Source: PLS

**Annotation**

<table>
<thead>
<tr>
<th>Reference List</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
</tr>
<tr>
<td>ProductionPlan</td>
</tr>
</tbody>
</table>

**ProductionPlanPointer**

**Description**
Logical pointer to the production plans produced by the ECS Planning Subsystem.

Content Source: DSS
Constraints: must exist for all ECS-produced products.

**Annotation**

<table>
<thead>
<tr>
<th>Reference List</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
</tr>
<tr>
<td>ProductionPlan</td>
</tr>
</tbody>
</table>
ProductionPlanStartDate

Description
The beginning date for which the production plan is applicable.

Content Source: PLS
Constraints: must exist for all ECS-produced products.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProductionPlan</td>
</tr>
</tbody>
</table>

ProgrammersGuidePointer

Description
Data model logical reference to Programmers Guide document.

Content Source: DSS
Constraints: If Programmers Guide exists then ProgrammersGuidePointer must exist.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProgrammersGuide</td>
</tr>
</tbody>
</table>

ProviderURL

Description
URL of the Advertisement provider.

Content Source: IOS

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProviderAdvertisement</td>
</tr>
</tbody>
</table>
**QAGranulePointer**

**Description**
Data model logical reference to QA Granule.

Content Source: DSS
Constraints: If QAGranule exists then QAGranulePointer must exist.

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>QAGranule</td>
</tr>
</tbody>
</table>

**QAPercentCloudCover**

**Description**
This attribute is used to characterize the cloud cover amount of a granule. This attribute may be repeated for individual parameters within a granule. (Note - there may be more than one way to define a cloud or its effects within a product containing several parameters; i.e. this attribute may be parameter specific)

Content Source: DP

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>QAGranule</td>
</tr>
</tbody>
</table>

**QAPercentInterpolatedData**

**Description**
Granule level % interpolated data. This attribute can be repeated for individual parameters within a granule.

Content Source: PGE

**Annotation**
**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>QAStats</td>
</tr>
</tbody>
</table>

**QAPercentMissingData**

**Description**
Granule level % missing data. This attribute can be repeated for individual parameters within a granule.

Content Source: PGE

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>QAStats</td>
</tr>
</tbody>
</table>

**QAPercentOutOfBoundsData**

**Description**
Granule level % out of bounds data. This attribute can be repeated for individual parameters within a granule.

Content Source: PGE
Constraints: mandatory

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>QAStats</td>
</tr>
</tbody>
</table>

**QualityTextCommentPointer**

**Description**
Data model logical reference to collection level pointer to Quality Text Comment document.

Content Source: DSS
Constraints: If QualityText exists then QualityTextCommentPointer exists.
# RadiusUnits

**Description**
The unit of measurement describing the distance from the center of spatial extent or coverage to the furthest point covered by the spatial extent of the locality used to determine a circular region representing general extent or coverage.

Content Source: DP(collection);PGE(granule)

**Annotation**

## Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circle</td>
</tr>
</tbody>
</table>

# RadiusValue

**Description**
The distance from the center of spatial extent or coverage to the furthest point covered by the spatial extent of the locality, stated in RadiusUnits, used to determine a circular region representing general extent or coverage.

Content Source: DP(collection);PGE(granule)

**Annotation**

## Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circle</td>
</tr>
</tbody>
</table>
RangeBeginningDate

Description
The year (and optionally month, or month and day) when the temporal coverage period being
described began.

Content Source: DP(collection);PGE(granule)
Alias: Start Date
Constraints:
RangeBeginningDate is mandatory if RangeDateTime class is used.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>RangeDateTime</td>
</tr>
</tbody>
</table>

RangeBeginningTime

Description
The first hour (and optionally minute, or minute and second) of the temporal coverage period
being described.

Content Source: DP(collection);PGE(granule)
Constraints:
RangeBeginningTime is mandatory if RangeDateTime class is used.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>RangeDateTime</td>
</tr>
</tbody>
</table>

RangeEndingDate

Description
The last year (and optionally month, or month and day) of the temporal coverage period being
described.
GSFC AVHRR This date represents the end date of the latest granule contained in the product.
MM/DD/YY format is product-specific for: sage_atmos_dyn, sage_atmos_comp, erbe_erp
MMDDYYYY format is product-specific for: LARC_FIRE, LARC_GTE
Content Source: DP(collection);PGE(granule)
Constraints:
   RangeEndingDate is mandatory if RangeDateTime class is used.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>RangeDateTime</td>
</tr>
</tbody>
</table>

RangeEndingTime

Description
The last hour (and optionally minute, or minute and second) of the temporal coverage period
being described for granule or collection.
Content Source: DP(collection);PGE(granule)
Constraints:
   RangeEndingTime is mandatory if RangeDateTime class is used.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>RangeDateTime</td>
</tr>
</tbody>
</table>

ReferencePaperReference

Description
Contains the unique ID of the Reference Paper as issued by publisher, such as 'NOS NSG 5', or
'JPL Publication 91-29'.
Content Source: DP
Constraints: if reference papers utilized, this must exist.

Annotation
Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ReferencePaper</td>
</tr>
</tbody>
</table>

**ReferencePaperType**

**Description**
Contains the type of reference paper.

Content Source: DP
Constraints: if reference papers utilized, this must exist.

**Annotation**

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ReferencePaper</td>
</tr>
</tbody>
</table>

**Description**
Stand Alone Document
Journal Article

**RegionalAreaDefinitionGuidePointer**

**Description**
Logical pointer to the Regional Area Definition Guide.

Content Source: DSS
Constraints: if guide exists, this must exist.

**Annotation**

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>RegionalAreaDefinitionGuide</td>
</tr>
</tbody>
</table>

2-224 420-TP-023-001
ReprocessingActual

Description
Granule level, stating what reprocessing has been performed on this granule.

Content Source: PGE
Constraints:
Constrained to number of times reprocessed.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECSDataGranule</td>
</tr>
</tbody>
</table>

ReprocessingPlanned

Description
Granule level, stating what reprocessing may be performed on this granule.

Content Source: PGE

Annotation
**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECSDataGranule</td>
</tr>
</tbody>
</table>

**Description**

- no further update anticipated
- further update is anticipated
- further update anticipated using enhanced PGE

**RevisionDate**

**Description**

Represents the date and possibly the time that this directory entry was created or the latest date and time of its modification or update.

Content Source: DP

**Annotation**


**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECSCollection</td>
</tr>
</tbody>
</table>

**Role**

**Description**

Classification of individuals who are associated with a given data set.

Content Source: DP
Constraints: Mandatory if contact is used.

**Annotation**


**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact</td>
</tr>
</tbody>
</table>
**Description**

Archive
Funding Source
Producer
Distributor
Data Originator
Investigator
Investigator ID
User Services

**ScienceQualityFlag**

**Description**
Granule level flag applying to a granule, and specifically to parameters. When applied to parameter, the flag refers to the quality of that parameter for the granule (as applicable). The parameters determining whether the flag is set are defined by the developers and documented in the Quality Flag Explanation.

Content Source: PGE(granule)
Constraints: One flag from QAFlags must exist.

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>QAFlags</td>
</tr>
</tbody>
</table>

**Description**

Passed - The granule (for parameter) has passed a specified science test.
Failed - The granule (for parameter) has failed a specified science test.
Being Investigated - The granule (for parameter) is being investigated by an expert.
Not Investigated - The granule (for parameter) has not been investigated by an expert.
Inferred Passed
Inferred Failed
Suspect - For MODIS Land

**ScienceQualityFlagExplanation**

**Description**

A text explanation of the criteria used to set science quality flag; including thresholds or other criteria.
Content Source: DP

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>QAFlags</td>
</tr>
</tbody>
</table>

**Description**
Free Text

**ScienceReviewDate**

**Description**
Date of last QA peer review.

Content Source: DP; PGE

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review</td>
</tr>
</tbody>
</table>

**ScienceReviewStatus**

**Description**
Type of Review which occurred on the 'Science Review Date'

Content Source: DP; PGE

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review</td>
</tr>
</tbody>
</table>
Description

QA at DAACs - In general, the DAACs role in the QC process will be to ensure the integrity of the data (non-science quality control) -- i.e. data are not corrupted in the transfer, archival or retrieval process. DAACs may also perform science quality control (though an SCF responsibility) through pre-arranged agreements with their instrument teams.

QA at SCF - The SCFs role in the QC process of collections will be to ensure science quality control of data products over the length of the data gathering process. Techniques such as trend analysis of the data may be applied within this context.

QA by Data Consumers - Data consumers who utilize the datasets will perform an indirect method of quality control, uncovering errors within the datasets as they perform their research. Much of this documentation may be found in journal article or conference papers.

None - The status must be set, and cannot default to having been completed. None also applies to those data, which are ingested from external sources and are not known to have been subjected to any form of quality control, or have quality ratings for which the definitions are not available.

QA within Software

SemiMajorAxis

Description

Radius of the equatorial axis of the ellipsoid.

Content Source: DP
Constraints: SemiMajorAxis > 0.0 Constraints: SemiMajorAxis mandatory if GeodeticModel class is applicable.

Annotation


Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>GeodeticModel</td>
</tr>
</tbody>
</table>

SensorCharacteristicDataType

Description

The datatype of the Instrument Characteristic/attribute defined by InstrumentCharacteristicName.

Content Source: DP (Collection)
Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SensorCharacteristic</td>
</tr>
</tbody>
</table>

Description

int
varchar
datetime
date
time
float

SensorCharacteristicDescription

Description
A description of the attribute defined by SensorCharacteristicName. (e.g., SensorCharacteristicName=SensorDevice, SensorCharacteristicDescription= Charge coupled device).

Content Source: DP (Collection)
Constraints: Use to define single-valued sensor attributes, not new objects.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SensorCharacteristic</td>
</tr>
</tbody>
</table>

SensorCharacteristicName

Description
The name of the Sensor Characteristic/attribute. Sensor attributes defined using SensorCharacteristicName must be single-valued attributes of the object 'Sensor' and not attributes of undefined objects.

Content Source: DP (Collection); PGE (Granule)
Constraints: Used to define sensor attributes, not objects associated with sensors.
Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SensorCharacteristic</td>
</tr>
</tbody>
</table>

SensorCharacteristicUnit

Description
The unit of the Sensor Characteristic (e.g. nanometers).

Content Source: DP (Collection)

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SensorCharacteristic</td>
</tr>
</tbody>
</table>

SensorCharacteristicValue

Description
The value of the attribute defined in the class SensorCharacteristicDescription. Attributes must have single values.

Content Source: DP (Collection); PGE (Granule)
Constraints: Domain defined by SensorCharacteristicDataType

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SensorCharacteristicValueClass</td>
</tr>
</tbody>
</table>

SensorGuidePointer

Description
Logical pointer to the Sensor Guide.
Content Source: DAAC Alias:

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SensorGuide</td>
</tr>
</tbody>
</table>

**SensorLongName**

**Description**
The generic or long name description of a sensor. (e.g. Visible-Near Infrared, Human Visual, Human Auditory)

Content Source: DP (Collection)
Alias: Detector Long Name

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor</td>
</tr>
</tbody>
</table>

**Description**
Active Cavity Radiometer
Enhanced Thematic Mapper Plus
Shortwave Scanning Thermistor Bolometer Detector
Total Scanning Thermistor Bolometer Detector
Window Scanning Thermistor Bolometer Detector
Charge Coupled Device
PIN Diode Spectrometer
Shortwave Infrared
Thermal Infrared
Visible Near Infrared
Charge Coupled Devicebased Pushbroom Nadir Viewing Camera A
Charge Coupled Devicebased Pushbroom Fore Viewing Camera A
Charge Coupled Devicebased Pushbroom Aft Viewing Camera A
Charge Coupled Devicebased Pushbroom Fore Viewing Camera B
Charge Coupled Devicebased Pushbroom Aft Viewing Camera B
Charge Coupled Devicebased Pushbroom Fore Viewing Camera C
Charge Coupled Devicebased Pushbroom Aft Viewing Camera C
Charge Coupled Devicebased Pushbroom Fore Viewing Camera D
Charge Coupled Devicebased Pushbroom Aft Viewing Camera D
Correlation Spectrometer at 2.3 um
Correlation Spectrometer at 2.4 um
Correlation Spectrometer at 4.7 um
Global Positioning System
Special Sensor Microwave/Imager
Cross-track Scanning Radiometer
Visible and Infrared Spin Scan Radiometer
Light Amplification by Stimulated Emission of Radiation
Light Detection and Ranging
Microwave Limb Sounder
Multispectral Imaging Radiometer
M1a Detector IR span wavenumber range 2552.53 cm$^{-1}$ through 2676.93 cm$^{-1}$
M1b Detector IR span wavenumber range 2309.49 cm$^{-1}$ through 2433.60 cm$^{-1}$
M2a Detector IR span wavenumber range 24342.58 cm$^{-1}$ through 2554.90 cm$^{-1}$
M2b Detector IR span wavenumber range 2169.46 cm$^{-1}$ through 2311.52 cm$^{-1}$
M3 Detector IR span wavenumber range 1337.20 cm$^{-1}$ through 1442.13 cm$^{-1}$
M4a Detector IR span wavenumber range 1540.36 cm$^{-1}$ through 1613.20 cm$^{-1}$
M4b Detector IR span wavenumber range 1459.55 cm$^{-1}$ through 1526.69 cm$^{-1}$
M4c Detector IR span wavenumber range 1283.63 cm$^{-1}$ through 1338.19 cm$^{-1}$
M4d Detector IR span wavenumber range 1216.29 cm$^{-1}$ through 1271.91 cm$^{-1}$
M5 Detector IR span wavenumber range 1055.13 cm$^{-1}$ through 1135.70 cm$^{-1}$
M6 Detector IR span wavenumber range 973.03 cm$^{-1}$ through 1045.24 cm$^{-1}$
M7 Detector IR span wavenumber range 910.51 cm$^{-1}$ through 973.44 cm$^{-1}$
M8 Detector IR span wavenumber range 910.51 cm$^{-1}$ through 973.44 cm$^{-1}$
M9 Detector IR span wavenumber range 788.51 cm$^{-1}$ through 851.77 cm$^{-1}$
M10 Detector IR span wavenumber range 727.20 cm$^{-1}$ through 780.97 cm$^{-1}$
M11 Detector IR span wavenumber range 687.26 cm$^{-1}$ through 728.08 cm$^{-1}$
M12 Detector IR span wavenumber range 649.23 cm$^{-1}$ through 681.66 cm$^{-1}$
VNIR Channel 1 spans wavelength range 0.40 micrometer through 0.44 micrometer
VNIR Channel 2 spans wavelength range 0.58 micrometer through 0.68 micrometer
VNIR Channel 3 spans wavelength range 0.71 micrometer through 0.93 micrometer
VNIR Channel 4 spans wavelength range 0.48 micrometer through 0.95 micrometer
AMSU-A Chan 1 center freq 23.800 GHz bandpass 0.270 GHz
AMSU-A Chan 2 center freq 31.400 GHz bandpass 0.180 GHz
AMSU-A Chan 3 center freq 50.300 GHz bandpass 0.180 GHz
AMSU-A Chan 4 center freq 52.800 GHz bandpass 0.400 GHz
AMSU-A Chan 5 center freq 53.596+/-0.115 GHz bandpass 2x0.170 GHz
AMSU-A Chan 6 center freq 54.400 GHz bandpass 0.400 GHz
AMSU-A Chan 7 center freq 54.940 GHz bandpass 0.400 GHz
AMSU-A Chan 8 center freq 55.500 GHz bandpass 0.330 GHz
AMSU-A Chan 9 center freq 57.290344 GHz bandpass 0.330 GHz
AMSU-A Chan 10 center freq 57.290344+/-0.217 GHz bandpass 2x0.078 GHz
AMSU-A Chan 11 center freq 57.290344+/-0.3222+/-0.048 bandpass 4x0.036 GHz
AMSU-A Chan 12 center freq 57.290344 +/- 0.3222 +/- 0.022 bandpass 4x0.016 GHz
AMSU-A Chan 13 center freq 57.290344 +/- 0.3222 +/- 0.010 bandpass 4x0.008 GHz
AMSU-A Chan 14 center freq 57.290344 +/- 0.3222 +/- 0.0045 bandpass 4x0.003 GHz
AMSU-A Chan 15 center freq 89.000 GHz bandpass 6.000 GHz
HSB Chan 1 NOT IMPLEMENTED AND CONTAINS NO VALID DATA
HSB Chan 2 center freq 150.00 GHz bandpass 4.0 GHz
HSB Chan 3 center freq 183.31 +/- 1.0 GHz bandpass 2x0.5 GHz
HSB Chan 4 center freq 183.31 +/- 3.0 GHz bandpass 2x1.0 GHz
HSB Chan 5 center freq 183.31 +/- 7.0 GHz bandpass 2x2.0 GHz
Infrared Sounder
Laser Altimeter
Photon Counter for the 532 nm Aerosol Returns
Pointing FTS with 4 co-aligned detector arrays, 16 pixels each
Cloud LIDAR
Dual Frequency GPS receiver
Geostationary Operational Environmental Satellite Imager
HIRDLS Channel 1 N2O aerosol 17.01-17.76 microns
HIRDLS Channel 2 CO2 16.26-16.67 microns
HIRDLS Channel 3 CO2 15.63-15.97 microns
HIRDLS Channel 4 CO2 15.15-15.97 microns
HIRDLS Channel 5 CO2 14.71-15.27 microns
HIRDLS Channel 6 aerosol 11.96-12.18 microns
HIRDLS Channel 7 CFC13 (CFC11) 11.72-11.98 microns
HIRDLS Channel 8 HNO3 11.05-11.63 microns
HIRDLS Channel 9 CF2Cl2 (CFC12) 10.72-10.93 microns
HIRDLS Channel 10 O3 9.90-10.10 microns
HIRDLS Channel 11 O3 9.54-9.89 microns
HIRDLS Channel 12 O3 8.77-8.93 microns
HIRDLS Channel 13 aerosol 8.20-8.33 microns
HIRDLS Channel 14 N2O5 7.94-8.14 microns
HIRDLS Channel 15 N2O 7.80-7.96 microns
HIRDLS Channel 16 ClONO2 7.70-7.82 microns
HIRDLS Channel 17 CH4 7.30-7.55 microns
HIRDLS Channel 18 H2O 6.97-7.22 microns
HIRDLS Channel 19 aerosol 7.06-7.13 microns
HIRDLS Channel 20 H2O 6.49-7.03 microns
HIRDLS Channel 21 NO2 6.12-6.32 microns
Lighting Imaging Sensor

**SensorShortName**

**Description**
A sensor is a defined sensory sub-component of an instrument. (e.g.
InstrumentShortName=ASTER, NumberOfSensors= 3, SensorShortName= SWIR,
SensorShortName= TIR, SensorShortName= VNIR) In cases where the Instrument has a single Sensor or the Instrument and Sensor are synonymous then both attributes should be populated. (e.g. AVHRR). Sensors cannot exist without Instruments.

Content Source: DP (Collection); PGE (Granule)
Alias: Detector Short Name

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor</td>
</tr>
</tbody>
</table>

Description

ACR
AMSR-E
ETM+
FTS
Shortwave Detector
Total Detector
Window Detector
CCD
CD
GPS
Laser
LIDAR
PIN Diode
SWIR
TIR
VNIR
VNIR Channel 1
VNIR Channel 2
VNIR Channel 3
VNIR Channel 4
AMSU-A Channel 1
AMSU-A Channel 2
AMSU-A Channel 3
AMSU-A Channel 4
AMSU-A Channel 5
AMSU-A Channel 6
AMSU-A Channel 7
AMSU-A Channel 8
AMSU-A Channel 9
AMSU-A Channel 10
AMSU-A Channel 11
AMSU-A Channel 12
AMSU-A Channel 13
AMSU-A Channel 14
AMSU-A Channel 15
CCD Camera AN
CCD Camera AF
CCD Camera AA
CCD Camera BF
CCD Camera BA
CCD Camera CF
CCD Camera CA
CCD Camera DF
CCD Camera DA
HSB Channel 1
HSB Channel 2
HSB Channel 3
HSB Channel 4
HSB Channel 5
LA
PC
M1a Detector Array
M1b Detector Array
M2a Detector Array
M2b Detector Array
M3 Detector Array
M4a Detector Array
M4b Detector Array
M4c Detector Array
M4d Detector Array
M5 Detector Array
M6 Detector Array
M7 Detector Array
M8 Detector Array
M9 Detector Array
M10 Detector Array
M11 Detector Array
M12 Detector Array
2.3um Radiometer
2.4um Radiometer
4.7um Radiometer
AN
AF
AA
BF
BA
CF
CA
DF
DA
VISSR
MIR
SSM/I
ShortWave Detector
1064 nm Detector
GPS Receiver
GOES Imager
LIS
MLS
IRS
MODIS
VNIR Channel 1
VNIR Channel 2
VNIR Channel 3
VNIR Channel 4
HIRDLS Channel 1
HIRDLS Channel 2
HIRDLS Channel 3
HIRDLS Channel 4
HIRDLS Channel 5
HIRDLS Channel 6
HIRDLS Channel 7
HIRDLS Channel 8
HIRDLS Channel 9
HIRDLS Channel 10
HIRDLS Channel 11
HIRDLS Channel 12
HIRDLS Channel 13
HIRDLS Channel 14
HIRDLS Channel 15
HIRDLS Channel 16
HIRDLS Channel 17
HIRDLS Channel 18
HIRDLS Channel 19
HIRDLS Channel 20
HIRDLS Channel 21
Sensor Technique

Description
The sensor technique. (e.g. laser altimetry)
Content Source: DP (Collection)

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor</td>
</tr>
</tbody>
</table>

Description
Active Cavity Radiometry
Broadband Microwave Radiometry
Broadband Thermistor Bolometry
Cooled Array Grating Spectrometer with photovoltaic HgCdTe detector array
Cooled Array Grating Spectrometer with photoconductive HgCdTe detector array
Counting of 532nm photon return in 75m bins 40km to surface
Doubly Split Bandpass Microwave Radiometry
Exact Measurement of Time between Transmit Pulse and receive ground return

HSB Chan 1 NOT IMPLEMENTED AND CONTAINS NO VALID DATA
Measure of 1064nm return energy in 75m bins from 20km to surface

Silicon Diode Detector behind sharp cut-on and cut-off interference filter
Silicon Diode Detector behind short-wave side sharp cut-on interference filter
Spectrometry
Whiskbroom Scanning Radiometry
Spectroscopy
Imaging Radiometry
Infrared Limb Sounding

Laser Ranging
Radiometry
Split Bandpass Microwave Radiometry
Imaging Spectroradiometry
Microwave Limb Sounding
Passive Microwave
Imaging Spectroradiometry
Infrared Sounding
Laser Altimetry
Photon Counting
Pseudorange and carrier phase
Ranging between the tops and bottoms of clouds

**SequenceNumber**

**Description**
Line number for description over 255 positions.

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AdvertisementDescription</td>
</tr>
</tbody>
</table>

**ServiceClass**

**Description**
This attribute describes the class of service. (e.g. subset)

Content Source: IOS, DSS

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SignatureServiceAdvertisement</td>
</tr>
</tbody>
</table>

**ServiceName**

**Description**
The name of the service, such as SubsetByParameter which belongs to the ServiceClass Subset.

Content Source: IOS, DSS

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SignatureServiceAdvertisement</td>
</tr>
</tbody>
</table>
ServiceURL

Description
URL that references the service for a MIME type service advertisement. This URL is what would be invoked to access the service.
Content Source: IOS

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MimeServiceAdvertisement</td>
</tr>
</tbody>
</table>

ShortName

Description
This name will identify the short name associated with the collection or granule. This includes the ECS Technical Baseline product names, i.e. CER02, MOD12, etc. This is the official reference name used in identifying the contents of the data collection.
Content Source: DP
Constraints: must be unique

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CollectionDescriptionClass</td>
</tr>
</tbody>
</table>

Description
reference RTM ECS ESDT ShortName Baseline and proposed ESDT ShortName Baseline on EDHS

SizeMBECSDataGranule

Description
The size attribute will indicate the volume of data contained in the granule.

Content Source: PGE
Constraints: mandatory for granule
Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECSDataGranule</td>
</tr>
</tbody>
</table>

**SouthBoundingCoordinate**

**Description**
Southern-most limit of coverage expressed in geodetic latitude.

Content Source: DP(collection);PGE(granule)
Constraints: SouthBoundingCoordinate not null for collection only.
Constraints: SouthBoundingCoordinate => -90.0
Constraints: SouthBoundingCoordinate <= +90.0
Constraints: SouthBoundingCoordinate <= NorthBoundingCoordinate

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BoundingRectangle</td>
</tr>
</tbody>
</table>

**SpatialCoverageType**

**Description**
This attribute denotes whether the locality/coverage requires horizontal, vertical, or both in the spatial domain and coordinate system definitions.

Content Source: DP

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spatial</td>
</tr>
</tbody>
</table>
**Description**

HORIZ&VERT - Horizontal & Vertical

Horizontal

Vertical

**SpatialKeyword**

**Description**

This attribute specifies a word or phrase which serves to summarize the spatial regions covered by the collection. It may be repeated if several regions are covered. This often occurs when a collection is described as covering some large region, and several smaller subregions within that region.

Content Source: DP

Alias: Location

Location Keyword

**Annotation**


**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SpatialKeywordClass</td>
</tr>
</tbody>
</table>

**Description**

Africa
Antarctica
Arctic Ocean
Asia
Atlantic Ocean
Equatorial
Europe
Global
Indian Ocean
Mid-Latitude
North America
Pacific Ocean
South America
Southern Ocean
Central America
Oceania
North Africa
Central Africa
West Africa
Southern Africa
East Africa
Western Asia
Central Asia
Southern Asia
Southeast Asia
Eastern Asia
Western Europe
Eastern Europe
Middle East
Northern Hemisphere
Southern Hemisphere
Eastern Hemisphere
Western Hemisphere
North Atlantic Ocean
North Pacific Ocean
South Atlantic Ocean
South Pacific Ocean
Baltic Sea
Bering Sea
Black Sea
Caribbean Sea
Caspian Sea
East China Sea
Great Lakes
Gulf of Mexico
Hudson Bay
Mediterranean Sea
North Sea
Red Sea
Sea of Japan
Sea of Okhotsk
South China Sea
Yellow Sea
Afghanistan
Albania
Algeria
American Samoa
Andorra
Angola
Anguilla
Antigua and Barbuda
Argentina
Armenia
Australia
Austria
Azerbaijan
Bahamas
Bahrain
Bangladesh
Barbados
Belarus
Belgium
Belize
Benin
Bermuda
Bhutan
Bolivia
Bosnia and Herzegovina
Botswana
Brazil
Brunei Darussalam
Bulgaria
Burkina Faso
Burma
Burundi
Cambodia
Cameroon
Canada
Cape Verde
Central African Republic
Chad
Chile
China
Colombia
Comoros
Congo
Cook Islands
Costa Rica
Cote d'Ivoire
Croatia
Cuba
Cyprus
Czech Republic
Denmark
Djibouti
Dominica
Dominican Republic
Ecuador
Egypt
El Salvador
Equatorial Guinea
Eritrea
Estonia
Ethiopia
Fiji
Finland
France
Gabon
Gambia
Georgia
Germany
Ghana
Greece
Grenada
Guam
Guatemala
Guinea
Guinea-Bissau
Guyana
Haiti
Holy See
Honduras
Hungary
Iceland
India
Indonesia
Iran
Iraq
Ireland
Israel
Italy
Jamaica
Japan
Jordan
Kazakhstan
Kenya
Kiribati
Korea, DPR
Korea, Republic
Kuwait
Kyrgyzstan
Laos
Latvia
Lebanon
Lesotho
Liberia
Libya
Liechtenstein
Lithuania
Luxembourg
Macedonia, FYR
Madagascar
Malawi
Malaysia
Maldives
Mali
Malta
Marshall Islands
Mauritania
Mauritius
Mexico
Micronesia
Moldova
Monaco
Mongolia
Montserrat
Morocco
Mozambique
Namibia
Nauru
Nepal
Netherlands
New Zealand
Nicaragua
Niger
Nigeria
Niue
Norway
Oman
Pakistan
Palau
Panama
Papua New Guinea
Paraguay
Peru
Philippines
SSAPAlgorithmPackageName

**Description**
Name of the Algorithm Package (from AP) that this component is associated with. An SSAPComponent may only be associated with ONE AP.

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSAPComponent</td>
</tr>
</tbody>
</table>

SSAPAlgPackageVersion

**Description**
Versions of the Algorithm Package (from AP) that this SSAP Component is associated with. An SSAPComponent can be associated with multiple AP versions.

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSAPComponentAPVersion</td>
</tr>
</tbody>
</table>

SSAPInsertDate

**Description**
Data of insertion to the Data Server.

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSAPComponent</td>
</tr>
</tbody>
</table>
StandAloneDocumentPointer

Description
Data model logical reference to a Stand-Alone Document.

Content Source: DSS
Constraints: if guide exists, this must exist.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>StandAloneDocument</td>
</tr>
</tbody>
</table>

StartDate

Description
Date of Advertisement creation.

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AdvertisementMaster</td>
</tr>
</tbody>
</table>

StartOrbitNumber

Description
Orbit number at start of data granule.

Content Source: PGE
Constraints: StartOrbitNumber is mandatory if OrbitCalculatedSpatialDomain class is applicable.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>OrbitCalculatedSpatialDomain</td>
</tr>
</tbody>
</table>
StateProvince

Description
The state or province of the address.

Content Source: DP

Annotation

Reference List
<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ContactAddress</td>
</tr>
</tbody>
</table>

Description
Free Text

StopOrbitNumber

Description
Orbit number at end of data granule.

Content Source: PGE
Constraints: StopOrbitNumber is mandatory if OrbitCalculatedSpatialDomain class is applicable.

Annotation

Reference List
<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>OrbitCalculatedSpatialDomain</td>
</tr>
</tbody>
</table>

StorageMedium

Description
The quantity and type of medium on which the distributed data are stored.

Content Source: DAAC
**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>StorageMediumClass</td>
</tr>
</tbody>
</table>

**Description**
35 mm Slides
Hardcopy Plots
Magnetic Disks
Magnetic Tapes
Microfiche Slides
Microfilm Reels
Optical Disks
Online - Information required to directly obtain the collection electronically.

**StreetAddress**

**Description**
An address line for the address, used for mailing or physical addresses of organizations or individuals who serve as points of contact.

Content Source: DP; DAAC
Alias: Address

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ContactAddress</td>
</tr>
</tbody>
</table>

**Description**
Free Text

**SuggestedUsage**

**Description**
This attribute describes how this collection or granule may be best used to support earth science/global change research.
**ECSCollection**

**Description**
Free Text

**SWDateLastModified**

**Description**
Date and time when the software was last modified.

Content Source: DP
Constraints: Mandatory if any modification made.

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECSCollection</td>
</tr>
</tbody>
</table>

**AlgorithmPackage**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AlgorithmPackage</td>
</tr>
</tbody>
</table>

**SWDevelopmentStandardPointer**

**Description**

Content Source: DSS
Constraints: If SW Development Standard exists then SWDevelopmentStandardPointer must exists.

**Annotation**
**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWDevelopmentStandard</td>
</tr>
</tbody>
</table>

**SWVersion**

**Description**
The actual version of the source code in the SSAP.

**SystemDescriptionPointer**

**Description**
Logical reference to the System Description document.

**Constraints:**
If System Description exists then SystemDescriptionPointer exists.

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AlgorithmPackage</td>
</tr>
</tbody>
</table>

**SystemDescription**

**Description**
Number of org or indiv who is point of contact. The general format of the number includes country, area, and STD codes, as required for the full telephone number. Multi-extensions should be single entries rather than part of a single entry text.

**Constraints:**
Phone is dependent upon TelephoneNumberType='Facsimile', 'TDD/TTY', 'Voice'

**Annotation**
**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
<th>Telephone</th>
</tr>
</thead>
</table>

**TelephoneNumberType**

**Description**
The type of telephone number being provided in this instance of the phone number, in order to reach the organization or individual who serves as a point of contact. Voice number is used to speak to the org or individual, the TDD/TTY number which hearing-impaired can converse with org or indiv., or the fa(x)simile number of the org's or indiv.

Content Source: DAAC; DP

Alias: Contact Voice Telephone
- Contact TDD/TTY Telephone
- Contact Facsimile Telephone

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
<th>Telephone</th>
</tr>
</thead>
</table>

**Description**
Voice
TDD/TTY
Facsimile

**TemporalKeyword**

**Description**
This attribute specifies a word or phrase which serves to summarize the temporal characteristics referenced in the collection.
i.e. Monthly Composite, Annual Mean.

Content Source: DP

**Annotation**
Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>TemporalKeywordClass</td>
</tr>
</tbody>
</table>

**Description**

Free Text

**TemporalRangeType**

**Description**

This attribute tells the system and ultimately the end user how temporal coverage is specified for the collection, granule, or event.

Content Source: DP

**Annotation**


Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporal</td>
</tr>
</tbody>
</table>

**Description**

Periodic - Regularly occurring periods of equal time.

Point In Time - A single date and time, usually used for in-situ measurements.

Continuous Range - A single continuous range of time with a discrete start date time and stop date time.

Discontinuous Multiple Range - A span of time with irregular temporal coverage gaps, requiring the use of multiple start/stop datetime pairs to denote the complete coverage.

Multiple Point In Time - Multiple occurrences of single date and time points.

**TemporalType**

**Description**

The type of temporal characterization.

**Description**

Range

Single
TestPlanPointer

Description
Data model reference to document specification.

Annotation
Content Source: DSS
Alias:
Constraints:
If Test Plan exists then TestPlanPointer exists.

Described, in DID 311, as an attribute of class TestPlan.

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>TestPlan</td>
</tr>
</tbody>
</table>

TimeofDay

Description
The hour (and optionally minute, or minute and second) of the day. This attribute is used to specify a single point in time covered by a data collection, granule, or event. In the GSFC_CZCS collection this would reflect the Pass_time which is the time of the first scan of the scene.

Content Source: DP(collection);PGE(granule)

Constraints:
TimeofDay is mandatory if SingleDateTime class is used.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SingleDateTime</td>
</tr>
</tbody>
</table>

TimeType

Description
This attribute provides the time system which the values found in temporal subclasses represent.

Content Source: DP
**Annotation**  

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporal</td>
</tr>
</tbody>
</table>

**Description**  
UTC - Coordinated Universal Time  
UT - Universal Time

**Title**

**Description**  
The full title of the document.

Content Source: DP  
Constraints: mandatory for all documents

**Annotation**  

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document</td>
</tr>
<tr>
<td>AdvertisementMaster</td>
</tr>
</tbody>
</table>

**Description**  
Free Text

**UniqueID**

**Description**  
Attribute for internal use only.

Content Source: IOS

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AdvertisementMaster</td>
</tr>
</tbody>
</table>
**UpperTitle**

**Description**
Upper case of Title.
Content Source: IOS

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AdvertisementMaster</td>
</tr>
</tbody>
</table>

**UserCommentDocumentPointer**

**Description**
Data model logical reference to User Comment Document.
Content Source: DSS
Constraints: User comment document must exist.

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>UserCommentDocument</td>
</tr>
</tbody>
</table>

**UserGuideCommentPointer**

**Description**
Used as hypertext link for the user’s guide.

**Annotation**
311-CD-604-001, March 2001, Release 6A.03 Science Data Processing Segment (SDPS) Database Design and Database Schema Specifications for the ECS Project which are changes to provide updated details for the Data Server and CIDM subsystems.

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>UserGuide</td>
</tr>
</tbody>
</table>

**UserGuidePointer**

**Description**
Logical Pointer to the UserGuide.
Annotation
311-CD-604-001, March 2001, Release 6A.03 Science Data Processing Segment (SDPS)
Database Design and Database Schema Specifications for the ECS Project which are changes to
provide updated details for the Data Server and CIDM subsystems.

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>UserGuide</td>
</tr>
</tbody>
</table>

ValidationDocumentPointer

Description
Data model logical reference to Validation Document.

Content Source: DSS
Constraints: Validation document must exist.

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ValidationDocument</td>
</tr>
</tbody>
</table>

VersionDescription

Description
A brief description of the differences between this collection version and another collection version.

Source: DP

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECSCollection</td>
</tr>
</tbody>
</table>

VersionID

Description
Version identifier of the data collection.

Content Source: DP
Constraints:
Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CollectionDescriptionClass</td>
</tr>
</tbody>
</table>

**VerticalSpatialDomainType**

**Description**
This attribute describes the type of the area of vertical space covered by the locality.

Content Source: DP(collection);PGE(granule)

Annotation

Reference List

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>VerticalSpatialDomain</td>
</tr>
</tbody>
</table>

**Description**
Atmosphere Layer
Cloud Layer
Maximum Altitude
Maximum Depth
Minimum Altitude
Minimum Depth

**VerticalSpatialDomainValue**

**Description**
This attribute describes the extent of the area of vertical space covered by the granule. Must be accompanied by an Altitude Encoding Method description. The datatype for this attribute is the value of the attribute VerticalSpatialDomainType. The unit for this attribute is the value of either DepthDistanceUnits or AltitudeDistanceUnits.

Content Source: DP(collection);PGE(granule)

Annotation
Reference List

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VerticalSpatialDomain</td>
<td></td>
</tr>
</tbody>
</table>

**Description**

Free Text

TOA - Top of Atmosphere

SFC - Surface of ocean or land, regardless to topography.

Cloud - Any cloud layers found.

Tropos - Troposphere. Must be accompanied by Altitude Encoding Method description. (default: 0 to 10 km)

Atmos - Troposphere + Stratosphere. Must be accompanied by Altitude Encoding Method description. (default: SFC to 30km)

Stratos - Stratosphere. Must be accompanied by Altitude Encoding Method description. (default: 10 to 30km)

Ex - Exosphere. Must be accompanied be Altitude Encoding Method description. (default: 700km)

Mid-Atmos - Upper troposphere to mesopause. Must be accompanied by Altitude Encoding Method description. (default: 10-120km)

Near_SFC - Near surface layer (within boundary layer). Must be accompanied by Altitude or Depth Encoding Method description. (default: SFC to +- 1km)

Plume_col - Vertical extent of volcanic eruption plume. Must be accompanied by Altitude Encoding Method description for this volcanic eruption.

Plume_top - Top of volcanic eruption plume. Must be accompanied by Altitude Encoding Method Description for this volcanic eruption.

Sub_SFC - Layers immediately beneath land surface.

TOO - Top of Ocean (oceanic mixed layer)

Atmosphere Profile - Data extends vertically through atmosphere.

**WestBoundingCoordinate**

**Description**

Western-most coordinate of the limit of coverage expressed in longitude.

Content Source: DP(collection);PGE(granule)

Constraints: WestBoundingCoordinate not null for collection only.

Constraints: WestBoundingCoordinate => -180.0
Constraints: WestBoundingCoordinate <= +180.0

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BoundingRectangle</td>
</tr>
</tbody>
</table>

**ZonelIdentifier**

**Description**
The appropriate numeric or alpha code used to identify the various zones in this grid coordinate system. See domain values of coordinate system for constraints on the zone numbers.

Content Source: DP(collection);PGE(granule)
Constraints: mandatory if grid coordinate system is used.

**Annotation**

**Reference List**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZonelIdentifierClass</td>
</tr>
</tbody>
</table>

**Description**
Universal Transverse Mercator (UTM) - 1<= UTM Zone Number <=60 for the Northern Hemisphere; -60 <= UTM Zone Number <= -1 for the Southern Hemisphere.

State Plane Coordinate System of 1927 - Domain values for identifier of the SPCS zone are four digit numeric codes and codes for State Plane Coordinate Systems.

State Plane Coordinate System of 1983

ARC Coordinate System - 1<= ARC System Zone Identifier <= 18

Other Grid System