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Joint Polar Satellite System (JPSS) Common Data Format Control Book – External
Volume II - RDR Formats

Goddard Space Flight Center
Greenbelt, Maryland

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JPSS Common Data Format Control Book – External
Volume II – RDR Formats

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Preface

This document is under JPSS Ground configuration control. Once this document is approved, JPSS approved changes are handled in accordance with Class I and Class II change control requirements as described in the JPSS Configuration Management Procedures, and changes to this document shall be made by complete revision.

Any questions should be addressed to:

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Change History Log

Revision	Effective Date	Description of Changes (Reference the CCR & CCB/ERB Approve Date)
Original	07/05/2011	This version incorporates the following CCRs: **ECR 1039** (DCO E1, SEM RDR TBD); **ECR 1043A** (DCO E2, OMPS RDR Updates); **474-CCR-10-0005** (ECR-CGS-0011 E3: RDR Size Updates; Updated file size item for ATMS RDR; Updated file size item for CrIS RDR; Updated file size item for OMPS RDR; Updated file size item for VIIRS RDR; Updated file size item for NPP RDR); **474-CCR-11-0029** (ECR-CGS-0035: Updated file size item for CrIS RDR; Updated file size item for OMPS RDR; Updated file size item for NPP RDR); and **474-CCR-11-0123** (ECR-CGS-0050: Updated file size item for VIIRS RDR; Updated file size item for NPP Spacecraft RDRs) to create JPSS CDFCB, External, Volume 2, RDR Formats, Rev -. This was approved at the JPSS Ground ERB July 5, 2011.
Rev A	11/30/2011	474-CCR-11-0227 contains the following updates for the IDPS Mx5.1 release: • ECR-CGS-0061 (previously approved), contained the following updates. They are incorporated into this document for Rev A: o PCR028633 (Approved as PCR027724) – Updates section 3.11 LP Diagnostic Calibration size typo
Rev B	11/03/2011	This version incorporates the following CCR: **474-CCR-11-0187** (ECR-CGS-0072): CDFCB-X Vol. II – Rev E6 • Added sections 3.17 and 3.18 for GCOM-W RDRs • Added GCOM RDRs to Table B-1 • Updated Description and AMSR2 TLM size in Section 3.18 and 3.19 based on RRAs • modified Table B-1 sensor fields. • Update to change MOIS document number from “SGC-070078” to “474-REF-00111”. • Additional update to the MOIS Document number as follows: 474-REF-00145 (JAXA #: SGC-070078) • Update Tech Exchange Doc number as 474-REF-00111 This CCR was approved at the JPSS Ground ERB on November 3, 2011

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Volume II – RDR Formats

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This document has been identified per the NPOESS Common Data Format Control Book – External Volume 5 Metadata, D34862-05, Appendix B as a document to be provided to the NOAA Comprehensive Large Array-data Stewardship System (CLASS) via the delivery of NPOESS Document Release Packages to CLASS.

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A	08/27/2007	Incorporation of the following ECRs with ECR 615A: • ECR 273D NPP IICDO Threads, D31400-42 • ECR 362C Cal-Val Requirements for IDPS Build 1.4 • ECR445B Rev A Release of the NPOESS Common Data Format Control Book - External Volume I, D34862-01 • ECR 462C Glossary Updates • ECRs 469C, 479A • ECR515B NPOESS Restructure Baseline - De-manifested and GFE Sensor Performance • DCO A1 D34862-02 CDFCB-X Vol. II ECR 532 – UML Updates • DCO A2 D34862-02 CDFCB-X Vol. II ECR544C - NPP RDR Format Updates Including Telemetry, Dwell, and Memory Dump • ECR549C IDPS Build 1.5 Metadata Updates - CDFCB-X Vol. 5, DCO B1 In addition these changes have been made: • Updated Granule Sizes • General clean-up (overview text, references) as needed • NPOESS Telemetry and Att/Eph RDR place-holders added • Removal of TBD on Spacecraft Telemetry RDR • Revised UML diagrams • Demanifested Sensor updates (ECR 515B)	

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B	06/25/2008	ECR 780B incorporates the following DCOs/ECRs: • DCO B1, ECR 683A OMPS NP and TC Granule Size Updates • DCO B2, ECR 706 RDR Description Updates • DCO B3, ECR 727 CERES RDRs (and ECR 726B, CERES Manifest on NPP) • DCO B4, ECR 745 OMPS LP RDR Granule Sizes • ECR 747A NPOESS Data Mapping, supersedes ECR 583B • ECR 579A, OMPS LP on NPP • ECR 602, RDR Data Product Sizing • Supersedes other CDFCB-X ECRs: 475A, 476B, 532, 549C In addition these changes have been made: • Clarified NPP Only on CERES • Added LRD and HRD qualifiers • Updated Appendix A • Updated SARSAT and A-DCS Sections • Appendix B added for Static Header values • Common RDR Structure description updates • Incorporation of ECR 712A and ECR 749 via UML Diagram Updates (supersedes ECR 454B) • Moved Diary APID list details from Section 2.1 to 3.15 and 3.16.	All

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C	01/23/2009	ECR 896B incorporates the following changes: Updated UML in Section 2 Updated RDR APID List pktsReserved description New ATMS RDR durations and sizes Removed CrIS LRD Packets New OMPS Calibation RDR durations Modified VIIRS Description Modified VIIRS RDR AP Footnotes Additional Spacecraft APIDs per C&TH Rev C02 Updated Appendix B	 4 - 7 12 19 25, 26 39 51 54 58 84
D	06/03/2009	ECR 957A incorporates the following changes: Updated SARSAT RDR sizes Miscellaneous document and reference corrections Clarified NPP Only for all OMPS LP RDRs Updated NPOESS attitude/ephemeris RDR contents Updated Appendix B for ASF Added TBDs for CERES on NPOESS	34 2–13, 21, 30, 34, 48, 49, 56-59 45- 47 61 62

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1.0 INTRODUCTION

1.1 Document Purpose and Scope

Volume II of the Common Data Format Control Book – External (CDFCB-X) provides the data format definitions of Raw Data Records (RDRs). These descriptions include the format of the Hierarchical Data Format Release 5 (HDF5) files, as well as the product definitions. These formats are available to authorized external users of the National Polar-orbiting Operational Environmental Satellite System (NPOESS) and the NPOESS Preparatory Project (NPP). For an overview of the CDFCB-X and the list of reference documents, see the CDFCB-X Volume I-Overview, D34862-01.

1.2 Document Overview

The organization of this volume is as follows:

Section 1.0: Introduction – Provides a brief overview of the document's purpose and scope.

Section 2.0: Raw Data Records HDF5 Details – Provides details on data organization and RDR unique metadata within the HDF5 formatted RDRs.

Section 3.0: Raw Data Records Definitions – Provides definitions specific to sensor RDRs for NPP.

1.3 General Overview of the RDR

The NPOESS RDR is an accumulation of binary data generated by sensors on board the NPP and NPOESS spacecraft and assembled into groups called application packets (APs). Unique Application Packet Identifier (APID) numbers represent each discrete AP type. The NPOESS ground software collects one or more groups of related APs together into granules which are then assembled into common RDR structures and combined with metadata to create the delivered HDF5 file. The APs are accumulated per discrete period and a granule refers to the data accumulated and organized for that discrete period. The APs are logically grouped into science, diagnostic, dwell, dump, and telemetry RDRs. A science RDR data product generally contains all the necessary APs to construct a Science Data Record (SDR). Diagnostic, dwell, and dump RDRs generally contain APs that are only generated while the sensor is in diagnostic mode. Telemetry RDRs generally contain APs that describe the health and status of the sensor

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or spacecraft. This document shows the structure of the collection of APs that compose individual RDRs and the HDF5 structure for RDRs. Figure 1.3-1, RDR HDF5 File Model, shows the reference hierarchy for RDR contents.

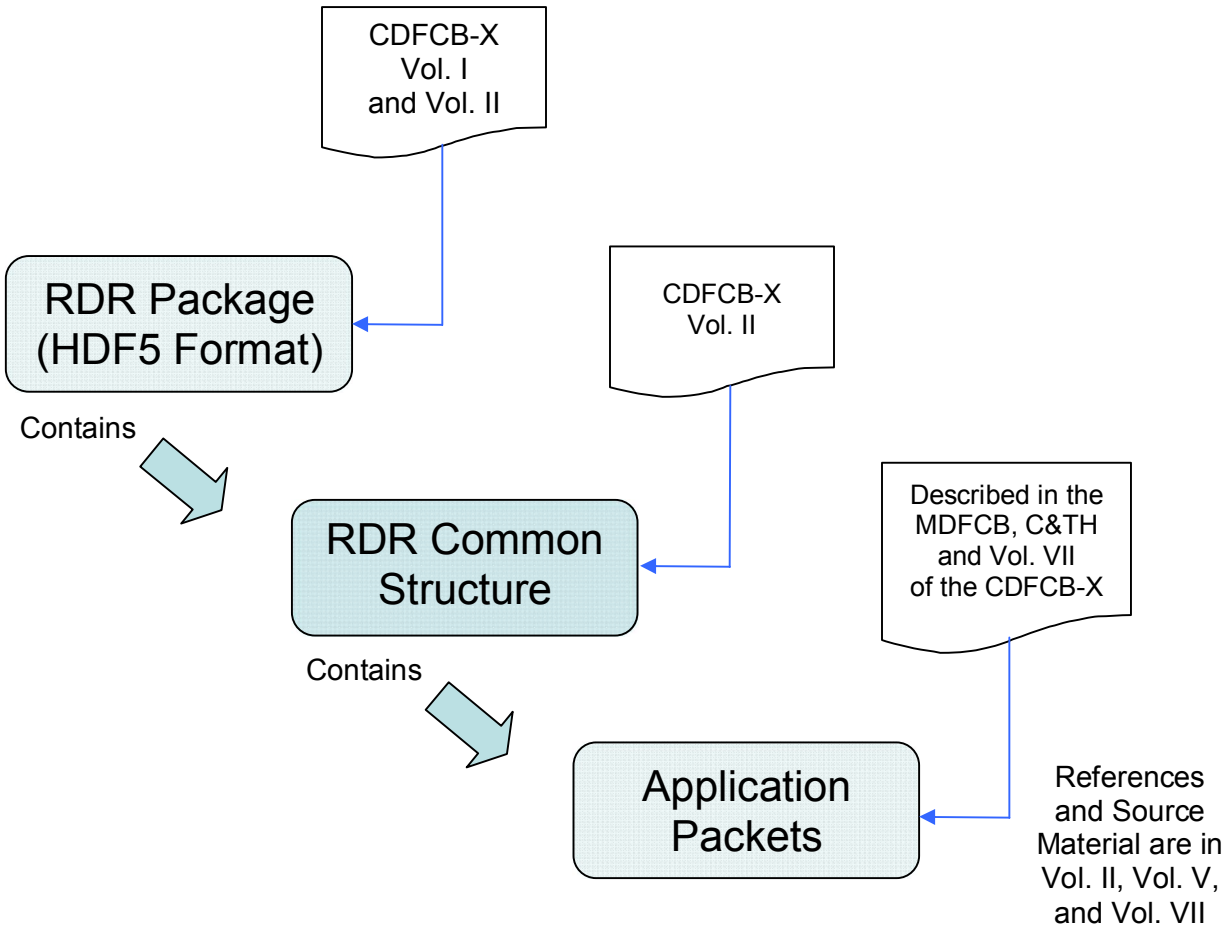

Figure 1.3-1, RDR HDF5 File Model

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2.0 RAW DATA RECORDS HDF5 DETAILS

Figure 2.0-1, Science and Diagnostic RDR Generalized UML Diagram, depicts the HDF5 RDR file organization as a Unified Modeling Language (UML) class diagram for Science and Diagnostic RDRs. This also describes the science calibration RDRs generated by OMPS. Figure 2.0-2, Dwell, Dump, and Telemetry RDR Generalized UML Diagram, depicts the HDF5 RDR file organization as a UML Class Diagram for Dwell, Dump and Telemetry RDRs.

Each HDF5 RDR file contains an HDF5 Root Group, '/', a Data_Products Group, one or more Product Groups (CollectionShortName), and an All_Data Group containing one or more (CollectionShortName)_All groups. The latter group contains the Dataset_Array which holds the common RDR structures of Consultative Committee for Space Data Systems (CCSDS) structured APs. For Science and Diagnostic RDRs a Spacecraft Diary Group is also included in the Data_Products group. The Product Groups and Spacecraft Diary Group both contain datasets – an Aggregation Dataset (CollectionShortName_Aggr) and Granule Datasets (CollectionShortName_Gran_n – where n indicates the nth granule in a temporal aggregation of granules (1 .. n)). A granule is a general term used to describe the minimum quanta of data collected per processing period, generally on the order of tens of seconds. For the definition and organization of the metadata attributes contained in the HDF5 files, see the CDFCB-X Volume V – Metadata, D34862-05. Attributes that are specific to a particular RDR are listed with the specific RDR's data format definition. Note: In the UML diagrams, an '*' following the name of an attribute indicates an element with exceptions; see the CDFCB-X Volume V for the details of the exception.

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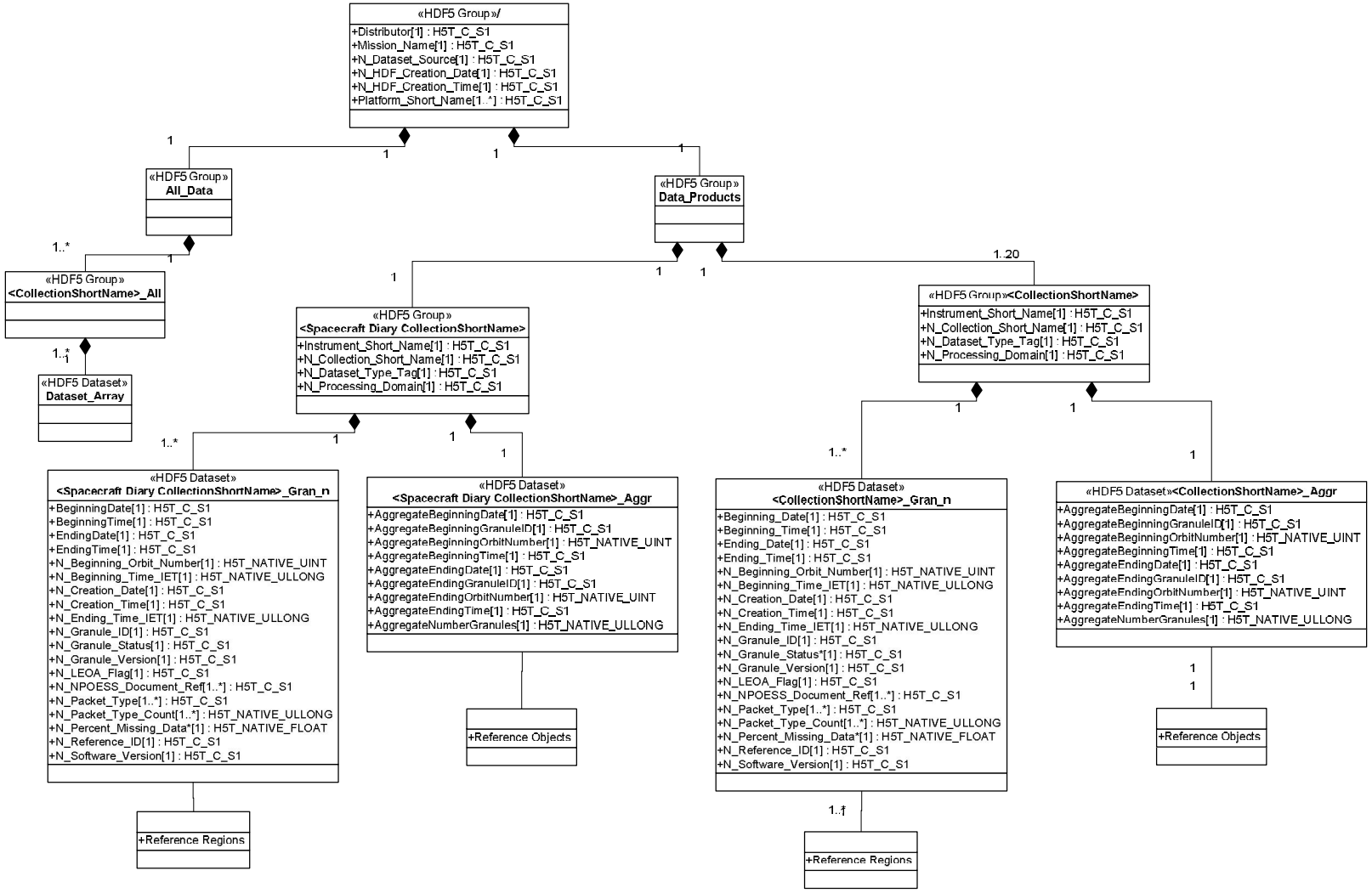

Figure 2.0-1, Science and Diagnostic RDR Generalized UML Diagram

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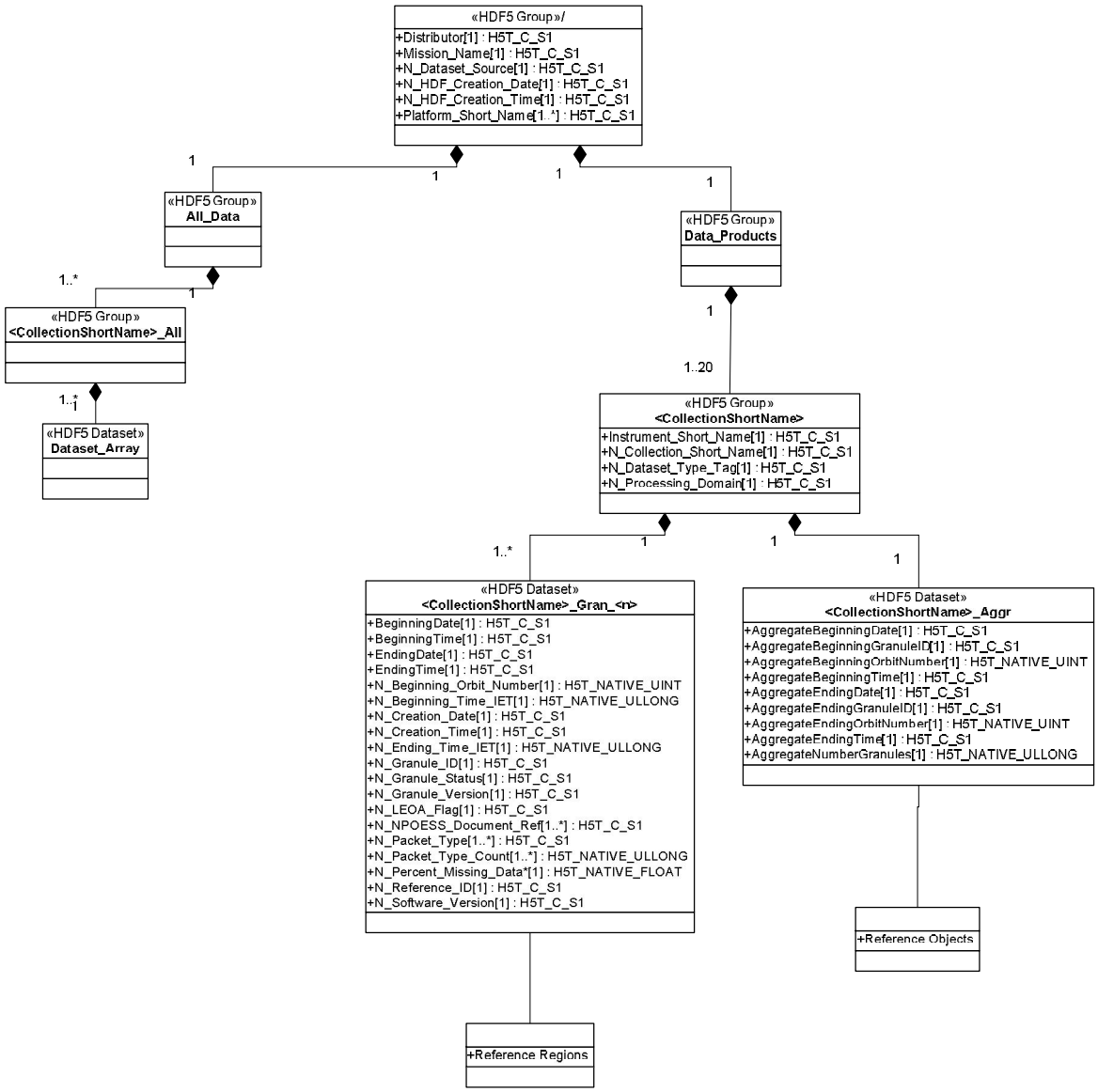

Figure 2.0-2, Dwell, Dump, Telemetry, and Spacecraft Diary (when requested separately) RDR Generalized UML Diagram

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

2.1 RDR Spacecraft Ephemeris and Attitude Data

Science and Diagnostic HDF5 RDR files contain Spacecraft Ephemeris and Attitude application packets (AP) that occur for the same period of time as the requested datasets included in the file. This data is contained in the Spacecraft Diary Group (CollectionShortName) of the HDF5 file.

The period of the Spacecraft Ephemeris and Attitude granules is not likely to coincide with the period of the RDR product dataset granules. However, the aggregation of Spacecraft Ephemeris and Attitude granules contains all of the APs collected during the aggregation period of the RDR product dataset. If the collection frequency for a given RDR product granule is less than the collection frequency for the Spacecraft Ephemeris and Attitude granule, then the co-temporal Spacecraft Ephemeris and Attitude granules are included in the HDF5 file in order to ensure overlapping time coverage. The time span of Ephemeris and Attitude granules is always greater than or equal to the time span of the RDR data. For example, Figure 2.1-1, Spacecraft Ephemeris and Attitude Delivery Timeline, shows a general example where a sensor granule timespan is much greater than the associated Spacecraft Ephemeris and Attitude granules. In this example, if Sensor granule *X* was requested for delivery, the resulting HDF5 file would include Spacecraft Ephemeris and Attitude granules *a*, *b*, *c*, and *d*. Likewise, Sensor granule *Y* would be accompanied by Spacecraft Ephemeris and Attitude granules *d*, *e*, *f*, and *g*.

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

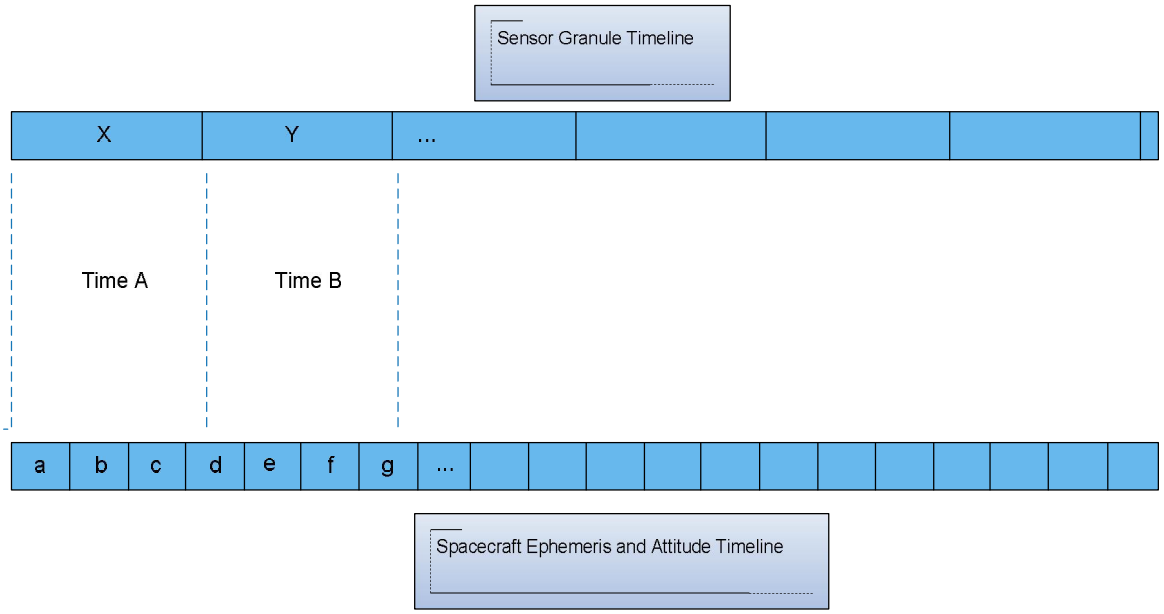

Figure 2.1-1, Spacecraft Ephemeris and Attitude Delivery Timeline

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

3.0 NPP/NPOESS COMMON RAW DATA RECORD STRUCTURE

The following paragraphs describe the structure and contents of the RDR granules formed by the NPOESS ground processing software. The ground processing software generates several RDRs for each sensor by accumulating one or more specific APs into a single collection. The accumulated APs are not byte-aligned or otherwise altered. They are merely collected and placed into storage in the order that they are received. The following paragraphs describe the binary packaging structure for these accumulated APs. Table 3.0-1, Common RDR Structure, shows the common NPOESS RDR Structure. All NPOESS RDRs are based on the same generic granule storage framework and is illustrated conceptually in Figure 3.0-1 Common RDR Layout.

The detailed structure and contents of the APs are documented in the Mission Data Format Control Book (MDFCB), GSFC 429-05-02-42 and the NPP Command and Telemetry Handbook (C&TH) for NPP and the CDFCB-X, Volume VII, D34862-07, for NPOESS. For more information on AP formatting, see the Recommendations for Advanced Orbiting Systems, Networks and Data Links, CCSDS 701.0-B-2, Section 3.3.3.

Note: All multi-byte structures are in Big Endian.

Table 3.0-1, Common RDR Structure

Field Name	Description
Static Header	Static header describing the RDR
APID List	Array of structures that contain information about each APID that is collected in the RDR
Packet Tracker	Array of structures that contains information about each AP that is in the RDR
AP Storage Area	General buffer where the APs are stored back-to-back in the order that they are received

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

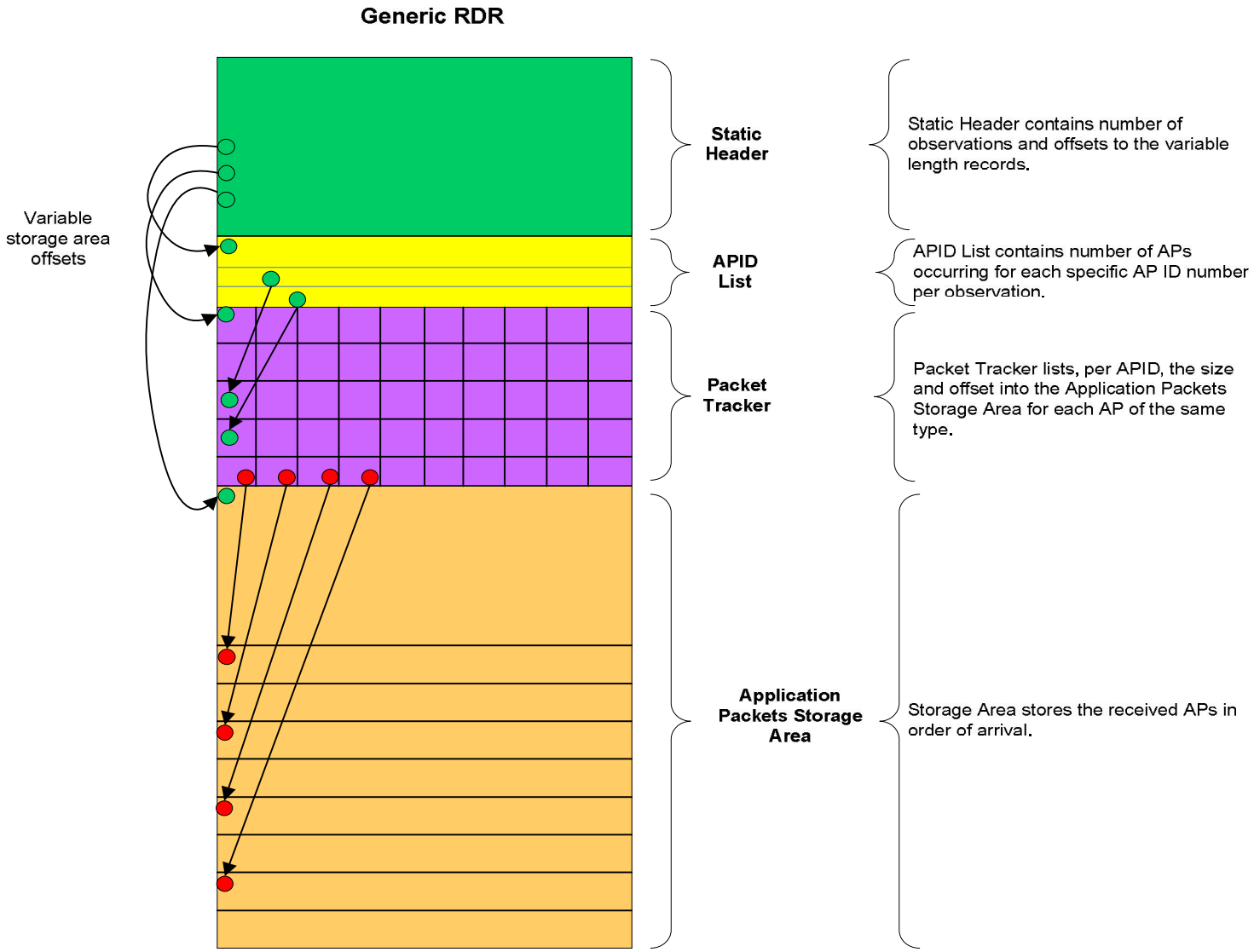

Figure 3.0-1, Common RDR Layout

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The following section defines these structures and provides methods for determining the variable length RDR components.

3.1 Common RDR Structures

Description/ Purpose	The following tables describe the four structures found in the common RDR Structure. The common RDR Structure granules are referenced by the HDF5 Object and Reference Region pointers in the CollectionShortName_Aggr and CollectionShortName_Gran_# datasets, respectively.
File-Naming Construct	See the CDFCB-X Volume I-Overview, D34862-01, Section 3.0 for details.
File Size	Nominally specified per RDR
File Format Type	Binary (structure stored within HDF5)
Production Frequency	Common structure created for each RDR granule Granule durations specified per RDR
Data Content and Data Format	Each RDR has a single RDR Static Header and a dynamic Application Packet content area with three major entries: 1) APID List, 2) Packet Tracker List, and 3) Application Packet Storage Area. Table 3.1-1, RDR Static Header, details the spacecraft and sensor that the RDR data originated from, the type of data the RDR contains, and the start and end boundary times of the RDR granule. It also provides byte offset information needed to access individual APs and the number of AP types that are contained in the RDR. Tables 3.1-2, 3.1-3, and 3.1-4 define the Dynamic Application Packet content area. Table 3.1-2, RDR APID List, defines the structure used to identify the AP data type and it provides information necessary for accessing the RDR Packet Tracker. The APID List has details for each APID including number expected and received. Table 3.1-3, RDR Packet Tracker provides information about individual APs. Table 3.1-4, Application Packet Storage Area, describes the storage area containing the APs.

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Table 3.1-1, RDR Static Header, details the spacecraft and sensor that the data originated from, the type of the data the RDR contains, and the start and end boundary times of the RDR granule. The RDR contains APs that have observation times which are greater than or equal to the start boundary and less than the end boundary time. The total size of the RDR Static Header is 72 bytes.

Table 3.1-1, RDR Static Header

Field Name	DataType	Description
satellite	char[4]	Source satellite name as found in CDFCB-X Volume I, Table 3.4.1-1, Spacecraft ID.
sensor	char[16]	The RDR sensor name in a case-sensitive string (Example: “VIIRS”, “ATMS”, “CrIS”, etc. See Appendix B, Common Static Header Values, for specific values.)
typeID	char[16]	The RDR type in an upper case string (Example: “SCIENCE”, “DIAGNOSTIC”, “TELEMETRY”, “MEMORY DUMP”, “DWELL”. See Appendix B, Common Static Header Values, for specific values.)
numAPIDs	Uint32	The number of different types of expected APIDs that make the RDR. (numAPIDs is specific for each type of RDR, see Appendix B, Common Static Header Values, for specific values.)
apidListOffset	Uint32	Byte offset of the APID List (this is equivalent to the size of the static header: 72). The APID List starts immediately after the Generic RDR Static Header. Note: Always use this value to find the APID address.
pktTrackerOffset	Uint32	Byte offset from the beginning of the Common RDR to the Packet Tracker list Note: Always use this value to find the Packet Tracker list.
apStorageOffset	Uint32	Byte offset from the beginning of the Common RDR to the AP Storage Note: Always use this value to find the AP Storage.
nextPktPos	Uint32	Byte offset from the beginning of the Application Packet Storage Area (apStorageOffset) to the end of valid data within the Application Packet Storage Area
startBoundary	int64	All APs occur at or after this time in IDPS Epoch Time (IET) format. Note IET begins January 1, 1958 and is measured in microseconds. For more information on IET see CDFCB-X Volume I, Section 3.3.1.
endBoundary	int64	The RDR non-inclusive boundary time in IET format. All APs occur before this time.

Table 3.1-2, RDR APID List, details the APIDs that are in the RDR. The number of

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elements in the list is equal to the numAPIDs field in the RDR Static Header. The size of a single RDR APID list element is 32 bytes.

Table 3.1-2, RDR APID List

Field Name	DataType	Description
name	char[16]	Shortname describing the data type (Example: M01 for VIIRS. See individual RDR sections for specific values.)
value	Uint32	This field stores an APID that is in the RDR.
pktTrackerStartIndex	Uint32	The first index in the pktTracker array that will contain an AP of this APID. This index is zero based.
pktsReserved	Uint32	This field stores the number of APs reserved for this APID in this RDR. This value accounts for the worst case expected for the temporal granule period. Due to variability in scan rates, the actual number of packets received can be less than the "reserved" and still be 100% complete as shown in the metadata.
pktsReceived	Uint32	The number of APs of this APID that have been received for this RDR

Each RDR contains an array of Packet Trackers. Table 3.1-3, RDR Packet Tracker, details information about the AP and its location in the storage buffer. The number of elements in this array is equal to the total number of packets that are expected for all expected APIDs. The size of a single RDR Packet Tracker is 24 bytes.

Table 3.1-3, RDR Packet Tracker

Field Name	DataType	Description
obsTime	int64	The IET observation time of the AP as derived from the CCSDS Secondary Header of the AP or associated with the segmented group of the APID.
sequenceNumber	int32	The 14 bit sequence number extracted from the Primary Header's Packet Sequence Control word of the AP. This is used to track segmented packets and their location.
size	int32	The AP size in bytes as received
offset	int32	The AP begins at this offset from the beginning of the AP Storage Area. From the beginning of the RDR, the AP is at "offset" + apStorageOffset. (offset = -1 for packets not received).

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Field Name	DataType	Description
fillPercent	int32	Percentage of fill data included in the AP. Based on received and expected bytes per AP with valid values being 0-100% reported to the nearest %. Any AP with fill data (even one byte) will be reported with at least 1% fill data. Under normal conditions the value is 0. In packets received at a Field Terminal, this value is always zero. If the primary AP header indicates a secondary AP header is present, and the time code of the secondary AP header is fill, the AP is not made available. In the event that an AP is repaired, resulting in less fillPercent, a repaired RDR granule may be produced. See D34862-01 CDFCB-X, Volume I, Section 3.5.7 for more information on Repair Granules.

Table 3.1-4 Application Packet Storage Area, describes the AP storage area.

Table 3.1-4, Application Packet Storage Area

Field Name	Data Type	Description
apStorage	Array of unsigned int8	Storage area where application packets are stored as they arrive in consecutive order

Table 3.1-5, Application Packet Tables, provides explanations of the fields given for each RDR described in the following sections.

Table 3.1-5, Application Packet Tables

APID Short Name	Description	Value $APID_{10}$
Short name of this Application Packet as an upper-case string	Brief description of this application packet	Unique Application packet ID value

Note: Grouped or segmented packets contain mission data exceeding the size of a single CCSDS packet. Two examples below are listed which show the maxima for grouped packet size and packets per group (or segment).

1. VIIRS Imagery Resolution Band 4 contains 33 CCSDS packets per segment. This includes one start packet, 31 middle packets and one last packet. The maximum packet size for the segment is 12,166 octets, and the total for the

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segment is 340,412 octets uncompressed. This is the largest grouped packet. This packet is generated every 1.7864 seconds.

2. The OMPS Limb Profiler contains 166 CCSDS packets per segment. The first and middle packets are 1024 octets and the last packet is 305 octets. The total size is 168,241 octets. This is the largest segment in terms of number of packets. This packet is generated every 18.72 seconds.

Accessing APs can be achieved in two fashions; Random Access or Sequential Access.

To access APs in random order by AP type:

- Get the range for a specific type of data from the APID List
    - Find desired AP type using name field
    - Get pktTrackerStartIndex
    - Get pktsReserved
- Loop over the elements in Packet Tracker array starting at pktTrackerStartIndex
    - Get offset (if -1 stop processing no packet received)
    - Get size
    - Access the AP by adding the offset to the apStorageOffset value found in the Static Header
    - Extract size (the AP size in bytes) from the AP Storage Area
    - Repeat above for pktsReserved

To access APs in sequential order:

- Get the apStorageOffset from the Static Header to determine memory location for start of APs in AP Storage Area
- Get the nextPktPos from the Static Header (The nextPktPos value indicates the end of valid RDR data within the AP Storage Area)
- Parse AP's manually by reading the primary header, accessing the size of the packet, and accessing the user data section in the CCSDS packet

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- Repeat until nextPktPos equals current position.

3.2 DELETED

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

3.3 Advanced Data Collection System (A-DCS) RDRs

Data Mnemonic (NPOESS Only)	Science (Mission): RDRE-ADCS-C0030 Telemetry (Housekeeping):RDRE-ADCS-C0031
Description/ Purpose	A-DCS collects environmental and other science data from remote sensor beacons, and is a part of the Argos Data Collection System. Raw Housekeeping and Mission Data are made available to the NESDIS Central for further processing and distribution.
File-Naming Construct	See the CDFCB-X Volume I, D34862-01, Section 3.0 for details.
File Size	EDFCB2-TBD-9022
File Format Type	HDF5
Data Content and Data Format	The A-DCS Science RDRs are described in Section 3.3.1 The A-DCS Telemetry (Housekeeping) RDRs are described in Section 3.3.2

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

3.3.1 A-DCS Science RDR

3.3.1.1 A-DCS Science RDR HDF5 Files

The A-DCS Science RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.3.1.2 A-DCS Science RDR Data Content Summary

Table 3.3.1.2-1, A-DCS Science RDR Application Packets, lists the APs accumulated for the A-DCS Science RDR. The APID assignment listed in Table 3.3.1.2-1, A-DCS Science RDR Application Packets, applies to NPOESS only. In the event of a discrepancy in APIDs listed here, see the CDFCB-X, Volume VII, D34862-07.

Table 3.3.1.2-1, A-DCS Science RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
SCI	Mission Data (science)	688

3.3.2 A-DCS Telemetry RDR

3.3.2.1 A-DCS Telemetry RDR HDF5 Files

The A-DCS Telemetry RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.3.2.2 A-DCS Telemetry RDR Data Content Summary

Table 3.3.2.2-1, A-DCS Telemetry RDR Application Packets, lists the APs accumulated for the A-DCS Telemetry RDR. The APID assignment listed in Table 3.3.2.2-1, A-DCS Telemetry RDR Application Packets, applies to NPOESS only. In the event of a discrepancy in APIDs listed here, see the CDFCB-X, Volume VII, D34862-07.

Table 3.3.2.2-1, A-DCS Telemetry RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
HK	Housekeeping Telemetry	672

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3.4 DELETED

3.5 Advanced Technology Microwave Sounder (ATMS) RDRs

Data Mnemonic	Science:	RDRE-ATMS-C0030
	Diagnostic:	RDRE-ATMS-C0032
	Dwell:	RDRE-ATMS-C0036
	Telemetry:	RDRE-ATMS-C0031
	Memory Dump:	RDRE-ATMS-C0035
Description/ Purpose	The ATMS instrument is a passive microwave sounder instrument that provides observations which, when combined with observations from an infrared sounder, provides global atmospheric temperature and water vapor profiles. NASA's new instrument has 22 microwave-sounding channels that measure microwave energy emitted and scattered by the atmosphere.	
File-Naming Construct	See the CDFCB-X Volume I, D34862-01, Section 3.0 for details.	
File Size	Science: 109.20 KiB (32 seconds) Diagnostic: 151.81 KiB (32 seconds) Dwell: 73.93 KiB (600 seconds) Telemetry: 0.83 KiB (32 seconds) Memory Dump: 268.24 KiB (0.1 seconds) All sizes are nominal per granule with duration specified in (). Sizes do not include HDF5 overhead.	
File Format Type	HDF5	
Data Content and Data Format	Section 3.5.1 describes the ATMS Science RDR Section 3.5.2 describes the ATMS Diagnostic RDR Section 3.5.3 describes the ATMS Dwell RDR Section 3.5.4 describes the ATMS Telemetry RDR Section 3.5.5 describes the ATMS Memory Dump RDR	

3.5.1 ATMS Science RDR

3.5.1.1 ATMS Science RDR HDF5 Files

The ATMS Science RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.5.1.2 ATMS Science RDR Data Content Summary

Table 3.5.1.2-1, ATMS Science RDR Application Packets, lists the APs accumulated for the ATMS Science RDR. In the event of a discrepancy in the APIDs listed here, see the

MDFCB, GSFC 429-05-02-42 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Table 3.5.1.2-1, ATMS Science RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
CAL	Calibration	515
SCI	Science - Operational Mode as well as Diagnostic Mode only if sensor is commanded to Dwell or to output Diagnostic or Memory Dump packets	528
ENG_TEMP	Engineering - Hot Cal Temperatures	530
ENG_HS	Engineering – Health and Status - required for science processing	531

3.5.2 ATMS Diagnostic RDR

3.5.2.1 ATMS Diagnostic RDR HDF5 Files

The ATMS Diagnostic RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.5.2.2 ATMS Diagnostic RDR Data Content Summary

Table 3.5.2.2-1, ATMS Diagnostic RDR Application Packets, lists the APs accumulated for the ATMS Diagnostic RDR. In the event of a discrepancy in the APIDs listed here, see the MDFCB, GSFC 429-05-02-42 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Table 3.5.2.2-1, ATMS Diagnostic RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
DIA	Diagnostic	516
DIA_SCI	Science Packet Radiances (APID 528) measured while in diagnostic mode only if sensor is commanded to Continuous Sampling or Point & Stare	536

3.5.3 ATMS Dwell RDR

3.5.3.1 ATMS Dwell RDR HDF5 Files

The ATMS Dwell RDR HDF5 files are described in Section 2.0, Raw Data Records

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HDF5 Details.

3.5.3.2 ATMS Dwell RDR Data Content Summary

Table 3.5.3.2-1, ATMS Dwell RDR Application Packets, lists the APs accumulated for the ATMS Dwell RDR. In the event of a discrepancy in the APIDs listed here, see the MDFCB, GSFC 429-05-02-42 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Table 3.5.3.2-1, ATMS Dwell RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
DWELL	Diagnostic Dwell Telemetry	517

3.5.4 ATMS Telemetry RDR

3.5.4.1 ATMS Telemetry RDR HDF5 Files

The ATMS Telemetry RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.5.4.2 ATMS Telemetry RDR Data Content Summary

Table 3.5.4.2-1, ATMS Telemetry RDR Application Packets, lists the APs accumulated for the ATMS Telemetry RDR. In the event of a discrepancy in the APIDs listed here, see the Command and Telemetry Handbook (C&TH) BATC Drawing 568423 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Table 3.5.4.2-1, ATMS Telemetry RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
HK	Housekeeping	518

3.5.5 ATMS Memory Dump RDR

3.5.5.1 ATMS Memory Dump RDR HDF5 Files

The ATMS Memory Dump RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.5.5.2 ATMS Memory Dump RDR Data Content Summary

Table 3.5.5.2-1, ATMS Memory Dump RDR Application Packets, lists the APs

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accumulated for the ATMS Memory Dump RDR. In the event of a discrepancy in the APIDs listed here, see the MDFCB, GSFC 429-05-02-42 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Table 3.5.5.2-1, ATMS Memory Dump RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
DUMP	Memory Dump	524

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3.6 DELETED

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3.7 Cross-Track Infrared Sounder (CrIS) RDRs

Data Mnemonic	Science:	RDRE-CRIS-C0030
	Diagnostic:	RDRE-CRIS-C0032
	Housekeeping (HSK) Dwell:	RDRE-CRIS-C0036
	Scene Selection Module (SSM) Dwell:	RDRE-CRIS-C0046
	Interferogram Module (IM) Dwell:	RDRE-CRIS-C0056
	Telemetry:	RDRE-CRIS-C0031
	Memory Dump:	RDRE-CRIS-C0035
Description/ Purpose	The CrIS sensor provides cross-track measurements of scene radiance to permit the calculation of the vertical distribution of temperature and moisture in the Earth's atmosphere. It also provides supporting measurements for a variety of other geophysical parameters.	
File-Naming Construct	See the CDFCB-X Volume I, D34862-01, Section 3.0 for details.	
File Size	Science: 5825.84 KiB (32 seconds) Diagnostic: 11712.35 KiB (32 seconds) HSK Dwell: 2964.95 KiB (600 seconds) SSM Dwell: 3439.55 KiB (600 seconds) IM Dwell: 3439.55 KiB (600 seconds) Telemetry: 11.13 KiB (32 seconds) Memory Dump: 1281.98 KiB (8 seconds) All sizes are nominal per granule with duration specified in (). Sizes do not include HDF5 overhead.	
File Format Type	HDF5	
Data Content and Data Format	Section 3.7.1 describes the CrIS Science RDR Section 3.7.2 describes the CrIS Diagnostic RDR Section 3.7.3 describes the CrIS Dwell RDRs Section 3.7.4 describes the CrIS Telemetry RDR Section 3.7.5 describes the CrIS Memory Dump RDR	

3.7.1 CrIS Science RDR

3.7.1.1 CrIS Science RDR HDF5 Files

The CrIS Science RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

3.7.1.2 CrIS Science RDR Data Content Summary

Table 3.7.1.2-1, CrIS Science RDR Application Packets, lists the APs accumulated for the CrIS Science RDR. In the event of a discrepancy in APIDs listed here, see the MDFCB, GSFC 429-05-02-42 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Table 3.7.1.2-1, CrIS Science RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
NLW1	LW 1 Earth Scene	1315
NLW2	LW 2 Earth Scene	1316
NLW3	LW 3 Earth Scene	1317
NLW4	LW 4 Earth Scene	1318
NLW5	LW 5 Earth Scene	1319
NLW6	LW 6 Earth Scene	1320
NLW7	LW 7 Earth Scene	1321
NLW8	LW 8 Earth Scene	1322
NLW9	LW 9 Earth Scene	1323
NMW1	MW 1 Earth Scene	1324
NMW2	MW 2 Earth Scene	1325
NMW3	MW 3 Earth Scene	1326
NMW4	MW 4 Earth Scene	1327
NMW5	MW 5 Earth Scene	1328
NMW6	MW 6 Earth Scene	1329
NMW7	MW 7 Earth Scene	1330
NMW8	MW 8 Earth Scene	1331
NMW9	MW 9 Earth Scene	1332
NSW1	SW 1 Earth Scene	1333
NSW2	SW 2 Earth Scene	1334
NSW3	SW 3 Earth Scene	1335
NSW4	SW 4 Earth Scene	1336
NSW5	SW 5 Earth Scene	1337
NSW6	SW 6 Earth Scene	1338
NSW7	SW 7 Earth Scene	1339
NSW8	SW 8 Earth Scene	1340

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

APID Short Name	Description	Value $APID_{10}$
NSW9	SW 9 Earth Scene	1341
SLW1	LW 1 Deep Space	1342
SLW2	LW 2 Deep Space	1343
SLW3	LW 3 Deep Space	1344
SLW4	LW 4 Deep Space	1345
SLW5	LW 5 Deep Space	1346
SLW6	LW 6 Deep Space	1347
SLW7	LW 7 Deep Space	1348
SLW8	LW 8 Deep Space	1349
SLW9	LW 9 Deep Space	1350
SMW1	MW 1 Deep Space	1351
SMW2	MW 2 Deep Space	1352
SMW3	MW 3 Deep Space	1353
SMW4	MW 4 Deep Space	1354
SMW5	MW 5 Deep Space	1355
SMW6	MW 6 Deep Space	1356
SMW7	MW 7 Deep Space	1357
SMW8	MW 8 Deep Space	1358
SMW9	MW 9 Deep Space	1359
SSW1	SW 1 Deep Space	1360
SSW2	SW 2 Deep Space	1361
SSW3	SW 3 Deep Space	1362
SSW4	SW 4 Deep Space	1363
SSW5	SW 5 Deep Space	1364
SSW6	SW 6 Deep Space	1365
SSW7	SW 7 Deep Space	1366
SSW8	SW 8 Deep Space	1367
SSW9	SW 9 Deep Space	1368
CLW1	LW 1 Internal Cal Target	1369
CLW2	LW 2 Internal Cal Target	1370
CLW3	LW 3 Internal Cal Target	1371
CLW4	LW 4 Internal Cal Target	1372
CLW5	LW 5 Internal Cal Target	1373

APID Short Name	Description	Value $APID_{10}$
CLW6	LW 6 Internal Cal Target	1374
CLW7	LW 7 Internal Cal Target	1375
CLW8	LW 8 Internal Cal Target	1376
CLW9	LW 9 Internal Cal Target	1377
CMW1	MW 1 Internal Cal Target	1378
CMW2	MW 2 Internal Cal Target	1379
CMW3	MW 3 Internal Cal Target	1380
CMW4	MW 4 Internal Cal Target	1381
CMW5	MW 5 Internal Cal Target	1382
CMW6	MW 6 Internal Cal Target	1383
CMW7	MW 7 Internal Cal Target	1384
CMW8	MW 8 Internal Cal Target	1385
CMW9	MW 9 Internal Cal Target	1386
CSW1	SW 1 Internal Cal Target	1387
CSW2	SW 2 Internal Cal Target	1388
CSW3	SW 3 Internal Cal Target	1389
CSW4	SW 4 Internal Cal Target	1390
CSW5	SW 5 Internal Cal Target	1391
CSW6	SW 6 Internal Cal Target	1392
CSW7	SW 7 Internal Cal Target	1393
CSW8	SW 8 Internal Cal Target	1394
CSW9	SW 9 Internal Cal Target	1395
EIGHT_S_SCI	Eight Second Science Cal	1289
ENG	Four Minute Engineering*	1290

*Not always present in RDR due to generation frequency.

3.7.2 CrIS Diagnostic RDR

3.7.2.1 CrIS Diagnostic RDR HDF5 Files

The CrIS Diagnostic RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.7.2.2 CrIS Diagnostic RDR Data Content Summary

Table 3.7.2.2-1, CrIS Diagnostic RDR Application Packets, lists the APs accumulated for the CrIS Diagnostic RDR. In the event of a discrepancy in APIDs listed here, see the

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

MDFCB, GSFC 429-05-02-42 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Table 3.7.2.2-1, CrIS Diagnostic RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
DIA_LW	LW Diagnostic	1294
DIA_MW	MW Diagnostic	1295
DIA_SW	SW Diagnostic	1296

3.7.3 CrIS Dwell RDRs

3.7.3.1 CrIS Housekeeping Dwell RDR

3.7.3.1.1 CrIS Housekeeping Dwell RDR HDF5 Files

The CrIS Housekeeping (HSK) Dwell RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.7.3.1.2 CrIS HSK Dwell RDR Data Content Summary

Table 3.7.3.1.2-1, CrIS HSK Dwell RDR Application Packets lists the APs accumulated for the CrIS HSK Dwell RDR. In the event of a discrepancy in APIDs listed here, see the MDFCB, GSFC 429-05-02-42 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Table 3.7.3.1.2-1, CrIS HSK Dwell RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
HK_DWELL	HSK Telemetry Dwell	1291

3.7.3.2 CrIS Scene Selection Module (SSM) Dwell RDR

3.7.3.2.1 CrIS SSM Dwell RDR HDF5 Files

The CrIS SSM Dwell RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.7.3.2.2 CrIS SSM Dwell RDR Data Content Summary

Table 3.7.3.2.2-1, CrIS SSM Dwell RDR Application Packets lists the APs accumulated

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

for the CrIS SSM Dwell RDR. In the event of a discrepancy in APIDs listed here, see the MDFCB, GSFC 429-05-02-42 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Table 3.7.3.2.2-1, CrIS SSM Dwell RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
SSM_DWELL	SSM Telemetry Dwell	1292

3.7.3.3 CrIS Interferogram Module (IM) Dwell RDR

3.7.3.3.1 CrIS IM Dwell RDR HDF5 Files

The CrIS IM Dwell RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.7.3.3.2 CrIS IM Dwell RDR Data Content Summary

Table 3.7.3.3.2-1, CrIS IM Dwell RDR Application Packets, lists the APs accumulated for the CrIS IM Dwell RDR. In the event of a discrepancy in APIDs listed here, see the MDFCB, GSFC 429-05-02-42 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Table 3.7.3.3.2-1, CrIS IM Dwell RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
IM_DWELL	IM Telemetry Dwell	1293

3.7.4 CrIS Telemetry RDR

3.7.4.1 CrIS Telemetry RDR HDF5 Files

The CrIS Telemetry RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.7.4.2 CrIS Telemetry RDR Data Content Summary

Table 3.7.4.2-1, CrIS Telemetry RDR Application Packets, lists the APs accumulated for the CrIS Dwell RDR. In the event of a discrepancy in APIDs listed here, see the C&TH, BATC Drawing 568423 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

Table 3.7.4.2-1, CrIS Telemetry RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
HK1	Housekeeping	1280
HK2	Housekeeping	1281
HK3	Housekeeping	1282
HK4	Housekeeping	1283
HK5	Housekeeping	1284
HK6	Housekeeping	1285
HK7	Housekeeping	1286
HK8	Housekeeping	1287

3.7.5 CrIS Memory Dump RDR

3.7.5.1 CrIS Memory Dump RDR HDF5 Files

The CrIS Memory Dump RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.7.5.2 CrIS Memory Dump RDR Data Content Summary

Table 3.7.5.2-1, CrIS Memory Dump RDR Application Packets, lists the APs accumulated for the CrIS Memory Dump RDR. In the event of a discrepancy in APIDs listed here, see the MDFCB, GSFC 429-05-02-42 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Table 3.7.5.2-1, CrIS Memory Dump RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
DUMP	Memory Dump	1397

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

3.8 Clouds and Earth Radiant Energy System (CERES) RDRs

Data Mnemonic (NPP Only)	Science:	RDRE-CERS-C0030
	Diagnostic:	RDRE-CERS-C0032
	Telemetry:	RDRE-CERS-C0031
Description/ Purpose	The CERES instrument provides radiometric measurements of the earth using three thermistor bolometer detector units. The short-wave detector measures earth-reflected solar radiation in the wavelength region of 0.3 µm to 5 µm; the window detector measures earth-emitted long-wave radiation in the wavelength region of 8.2 µm to 11.8 µm; and the total detector measures radiation in the range of 0.3 to 100 µm. For NPP, CERES is configured to scan in a plane perpendicular to the orbit track, with each complete scan taking 6.6 seconds. Science and Housekeeping (Telemetry) packets are nominally generated every scan, except during calibration sequences when the calibration packet is generated rather than the science packet. Both calibration and science packets are stored in the Science RDR. For NPOESS, EDFCB2-TBD-10536. The CERES RDRs are delivered without being used in the production of any other NPOESS Data Product.	
File-Naming Construct	See the CDFCB-X Volume I, D34862-01, Section 3.0 for details.	
File Size	For NPP: Science: 1370.84 KiB (660 seconds) Diagnostic: 685.45 KiB (660 seconds) Telemetry: 27.45 KiB (660 seconds) All sizes are per granule, with duration specified in (). Sizes do not include HDF5 overhead. For each RDR, the size represents the maximum internal buffer size required to support IDPS. For Science RDRs, since concurrent receipt of both APIDs is not expected, the size of the delivered HDF5 file may be much smaller (~50%) since the internal storage space will be truncated upon delivery to match the actual data received. For NPOESS: EDFCB2-TBD-10536.	
File Format Type	HDF5	
Data Content and Data Format	Section 3.8.1 describes the CERES Science RDR Section 3.8.2 describes the CERES Diagnostic RDR Section 3.8.3 describes the CERES Telemetry RDR	

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

3.8.1 CERES Science RDR

3.8.1.1 CERES Science RDR HDF5 Files

The CERES Science RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.8.1.2 CERES Science RDR Data Content Summary

Table 3.8.1.2-1, CERES Science RDR Application Packets, lists the APs accumulated for the CERES Science RDR. In the event of a discrepancy in APIDs listed here, see the MDFCB, GSFC 429-05-02-42 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS..

Table 3.8.1.2-1, CERES Science RDR Application Packets

APID Short Name	Description	NPP Value $APID_{10}$	NPOESS N01 Value $APID_{10}$
CAL	Calibration	147	EDFCB2-TBD-10537
SCI	Science	149	EDFCB2-TBD-10537

3.8.2 CERES Diagnostic RDR

3.8.2.1 CERES Diagnostic RDR HDF5 Files

The CERES Diagnostic RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.8.2.2 CERES Diagnostic RDR Data Content Summary

Table 3.8.2.2-1, CERES Diagnostic RDR Application Packets, lists the APs accumulated for the CERES Diagnostic RDR. In the event of a discrepancy in APIDs listed here, see the MDFCB, GSFC 429-05-02-42 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Table 3.8.2.2-1, CERES Diagnostic RDR Application Packets

APID Short Name	Description	Value $APID_{10}$	NPOESS N01 Value $APID_{10}$
DIA	Diagnostic	150	EDFCB2-TBD-10537

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

3.8.3 CERES Telemetry RDR

3.8.3.1 CERES Telemetry RDR HDF5 Files

The CERES Telemetry RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.8.3.2 CERES Telemetry RDR Data Content Summary

Table 3.8.3.2-1, CERES Telemetry RDR Application Packets, lists the APs accumulated for the CERES Telemetry RDR. In the event of a discrepancy in APIDs listed here, see the NPP C&TH BATC Drawing 568423 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Table 3.8.3.2-1, CERES Telemetry RDR Application Packets

APID Short Name	Description	Value $APID_{10}$	NPOESS N01 Value $APID_{10}$
HK	Housekeeping Telemetry	146	EDFCB2-TBD-10537

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

3.9 Search and Rescue Satellite Aided Tracking (SARSAT) RDRs

Data Mnemonic (NPOESS Only)	Repeater Housekeeping: RDRE-SARR-C0031 Processor Housekeeping: RDRE-SARP-C0031
Description/ Purpose	The SARSAT payload supports the global search and rescue mission as part of the international *Cosmicheskaya Sistyema Poiska Avariynich Sudov* - Space System for the Search of Vessels in Distress – Search and Rescue Satellite-aided Tracking (COSPAS-SARSAT). The payload consists of the SAR repeater (SARR) and the SAR processor-3 (SARP-3). The RDRs are limited to containing the housekeeping telemetry packets from the sensors. They are used, in part, to generate the engineering unit converted telemetry Sensor Data Records (SDRs) from Stored Mission Data.
File-Naming Construct	See the CDFCB-X Volume I, D34862-01, Section 3.0 for details.
File Size	SARR: 67.60 KiB (640 Seconds) SARP: 1.98 KiB (640 Seconds) EDFCB6-TBR-10532
File Format Type	HDF5
Data Content and Data Format	Section 3.9.1 describes the SARR Telemetry RDR Section 3.9.2 describes the SARP Telemetry RDR

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

3.9.1 SARR Telemetry RDR

3.9.1.1 SARR Telemetry RDR HDF5 Files

The SARR Telemetry RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.9.1.2 SARR Telemetry RDR Data Content Summary

Table 3.9.1.2-1, SARR Telemetry RDR Application Packets, lists the APs accumulated for the SARR Telemetry RDR. The APID assignment listed in Table 3.9.1.2-1, SARR Telemetry RDR Application Packets, applies to NPOESS only. In the event of a discrepancy in APIDs listed here, see the CDFCB-X, Volume VII, D34862-07.

Table 3.9.1.2-1, SARR Telemetry RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
HK	Housekeeping Telemetry	704

3.9.2 SARP Telemetry RDR

3.9.2.1 SARP Telemetry RDR HDF5 Files

The SARP Telemetry RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.9.2.2 SARP Telemetry RDR Data Content Summary

Table 3.9.2.2-1, SARP Telemetry RDR Application Packets, lists the APs accumulated for the SARP Telemetry RDR. The APID assignment listed in Table 3.9.2.2-1, SARP Telemetry RDR Application Packets, applies to NPOESS only. In the event of a discrepancy in APIDs listed here, see the CDFCB-X, Volume VII, D34862-07.

Table 3.9.2.2-1, SARP Telemetry RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
HK	Housekeeping Telemetry	736

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

3.10 DELETED

3.11 Ozone Mapping and Profiler Suite (OMPS) RDR

Data Mnemonic

Nadir Profile (NP)

Science:	RDRE-OMPS-C0030
Calibration:	RDRE-OMPS-C0037
Diagnostic Earth View:	RDRE-OMPS-C0052
Diagnostic Calibration:	RDRE-OMPS-C0053

Nadir Total Column (NTC)

Science:	RDRE-OMPS-C0031
Calibration:	RDRE-OMPS-C0038
Diagnostic Earth View:	RDRE-OMPS-C0050
Diagnostic Calibration:	RDRE-OMPS-C0051

Limb Profile (LP)

Science:	RDRE-OMPS-C0032
Calibration:	RDRE-OMPS-C0039
Diagnostic Exposure #1 Earth View:	RDRE-OMPS-C0054
Diagnostic Exposure #2 Earth View:	RDRE-OMPS-C0056
Diagnostic Calibration:	RDRE-OMPS-C0055

Dwell:	RDRE-OMPS-C0036
Telemetry:	RDRE-OMPS-C0034
Memory Dump:	RDRE-OMPS-C0035
Flight Software (FSW) Boot-Up Status:	RDRE-OMPS-C0057

Description/ Purpose

OMPS uses two primary sensors within a single instrument suite to perform complementary functions for atmospheric ozone monitoring. Total column ozone is retrieved from backscattered UV radiance measurements, using a 2-D Charge-Coupled Device (CCD) system, which points towards the nadir and simultaneously observes across the orbital track to provide daily global mapping. An additional CCD focal plane collects nadir data at shorter wavelengths to create a non-EDR profile ozone product for continuity with previous instruments.

Profile ozone data is obtained from limb-scattered UV and visible measurements, using a CCD array-based system.

File-Naming Construct

See the CDFCB-X Volume I, D34862-01, Section 3.0 for details

File Size

NP Science: 262.10 KiB Initial (1 swath per 37.44 seconds (1

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

	FOV per swath)) NP Science: 1310.10 KiB Maximum (5 swath per 37.44 seconds (5 FOVs per swath)) NP Calibration: 124450.10 KiB Maximum (2700 seconds) NP Diagnostic Earth View: 1310.10 KiB Maximum (0.1 seconds) NP Diagnostic Calibration: 1310.10 KiB Maximum (0.1 seconds) NTC Science: 1310.10 KiB Initial (5 swath per 37.44 seconds (35 FOV per swath)) NTC Science: 3930.10 KiB Maximum (15 swath per 37.44 seconds (105 FOV per swath)) NTC Calibration: 140170.10 KiB Maximum (2700 seconds) NTC Diagnostic Earth View: 1310.10 KiB Maximum (0.1 seconds) NTC Diagnostic Calibration: 1310.10 KiB Maximum (0.1 seconds) LP Science: 1,048.13 KiB Maximum (37.44 seconds) LP Calibration: 327,500.10 KiB Maximum (3000 seconds) LP Diagnostic Exposure #1 Earth View: 1310.10 KiB Maximum (0.1 seconds) LP Diagnostic Exposure #2 Earth View: 1310.10 KiB Maximum (0.1 seconds) LP Diagnostic Calibration: 1310.10 KiB Maximum (0.1 seconds) Dwell: 157.13 KiB Maximum (600 seconds) Telemetry: 7.87 KiB Nominal (40 seconds) Memory Dump: 4454.10 KiB Maximum (0.1 seconds) FSW Boot-Up Status: 0.31 KiB Nominal (0.1 seconds) All sizes are per granule with durations given in (). HDF5 overhead is not included in sizing. Due to operational sensor configuration, actual delivered granule sizes may be significantly smaller for those RDRs specified as “Maximum”.
File Format Type	HDF5
Data Content and Data Format	Section 3.11.1 describes the OMPS NP Science RDR Section 3.11.2 describes the OMPS NP Calibration RDR Section 3.11.3 describes the OMPS NP Diagnostic Earth View RDR Section 3.11.4 describes the OMPS NP Diagnostic Calibration RDR

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

Section 3.11.5 describes the OMPS NTC Science RDR
Section 3.11.6 describes the OMPS NTC Calibration RDR
Section 3.11.7 describes the OMPS NTC Diagnostic Earth View RDR
Section 3.11.8 describes the OMPS NTC Diagnostic Calibration RDR

Section 3.11.9 describes the OMPS LP Science RDR
Section 3.11.10 describes the OMPS LP Calibration RDR
Section 3.11.11 describes the OMPS LP Diagnostic Exposure #1 Earth View RDR
Section 3.11.12 describes the OMPS LP Diagnostic Exposure #2 Earth View RDR
Section 3.11.13 describes the OMPS LP Diagnostic Calibration RDR

Section 3.11.14 describes the OMPS Dwell RDR
Section 3.11.15 describes the OMPS Telemetry RDR
Section 3.11.16 describes the OMPS Memory Dump RDR
Section 3.11.17 describes the OMPS FSW Boot-Up Status RDR

3.11.1 OMPS NP Science RDR

3.11.1.1 OMPS NP Science RDR HDF5 Files

The OMPS NP Science RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.11.1.2 OMPS NP Science RDR Data Content Summary

Table 3.11.1.2-1, OMPS NP Science RDR Application Packets, lists the APs accumulated for the OMPS NP Science RDR. In the event of a discrepancy in APIDs listed here, see the MDFCB, GSFC 429-05-02-42 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Table 3.11.1.2-1, OMPS NP Science RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
NP	Science Nadir Profile Earth View	561

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

Packets in the NP Science RDR are collected into granules based on the actual observation time rather than the secondary header timestamp of each packet. This is accomplished by removing the integration time needed to create the packet when determining the granule boundary it belongs to. This means that packet timestamps in the RDRs will not necessarily fall within the granule boundary times in the metadata. Each observation is max-sized to accept at most a single segment (256 packets).

3.11.2 OMPS NP Calibration RDR

3.11.2.1 OMPS NP Calibration RDR HDF5 Files

The OMPS NP Calibration RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.11.2.2 OMPS NP Calibration RDR Data Content Summary

Table 3.11.2.2-1, OMPS NP Calibration RDR Application Packets, lists the APs accumulated for the OMPS NP Calibration RDR. In the event of a discrepancy in APIDs listed here, see the MDFCB, GSFC 429-05-02-42 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Table 3.11.2.2-1, OMPS NP Calibration RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
NP_CAL	Science Nadir Profile Calibration	565

OMPS NP Calibration RDRs contain all images for a single event. Each event is made up of a number of images. Each image can be made up of anywhere from 1 Standalone packet to a multiple segmented group. The RDR is max sized to handle data based on the values provided in Table 3.11.2.2-2, OMPS NP Calibration RDR Maximum Sizes:

Table 3.11.2.2-2, OMPS NP Calibration RDR Maximum Sizes

Sizing Parameter	Value
Max Number of images	95
Maximum segments per image	5

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

3.11.3 OMPS NP Diagnostic Earth View

3.11.3.1 OMPS NP Diagnostic Earth View RDR HDF5 Files

The OMPS NP Diagnostic Earth View RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.11.3.2 OMPS NP Diagnostic Earth View RDR Data Content Summary

Table 3.11.3.2-1, OMPS NP Diagnostic Earth View RDR Application Packets, lists the APs accumulated for the OMPS NP Diagnostic Earth View RDR. In the event of a discrepancy in APIDs listed here, see the MDFCB, GSFC 429-05-02-42 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Table 3.11.3.2-1, OMPS NP Diagnostic Earth View RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
DIA_SCI	Nadir Profile Diagnostic Earth View	577

OMPS NP Diagnostic Earth View RDRs are sized to expect one observation per granule. This observation is max-sized such that it can only be up to 5 segmented groups (5*256 packets) using the OMPS super segmentation approach. The data may be collected at a different rate than the granule size, so gaps between granule IDs can be expected (does not imply there are data gaps). The minimum granule size was chosen to support flexibility for Diagnostic activities.

3.11.4 OMPS NP Diagnostic Calibration RDR

3.11.4.1 OMPS NP Diagnostic Calibration RDR HDF5 Files

The OMPS NP Diagnostic Calibration RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.11.4.2 OMPS NP Diagnostic Calibration RDR Data Content Summary

Table 3.11.4.2-1, OMPS NP Diagnostic Calibration RDR Application Packets, lists the APs accumulated for the OMPS NP Diagnostic Calibration RDR. In the event of a discrepancy in APIDs listed here, see the MDFCB, GSFC 429-05-02-42 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Table 3.11.4.2-1, OMPS NP Diagnostic Calibration RDR Application Packets

APID Short Name	Description	Value $APID_{10}$

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

DIA_CAL	Diagnostic Nadir Profile Calibration	581

OMPS NP Diagnostic Calibration RDRs are sized to expect one image per granule. This observation is max-sized such that it can only be up to 5 segmented groups (5*256 packets) using the OMPS super segmentation approach. The data may be collected at a different rate than the granule size, so gaps between granule IDs can be expected (does not imply there are data gaps). The minimum granule size was chosen to support flexibility for Diagnostic activities.

3.11.5 OMPS NTC Science RDR

3.11.5.1 OMPS NTC Science RDR HDF5 Files

The OMPS NTC Science RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.11.5.2 OMPS NTC Science RDR Data Content Summary

Table 3.11.5.2-1, OMPS NTC Science RDR Application Packets, lists the APs accumulated for the OMPS NTC Science RDR. In the event of a discrepancy in APIDs listed here, see the MDFCB, GSFC 429-05-02-42 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Table 3.11.5.2-1, OMPS NTC Science RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
NTC	Science NTC Earth View	560

Packets in the NTC Science RDR are collected into granules based on the actual observation time rather than the secondary header timestamp of each packet. This is accomplished by removing the integration time needed to create the packet when determining the granule boundary it belongs to. This means that packet timestamps in the RDRs will not necessarily fall within the granule boundary times in the metadata. Each observation is max-sized to accept at most a single segment (256 packets).

3.11.6 OMPS NTC Calibration RDR

3.11.6.1 OMPS NTC Calibration RDR HDF5 Files

The OMPS NTC Calibration RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

3.11.6.2 OMPS NTC Calibration RDR Data Content Summary

Table 3.11.6.2-1, OMPS NTC Calibration RDR Application Packets, lists the APs accumulated for the OMPS NTC Calibration RDR. In the event of a discrepancy in APIDs listed here, see the MDFCB, GSFC 429-05-02-42 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Table 3.11.6.2-1, OMPS NTC Calibration RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
NTC_CAL	Science NTC Calibration	564

OMPS NTC Calibration RDRs contain all images for a single event. Each event is made up of a number of images. Each image can be made up of anywhere from 1 Standalone packet to a multiple segmented group. The RDR is max sized to handle data based on the values provided in Table 3.11.6.2-2, OMPS NP Calibration RDR Maximum Sizes.

Table 3.11.6.2-2, OMPS NTC Calibration RDR Maximum Sizes

Sizing Parameter	Value
Max Number of images	107
Maximum segments per image	5

3.11.7 OMPS NTC Diagnostic Earth View RDR

3.11.7.1 OMPS NTC Diagnostic Earth View RDR HDF5 Files

The OMPS Diagnostic RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.11.7.2 OMPS NTC Diagnostic Earth View RDR Data Content Summary

Table 3.11.7.2-1, OMPS NTC Diagnostic Earth View RDR Application Packets, lists the APs accumulated for the OMPS NTC Diagnostic Earth View RDR. In the event of a discrepancy in APIDs listed here, see the MDFCB, GSFC 429-05-02-42 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Table 3.11.7.2-1, OMPS NTC Diagnostic Earth View RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
DIA_SCI	Diagnostic Nadir Total Column Earth View	576

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

OMPS NTC Diagnostic Earth View RDRs are sized to expect one observation per granule. This observation is max-sized such that it can only be up to 5 segmented groups (5*256 packets) using the OMPS super segmentation approach. The data may be collected at a different rate than the granule size, so gaps between granule IDs can be expected (does not imply there are data gaps). The minimum granule size was chosen to support flexibility for Diagnostic activities.

3.11.8 OMPS NTC Diagnostic Calibration RDR

3.11.8.1 OMPS NTC Diagnostic Calibration RDR HDF5 Files

The OMPS NTC Diagnostic Calibration RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.11.8.2 OMPS NTC Diagnostic Calibration RDR Data Content Summary

Table 3.11.8.2-1, OMPS NTC Diagnostic Calibration RDR Application Packets, lists the APs accumulated for the OMPS NTC Diagnostic Calibration RDR. In the event of a discrepancy in APIDs listed here, see the MDFCB, GSFC 429-05-02-42 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Table 3.11.8.2-1, OMPS NTC Diagnostic Calibration RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
DIA_CAL	Diagnostic Nadir Total Column Calibration	580

OMPS NTC Diagnostic Calibration RDRs are sized to expect one image per granule. This observation is max-sized such that it can only be up to 5 segmented groups (5*256 packets) using the OMPS super segmentation approach. The data may be collected at a different rate than the granule size, so gaps between granule IDs can be expected (does not imply there are data gaps). The minimum granule size was chosen to support flexibility for Diagnostic activities.

3.11.9 OMPS LP Science RDR (NPP Only)

3.11.9.1 OMPS LP Science RDR HDF5 Files

The OMPS LP Science RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

3.11.9.2 OMPS LP Science RDR Data Content Summary

Table 3.11.9.2-1, OMPS LP Science RDR Application Packets, lists the APs accumulated for the OMPS LP Science RDR. The APID assignment listed in Table 3.11.9.2-1, OMPS LP Science RDR Application Packets, applies to NPP only. In the event of a discrepancy in APIDs listed here, see the MDFCB, GSFC 429-05-02-42.

Table 3.11.9.2-1, OMPS LP Science RDR Application Packets

APID Short Name	Description	Value NPP $APID_{10}$
LP1	Science LP Image #1 (long)	562
LP2	Science LP Image #2 (short)	563

Each observation for each APID is max-sized to accept at most a single segment (256 packets).

3.11.10 OMPS LP Calibration RDR (NPP Only)

3.11.10.1 OMPS LP Calibration RDR HDF5 Files

The OMPS LP Calibration RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.11.10.2 OMPS LP Calibration RDR Data Content Summary

Table 3.11.10.2-1, OMPS LP Calibration RDR Application Packets, lists the APs accumulated for the OMPS LP Calibration RDR. The APID assignment listed in Table 3.11.10.2-1, OMPS LP Calibration RDR Application Packets, applies to NPP only. In the event of a discrepancy in APIDs listed here, see the MDFCB, GSFC 429-05-02-42.

Table 3.11.10.2-1, OMPS LP Calibration RDR Application Packets

APID Short Name	Description	Value NPP $APID_{10}$
LP_CAL	Science LP Calibration	566

OMPS LP Calibration RDRs contain all images for a single event. Each event is made up of a number of images. Each image can be made up of anywhere from 1 Standalone packet to a multiple segmented group. The RDR is max sized to handle data based on the values provided in Table 3.11.10.2-2, OMPS NP Calibration RDR Maximum Sizes.

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

Table 3.11.10.2-2, OMPS NTC Calibration RDR Maximum Sizes

Sizing Parameter	Value
Max Number of images	250
Maximum segments per image	5

3.11.11 OMPS LP Diagnostic Exposure #1 Earth View RDR (NPP Only)

3.11.11.1 OMPS LP Diagnostic Exposure #1 Earth View RDR HDF5 Files

The OMPS LP Diagnostic Exposure #1 Earth View RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.11.11.2 OMPS LP Diagnostic Exposure #1 Earth View RDR Data Content Summary

Table 3.11.11.2-1, OMPS LP Diagnostic Exposure #1 Earth View RDR Application Packets, lists the APs accumulated for the OMPS LP Diagnostic Exposure #1 Earth View RDR. The APID assignment listed in Table 3.11.11.2-1, OMPS LP Diagnostic Exposure #1 Earth View RDR Application Packets, applies to NPP only. In the event of a discrepancy in APIDs listed here, see the MDFCB, GSFC 429-05-02-42.

Table 3.11.11.2-1, OMPS LP Diagnostic Exposure #1 Earth View RDR Application Packets

APID Short Name	Description	Value NPP $APID_{10}$
DIA_LP1	Limb Profile Diagnostic Exposure #1 Earth View	578

OMPS LP Diagnostic Exposure #1 RDRs are sized to expect one observation per granule. This observation is max-sized such that it can only be up to 5 segmented groups (5*256 packets) using the OMPS super segmentation approach. The data may be collected at a different rate than the granule size, so gaps between granule IDs can be expected (does not imply there are data gaps). The minimum granule size was chosen to support flexibility for Diagnostic activities.

3.11.12 OMPS LP Diagnostic Exposure #2 Earth View RDR (NPP Only)

3.11.12.1 OMPS LP Diagnostic Exposure #2 Earth View RDR HDF5 Files

The OMPS LP Diagnostic Exposure #2 Earth View RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

3.11.12.2 OMPS LP Diagnostic Exposure #2 Earth View RDR Data Content Summary

Table 3.11.12.2-1, OMPS LP Diagnostic Exposure #2 Earth View RDR Application Packets, lists the APs accumulated for the OMPS LP Diagnostic Exposure #2 Earth View RDR. The APID assignment listed in Table 3.11.12.2-1, OMPS LP Diagnostic Exposure #2 Earth View RDR Application Packets, applies to NPP only. In the event of a discrepancy in APIDs listed here, see the MDFCB, GSFC 429-05-02-42.

Table 3.11.12.2-1, OMPS LP Diagnostic Exposure #2 Earth View RDR Application Packets

APID Short Name	Description	Value NPP $APID_{10}$
DIA_LP2	Limb Profile Diagnostic Exposure #2 Earth View	579

OMPS LP Diagnostic Exposure #2 RDRs are sized to expect one observation per granule. This observation is max-sized such that it can only be up to 5 segmented groups (5*256 packets) using the OMPS super segmentation approach. The data may be collected at a different rate than the granule size, so gaps between granule IDs can be expected (does not imply there are data gaps). The minimum granule size was chosen to support flexibility for Diagnostic activities.

3.11.13 OMPS LP Diagnostic Calibration RDR (NPP Only)

3.11.13.1 OMPS LP Diagnostic Calibration RDR HDF5 Files

The OMPS LP Diagnostic Calibration RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.11.13.2 OMPS LP Diagnostic Calibration RDR Data Content Summary

Table 3.11.13.2-1, OMPS LP Diagnostic Calibration RDR Application Packets, lists the APs accumulated for the OMPS LP Diagnostic Calibration RDR. The APID assignment listed in Table 3.11.13.2-1, OMPS LP Diagnostic Calibration RDR Application Packets, applies to NPP only. In the event of a discrepancy in APIDs listed here, see the MDFCB, GSFC 429-05-02-42.

Table 3.11.13.2-1, OMPS LP Diagnostic Calibration RDR Application Packets

APID Short Name	Description	Value NPP $APID_{10}$

DIA_CAL	Diagnostic Limb Profile Calibration	582

OMPS LP Diagnostic Calibration RDRs are sized to expect one image per granule. This observation is max-sized such that it can only be up to 5 segmented groups (5*256 packets) using the OMPS super segmentation approach. The data may be collected at a different rate than the granule size, so gaps between granule IDs can be expected (does not imply there are data gaps). The minimum granule size was chosen to support flexibility for Diagnostic activities.

3.11.14 OMPS Dwell RDR

3.11.14.1 OMPS Dwell RDR HDF5 Files

The OMPS Dwell RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.11.14.2 OMPS Dwell RDR Data Content Summary

Table 3.11.14.2-1, OMPS Dwell RDR Application Packets, lists the APs accumulated for the OMPS Dwell RDR. In the event of a discrepancy in APIDs listed here, see the MDFCB, GSFC 429-05-02-42 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Table 3.11.14.2-1, OMPS Dwell RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
DWELL	Dwell Telemetry	549

3.11.15 OMPS Telemetry RDR

3.11.15.1 OMPS Telemetry RDR HDF5 Files

The OMPS Telemetry RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.11.15.2 OMPS Telemetry RDR Data Content Summary

Table 3.11.15.2-1, OMPS Telemetry RDR Application Packets, lists the APs accumulated for the OMPS Telemetry RDR. In the event of a discrepancy in APIDs listed here, see the C&TH, BATC Drawing 568423 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

Table 3.11.15.2-1, OMPS Telemetry RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
HK	Housekeeping	544

3.11.16 OMPS Memory Dump RDR

3.11.16.1 OMPS Memory Dump RDR HDF5 Files

The OMPS Memory Dump RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.11.16.2 OMPS Memory Dump RDR Data Content Summary

Table 3.11.16.2-1, OMPS Memory Dump RDR Application Packets, lists the APs accumulated for the OMPS Memory Dump RDR. In the event of a discrepancy in APIDs listed here, see the MDFCB, GSFC 429-05-02-42 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Table 3.11.16.2-1, OMPS Memory Dump RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
DUMP	Memory Dump	556

3.11.17 OMPS Flight Software (FSW) Boot-Up Status RDR

3.11.17.1 OMPS FSW Boot-Up RDR HDF5 Files

The OMPS FSW Boot-Up RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.11.17.2 OMPS FSW Boot-Up RDR Data Content Summary

Table 3.11.17.2-1, OMPS FSW Boot-Up RDR Application Packets, lists the APs accumulated for the OMPS FSW Boot-Up RDR. In the event of a discrepancy in the APIDs listed here, see the C&TH, BATC Drawing 568423 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Table 3.11.17.2-1, OMPS FSW Boot-Up RDR Application Packets

APID Short Name	Description	Value $APID_{10}$

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

DIA_BU	Diagnostic - Flight Software Boot-Up Status	550

3.12 Space Environment Monitor (SEM) RDRs (EDFCB2-TBD-10558)

3.13 DELETED

3.14 Visible/Infrared Imager Radiometer Suite (VIIRS) RDRs

Data Mnemonic	Science:	RDRE-VIRS-C0030
	Diagnostic:	RDRE-VIRS-C0032
	Telemetry-Diagnostic:	RDRE-VIRS-C0036
	Telemetry:	RDRE-VIRS-C0031
	Memory Dump:	RDRE-VIRS-C0035
Description/ Purpose	The VIIRS sensor provides for the retrieval of imagery, aerosol, cloud, land, ocean, and earth radiation budget EDRs using visible and IR channels. VIIRS has 22 spectral bands over the 0.4 to 12.5 micron range. There are 15 “reflective” (8 Visible [VIS], 2 Near Infra-red [NIR], and 5 Short Wave Infrared[SWIR]) bands from 0.4 to 2.3 microns, three “mixed” Mid-Wave Infrared (MWIR) bands from 3.5 to 4.1 microns, and four “emissive” Long Wave Infrared (LWIR) bands from 8.4 to 12.5 microns.	
File-Naming Construct	See the CDFCB-X Volume I, D34862-01, Section 3.0 for details	
File Size	Science: Maximum 236872.54 KiB (86 seconds) Diagnostic: 141,825.79 KiB (86 seconds) Telemetry: 155.24 KiB (602 seconds) Telemetry-Diagnostic: 155.24 KiB (602 seconds) Memory dump: 4159.72 KiB (0.1 seconds) All sizes are nominal per granule unless otherwise specified. Granule durations are specified in (). Sizes do not include HDF5 overhead. The actual size of delivered HDF5 Science RDRs could be significantly less than the maximum due to compression and operating modes changing the data rate. For more information on the compression scheme, see the CDFCB-X Volume VII, D34862-07, Part 1, Section 16.	
File Format Type	HDF5	
Data Content and Data Format	Section 3.14.1 describes the VIIRS Science RDR Section 3.14.2 describes the VIIRS Diagnostic RDR Section 3.14.3 describes the VIIRS Telemetry-Diagnostic RDR Section 3.14.4 describes the VIIRS Telemetry RDR Section 3.14.5 describes the VIIRS Memory Dump RDR	

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

3.14.1 VIIRS Science RDR

3.14.1.1 VIIRS Science RDR HDF5 Files

The VIIRS Science RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.14.1.2 VIIRS Science RDR Data Content Summary

Table 3.14.1.2-1, VIIRS Science RDR Application Packets, lists the superset of possible APs accumulated for the VIIRS Science RDR. Not all APIDs in Table 3.14.1.2-1, VIIRS Science RDR Application Packets, can be collected at all times due to LRD and HRD/SMD configuration differences. APIDs exclusive to LRD are identified with an "LRD" in the description, but may not be indicative of all available LRD APIDs. See Section 3.1, Common RDR Structures, for detailed information on how APIDs are stored within the RDR. In the event of a discrepancy in APIDs listed here, see the MDFCB, GSFC 429-05-02-42 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Table 3.14.1.2-1, VIIRS Science RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
CM04[1, 3]	Compressed M4 LRD Operational	1508
CM05[1, 3]	Compressed M5 LRD Operational	1509
CM03[1, 3]	Compressed M3 LRD Operational	1510
CM02[1, 3]	Compressed M2 LRD Operational	1511
CM01[1, 3]	Compressed M1 LRD Operational	1512
CM06[1, 3]	Compressed M6 LRD Operational	1513
CM07[3]	Compressed M7 LRD Operational	1514
CM09[1, 3]	Compressed M9 LRD Operational	1515
CM10[3]	Compressed M10 LRD Operational	1516
CM08[3]	Compressed M8 LRD Operational	1517
CM11[1, 3]	Compressed M11 LRD Operational	1518
CM13[3]	Compressed M13 LRD Operational	1519
CM12[3]	Compressed M12 LRD Operational	1520
CI04[3]	Compressed I4 LRD Operational	1521
CM16[3]	Compressed M16 LRD Operational	1522
CM15[3]	Compressed M15 LRD Operational	1523

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

APID Short Name	Description	Value $APID_{10}$
CM14[3]	Compressed M14 LRD Operational	1524
CI05[3]	Compressed I5 LRD Operational	1525
CI01[1, 3]	Compressed I1 LRD Operational	1526
CI02[1, 3]	Compressed I2 LRD Operational	1527
CI03[1, 3]	Compressed I3 LRD Operational	1528
CDNB[3]	Compressed DNB LRD Operational	1529
M04[1]	Moderate Resolution Band 4	800
M05[1]	Moderate Resolution Band 5	801
M03[1]	Moderate Resolution Band 3	802
M02[1]	Moderate Resolution Band 2	803
M01[1]	Moderate Resolution Band 1	804
M06[1]	Moderate Resolution Band 6	805
M07	Moderate Resolution Band 7	806
M09[1]	Moderate Resolution Band 9	807
M10	Moderate Resolution Band 10	808
M08	Moderate Resolution Band 8	809
M11[1]	Moderate Resolution Band 11	810
M13	Moderate Resolution Band 13	811
M12	Moderate Resolution Band 12	812
I04	Imagery Resolution Band 4	813
M16	Moderate Resolution Band 16	814
M15	Moderate Resolution Band 15	815
M14	Moderate Resolution Band 14	816
I05	Imagery Resolution Band 5	817
I01[1]	Imagery Resolution Band 1	818
I02[1]	Imagery Resolution Band 2	819
I03[1]	Imagery Resolution Band 3	820
DNB	Day Night Band	821
DNB_MGS[2]	Day Night Band – Middle Gain Stage	822
DNB_LGS[2]	Day Night Band – Low Gain Stage	823
CAL	Calibration	825
ENG	Engineering	826

Notes

1 Bands output during operational/day mode only.

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

2 Only at night, and only by command.
3 NPOESS only (States 2 and 3).

3.14.2 VIIRS Diagnostic RDR

3.14.2.1 VIIRS Diagnostic RDR HDF5 Files

The VIIRS Diagnostic RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.14.2.2 VIIRS Diagnostic RDR Data Content Summary

Table 3.14.2.2-1, VIIRS Diagnostic RDR Application Packets, lists the APs accumulated for the VIIRS Diagnostic RDR. In the event of a discrepancy in APIDs listed here, see the MDFCB, GSFC 429-05-02-42 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Table 3.14.2.2-1, VIIRS Diagnostic RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
DIA_M04	Diagnostic Moderate Resolution Band 4	830
DIA_M05	Diagnostic Moderate Resolution Band 5	831
DIA_M03	Diagnostic Moderate Resolution Band 3	832
DIA_M02	Diagnostic Moderate Resolution Band 2	833
DIA_M01	Diagnostic Moderate Resolution Band 1	834
DIA_M06	Diagnostic Moderate Resolution Band 6	835
DIA_M07	Diagnostic Moderate Resolution Band 7	836
DIA_M09	Diagnostic Moderate Resolution Band 9	837
DIA_M10	Diagnostic Moderate Resolution Band 10	838
DIA_M08	Diagnostic Moderate Resolution Band 8	839
DIA_M11	Diagnostic Moderate Resolution Band 11	840
DIA_M13	Diagnostic Moderate Resolution Band 13	841
DIA_M12	Diagnostic Moderate Resolution Band 12	842
DIA_I04	Diagnostic Imagery Resolution Band 4	843
DIA_M16	Diagnostic Moderate Resolution Band 16	844
DIA_M15	Diagnostic Moderate Resolution Band 15	845
DIA_M14	Diagnostic Moderate Resolution Band 14	846
DIA_I05	Diagnostic Imagery Resolution Band 5	847
DIA_I01	Diagnostic Imagery Resolution Band 1	848
DIA_I02	Diagnostic Imagery Resolution Band 2	849

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

APID Short Name	Description	Value $APID_{10}$
DIA_I03	Diagnostic Imagery Resolution Band 3	850
DIA_DNB	Diagnostic Day Night Band	851
DIA_DNB_MGS	Diagnostic Day Night Band – Middle Gain Stage	852
DIA_DNB_LGS	Diagnostic Day Night Band – Low Gain Stage	853
DIA_CAL	Diagnostic Calibration	855
DIA_ENG	Diagnostic Engineering	856

3.14.3 VIIRS Telemetry-Diagnostic RDR

3.14.3.1 VIIRS Telemetry-Diagnostic RDR HDF5 Files

The VIIRS Telemetry RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.14.3.2 VIIRS Telemetry-Diagnostic RDR Data Content Summary

Table 3.14.3.2-1, VIIRS Telemetry-Diagnostic RDR Application Packets, lists the APs accumulated for the VIIRS Telemetry-Diagnostic RDR. In the event of a discrepancy in APIDs listed here, see the MDFCB, GSFC 429-05-02-42 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Table 3.14.3.2-1, VIIRS Telemetry-Diagnostic RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
HK_DIA	Diagnostic Telemetry (This packet is mutually exclusive with application packet APID 768)	773

3.14.4 VIIRS Telemetry RDR

3.14.4.1 VIIRS Telemetry RDR HDF5 Files

The VIIRS Telemetry RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.14.4.2 VIIRS Telemetry RDR Data Content Summary

Table 3.14.4.2-1, VIIRS Telemetry RDR Application Packets, lists the APs accumulated for the VIIRS Telemetry RDR. In the event of a discrepancy in APIDs listed here, see the C&TH, BATC Drawing 568423 for NPP, or the CDFCB-X Volume VII, D34862-07 for

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

NPOESS.

Table 3.14.4.2-1, VIIRS Telemetry RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
HK	Housekeeping Telemetry (This packet is mutually exclusive with application packet APID 773.)	768

3.14.5 VIIRS Memory Dump RDR

3.14.5.1 VIIRS Memory Dump RDR HDF5 Files

The VIIRS Memory Dump RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.14.5.2 VIIRS Memory Dump RDR Data Content Summary

Table 3.14.5.2-1, VIIRS Memory Dump RDR Application Packets, lists the APs accumulated for the VIIRS Memory Dump RDR. In the event of a discrepancy in APIDs listed here, see the MDFCB, GSFC 429-05-02-42 for NPP, or the CDFCB-X Volume VII, D34862-07 for NPOESS.

Table 3.14.5.2-1, VIIRS Memory Dump RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
DUMP	Memory Dump	780

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

3.15 NPP Spacecraft RDRs

Data Mnemonic	Telemetry:	RDRE-SCTP-C0031
	Attitude/Ephemeris:	RDRE-SCAE-C0030
Description/ Purpose	The NPP Spacecraft produces several application packets on VCID 0 which are related to spacecraft health and status. These Application packets are grouped into the NPP Spacecraft Telemetry RDR. The NPP Spacecraft produces several application packets on VCID 0 which are related to spacecraft attitude and ephemeris. These Application packets are grouped into the NPP Attitude and Ephemeris RDR.	
File-Naming Construct	See the CDFCB-X Volume I, D34862-01, Section 3.0 for details	
File Size	Telemetry: Maximum 5065.10KiB (608 seconds). Attitude/Ephemeris: Nominal 14.62 KiB (20 seconds). All sizes are per granule, with duration specified in (). Sizes do not include HDF5 overhead.	
File Format Type	HDF5	
Data Content and Data Format	Section 3.15.1 describes the NPP Spacecraft Telemetry RDR Section 3.15.2 describes the NPP Attitude/Ephemeris RDR	

3.15.1 NPP Spacecraft Telemetry RDR

3.15.1.1 NPP Spacecraft Telemetry RDR HDF5 Files

The NPP Spacecraft Telemetry RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.15.1.2 NPP Spacecraft Telemetry RDR Data Content Summary

Table 3.15.1.2-1, NPP Spacecraft Telemetry RDR Application Packets, lists the APs accumulated for the NPP Spacecraft Telemetry RDR. In the event of a discrepancy in APIDs listed here, see the NPP C&TH, BATC Drawing 568423. Note: Spacecraft generated APIDs are in the range 0 to 99, however, only the APIDs that are currently described in the C&TH are included here. Additional APIDs may be added with subsequent revisions of the NPP C&TH.

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

Table 3.15.1.2-1, NPP Spacecraft Telemetry RDR Application Packets

APID Short Name	Description	Value NPP $APID_{10}$
BUS_HR	Bus High Rate, 1 Hz	1
BUS_LR	Bus Low Rate, 1/16 Hz	2
BUS_DTU	Bus DTU	3
BUS_T	Bus Thermal	4
SSR	SSR 1553 Data	5
PUMA	PUMA 1553 Data	6
DSEP	DSEP 1553 Data – no Therm	7
ADCS_HKL	ADCS HSK – low rate	9
TOD	Time of Day Message	10
ADCS_DIA	ADCS Diagnostic	12
FSW_HKF	Bus FSW HSK – Fast	13
FSW_HKS	Bus FSW HSK – Slow	14
G_HR	High Rate Gyro	15
ST_HR	High Rate Star Tracker	16
FSW_DIA	FSW Diagnostic, #1	17
FSW_DIA2	FSW Diagnostic, #2	18
FW_DIA	1394 Diagnostic	19
ADCSDIAF	ADCS Diagnostic, Fast	20
ADCSDIAS	ADCS Diagnostic, Slow	21
FSW_DIA3	FSW Diagnostic	22
FSW_DIA4	FSW Diagnostic	23
FSW_DIA5	FSW Diagnostic	24
PD_LR	PUMA and DSEP, Low Rate	25
DMP_SCCS	SCC FSW Short Table Dump	26
SMP_CDPS	CDP FSW Short Table Dump	27
DUMP_SCC	SCC Table Dump Packet	28
DUMP_CDP	CDP Table Dump Packet	29
SCC_SU	SCC FSW Startup & Kernel Frames	30
DTU_TEST	DTU Test Mode	31
FW_HK	1394 Housekeeping	70

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

3.15.2 NPP Spacecraft Attitude and Ephemeris RDR

3.15.2.1 NPP Spacecraft Attitude and Ephemeris RDR HDF5 Files

The NPP Spacecraft Attitude and Ephemeris RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.15.2.2 NPP Spacecraft Attitude and Ephemeris Data Content Summary

Table 3.15.2.2-1, NPP RDR Spacecraft Ephemeris and Attitude Application Packets, lists the APs accumulated for the Spacecraft Diary group; the APID assignment listed in this table applies only to NPP. In the event of a discrepancy in the APIDs listed here, see the NPP C&TH, BATC Drawing 568423.

Table 3.15.2.2-1, NPP RDR Spacecraft Ephemeris and Attitude Application Packets

APID Short Name	APID Description	Value NPP $APID_{10}$
CRITICAL	Bus Critical Telemetry	0
ADCS_HKH	ADCS Housekeeping Telemetry High Rate	8
DIARY	Diary (Ephemeris and Attitude)	11

The sampling frequencies of the NPP attitude and ephemeris data contained in the Spacecraft Attitude and Ephemeris granules are both 1.0 Hz. For more information, see SER-SW062, FSW Table Description, CDP Table 20.

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

3.16 NPOESS Spacecraft RDRs

Data Mnemonic	Telemetry:	RDRE-SCTN-C0031
	Attitude/Ephemeris:	RDRE-SCAE-C0031
Description/ Purpose	The NPOESS Spacecraft produce several application packets which are related to spacecraft health and status. These Application packets are grouped into the NPOESS Spacecraft Telemetry RDR. The NPOESS Spacecraft produces several application packets which are related to attitude and ephemeris. These Application packets are grouped into the NPOESS Attitude and Ephemeris RDR.	
File-Naming Construct	See the CDFCB-X Volume I, D34862-01, Section 3.0 for details	
File Size	Telemetry: EDFCB2-TBD-10138 Attitude/Ephemeris: EDFCB2-TBD-10139	
File Format Type	HDF5	
Data Content and Data Format	Section 3.16.1 describes the NPOESS Spacecraft Telemetry RDR Section 3.16.2 describes the NPOESS Attitude/Ephemeris RDR	

3.16.1 NPOESS Spacecraft Telemetry RDR

3.16.1.1 NPOESS Spacecraft Telemetry RDR HDF5 Files

The NPOESS Spacecraft Telemetry RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.16.1.2 NPOESS Spacecraft Telemetry RDR Data Content Summary

Table 3.16.1.2-1, NPOESS Spacecraft Telemetry RDR Application Packets, lists the APs accumulated for the NPOESS Spacecraft Telemetry RDR. The APID assignment listed in Table 3.16.1.2-1, NPOESS Spacecraft Telemetry RDR Application Packets, applies to NPOESS only. In the event of a discrepancy in APIDs listed here, see the CDFCB-X Volume VII, D34862-07.

Table 3.16.1.2-1, NPOESS Spacecraft Telemetry RDR Application Packets

EDFCB2-TBD-10140

APID Short Name	Description	Value $APID_{10}$

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

APID Short Name	Description	Value $APID_{10}$

3.16.2 NPOESS Spacecraft Attitude and Ephemeris RDR

3.16.2.1 NPOESS Spacecraft Attitude and Ephemeris RDR HDF5 Files

The NPOESS Spacecraft Attitude and Ephemeris RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.16.2.2 NPOESS Spacecraft Attitude and Ephemeris Data Content Summary

Table 3.16.2.2-2, NPOESS RDR Spacecraft Ephemeris and Attitude Application Packets, lists the APs accumulated for the Spacecraft Diary group for NPOESS. In the event of a discrepancy see the CDFCB-X Volume VII, D34862-07.

Table 3.16.2-2, NPOESS RDR Spacecraft Ephemeris and Attitude Application Packets

APID Short Name	APID Description	NPOESS $APID_{10}$
DIARY	SCP Auxiliary Data (attitude and ephemeris)	8
SCAUX	DSU Auxiliary Data (table indicators and compression ratio)	11

The Spacecraft Ephemeris data points within the granule are sampled at 0.1 Hz and the Attitude data points are sampled at 2 Hz; refer to the CDFCB-X Volume VII, D34862-07, for further details.

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

3.17 Advanced Microwave Scanning Radiometer 2 (AMSR2) RDRs

Data Mnemonic (NPOESS Only)	Science:	RDRE-AMS2-C0030
	Telemetry:	RDRE-AMS2-C0031

Description/ Purpose	The JAXA Global Change Observation Mission (GCOM) is a satellite project for the purpose of global and long-term observation of the Earth environment. GCOM consists of two satellite series, GCOM-W and GCOM-C. The Advanced Microwave Scanning Radiometer 2 (AMSR2) sensor on GCOM-W observes water-related targets including precipitation, water vapor, sea surface wind speed, sea surface temperature, soil moisture, and snow depth
File-Naming Construct	See the CDFCB-X Volume I, D34862-01, Section 3.0 for details.
File Size	AMSR2 Science: Maximum 5911.48 KiB (540 Seconds) AMSR2 Telemetry: 896.16 KiB (540 Seconds)
File Format Type	HDF5
Data Content and Data Format	Section 3.17.1 describes the AMSR2 Science RDR Section 3.17.2 describes the AMSR2 Telemetry RDR

3.17.1 AMSR2 Science RDR

3.17.1.1 AMSR2 Science RDR HDF5 Files

The AMSR2 Science RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.17.1.2 AMSR2 Science RDR Data Content Summary

Table 3.17.1.2-1, AMSR2 Science RDR Application Packets, lists the APs accumulated for the AMSR2 Science RDR. The APID assignment listed in Table 3.17.1.2-1, AMSR2 Science RDR Application Packets, applies to GCOM-W only. In the event of a discrepancy in APIDs listed here or for details of the AP content, see the GCOM-W1 Mission Operations Interface Specification (MOIS), **474-REF-00145 (JAXA #: SGC-070078)** and the JPSS GS Technical Exchange with JAXA for GCOM-W1, 474-REF-00111.

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

Table 3.17.1.2-1, AMSR2 Science RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
MISSION_DATA	Mission Data (Science)	1576

3.17.2 AMSR2 Telemetry RDR

3.17.2.1 AMSR2 Telemetry RDR HDF5 Files

The AMSR2 Telemetry RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.17.2.2 AMSR2 Telemetry RDR Data Content Summary

Table 3.17.2.2-1, AMSR2 Telemetry RDR Application Packets, lists the APs accumulated for the AMSR2 Telemetry RDR. The APID assignment listed in Table 3.17.2.2-1, AMSR2 Telemetry RDR Application Packets, applies to GCOM-W only. In the event of a discrepancy in APIDs listed here or for details of the AP content, see the GCOM-W1 Mission Operations Interface Specification (MOIS), **474-REF-00145 (JAXA #: SGC-070078)** and the JPSS GS Technical Exchange with JAXA for GCOM-W1, 474-REF-00111.

Table 3.17.2.2-1, AMSR2 Telemetry RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
PCD_SUPP_DATA	Housekeeping Telemetry	253
GPSR_DATA	Geolocation Data	1551

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

3.18 GCOM-W1 Spacecraft RDRs

Data Mnemonic (NPOESS Only)	Telemetry: RDRE-SCGW-C0031 Attitude and Ephemeris: RDRE-SCGW-C0032
Description/ Purpose	The GCOM-W1 Spacecraft produces application packets related to spacecraft health and status. These Application packets are grouped into the GCOM-W1 Spacecraft Telemetry RDR. The GCOM-W1 Spacecraft produces application packets related to spacecraft attitude and ephemeris. These Application packets are grouped into the GCOM-W1 Attitude and Ephemeris RDR
File-Naming Construct	See the CDFCB-X Volume I, D34862-01, Section 3.0 for details.
File Size	Telemetry: Maximum 431.24 KiB (540 Seconds) Attitude & Ephemeris: Nominal 11.09 KiB (20 Seconds)
File Format Type	HDF5
Data Content and Data Format	Section 3.18.1 describes the GCOM-W1 Spacecraft Telemetry RDR Section 3.18.2 describes the GCOM-W1 Spacecraft Attitude and Ephemeris RDR

3.18.1 GCOM-W1 Spacecraft Telemetry RDR

3.18.1.1 GCOM-W1 Spacecraft Telemetry RDR HDF5 Files

The GCOM-W1 Spacecraft Telemetry RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.18.1.2 GCOM-W1 Spacecraft Telemetry RDR Data Content Summary

Table 3.18.1.1-1, GCOM-W1 Spacecraft Telemetry RDR Application Packets, lists the APs accumulated for the GCOM-W1 Spacecraft Telemetry RDR. The APID assignment listed in Table 3.18.1.1-1, GCOM-W1 Spacecraft Telemetry RDR Application Packets, applies to GCOM-W only. In the event of a discrepancy in APIDs listed here or for details of the AP content, see the GCOM-W1 Mission Operations Interface Specification (MOIS), **474-REF-00145 (JAXA #: SGC-070078)** and the JPSS GS Technical Exchange with JAXA for GCOM-W1, 474-REF-00111.

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

Table 3.18.1.1-1, GCOM-W1 Spacecraft Telemetry RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
SYS_TELEMETRY	Housekeeping Telemetry	1281
RT_PCD_SUPP	Support Data	1550

3.18.2 GCOM-W1 Spacecraft Attitude and Ephemeris RDR

3.18.2.1 GCOM-W1 Spacecraft Attitude and Ephemeris RDR HDF5 Files

The GCOM-W1 Spacecraft Attitude and Ephemeris RDR HDF5 files are described in Section 2.0, Raw Data Records HDF5 Details.

3.13.1.1 GCOM-W1 Spacecraft Attitude and Ephemeris RDR Data Content Summary

Table 3.18.2.1-1, GCOM-W1 Spacecraft Attitude and Ephemeris RDR Application Packets, lists the APs accumulated for the GCOM-W1 Spacecraft Attitude and Ephemeris RDR. The APID assignment listed in Table 3.18.2.1-1, GCOM-W1 Spacecraft Attitude and Ephemeris RDR Application Packets, applies to GCOM-W only. In the event of a discrepancy in APIDs listed here or for details of the AP content, see the GCOM-W1 Mission Operations Interface Specification (MOIS), **474-REF-00145 (JAXA #: SGC-070078)** and the JPSS GS Technical Exchange with JAXA for GCOM-W1, 474-REF-00111.

Table 3.18.2.1-1, GCOM-W1 Spacecraft Attitude and Ephemeris RDR Application Packets

APID Short Name	Description	Value $APID_{10}$
ATT_ORBIT	Orbit Data (Spacecraft Diary)	1549

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

APPENDIX A: DATA MNEMONIC TO INTERFACE MAPPING

Description	Data	File Type	Document	Interface Mnemonic
ADCS RDR - Science Format	RDRE-ADCS-C0030	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_CN-LN0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34651: NPOESS Field Terminal ICD	X_FD_FM-LB5200
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
ADCS RDR - Telemetry Format	RDRE-ADCS-C0031	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_CN-LN0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
ATMS RDRs - Science	RDRE-ATMS-C0030	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_CN-LN0030
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34466: NPOESS to DOD ICD	X_NP_CN-LC0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D34651: NPOESS Field Terminal ICD	X_FD_FM-LB5200
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045

Description	Data	File Type	Document	Interface Mnemonic
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
ATMS RDRs - Telemetry	RDRE-ATMS-C0031	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
ATMS RDRs - Diagnostic	RDRE-ATMS-C0032	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D31413: NPOESS to NOAA ICD	X_NP_CN-LN0030
			D34466: NPOESS to DOD ICD	X_NP_CN-LC0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
ATMS RDR - Memory Dump	RDRE-ATMS-C0035	HDF5		

Description	Data	File Type	Document	Interface Mnemonic
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
ATMS RDR - Dwell Telemetry	RDRE-ATMS-C0036	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
CrIS RDRs - Science	RDRE-CRIS-C0030	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D31413: NPOESS to NOAA ICD	X_NP_CN-LN0030
			D34466: NPOESS to DOD ICD	X_NP_CN-LC0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

Description	Data	File Type	Document	Interface Mnemonic
			D34651: NPOESS Field Terminal ICD	X_FD_FM-LB5200
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
CrIS RDRs - Telemetry	RDRE-CRIS-C0031	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
CrIS RDRs - Diagnostic	RDRE-CRIS-C0032	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D31413: NPOESS to NOAA ICD	X_NP_CN-LN0030
			D34466: NPOESS to DOD ICD	X_NP_CN-LC0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040

Description	Data	File Type	Document	Interface Mnemonic
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
CrIS RDR - Memory Dump	RDRE-CRIS-C0035	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
CrIS RDR - HSK Dwell Telemetry	RDRE-CRIS-C0036	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
CRIS SSM Dwell Telemetry RDR	RDRE-CRIS-C0046	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090

Description	Data	File Type	Document	Interface Mnemonic
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
CRIS IM Dwell Telemetry RDR	RDRE-CRIS-C0056	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
CERES Science RDR	RDRE-CERS-C0030	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
CERES Diagnostic RDR	RDRE-CERS-C0032	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030

Description	Data	File Type	Document	Interface Mnemonic
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
CERES Telemetry RDR	RDRE-CERS-C0031	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
SARSAT RDR - Processor	RDRE-SARP-C0031	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_CN-LN0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
SARSAT RDR - Repeater	RDRE-SARR-C0031	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_CN-LN0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045

Description	Data	File Type	Document	Interface Mnemonic
OMPS RDRs - Nadir Profile	RDRE-OMPS-C0030	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_CN-LN0030
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34466: NPOESS to DOD ICD	X_NP_CN-LC0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D34651: NPOESS Field Terminal ICD	X_FD_FM-LB5200
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
OMPS RDRs - Nadir Total Column	RDRE-OMPS-C0031	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_CN-LN0030
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34466: NPOESS to DOD ICD	X_NP_CN-LC0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D34651: NPOESS Field Terminal ICD	X_FD_FM-LB5200
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

Description	Data	File Type	Document	Interface Mnemonic
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
OMPS RDRs - Limb Profile	RDRE-OMPS-C0032	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
OMPS RDRs - Telemetry	RDRE-OMPS-C0034	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
OMPS RDRs - Memory Dump	RDRE-OMPS-C0035	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040

Description	Data	File Type	Document	Interface Mnemonic
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
OMPS RDRs - Dwell	RDRE-OMPS-C0036	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
OMPS RDRs - Nadir Profile Calibration	RDRE-OMPS-C0037	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_CN-LN0030
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34466: NPOESS to DOD ICD	X_NP_CN-LC0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

Description	Data	File Type	Document	Interface Mnemonic
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
OMPS RDRs - Nadir Total Column Calibration	RDRE-OMPS-C0038	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_CN-LN0030
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34466: NPOESS to DOD ICD	X_NP_CN-LC0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
OMPS RDRs - Limb Profile Calibration	RDRE-OMPS-C0039	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
OMPS RDRs - Diagnostic Nadir TC Earth View	RDRE-OMPS-C0050	HDF5		

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

Description	Data	File Type	Document	Interface Mnemonic
			D31413: NPOESS to NOAA ICD	X_NP_CN-LN0030
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34466: NPOESS to DOD ICD	X_NP_CN-LC0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
OMPS RDRs - Diagnostic Nadir TC Calibration	RDRE-OMPS-C0051	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D31413: NPOESS to NOAA ICD	X_NP_CN-LN0030
			D34466: NPOESS to DOD ICD	X_NP_CN-LC0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
OMPS RDRs - Diagnostic Nadir Profile Earth View	RDRE-OMPS-C0052	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030

Check the JPSS MIS Server at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm to verify that this is the correct version prior to use.

Description	Data	File Type	Document	Interface Mnemonic
			D31413: NPOESS to NOAA ICD	X_NP_CN-LN0030
			D34466: NPOESS to DOD ICD	X_NP_CN-LC0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
OMPS RDRs - Diagnostic Nadir Profile Calibration	RDRE-OMPS-C0053	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D31413: NPOESS to NOAA ICD	X_NP_CN-LN0030
			D34466: NPOESS to DOD ICD	X_NP_CN-LC0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
OMPS RDRs - Diagnostic Limb Earth View Exposure #1	RDRE-OMPS-C0054	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090

Description	Data	File Type	Document	Interface Mnemonic
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
OMPS RDRs - Diagnostic Limb Calibration	RDRE-OMPS-C0055	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
OMPS RDRs - Diagnostic Limb Profile Exposure #2	RDRE-OMPS-C0056	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300

Description	Data	File Type	Document	Interface Mnemonic
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
OMPS RDRs - Flight Software Start-up Status	RDRE-OMPS-C0057	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
VIIRS RDRs - Science	RDRE-VIRS-C0030	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D31413: NPOESS to NOAA ICD	X_NP_CN-LN0030
			D34466: NPOESS to DOD ICD	X_NP_CN-LC0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D34651: NPOESS Field Terminal ICD	X_FD_FM-LB5200
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
VIIRS RDRs - Telemetry	RDRE-VIRS-C0031	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030

Description	Data	File Type	Document	Interface Mnemonic
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
VIIRS RDRs - Diagnostic	RDRE-VIRS-C0032	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_CN-LN0030
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34466: NPOESS to DOD ICD	X_NP_CN-LC0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
VIIRS RDRs - Memory Dump	RDRE-VIRS-C0035	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045

Description	Data	File Type	Document	Interface Mnemonic
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
VIIRS RDRs - Telemetry Diagnostic	RDRE-VIRS-C0036	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34466: NPOESS to DOD ICD	X_NP_CN-LC0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
NPP Spacecraft - Attitude and Ephemeris	RDRE-SCAE-C0030	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
NPP Spacecraft - Telemetry	RDRE-SCTP-C0031	HDF5		

Description	Data	File Type	Document	Interface Mnemonic
			D31413: NPOESS to NOAA ICD	X_NP_CN-LN0030
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
NPOESS Spacecraft - Attitude and Ephemeris	RDRE-SCAE-C0031	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
NPOESS Spacecraft - Telemetry	RDRE-SCTN-C0031	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_CN-LN0030
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
			D34466: NPOESS to DOD ICD	X_NP_CN-LC0030
			D34642: NPOESS C3S to IDPS ICD	T_NE_MM-L00090

Description	Data	File Type	Document	Interface Mnemonic
			D34645: NPOESS to SDS ICD	X_NP_SD-L00030
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00040
			D37032: NPOESS Integrated Support Facility ICD	T_DP_SP-L00045
			D37032: NPOESS Integrated Support Facility ICD	T_DP_AU-L00300
			D41068: NPOESS IDPS to NSIPS ICD	T_AU_CV-L00030
AMSR2 RDRs - Science	RDRE-AMS2-C0030	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
AMSR2 RDRs - Telemetry	RDRE-AMS2-C0031	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
GCOM-W1 Spacecraft - Telemetry	RDRE-SCGW-C0031	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030
GCOM-W1 Spacecraft – Attitude and Ephemeris	RDRE-SCGW-C0032	HDF5		
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0030

APPENDIX B: COMMON RDR STATIC HEADER VALUES

Table B-1, Common RDR Static Header Values lists pre-defined unique values for the fields from the static header for each of the RDRs defined.

Table B-1, Common RDR Static Header Values

RDR Name	Sensor	TypeID	numAPIDs
A-DCS Science (Mission)	A-DCS	SCIENCE	1
A-DCS Telemetry (Housekeeping)	A-DCS	TELEMETRY	1
ATMS Science	ATMS	SCIENCE	4
ATMS Diagnostic	ATMS	DIAGNOSTIC	2
ATMS Dwell	ATMS	DWELL	1
ATMS Telemetry	ATMS	TELEMETRY	1
ATMS Memory Dump	ATMS	DUMP	1
CrIS Science	CrIS	SCIENCE	83
CrIS Diagnostic	CrIS	DIAGNOSTIC	3
CrIS HSK Dwell	CrIS	HSKDWELL	1
CrIS SSM Dwell	CrIS	SSMDWELL	1
CrIS IM Dwell	CrIS	IMDWELL	1
CrIS Telemetry	CrIS	TELEMETRY	8
CrIS Memory Dump	CrIS	DUMP	1
CERES Science	CERES	SCIENCE	2
CERES Diagnostic	CERES	DIAGNOSTIC	1
CERES Telemetry	CERES	TELEMETRY	1
SARR Telemetry	SARR	TELEMETRY	1

RDR Name	Sensor	TypeID	numAPIDs
SARP Telemetry	SARP	TELEMETRY	1
OMPS NP Science	OMPS-NP	SCIENCE	1
OMPS NP Calibration	OMPS-NP	CALIBRATION	1
OMPS NP Diagnostic Earth View	OMPS-NP	DIAG-SCI	1
OMPS NP Diagnostic Calibration	OMPS-NP	DIA-CAL	1
OMPS TC Science	OMPS-TC	SCIENCE	1
OMPS TC Calibration	OMPS-TC	CALIBRATION	1
OMPS TC Diagnostic Earth View	OMPS-TC	DIAG-SCI	1
OMPS TC Diagnostic Calibration	OMPS-TC	DIA-CAL	1
OMPS LP Science	OMPS-LP	SCIENCE	2
OMPS LP Calibration	OMPS-LP	CALIBRATION	1
OMPS LP Diagnostic Exposure #1 Earth View	OMPS-LP	DIAGEXPONE	1
OMPS LP Diagnostic Exposure #2 Earth View	OMPS-LP	DIAGEXPTWO	1
OMPS LP Diagnostic Calibration	OMPS-LP	DIA-CAL	1
OMPS Dwell	OMPS	DWELL	1
OMPS Telemetry	OMPS	TELEMETRY	1
OMPS Memory Dump	OMPS	DUMP	1
OMPS Flight Software Boot-up	OMPS	FSW BOOTUP	1
VIIRS Science	VIIRS	SCIENCE	26
VIIRS Diagnostic	VIIRS	DIAGNOSTIC	26
VIIRS Telemetry	VIIRS	TELEMETRY	1
VIIRS Diagnostic Telemetry	VIIRS	DIAGTELEMETRY	1
VIIRS Memory Dump	VIIRS	DUMP	1
NPP Spacecraft Telemetry	SPACECRAFT	TELEMETRY	30

RDR Name	Sensor	TypeID	numAPIDs
NPP Ephemeris and Attitude	SPACECRAFT	DIARY	3
NPOESS Spacecraft Telemetry	SPACECRAFT	TELEMETRY	EDFCB2-TBD-10140
NPOESS Ephemeris and Attitude	SPACECRAFT	DIARY	2
AMSR2 Science	AMSR2	SCIENCE	1
AMSR2 Telemetry	AMSR2	TELEMETRY	2
GCOM-W1 Attitude and Ephemeris	GCOM	DIARY	1
GCOM-W1 Telemetry	GCOM	TELEMETRY	2