GSFC JPSS CMO
02/12/2015
Released

Effective Date: February 02, 2015
Revision C

Joint Polar Satellite System (JPSS) Ground Project
Code 474
474-00448-01-07

Joint Polar Satellite System (JPSS) Algorithm Specification Volume I: Software Requirement Specification (SRS) for Ancillary Data Handling Gridding and Granulation

Goddard Space Flight Center
Greenbelt, Maryland

National Aeronautics and
Space Administration

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.

Joint Polar Satellite System (JPSS) Algorithm Specification Volume I: Software Requirement Specification (SRS) for Ancillary Data Handling Gridding and Granulation JPSS Review/Approval Page

Prepared By:

_____

JPSS Ground System
(Electronic Approvals available online at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm)

Approved By:

_____

Robert M. Morgenstern Date

JPSS Ground Project Mission Systems Engineering Manager
(Electronic Approvals available online at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm)

Approved By:

_____

Daniel S. DeVito Date
JPSS Ground Project Manager
(Electronic Approvals available online at https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm)

Goddard Space Flight Center
Greenbelt, Maryland

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.

Preface

This document is under JPSS Ground Project 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:

JPSS Configuration Management Office
NASA/GSFC
Code 474
Greenbelt, MD 20771

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.

Change History Log

Revision	Effective Date	Description of Changes (Reference the CCR & CCB/ERB Approve Date)
Rev-	Aug. 29, 2013	This version incorporates 474-CCR-13-1214 which was approved by JPSS Ground ERB on the effective date shown.
A	Jan. 30, 2014	This version incorporates 474-CCR-14-1721 and 474-CCR-14-1741 which was approved by JPSS Ground ERB on the effective date shown.
A1	Oct. 23, 2014	This version incorporates 474-CCR-14-2091 which was approved by the JPSS Ground ERB for CO10 on the effective date shown.
B	Aug. 14, 2014	This version incorporates 474-CCR-14-1781 and 474-CCR-14-1832 which was approved by JPSS Ground ERB on the effective date shown.
C	Feb. 02, 2015	This version incorporates 474-CCR-14-2219, which was approved by JPSS Ground ERB on the effective date shown.

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.

List of TBx Items

TBx	Type	ID	Text	Action
None				

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 of Contents

1 Introduction ... 1
1.1 Identification ... 2
1.2 Algorithm Overview ... 2
1.3 Document Overview ... 2
2 Related Documentation ... 3
2.1 Parent Documents ... 3
2.2 Applicable Documents ... 3
2.3 Information Documents ... 3
3 Algorithm Requirements ... 5
3.1 Blocks and Modes ... 5
3.1.1 Normal Mode Performance ... 5
3.1.2 Graceful Degradation Mode Performance ... 5
3.2 Algorithm Functional Requirements ... 5
3.2.1 Product Production Requirements ... 5
3.2.2 Algorithm Science Requirements ... 5
3.2.3 Algorithm Exception Handling ... 7
3.3 External Interfaces ... 8
3.3.1 Inputs ... 8
3.3.2 Outputs ... 30
3.4 Science Standards ... 31
3.5 Metadata Output ... 31
3.6 Quality Flag Content Requirements ... 31
3.7 Data Quality Notification Requirements ... 31
3.8 Adaptation ... 31
3.9 Provenance Requirements ... 31
3.10 Computer Software Requirements ... 31
3.11 Software Quality Characteristics ... 31
3.12 Design and Implementation Constraints ... 31
3.13 Personnel Related Requirements ... 32
3.14 Training Requirements ... 32
3.15 Logistics Related requirements ... 32
3.16 Other Requirements ... 32
3.17 Packaging Requirements ... 32
3.18 Precedence and Criticality ... 32
Appendix A. Requirements Attributes ... 33

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.

List of Figures

Figure: 3-1 Ancillary Data Handling Gridding and Granulation Data Flows 11

List of Tables

Table: 1-1 JPSS Ground System Services 2
Table: 3-1 Systems Resource Flow Matrix: Ancillary Data Handling Gridding and Granulation 12

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.

1 Introduction

The Joint Polar Satellite System (JPSS) is the National Oceanic and Atmospheric Administration's (NOAA) next-generation operational Earth observation program that acquires and distributes global environmental data primarily from multiple polar-orbiting satellites. The program plays a critical role in NOAA's mission to understand and predict changes in weather, climate, oceans and coasts, and the space environment, which support the Nation's economy and protect lives and property. JPSS polar-orbiting satellites provide continued environmental observation that is currently performed by NOAA Polar Operational Environment Satellites (POES). The first JPSS satellite mission, the Suomi National Polar-orbiting Partnership (S-NPP) satellite, was successfully launched in October 2011. It will be followed by two JPSS satellites: JPSS-1, planned for launch in fiscal year (FY) 2017, with JPSS-2 to follow in FY2022.

In addition to the JPSS Program's own satellites operating in the 1330 Local Time of the Ascending Node (LTAN) orbit, NOAA also leverages mission partner assets for better global coverage. These partner assets include the Department of Defense (DoD) operational weather satellites (in the 1730 – 1930 LTAN orbit), European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) Meteorological Operational (Metop) satellites (in the 2130 LTAN orbit) and Japanese Aerospace Exploration Agency (JAXA) Global Change Observation Mission-Water (GCOM-W) satellites (in the 1330 LTAN orbit). JPSS routes Metop data from the McMurdo Station, Antarctica to the EUMETSAT facility in Darmstadt, Germany and EUMETSAT provides Metop data to NOAA. For GCOM, JPSS routes the GCOM-W data from Svalbard, Norway through the NOAA Satellite Operations Facility (NSOF) in Suitland, MD to the JAXA facility in Japan. The JPSS program also processes GCOM-W data and delivers GCOM-W products to the JPSS users who have JAXA permissions.

The JPSS Program provides data acquisition and routing support to the Defense Meteorological Satellite Program (DMSP) and the Coriolis Program. The JPSS Program provides data routing support to the National Science Foundation (NSF), as well as the National Aeronautics and Space Administration (NASA) Space Communication and Navigation (SCaN)-supported missions, which include the Earth Observing System (EOS). As part of the agreements for the use of McMurdo Station, JPSS will provide communications/network services for the NSF between McMurdo Station, Antarctica and Centennial, Colorado.

As a multi-mission ground infrastructure, the JPSS Ground System supports the heterogeneous constellation of the before-mentioned polar-orbiting satellites both within and outside the JPSS Program through a comprehensive set of services as listed in Table 1-1.

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.

Table: 1-1 JPSS Ground System Services

Service	Description
Enterprise Management and Ground Operations	Provides mission management, mission operations, ground operations, contingency management and system sustainment
Flight Operations	Provides launch support and early orbit operations, telemetry and commanding, orbital operations, mission data playback, payload support, flight software upgrade, flight vehicle simulation, and disposal at the end of mission life
Data Acquisition	Provides space/ground communications for acquiring mission data
Data Routing	Provides routing of telemetry, mission and/or operations data through JPSS' global data network
Data Product Generation	Provides the processing of mission data to generate and distribute raw, sensor, environmental, and ancillary data products
Data Product Calibration and Validation	Provides calibration and validation of the data products
Field Terminal Support	Provides development and operational support to the Field Terminal customers

1.1 Identification

This SRS provides requirements relating to support algorithms that process inputs from external data sources feeding many VIIRS Environmental Data Records (EDRs), including Cloud Mask, Surface Type, Surface Temperature, and Albedo, or feeding OMPS SDR or Ozone EDR products. Products generated in the process include gridded Intermediate Products (Grid IP), granulated IP, or granulated Ancillary data (ANC).

1.2 Algorithm Overview

There are 3 types of algorithms: gridding of granulated products, gridding of gridded products, and granulation of gridded products. Gridding is the process of accumulating, or compositing pixel data into earth-model grid cells. Granulation is the process of referencing ancillary data and previously gridded IPs to sensor data. External data sources are considered "ancillary" inputs. Parameters gridded or granulated for input to IDPS are related to ice and snow cover, vegetation cover, surface reflectance, surface albedo, quarterly surface type, and surface type.

1.3 Document Overview

Section	Description
Section 1	Introduction – Provides a brief overview of the JPSS Ground System and the relevant algorithm, as reference material only.
Section 2	Related Documentation – Lists related documents and identifies them as Parent, Applicable, or Information Documents such as, MOAs, MOUs, technical implementation agreements, as well as Data Format specifications. This section also establishes an order of precedence in the event of conflict between two or more documents.
Section 3	Algorithm Requirements – Provides a summary of the science requirements for the products covered by this volume.
Appendix A	Requirements Attributes – Provides the mapping of requirements to verification methodology and attributes.

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 Related Documentation

The latest JPSS documents can be obtained from URL: https://jpssmis.gsfc.nasa.gov/frontmenu_dsp.cfm. JPSS Project documents have a document number starting with 470, 472 or 474 indicating the governing Configuration Control Board (CCB) (Program, Flight, or Ground) that has the control authority of the document.

2.1 Parent Documents

The following reference document(s) is (are) the Parent Document(s) from which this document has been derived. Any modification to a Parent Document will be reviewed to identify the impact upon this document. In the event of a conflict between a Parent Document and the content of this document, the JPSS Program Configuration Change Board has the final authority for conflict resolution.

Doc. No.	Document Title
470-00067	Joint Polar Satellite System (JPSS) Ground System Requirements Document (GSRD)
470-00067-02	Joint Polar Satellite System (JPSS) Ground System Requirements Document (GSRD), Volume 2 - Science Product Specification
474-00448-01-01	Joint Polar Satellite System (JPSS) Algorithm Specification Volume I: Software Requirements Specification (SRS) for the Common Algorithms

2.2 Applicable Documents

The following document(s) is (are) the Applicable Document(s) from which this document has been derived. Any modification to an Applicable Document will be reviewed to identify the impact upon this document. In the event of conflict between an Applicable Document and the content of this document, the JPSS Program Configuration Change Board has the final authority for conflict resolution.

Doc. No.	Document Title
474-00028	Joint Polar Satellite System (JPSS) VIIRS Earth Gridding Algorithm Theoretical Basis Document (ATBD)
474-00448-02-07	Joint Polar Satellite System (JPSS) Algorithm Specification Volume II: Data Dictionary for the Ancillary Data Handling Gridding and Granulation
474-00448-04-07	Joint Polar Satellite System (JPSS) Algorithm Specification Volume IV: Software Requirements Software Parameter File (SRSPF)for the Ancillary Data Handling Gridding and Granulation

2.3 Information Documents

The following documents are referenced herein and amplify or clarify the information presented in this document. These documents are not binding on the content of this document.

Doc. No.	Document Title
474-00333	Joint Polar Satellite System (JPSS) Ground System (GS) Architecture Description Document (ADD)
474-00054	Joint Polar Satellite System (JPSS) Ground System (GS) Concept of Operations (ConOps)

Doc. No.	Document Title
470-00041	Joint Polar Satellite System (JPSS) Program Lexicon
474-00448-03-07	Joint Polar Satellite System (JPSS) Algorithm Specification Volume III: Operational Algorithm Description (OAD) for the Ancillary Data Handling Gridding and Granulation
429-05-02-42	Joint Polar Satellite System (JPSS) Mission Data Format Control Book for NPP
472-00251	Joint Polar Satellite System (JPSS) Mission Data Format Control Book for JPSS-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.

3 Algorithm Requirements

3.1 Blocks and Modes

3.1.1 Normal Mode Performance

Not applicable.

3.1.2 Graceful Degradation Mode Performance

Not applicable.

3.2 Algorithm Functional Requirements

3.2.1 Product Production Requirements

Not applicable.

3.2.2 Algorithm Science Requirements

SRS.01.07_161 The Grid-to-Grid software shall incorporate a computing algorithm provided for data reduction and gridding of the VIIRS NBAR NDVI Rolling Tile gridded IP.

Rationale: Algorithms are established in accordance with the JPSS VIIRS Earth Gridding ATBD (474-00028).

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.07_162 The Gran-to-Grid software shall incorporate a computing algorithm provided for gridding of a merged VIIRS Snow Cover Binary Map EDR and Sea Ice Concentration IP with a gridded Global Multisensor Automated Snow/Ice (GMASI) Map into a Snow/Ice Cover Rolling Tile gridded IP.

Rationale: Algorithms are established in accordance with the JPSS VIIRS Earth Gridding ATBD (474-00028). The Snow/Ice Cover Gridded IP is updated with information of the Snow Cover EDR process, Ice information from the Ice Concentration IP, and ancillary data from the NOAA Global Multisensor Automated Snow/Ice Map.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.07_164 The Grid-to-Grid software shall incorporate a computing algorithm provided for gridding and post-compositing the SR-BT-VI Monthly Final Tile gridded IP.

Rationale: Algorithms are established in accordance with the JPSS VIIRS Earth Gridding ATBD (474-00028).

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.07_165 The Gran-to-Grid software shall incorporate a computing algorithm provided for gridding the VIIRS Daily Surface Reflectance tile gridded IP.

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.

Rationale: Algorithms are established in accordance with 474-00028, ATBD for VIIRS Earth Gridding.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.07_168 The Grid-to-Grid software shall incorporate a computing algorithm provided for albedo and gridding of the VIIRS Land Surface Albedo 17-day Tile gridded IP.

Rationale: Algorithms are established in accordance with the JPSS VIIRS Earth Gridding ATBD (474-00028).

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.07_991 The Grid-to-Grid software shall incorporate a computing algorithm provided for data reduction and gridding of NBAR-NDVI-Monthly and NBAR-NDVI-17-day Tile gridded IPs.

Rationale: Algorithms are established in accordance with the JPSS VIIRS Earth Gridding ATBD (474-00028).

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.07_992 The Grid-to-Grid software shall incorporate a computing algorithm provided for albedo and gridding of BRDF Archetypal 17-day Tile gridded IP.

Rationale: Algorithms are established in accordance with the JPSS VIIRS Earth Gridding ATBD (474-00028).

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.07_178 The ANC-to-Grid software shall reformat the NOAA Global Multi-sensor Automated Snow Ice Cover (GMASI) to a Snow/Ice Cover Rolling Tile gridded IP format.

Rationale: The GMASI ancillary inputs need to match the format for the desired output data product Snow/Ice Cover Rolling Tile gridded IP.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.07_181 The granulation software shall granulate time interpolated versions of the NCEP GFS forecasts to a VIIRS granulation.

Rationale: The ancillary inputs need to match the granulation for the desired output data product. The 3 and 6 hour forecasts are granulated in normal modes of operation. In graceful degradation, extended forecasts up to 24 hours may be used.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.07_963 The granulation software shall regranulate time interpolated versions of the NCEP GFS forecasts to an OMPS granulation.

Rationale: The ancillary inputs need to match the granulation for the desired output data product. The 3 and 6 hour forecasts are granulated in normal modes of operation. In graceful degradation, extended forecasts up to 24 hours may be used.

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.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.07_182 The granulation software shall granulate time interpolated versions of the NAAPS Total Optical Depth forecast to a VIIRS granulation.

Rationale: The ancillary inputs need to match the granulation for the desired output data product. The 3 and 6 hour forecasts are granulated in normal modes of operation. In graceful degradation, extended forecasts up to 24 hours may be used.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.07_965 The granulation software shall granulate time interpolated versions of the NAVGEM forecasts to an OMPS granulation.

Rationale: The ancillary inputs need to match the granulation for the desired output data product. The 3 and 6 hour forecasts are granulated in normal modes of operation. In graceful degradation, extended forecasts up to 24 hours may be used.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.07_966 The granulation software shall regranulate select VIIRS products to an OMPS granulation.

Rationale: The following VIIRS products are regranulated for use in OMPS processing: Gridded Snow/Ice Cover IP, Snow Cover EDR, Ice Surface Temperature EDR, and Quarterly Surface Type Ancillary data.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.07_183 The granulation software shall granulate time interpolated versions of the NAVGEM forecasts to a VIIRS granulation.

Rationale: The ancillary inputs need to match the granulation for the desired output data product. The 3 and 6 hour forecasts are granulated in normal modes of operation. In graceful degradation, extended forecasts up to 24 hours may be used.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

3.2.3 Algorithm Exception Handling

SRS.01.07_974 The VIIRS Snow/Ice Cover Gran IP software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Ancillary Data, Gridding and Granulation (474-00448-04-07) <SnowIceCover_GranIP><fill>.

Rationale: The IP software through its computing algorithm must fill the VIIRS Snow/Ice Cover Gran IP values if downstream processes require fill values for the empty grid in the template tile based on the established fill conditions to satisfy exclusion and fill conditions.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.07_975 The VIIRS Gridded Snow/Ice Cover Rolling Tile software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm

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.

Specification Vol IV: SRSPF for Ancillary Data, Gridding and Granulation (474-00448-04-07) <SnowIceCover_GridIP><fill>.

Rationale: The Gridded IP software must supply values for all on-earth VIIRS Snow/Ice Cover Rolling Tile Gridded IP cells. When valid data is not available, the GIP will not be updated. Off earth tiles contain FILL in general but this is not updated by the Gridded IP software.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.07_976 The VIIRS SR-BT-VI Monthly Final Tile software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Ancillary Data, Gridding and Granulation (474-00448-04-07) <MonthBT-SR-VI_GridIP><fill>.

Rationale: The Gridded IP software must supply values for all land VIIRS SR-BT-VI Monthly Final Tile Gridded IP cells. When valid data is not available, the GIP will not be updated. Off earth tiles contain FILL in general but this is not updated by the Gridded IP software.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.07_977 The VIIRS Land Surface Albedo 17-day Tile software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Ancillary Data, Gridding and Granulation (474-00448-04-07) <LSA_GridIP><fill>.

Rationale: The Gridded IP software must supply values for all land VIIRS Land Surface Albedo 17-day Tile Gridded IP cells. When valid data is not available, the GIP will not be updated. Off earth tiles contain FILL in general but this is not updated by the Gridded IP software.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.07_978 The VIIRS NBAR NDVI Rolling Tile software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Ancillary Data, Gridding and Granulation (474-00448-04-07) <Roll-NBAR-NDVI_GridIP><fill>.

Rationale: The Gridded IP software must supply values for all land VIIRS NBAR NDVI Rolling Tile Gridded IP cells. When valid data is not available, the GIP will not be updated. Off earth tiles contain FILL in general but this is not updated by the Gridded IP software.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

3.3 External Interfaces

3.3.1 Inputs

SRS.01.07_962 The gridding and granulation software shall incorporate inputs as specified in Table 3-1.

Mission Effectivity: S-NPP, JPSS-1, JPSS-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.

SRS.01.07_986 The Gran-To-Grid software shall ingest tables and coefficients formatted in accordance with Section 7 of the JPSS Algorithm Specification Vol II: Data Dictionary for Ancillary Data Handling Gridding and Granulation (474-00448-02-07).

Rationale: This defines the formats for Lookup Tables, and Processing Coefficients for input into the algorithm module.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.07_993 The Grid-To-Grid software shall ingest tables and coefficients formatted in accordance with Section 7 of the JPSS Algorithm Specification Vol II: Data Dictionary for Ancillary Data Handling Gridding and Granulation (474-00448-02-07).

Rationale: This defines the formats for Lookup Tables, and Processing Coefficients for input into the algorithm module.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.07_987 The VIIRS Snow/Ice Cover IP software shall ingest tables and coefficients formatted in accordance with Section 7 of the JPSS Algorithm Specification Vol II: Data Dictionary for Ancillary Data Handling Gridding and Granulation (474-00448-02-07).

Rationale: This defines the formats for Lookup Tables, and Processing Coefficients for input into the algorithm module.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.07_989 The Gran-To-Grid software shall ingest ancillary data formatted in accordance with Section 6 of the JPSS Algorithm Specification Vol II: Data Dictionary for Ancillary Data Handling Gridding and Granulation (474-00448-02-07).

Rationale: This defines the formats for Lookup Tables, and Processing Coefficients for input into the algorithm module.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.07_994 The Grid-To-Grid software shall ingest ancillary data formatted in accordance with Section 6 of the JPSS Algorithm Specification Vol II: Data Dictionary for Ancillary Data Handling Gridding and Granulation (474-00448-02-07).

Rationale: This defines the formats for Lookup Tables, and Processing Coefficients for input into the algorithm module.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

Table 3-1 and Figure 3-1 are best viewed together since they describe the processes governed by this SRS in different ways. The figure diagrams the data flowing into, out of, and within the code governed by this SRS. The table lists these same data interactions as well as all downstream dependencies for outputs from this SRS.

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.

Each row in the table describes a single software interaction – data flowing from one software item to another. The data is listed in the first column. The second column includes the mnemonic or short name for the data. Blanks indicate there is no mnemonic. The third and fourth columns contain the SRS that generates the data product(s) in the first column, and the SRS that receives those products. The final two columns contain the actual function name in Algorithm Development Library (ADL) that produces those products, and the function that inputs those products. The SRS's titled "Ingest MSD" and "Store/Retrieve" are non-existent SRS's functioning as data handling for the IDPS. The software functions "Store Products" and "Retrieve Products" are similar non-existent functions that operate as IDPS data handling.

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.

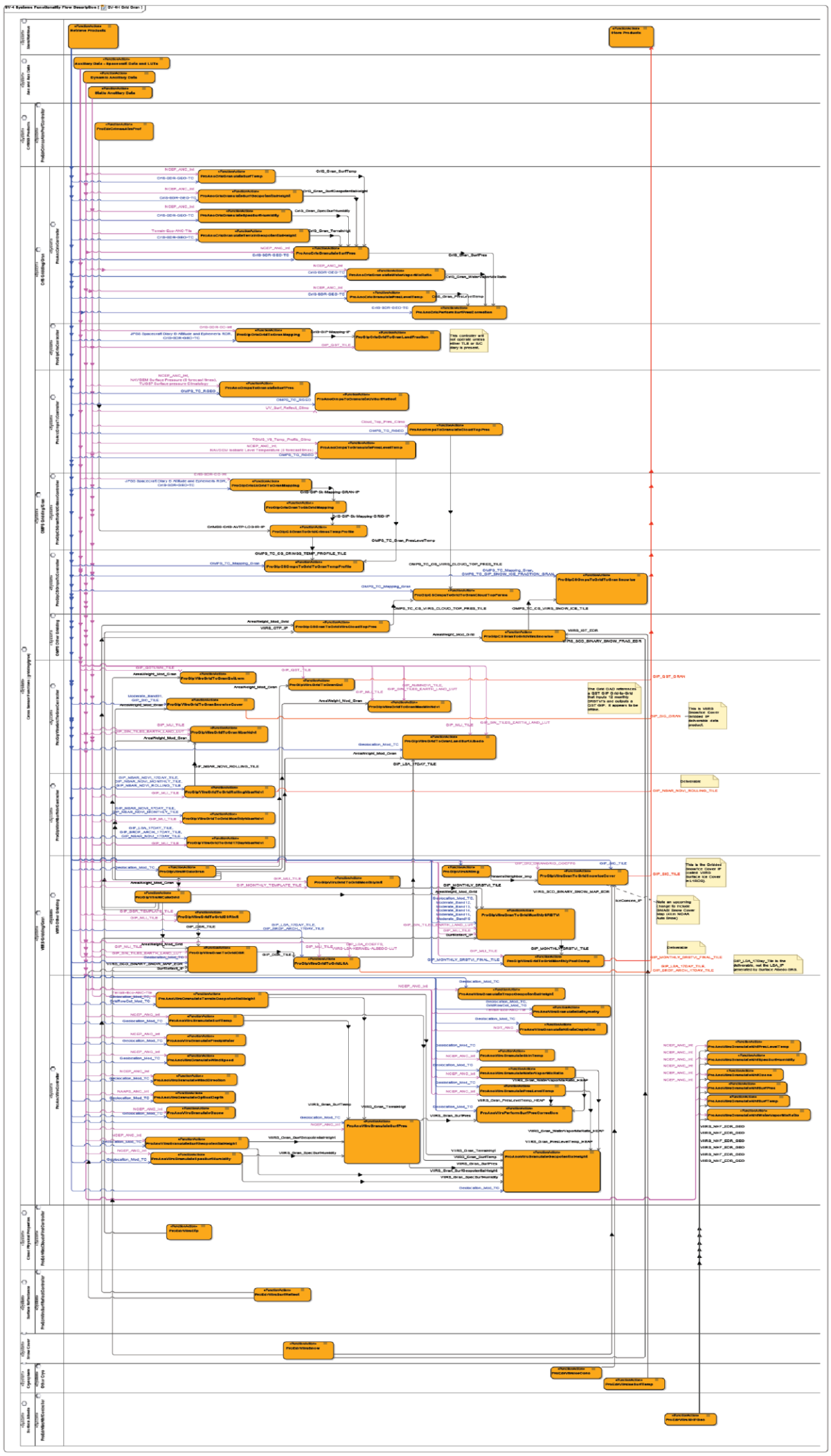

Figure: 3-1 Ancillary Data Handling Gridding and Granulation Data Flows

Table: 3-1 Systems Resource Flow Matrix: Ancillary Data Handling Gridding and Granulation

Data Product Name	Mnemonic or Short Name, if applicable	Source SRS	Receiving SRS	Sending Function	Receiving Function
NCEP_ANC_Int	AN_NP-L10000	Anc and Aux Data	Grid Gran	Dynamic Ancillary Data	ProAncViirsGranulateNhfPresLevelTemp
VIIRS_NHF_AGG_LUT	NP_NU-LM0234-007	Anc and Aux Data	Surface Albedo	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsNHFGeo
OCC_Rayleigh_LUT OCC_DD_Rayleigh_CORR_LUT OCC_POLAR_LUT OCC_AOPROP_LUT OCC_AEROCOEFFS_LUT OCC_DIFFUSE_LUT OCC_Pro_Coeffs OCC_EDR_DQTT VIIRS-BP-FlagThreshold-LUT	NP_NU-LM0040-013 NP_NU-LM0234-003 NP_NU-LM0234-002 NP_NU-LM0040-011 NP_NU-LM0040-010 NP_NU-LM0040-012 DP_NU-LM2030-000 NP_NU-LM0235-002	Anc and Aux Data	Ocean Color and Chlorophyll	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsOCC
SST_Coeffs_LUT PRO_SST_Coeffs_LUT SST_DQTT	NP_NU-LM0233-018 DP_NU-LM2030-000	Anc and Aux Data	Sea Surface Temperature	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsSst
VIIRS-LSA-IP-AC VIIRS-LSA-DPSA-COEFF-LUT VIIRS-LSA-KERNEL-ALBEDO-LUT VIIRS-LSA-BPSA-LUT VIIRS-LSA-BPSA-REGRESS-LUT VIIRS-LSA-BPSA-SEA-ICE-LUT	NP_NU-LM0040-016 NP_NU-LM0233-019 NP_NU-LM0040-014 NP_NU-LM0040-015 NP_NU-LM0040-111	Anc and Aux Data	Surface Albedo	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsLandSurfAlbedo
GIP_SIN_TILES_EARTH_LAND_LUT GIP_LSA_TILE	NP_NU-LM0233-074	Anc and Aux Data	Grid Gran	Auxiliary Data - Spacecraft Data and LUTs	ProGipViirsGridToGranLandSurfAlbedo
VIIRS-BP-	NP_NU-LM0235-002	Anc and Aux Data	Surface Albedo	Auxiliary Data -	ProEdrViirsSurfaceAlb

Data Product Name	Mnemonic or Short Name, if applicable	Source SRS	Receiving SRS	Sending Function	Receiving Function
FlagThreshold-LUT VIIRS-SURFACE-ALBEDO-EDR-DQTT-Int VIIRS_LSA_IPSCALED VIIRS_OCEAN_ALBEDO_IPSCALED	DP_NU-LM2030-000			Spacecraft Data and LUTs	edo
SNOWDEPTH-THICKNESS-LUT BROADBAND-ALBEDO-LUT ICE-AGE-CFG-PARAMS-LUT ICE-REFLECTANCE-LUT VIIRS_SIC_EDR_DQTT	NP_NU-LM0233-006 NP_NU-LM0040-009 DP_NU-LM2030-000	Anc and Aux Data	Cryosphere	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsIceAge
VIIRS_IST_LUT VIIRS_IST_COEFF_LUT VIIRS_IST_DQTT	NP_NU-LM0233-011 DP_NU-LM2030-000	Anc and Aux Data	Cryosphere	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsIceSurfTemp
VIIRS_IQ_LUT VIIRS_IC_LUT	NP_NU-LM0233-010 NP_NU-LM0233-008	Anc and Aux Data	Cryosphere	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsIceConc
VIIRS_IQ_LUT VIIRS_STIP_LUT	NP_NU-LM0233-010	Anc and Aux Data	Cryosphere	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsIceQual
SurfType_EDRSCALED VIIRS-LST-LUT VIIRS-LST-EDR-AC VIIRS-LST-DQTT	NP_NU-LM0233-012 DP_NU-LM2030-000	Anc and Aux Data	Land Surface Temperature	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsLst
GIP_AMMNDVI_TILE GIP_SIN_TILES_EARTH_LAND_LUT	NP_NU-LM0233-074	Anc and Aux Data	Grid Gran	Auxiliary Data - Spacecraft Data and LUTs	ProGipViirsGridToGranMaxMinNdvi

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.

Data Product Name	Mnemonic or Short Name, if applicable	Source SRS	Receiving SRS	Sending Function	Receiving Function
GIP_QST_TILE		Anc and Aux Data	Grid Gran	Auxiliary Data - Spacecraft Data and LUTs	ProGipViirsGridToGranQst
VIIRS_ST_EDR_DQTT SurfType_Coefficients	DP_NU-LM2030-000	Anc and Aux Data	Surface Type	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsSurfType
VIIRS_SCD_SNOW_COVER_QUAL_LUT VIIRS_SCD_SNOW_COVER_LUT VIIRS_SCD_EDR_AC VIIRS_SCD_BINARY_SNOW_FRAC_EDR_DQTT VIIRS_SCD_BINARY_SNOW_MAP_EDR_DQTT	NP_NU-LM0233-072 NP_NU-LM0233-073 DP_NU-LM2020-001 DP_NU-LM2030-000 DP_NU-LM2030-000	Anc and Aux Data	Snow Cover	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsSnow
VI_Pro_Coeffs VI_DQTT	DP_NU-LM2030-000	Anc and Aux Data	Vegetation Index	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsVI
SRCoeffs_LUT AOTValues_LUT SolZenAngles_LUT SatZenAngles_LUT IncScatAngles_LUT ScatAngDims_LUT DownTrans_LUT SphAlb_LUT AtmReflect_LUT	 NP_NU-LM0233-064 NP_NU-LM0233-070 NP_NU-LM0233-068 NP_NU-LM0233-067 NP_NU-LM0233-069 NP_NU-LM0233-066 NP_NU-LM0233-071 NP_NU-LM0233-065	Anc and Aux Data	Surface Reflectance	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsSurfReflect
VIIRS_GCE_COEFFS VIIRS_AGG_LUT VIIRS_CBH_EDR_DQTT VIIRS_CCL_EDR_DQTT VIIRS_CEPS_EDR_DQTT	 NP_NU-LM0233-005 DP_NU-LM2030-000 DP_NU-LM2030-000 DP_NU-LM2030-000 DP_NU-LM2030-000 DP_NU-LM2030-000 DP_NU-LM2030-000	Anc and Aux Data	Cloud Physical Properties	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsGce

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.

Data Product Name	Mnemonic or Short Name, if applicable	Source SRS	Receiving SRS	Sending Function	Receiving Function
VIIRS_COT_EDR_DQTT VIIRS_CTH_EDR_DQTT VIIRS_CTP_EDR_DQTT VIIRS_CTT_EDR_DQTT	DP_NU-LM2030-000				
VIIRS_CBH_LWC_LUT VIIRS_CBH_IP_COEFFS	NP_NU-LM0233-001	Anc and Aux Data	Cloud Physical Properties	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsCbh
VIIRS_CCL_Coeffs VIIRS_CT_LUT VIIRS_AGG_LUT	NP_NU-LM0233-002 NP_NU-LM0233-005	Anc and Aux Data	Cloud Physical Properties	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsCcl
Geolocation_Mod_Parameters	NP_NU-LM0233-212	Anc and Aux Data	Cloud Physical Properties	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsPpc
NCEP_ANC_Int	AN_NP-L10000	Anc and Aux Data	Grid Gran	Dynamic Ancillary Data	ProAncViirsGranulateTropoGeopotentialHeight
VIIRS_CTP_Coeffs VIIRS_CTP_COT_LUT VIIRS_CTP_MSC_LUT VIIRS_CTP_OSS_OD_LUT VIIRS_CTP_OSS_SEL_LUT	NP_NU-LM0040-004 NP_NU-LM0040-005 NP_NU-LM0040-006 NP_NU-LM0040-007	Anc and Aux Data	Cloud Physical Properties	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsCtp
VIIRS_COP_IceCloud_LUT VIIRS_COP_WaterCloud_LUT VIIRS_COP_Transmittance_LUT VIIRS_COP_Surface_LUT	NP_NU-LM0040-002 NP_NU-LM0040-003 NP_NU-LM0040-017 NP_NU-LM0233-063 NP_NU-LM0233-088 NP_NU-LM0233-089	Anc and Aux Data	Cloud Optical Properties	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsCop

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.

Data Product Name	Mnemonic or Short Name, if applicable	Source SRS	Receiving SRS	Sending Function	Receiving Function
VIIRS_COP_IR_LUT VIIRS_COP_RTM_LUT VIIRS_COP_Coeffs					
NCEP_ANC_Int	AN_NP-L10000	Anc and Aux Data	Grid Gran	Dynamic Ancillary Data	ProAncViirsGranulatePresLevelTemp
NCEP_ANC_Int	AN_NP-L10000	Anc and Aux Data	Grid Gran	Dynamic Ancillary Data	ProAncViirsGranulateWaterVaporMixRatio
NCEP_ANC_Int	AN_NP-L10000	Anc and Aux Data	Grid Gran	Dynamic Ancillary Data	ProAncViirsGranulateSkinTemp
NCEP_ANC_Int	AN_NP-L10000	Anc and Aux Data	Grid Gran	Dynamic Ancillary Data	ProAncViirsGranulateSpecSurfHumidity
NCEP_ANC_Int	AN_NP-L10000	Anc and Aux Data	Grid Gran	Dynamic Ancillary Data	ProAncViirsGranulateSurfGeopotentialHeight
NCEP_ANC_Int	AN_NP-L10000	Anc and Aux Data	Grid Gran	Dynamic Ancillary Data	ProAncViirsGranulateSurfPres
NCEP_ANC_Int	AN_NP-L10000	Anc and Aux Data	Grid Gran	Dynamic Ancillary Data	ProAncViirsGranulateOzone
NCEP_ANC_Int	AN_NP-L10000	Anc and Aux Data	Grid Gran	Dynamic Ancillary Data	ProAncViirsGranulateOpticalDepth
NCEP_ANC_Int	AN_NP-L10000	Anc and Aux Data	Grid Gran	Dynamic Ancillary Data	ProAncViirsGranulateWindDirection
VIIRS-AEROSOL-EDR-INPUT-DIAGNOSTICS VIIRS-AOT-LUT VIIRS-AOT-SUNGLINT-LUT VIIRS-AOT-CLIMO VIIRS-AEROS-EDR-DQTT VIIRS-AEROSOL-CFG-PARMS VIIRS-SM-EDR-DQTT	NP_NU-LM0040-000 NP_NU-LM0040-001 AN_NP-L10010-001 DP_NU-LM2030-000 DP_NU-LM2030-000	Anc and Aux Data	Aerosol Products	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsAerosol
GIP_SIN_TILES_EARTH_LAND_LUT	NP_NU-LM0233-074	Anc and Aux Data	Grid Gran	Auxiliary Data - Spacecraft Data and	ProGipViirsGridToGranNbarNdvi

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.

Data Product Name	Mnemonic or Short Name, if applicable	Source SRS	Receiving SRS	Sending Function	Receiving Function
				LUTs	
CloudMask_Thresholds		Anc and Aux Data	Cloud Mask	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsCM
NCEP_ANC_Int	AN_NP-L10000	Anc and Aux Data	Grid Gran	Dynamic Ancillary Data	ProAncViirsGranulate WindSpeed
NCEP_ANC_Int	AN_NP-L10000	Anc and Aux Data	Grid Gran	Dynamic Ancillary Data	ProAncViirsGranulateP recipWater
NCEP_ANC_Int	AN_NP-L10000	Anc and Aux Data	Grid Gran	Dynamic Ancillary Data	ProAncViirsGranulateS urfTemp
VIIRS_AF_DQTT ActiveFires_Thresholds	DP_NU-LM2030-000	Anc and Aux Data	Active Fires	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsActiveFires
GIP_QSTLWM_TILE		Anc and Aux Data	Grid Gran	Auxiliary Data - Spacecraft Data and LUTs	ProGipViirsGridToGra nQstLwm
GIP_QST_TILE		Anc and Aux Data	Grid Gran	Auxiliary Data - Spacecraft Data and LUTs	ProGipCrisGridToGran LandFraction
CrIS-SDR-CC-Int	DP_NU-LM2020-001	Anc and Aux Data	Grid Gran	Auxiliary Data - Spacecraft Data and LUTs	ProGipCris5kGridToGr anMapping
OMPS_TC_EDR_LUT OMPS_TC_EDR_DQT T	DP_NU-LM2030-000	Anc and Aux Data	Ozone Total Column	Auxiliary Data - Spacecraft Data and LUTs	ProEdrOmpsTcEdr
UV_Surf_Reflect_Clim o	AN_NP-L10220-001	Anc and Aux Data	Grid Gran	Static Ancillary Data	ProAncOmpsTcGranula teUVSurfReflect
NCEP_ANC_Int	AN_NP-L10000	Anc and Aux Data	Grid Gran	Dynamic Ancillary Data	ProAncOmpsTcGranula tePresLevelTemp
TOMS_V8_Temp_Prof ile_Climo	AN_NP-L20230-004	Anc and Aux Data	Grid Gran	Static Ancillary Data	ProAncOmpsTcGranula tePresLevelTemp
Cloud_Top_Pres_Climo	AN_NP-L10020-001	Anc and Aux Data	Grid Gran	Static Ancillary Data	ProAncOmpsTcGranula teCloudTopPres
OMPS_TC_EDR_LUT		Anc and Aux Data	Grid Gran	Auxiliary Data - Spacecraft Data and LUTs	ProEdrOmpsTcIp

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.

Data Product Name	Mnemonic or Short Name, if applicable	Source SRS	Receiving SRS	Sending Function	Receiving Function
NAVGEM Surface Pressure (8 forecast times)	AN_NP-L20210-003	Anc and Aux Data		Dynamic Ancillary Data	ProAncOmpsTcGranulateSurfPres
OMPS_NP_EDR_COEFF OMPS_NP_LUT OMPS_NP_IP_DQTT	DP_NU-LM2030-000	Anc and Aux Data	Ozone Nadir Profile	Auxiliary Data - Spacecraft Data and LUTs	ProEdrOmpsNP
GIP_SIC_TILE	IMPE_VGSC_R0100	Anc and Aux Data	OMPS NP RDR/SDR	Static Ancillary Data	ProGipOmpsTcGridToGranSnowIceFraction
USNO-Polarwander-UT1 JPL-Planet-Ephem		Anc and Aux Data	Geolocation and S/C	Dynamic Ancillary Data	ProSdrCmnGeo
GIP_QST_TILE		Anc and Aux Data	OMPS NP RDR/SDR	Static Ancillary Data	ProGipOmpsNpGridToGranSunGlint
GIP_QST_TILE		Anc and Aux Data	OMPS TC RDR/SDR	Static Ancillary Data	
NCEP_ANC_Int	AN_NP-L10000	Anc and Aux Data	Grid Gran	Dynamic Ancillary Data	ProAncCrisGranulatePresLevelTemp
NCEP_ANC_Int	AN_NP-L10000	Anc and Aux Data	Grid Gran	Dynamic Ancillary Data	ProAncCrisGranulateWaterVaporMixRatio
NCEP_ANC_Int	AN_NP-L10000	Anc and Aux Data	Grid Gran	Dynamic Ancillary Data	ProAncCrisGranulateSpecSurfHumidity
NCEP_ANC_Int	AN_NP-L10000	Anc and Aux Data	Grid Gran	Dynamic Ancillary Data	ProAncCrisGranulateSurfGeopotentialHeight
NCEP_ANC_Int		Anc and Aux Data	Grid Gran	Dynamic Ancillary Data	ProAncCrisGranulateSurfTemp
	AN_NP-L10000	Anc and Aux Data	Grid Gran	Dynamic Ancillary Data	ProAncCrisGranulateSurfPres
CrIS-SDR-CC-Int	DP_NU-LM2020-001	Anc and Aux Data	Grid Gran	Auxiliary Data - Spacecraft Data and LUTs	ProGipCrisGridToGranMapping
CrIMSS_Night_LAA_EOF_LUT CrIMSS_EDR_DQTT CrIMSS_Ozone_IP_DQTT	NP_NU-LM0230-009 DP_NU-LM2030-000 DP_NU-LM2030-000	Anc and Aux Data	CrIMSS Products	Auxiliary Data - Spacecraft Data and LUTs	ProEdrCrimssAtmProf
Lunar_Phase	NP_NU-LM0233-016	Anc and Aux Data	VIIRS Imagery	Dynamic Ancillary	ProEdrViirsNccImagery

Data Product Name	Mnemonic or Short Name, if applicable	Source SRS	Receiving SRS	Sending Function	Receiving Function
				Data	
NCC_Thresholds NCC_GVVSSE_LUT NCC_GVVSLE_LUT NCC_Solar_BRDF_LUT NCC_Lunar_BRDF_LUT VIIRS_NCC_EDR_DQTT	NP_NU-LM0233-017 NP_NU-LM0233-015 DP_NU-LM2030-000	Anc and Aux Data	VIIRS Imagery	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsNccImagery
VIIRS_GTM_EDR_DQTT_1 VIIRS_GTM_EDR_DQTT_2 VIIRS_GTM_EDR_DQTT_3 VIIRS_GTM_EDR_DQTT_4 VIIRS_GTM_EDR_DQTT_5	DP_NU-LM2030-000 DP_NU-LM2030-000 DP_NU-LM2030-000 DP_NU-LM2030-000 DP_NU-LM2030-000		VIIRS Imagery	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsIChannelImagery
CmnGeo-Param-LUT CmnGeo-Anomaly_TLE	NP_NU-LM0233-215	Anc and Aux Data	Geolocation and S/C	Auxiliary Data - Spacecraft Data and LUTs	ProSdrCmnGeo
OMPS_NP_SDR_CC_Int OMPS_NP_CALCONST_LUT OMPS_NP_FAM_LUT OMPS_NP_OSOL_LUT OMPS_NP_PSOL_LUT OMPS_NP_SIRR_CC_LUT OMPS_NP_SRF_LUT OMPS_NP_SRPM_LUT	DP_NU-LM2020-001 NP_NU-LM0240-108 NP_NU-LM0240-109 NP_NU-LM0240-110 NP_NU-LM0240-111 NP_NU-LM0240-115 NP_NU-LM0240-113 NP_NU-LM0240-118 NP_NU-LM0240-136 NP_NU-LM0240-134 NP_NU-LM0240-135 NP_NU-LM0240-127 NP_NU-LM0240-121 NP_NU-LM0240-120	Anc and Aux Data	OMPS NP RDR/SDR	Auxiliary Data - Spacecraft Data and LUTs	ProSdrOmpsNpEarth

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.

Data Product Name	Mnemonic or Short Name, if applicable	Source SRS	Receiving SRS	Sending Function	Receiving Function
OMPS_NP_BIAS_GND_PI OMPS_NP_DARKS_GND_PI OMPS_NP_SAA_DARKS_GND_PI OMPS_NP_CF_EARTH_GND_PI OMPS_NP_EV_SAMPLE_GND_PI OMPS_NP_LINEARITY_GND_PI OMPS_NP_MACROTABLE_GND_PI OMPS_NP_TIMING_PATTERN_GND_PI OMPS_NP_WAVELENGTH_GND_PI OMPS_TBL_VERS_GND_PI	NP_NU-LM0240-122 NP_NU-LM0240-119 NP_NU-LM0240-125 NP_NU-LM0240-130				
OMPS_NP_SDR_CC_Int OMPS_NP_BRDFGRIDS_LUT OMPS_NP_CALCONST_LUT OMPS_NP_FAM_LUT OMPS_NP_LSHF_LUT OMPS_NP_OSOL_LUT OMPS_NP_PSOL_LUT OMPS_NP_SIRR_LUT OMPS_NP_SIRR_CC_LUT OMPS_NP_SRF_LUT	DP_NU-LM2020-001 NP_NU-LM0240-116 NP_NU-LM0240-108 NP_NU-LM0240-109 NP_NU-LM0240-117 NP_NU-LM0240-110 NP_NU-LM0240-111 NP_NU-LM0240-112 NP_NU-LM0240-115 NP_NU-LM0240-113 NP_NU-LM0240-118 NP_NU-LM0240-114 NP_NU-LM0240-105 NP_NU-LM0240-100 NP_NU-LM0240-106 NP_NU-LM0240-107 NP_NU-LM0240-104	Anc and Aux Data	OMPS NP RDR/SDR	Auxiliary Data - Spacecraft Data and LUTs	ProSdrOmpsNpCal

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.

Data Product Name	Mnemonic or Short Name, if applicable	Source SRS	Receiving SRS	Sending Function	Receiving Function
OMPS_NP_SRPM_LUT OMPS_NP_WFP_LUT OMPS_NP_CF_SOLAR_AP OMPS_NP_DARKS_AP OMPS_NP_FLUX_AP OMPS_NP_RAW_FLUX_AP OMPS_NP_WAVEMON_AP OMPS_TBL_VERS_GND_PI OMPS_NP_EV_SAMPLE_GND_PI OMPS_NP_LED_SAMPLE_GND_PI OMPS_NP_LINEARITY_GND_PI OMPS_NP_MACROTABLE_GND_PI OMPS_NP_SOLAR_CAL_SAMPLE_GND_PI OMPS_NP_TIMING_PATTERN_GND_PI OMPS_NP_WAVELENGTH_GND_PI	NP_NU-LM0240-130 NP_NU-LM0240-121 NP_NU-LM0240-123 NP_NU-LM0240-120 NP_NU-LM0240-122 NP_NU-LM0240-124 NP_NU-LM0240-119 NP_NU-LM0240-125				
OMPS_TBL_VERS_GND_PI OMPS_TC_BIAS_GND_PI OMPS_TC_CF_EARTH_GND_PI OMPS_TC_DARKS_GND_PI	NP_NU-LM0240-130 NP_NU-LM0240-133 NP_NU-LM0240-027 NP_NU-LM0240-131 NP_NU-LM0240-132 NP_NU-LM0240-008 NP_NU-LM0240-009 NP_NU-LM0240-010	Anc and Aux Data	OMPS TC RDR/SDR	Auxiliary Data - Spacecraft Data and LUTs	ProSdrOmpsTcEarth

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.

Data Product Name	Mnemonic or Short Name, if applicable	Source SRS	Receiving SRS	Sending Function	Receiving Function
OMPS_TC_SAA_DARKS_GND_PI OMPS_TC_CALCONST_LUT OMPS_TC_FAM_LUT OMPS_TC_OSOL_LUT OMPS_TC_PSOL_LUT OMPS_TC_SRF_LUT OMPS_TC_SRPM_LUT OMPS_TC_STRAYLIGHT_LUT OMPS_TC_SIRR_CC_LUT OMPS_TC_WAVELENGTH_GND_PI OMPS_TC_EV_SAMPLE_GND_PI OMPS_TC_MACROTABLE_GND_PI OMPS_TC_LINEARITY_GND_PI OMPS_TC_TIMING_PATTERN_GND_PI OMPS_TC_SDR_CC_Int	NP_NU-LM0240-011 NP_NU-LM0240-013 NP_NU-LM0240-019 NP_NU-LM0240-129 NP_NU-LM0240-015 NP_NU-LM0240-026 NP_NU-LM0240-022 NP_NU-LM0240-023 NP_NU-LM0240-021 NP_NU-LM0240-020 DP_NU-LM2020-001				
OMPS_TC_BIAS_AP OMPS_TC_BRDFGRIDS_LUT OMPS_TC_CALCONST_LUT OMPS_TC_SDR_CC_Int OMPS_TC_CF_SOLAR_AP	NP_NU-LM0240-002 NP_NU-LM0240-017 NP_NU-LM0240-008 DP_NU-LM2020-001 NP_NU-LM0240-005 NP_NU-LM0240-000 NP_NU-LM0240-009 NP_NU-LM0240-003 NP_NU-LM0240-006		OMPS TC RDR/SDR	Auxiliary Data - Spacecraft Data and LUTs	ProSdrOmpsTcCal

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.

Data Product Name	Mnemonic or Short Name, if applicable	Source SRS	Receiving SRS	Sending Function	Receiving Function
OMPS_TC_DARKS_AP	NP_NU-LM0240-018				
OMPS_TC_FAM_LUT	NP_NU-LM0240-010				
OMPS_TC_FLAT_HISTORY_AP	NP_NU-LM0240-011				
OMPS_TC_FLUX_AP	NP_NU-LM0240-007				
OMPS_TC_LSHF_LUT	NP_NU-LM0240-012				
OMPS_TC_OSOL_LUT	NP_NU-LM0240-019				
OMPS_TC_PSOL_LUT	NP_NU-LM0240-014				
OMPS_TC_RAW_FLUX_AP	NP_NU-LM0240-004				
OMPS_TC_SIRR_LUT	NP_NU-LM0240-130				
OMPS_TC_SRPM_LUT	NP_NU-LM0240-026				
OMPS_TC_WFP_LUT	NP_NU-LM0240-022				
OMPS_TC_WAVEMON_AP	NP_NU-LM0240-024				
OMPS_TBL_VERS_GND_PI	NP_NU-LM0240-025				
OMPS_TC_WAVELENGTH_GND_PI	NP_NU-LM0240-023				
OMPS_TC_EV_SAMPLE_GND_PI	NP_NU-LM0240-021				
OMPS_TC_LED_SAMPLE_GND_PI	NP_NU-LM0240-020				
OMPS_TC_SOLAR_CAL_SAMPLE_GND_PI	NP_NU-LM0240-015				
OMPS_TC_MACROTABLE_GND_PI					
OMPS_TC_LINEARITY_GND_PI					
OMPS_TC_TIMING_PATTERN_GND_PI					

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.

Data Product Name	Mnemonic or Short Name, if applicable	Source SRS	Receiving SRS	Sending Function	Receiving Function
OMPS_TC_SIRR_CC_LUT					
CrIS-SDR-CORRECTION-MATRIX CrIS-SDR-DQTT CrIS-SDR-CC-Int CrIS-SDR-FILL-PACKET-LUT	NP_NU-LM0130-000 DP_NU-LM2030-000 DP_NU-LM2020-001 NP_NU-LM0230-016	Anc and Aux Data	CrIS RDR/SDR	Auxiliary Data - Spacecraft Data and LUTs	ProSdrCris
ATMS_SDR_COEFFS ATMS_SDR_DQTT ATMS_TDR_DQTT	DP_NU-L00020-020 DP_NU-LM2030-000 DP_NU-LM2030-000	Anc and Aux Data	ATMS RDR/SDR/TDR	Auxiliary Data - Spacecraft Data and LUTs	ProSdrAtms
ATMS_SDR_COEFFS	DP_NU-L00020-020	Anc and Aux Data	ATMS RDR/SDR/TDR	Auxiliary Data - Spacecraft Data and LUTs	ProSdrAtmsVerifiedRDR
DeltaCLut TeleCoeffs RadiometricParameters RsrLut SolarIradLut CoeffALut CoeffBLut GainLut SOLAR_DIFF_REFLECTANCE_LUT SOLAR_DIFF_RVS_LUT SOLAR_DIFF_PROC_COEFFS SOLAR_DIFF_HIST_AGG_AUX SOLAR_DIFF_HIST_AGG_AC SOLAR_DIFF_AGG_LUT VIIRS_SOLAR_DIFF_ROT_MATRIX_LUT	NP_NU-LM0233-024 NP_NU-LM0233-048 NP_NU-LM0233-041 NP_NU-LM0233-043 NP_NU-LM0233-047 NP_NU-LM0233-022 NP_NU-LM0233-023 NP_NU-LM0233-032 NP_NU-LM0233-056 NP_NU-LM0233-057 NP_NU-LM0233-055 IMPE_VSDH_R0100 NP_NU-LM0233-059 NP_NU-LM0233-059 NP_NU-LM0233-080 NP_NU-LM0233-082 NP_NU-LM0233-081 NP_NU-LM0233-085 NP_NU-LM0233-083	Anc and Aux Data	VIIRS RDR/SDR	Auxiliary Data - Spacecraft Data and LUTs	ProSdrViirsSolarDiffuser

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.

Data Product Name	Mnemonic or Short Name, if applicable	Source SRS	Receiving SRS	Sending Function	Receiving Function
VIIRS_SOLAR_DIFF_SDSM_TIME_LUT VIIRS_SOLAR_DIFF_SDSM_BRDF_LUT VIIRS_SOLAR_DIFF_SDSM_TRANS_SCREEN_LUT VIIRS_SOLAR_DIFF_TRANS_SCREEN_LUT					
	NP_NU-LM0233-026 NP_NU-LM0233-028 NP_NU-LM0233-033 NP_NU-LM0233-035 NP_NU-LM0233-027 NP_NU-LM0233-086 NP_NU-LM0233-087 NP_NU-LM0233-032 NP_NU-LM0233-036 NP_NU-LM0233-044 NP_NU-LM0233-037 NP_NU-LM0233-038 NP_NU-LM0233-029 NP_NU-LM0233-048 NP_NU-LM0233-047 NP_NU-LM0233-043 NP_NU-LM0233-039 NP_NU-LM0233-084 NP_NU-LM0233-041 NP_NU-LM0233-040 NP_NU-LM0233-030 NP_NU-LM0233-042 NP_NU-LM0233-045 NP_NU-LM0233-021 NP_NU-LM0233-025 NP_NU-LM0233-024 NP_NU-LM0233-022	Anc and Aux Data	VIIRS RDR/SDR		ProSdrViirsCal

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.

Data Product Name	Mnemonic or Short Name, if applicable	Source SRS	Receiving SRS	Sending Function	Receiving Function
	NP_NU-LM0233-023 DP_NU-LM2030-000				
VIIRS-BP-FlagThreshold-LUT VIIRS-BP-PSF-MOD-LUT VIIRS-BP-SUB-RADIANCE-LUT VIIRS-BRIGHT-PIXEL-AC-Int		Anc and Aux Data	VIIRS RDR/SDR	Auxiliary Data - Spacecraft Data and LUTs	ProSdrViirsBrightPixel
QaLut Geolocation_Mod_Parameters Geolocation_DNB_Parameters Geolocation_Img_Parameters	NP_NU-LM0233-040 NP_NU-LM0233-212 NP_NU-LM0233-213 NP_NU-LM0233-211		VIIRS RDR/SDR	Auxiliary Data - Spacecraft Data and LUTs	ProSdrViirsGeo

Data Product Name	Mnemonic or Short Name, if applicable	Source SRS	Receiving SRS	Sending Function	Receiving Function
GIP_SIN_TILES_EARTH_LAND_LUT	NP_NU-LM0233-074	Anc and Aux Data	Grid Gran	Auxiliary Data - Spacecraft Data and LUTs	ProGipViirsGranToGridMonthlySRBTVI
GIP_MONTHLY_TEMPLATE_TILE		Anc and Aux Data	Grid Gran	Auxiliary Data - Spacecraft Data and LUTs	ProGipViirsGridToGridMonthlyInit
GIP_SIN_TILES_EARTH_LAND_LUT	NP_NU-LM0233-074	Anc and Aux Data	Grid Gran	Auxiliary Data - Spacecraft Data and LUTs	ProGipViirsGranToGridDSR
GIP_LSA_COEFFS VIIRS-LSA-KERNEL-ALBEDO-LUT	NP_NU-LM0233-019	Anc and Aux Data	Grid Gran	Auxiliary Data - Spacecraft Data and LUTs	ProGipViirsGridToGridLSA
GIP_SIC_GRANGRID_COEFFS		Anc and Aux Data		Auxiliary Data - Spacecraft Data and LUTs	ProGipViirsGranToGridSnowIceCover
VIIRS-SUSMAT-EDRSCALED VIIRS_NHF_RTM_LUT VIIRS_NHF_COART_LUT VIIRS_NHF_AGG_LUT VIIRS-NHF-OZ-COEFF-LUT VIIRS_NHF_EDR_AC_Int VIIRS_NHF_EDR_DQTT_Int	NP_NU-LM0234-001 NP_NU-LM0234-000 NP_NU-LM0234-007 AN_NP-L10135-002 DP_NU-LM2020-001 DP_NU-LM2030-000		Surface Albedo	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsNHF
NCEP_ANC_Int	AN_NP-L10000	Anc and Aux Data	Grid Gran	Dynamic Ancillary Data	ProAncViirsGranulateNhfWaterVaporMixRatio
NCEP_ANC_Int	AN_NP-L10000	Anc and Aux Data	Grid Gran	Dynamic Ancillary Data	ProAncViirsGranulateNhfSurfTemp
NCEP_ANC_Int	AN_NP-L10000	Anc and Aux Data	Grid Gran	Dynamic Ancillary Data	ProAncViirsGranulateNhfSurfPres
NCEP_ANC_Int	AN_NP-L10000	Anc and Aux Data	Grid Gran	Dynamic Ancillary	ProAncViirsGranulateN

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.

Data Product Name	Mnemonic or Short Name, if applicable	Source SRS	Receiving SRS	Sending Function	Receiving Function
				Data	hfOzone
	AN_NP-L10000	Anc and Aux Data	Grid Gran	Dynamic Ancillary Data	ProAncViirsGranulateNhfSpecSurfHumidity
GIP_MLI_TILE		Anc and Aux Data	Grid Gran	Static Ancillary Data	ProGipViirsGridToGranNbarNdvi
GIP_MLI_TILE			Grid Gran	Static Ancillary Data	ProGipViirsGridToGranLandSurfAlbedo
		Anc and Aux Data	Grid Gran	Static Ancillary Data	ProGipViirsGridToGranMaxMinNdvi
GIP_MLI_TILE		Anc and Aux Data	Grid Gran	Static Ancillary Data	ProGipViirsGridToGrid17DayNbarNdvi
			Grid Gran	Static Ancillary Data	ProGipViirsGridToGridMonthlyNbarNdvi
GIP_MLI_TILE		Anc and Aux Data	Grid Gran	Static Ancillary Data	ProGipViirsGridToGridRollingNbarNdvi
GIP_MLI_TILE		Anc and Aux Data	Grid Gran	Static Ancillary Data	ProGipViirsGridToGridMonthlyPostComp
GIP_MLI_TILE		Anc and Aux Data	Grid Gran	Static Ancillary Data	ProGipViirsGranToGridMonthlySRBTVI
GIP_MLI_TILE		Anc and Aux Data	Grid Gran	Static Ancillary Data	ProGipViirsGridToGridMonthlyInit
GIP_MLI_TILE		Anc and Aux Data	Grid Gran	Static Ancillary Data	ProGipViirsGridToGridLSA
GIP_MLI_TILE		Anc and Aux Data	Grid Gran		ProGipViirsGranToGridDSR
GIP_DSR_TEMPLATE_TILE		Anc and Aux Data	Grid Gran	Auxiliary Data - Spacecraft Data and LUTs	ProGipViirsGridToGridDSRInit
GIP_MLI_TILE		Anc and Aux Data	Grid Gran	Static Ancillary Data	ProGipViirsGridToGridDSRInit
NDT_ANC	AN_NP-L10120-001	Anc and Aux Data	Grid Gran	Static Ancillary Data	ProAncViirsGranulateNitrateDepletion
Terrain-Eco-ANC-Tile	AN_NP-L10100-003	Anc and Aux Data	Grid Gran	Static Ancillary Data	ProAncViirsGranulateBathymetry
Terrain-Eco-ANC-Tile	AN_NP-L10100-003	Anc and Aux Data	Grid Gran	Static Ancillary Data	ProAncViirsGranulateTerrainGeopotentialHeig

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.

Data Product Name	Mnemonic or Short Name, if applicable	Source SRS	Receiving SRS	Sending Function	Receiving Function
					ht
Terrain-Eco-ANC-Tile SAA-Coeff	AN_NP-L10100-003	Anc and Aux Data	Geolocation and S/C	Static Ancillary Data	ProSdrCmnGeo

3.3.2 Outputs

SRS.01.07_170 The Grid-to-Grid software shall generate the VIIRS Land Surface Albedo 17-day Tile in conformance with the XML format file in Attachment A.1 of the JPSS Algorithm Specification Vol II: Data Dictionary for Ancillary Data Handling Gridding and Granulation (474-00448-02-07).

Rationale: The product profile must conform to the XML format file.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.07_171 The Grid-to-Grid software shall generate the VIIRS NBAR NDVI Rolling Tile Gridded IP in conformance with the XML format file in Attachment A.2 of the JPSS Algorithm Specification Vol II: Data Dictionary for Ancillary Data Handling Gridding and Granulation (474-00448-02-07).

Rationale: The product profile must conform to the XML format file.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.07_172 The Gran-to-Grid software shall generate the VIIRS Snow/Ice Cover Rolling Tile Gridded IP in conformance with the XML format file in Attachment A.5 of JPSS Algorithm Specification Vol II: Data Dictionary for Ancillary Data Handling Gridding and Granulation (474-00448-02-07).

Rationale: The product profile must conform to the XML format file.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.07_173 The Grid-to-Gran software shall generate the VIIRS Snow/Ice Cover 750m IP in conformance with the XML format file in Attachment A.6 of the JPSS Algorithm Specification Vol II: Data Dictionary for Ancillary Data Handling Gridding and Granulation (474-00448-02-07).

Rationale: The product profile must conform to the XML format file.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.07_174 The Grid-to-Grid software shall generate the VIIRS Surface Reflectance, Brightness Temperatures, & Vegetation Index Monthly Final gridded IP in conformance with the XML format file in Attachment A.7 of the JPSS Algorithm Specification Vol II: Data Dictionary for Ancillary Data Handling Gridding and Granulation (474-00448-02-07).

Rationale: The product profile must conform to the XML format file. Note that this product is for the final tile.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.07_996 The Gran-to-Grid software shall generate the VIIRS Daily Surface Reflectance tile gridded IP in conformance with the XML format file in Attachment A.9 of

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.

the JPSS Algorithm Specification Vol II: Data Dictionary for Ancillary Data Handling Gridding and Granulation (474-00448-02-07).

Rationale: The product profile must conform to the XML format file.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

3.4 Science Standards

Not applicable.

3.5 Metadata Output

Not applicable.

3.6 Quality Flag Content Requirements

SRS.01.07_145 The VIIRS Land Surface Albedo 17-day Tile software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Ancillary Data, Gridding and Granulation (474-00448-04-07) <LSA_GridIP><QF>.

Rationale: Quality Flags must be generated based on the established flag conditions, logic, and format.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

3.7 Data Quality Notification Requirements

Not applicable.

3.8 Adaptation

Not applicable.

3.9 Provenance Requirements

Not applicable.

3.10 Computer Software Requirements

Not applicable.

3.11 Software Quality Characteristics

Not applicable.

3.12 Design and Implementation Constraints

SRS.01.07_159 The JPSS Common Ground System shall execute the Gran to Grid algorithms.

Rationale: The CGS must incorporate algorithm changes that are supplied by the algorithm vendor.

Mission Effectivity: S-NPP, JPSS-1, JPSS-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.

SRS.01.07_969 The JPSS Common Ground System shall execute the Grid to Grid algorithms.

Rationale: The CGS must incorporate algorithm changes that are supplied by the algorithm vendor.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.07_970 The JPSS Common Ground System shall execute the Grid to Gran algorithms.

Rationale: The CGS must incorporate algorithm changes that are supplied by the algorithm vendor. The CGS is responsible for Grid-To-Gran algorithms producing Snow/Ice Cover, QST, LSA, and NBAR NDVI Gran IPs.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

SRS.01.07_163 The JPSS Common Ground System shall execute a computing algorithm for granulating the VIIRS Snow/Ice Cover 750m granulated IP.

Rationale: The CGS must incorporate algorithm changes that are supplied by the algorithm vendor.

Mission Effectivity: S-NPP, JPSS-1, JPSS-2

3.13 Personnel Related Requirements

Not applicable.

3.14 Training Requirements

Not applicable.

3.15 Logistics Related requirements

Not applicable.

3.16 Other Requirements

Not applicable.

3.17 Packaging Requirements

Not applicable.

3.18 Precedence and Criticality

Not applicable.

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. Requirements Attributes

The Requirements Attributes Table lists each requirement with CM-controlled attributes including requirement type, mission effectivity, requirement allocation(s), block start and end, method(s) for verifying each requirement, verification events, etc.

Req ID	Requirement Text	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Verification Event
SRS.01.07_161	The Grid-to-Grid software shall incorporate a computing algorithm provided for data reduction and gridding of the VIIRS NBAR NDVI Rolling Tile gridded IP.	Ap	Grid IP	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Inspection	NA	Maturity Level Declaration
SRS.01.07_162	The Gran-to-Grid software shall incorporate a computing algorithm provided for gridding of a merged VIIRS Snow Cover Binary Map EDR and Sea Ice Concentration IP with a gridded Global Multisensor Automated Snow/Ice (GMASI) Map into a Snow/Ice Cover Rolling Tile gridded IP.	Ap	Grid IP	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Inspection	NA	Maturity Level Declaration
SRS.01.07_164	The Grid-to-Grid software shall incorporate a computing algorithm provided for gridding and post-compositing the SR-BT-VI Monthly Final Tile gridded IP.	Ap	Grid IP	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Inspection	NA	Maturity Level Declaration
SRS.01.07_165	The Gran-to-Grid software shall incorporate a computing algorithm provided for gridding the VIIRS Daily Surface Reflectance tile gridded IP.	Ap	GIP	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Inspection	NA	Maturity Level Declaration
SRS.01.07_168	The Grid-to-Grid software shall incorporate a computing algorithm provided for albedo and gridding of the VIIRS Land Surface Albedo 17-day Tile gridded IP.	Ap	Grid IP	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Inspection	NA	Maturity Level Declaration
SRS.01.07_991	The Grid-to-Grid software shall incorporate a computing algorithm provided for data reduction and	Ap	Grid IP	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Inspection	NA	Maturity Level Declaration

Req ID	Requirement Text	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Verification Event
	gridding of NBAR-NDVI-Monthly and NBAR-NDVI-17-day Tile gridded IPs.									
SRS.01.07_992	The Grid-to-Grid software shall incorporate a computing algorithm provided for albedo and gridding of BRDF Archetypal 17-day Tile gridded IP.	Ap	Grid IP	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Inspection	NA	Maturity Level Declaration
SRS.01.07_178	The ANC-to-Grid software shall reformat the NOAA Global Multi-sensor Automated Snow Ice Cover (GMASI) to a Snow/Ice Cover Rolling Tile gridded IP format.	Ap	ANC	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	2.0.0-AAT
SRS.01.07_181	The granulation software shall granulate time interpolated versions of the NCEP GFS forecasts to a VIIRS granulation.	Ap	ANC	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	2.0.0-AAT
SRS.01.07_963	The granulation software shall regranulate time interpolated versions of the NCEP GFS forecasts to an OMPS granulation.	Ap	ANC	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	2.0.0-AAT
SRS.01.07_182	The granulation software shall granulate time interpolated versions of the NAAPS Total Optical Depth forecast to a VIIRS granulation.	Ap	ANC	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	2.0.0-AAT
SRS.01.07_965	The granulation software shall granulate time interpolated versions of the NAVGEM forecasts to an OMPS granulation.	Ap	ANC	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	2.0.0-AAT
SRS.01.07_966	The granulation software shall regranulate select VIIRS products to an OMPS granulation.	Ap	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	2.0.0-AAT
SRS.01.07_183	The granulation software shall granulate time interpolated versions of the NAVGEM forecasts to a VIIRS granulation.	Ap	ANC	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	2.0.0-AAT

Req ID	Requirement Text	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Verification Event
SRS.01.07_974	The VIIRS Snow/Ice Cover Gran IP software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Ancillary Data, Gridding and Granulation (474-00448-04-07) <SnowIceCover_GranIP><fill>.	E	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	2.0.0-AAT
SRS.01.07_975	The VIIRS Gridded Snow/Ice Cover Rolling Tile software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Ancillary Data, Gridding and Granulation (474-00448-04-07) <SnowIceCover_GridIP><fill>.	E	Grid IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	2.0.0-AAT
SRS.01.07_976	The VIIRS SR-BT-VI Monthly Final Tile software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Ancillary Data, Gridding and Granulation (474-00448-04-07) <MonthBT-SR-VI_GridIP><fill>.	E	Grid IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	2.0.0-AAT
SRS.01.07_977	The VIIRS Land Surface Albedo 17-day Tile software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for Ancillary Data, Gridding and Granulation (474-00448-04-07) <LSA_GridIP><fill>.	E	Grid IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	2.0.0-AAT
SRS.01.07_978	The VIIRS NBAR NDVI Rolling Tile software shall set <FillField> to <FillValue> according to <FillCondition> specified in the JPSS	E	Grid IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	2.0.0-AAT

Req ID	Requirement Text	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Verification Event
	Algorithm Specification Vol IV: SRSPF for Ancillary Data, Gridding and Granulation (474-00448-04-07) <Roll-NBAR-NDVI_GridIP><fill>.									
SRS.01.07_962	The gridding and granulation software shall incorporate inputs as specified in Table 3-1.	I	ANC	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	2.0.0-AAT
SRS.01.07_986	The Gran-To-Grid software shall ingest tables and coefficients formatted in accordance with Section 7 of the JPSS Algorithm Specification Vol II: Data Dictionary for Ancillary Data Handling Gridding and Granulation (474-00448-02-07).	Ft	Grid IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	2.0.0-AAT
SRS.01.07_993	The Grid-To-Grid software shall ingest tables and coefficients formatted in accordance with Section 7 of the JPSS Algorithm Specification Vol II: Data Dictionary for Ancillary Data Handling Gridding and Granulation (474-00448-02-07).	Ft	Grid IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	2.0.0-AAT
SRS.01.07_987	The VIIRS Snow/Ice Cover IP software shall ingest tables and coefficients formatted in accordance with Section 7 of the JPSS Algorithm Specification Vol II: Data Dictionary for Ancillary Data Handling Gridding and Granulation (474-00448-02-07).	Ft	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	2.0.0-AAT
SRS.01.07_989	The Gran-To-Grid software shall ingest ancillary data formatted in accordance with Section 6 of the JPSS Algorithm Specification Vol II: Data Dictionary for Ancillary Data Handling Gridding and Granulation (474-00448-02-07).	Fa	ANC	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	2.0.0-AAT
SRS.01.07_994	The Grid-To-Grid software shall ingest	Fa	ANC	S-NPP	CGS	2.0.0	3.0.0	Inspection	NA	2.0.0-AAT

Req ID	Requirement Text	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Verification Event
	ancillary data formatted in accordance with Section 6 of the JPSS Algorithm Specification Vol II: Data Dictionary for Ancillary Data Handling Gridding and Granulation (474-00448-02-07).			JPSS-1 JPSS-2						
SRS.01.07_170	The Grid-to-Grid software shall generate the VIIRS Land Surface Albedo 17-day Tile in conformance with the XML format file in Attachment A.1 of the JPSS Algorithm Specification Vol II: Data Dictionary for Ancillary Data Handling Gridding and Granulation (474-00448-02-07).	F	Grid IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	2.0.0-AAT
SRS.01.07_171	The Grid-to-Grid software shall generate the VIIRS NBAR NDVI Rolling Tile Gridded IP in conformance with the XML format file in Attachment A.2 of the JPSS Algorithm Specification Vol II: Data Dictionary for Ancillary Data Handling Gridding and Granulation (474-00448-02-07).	F	Grid IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	2.0.0-AAT
SRS.01.07_172	The Gran-to-Grid software shall generate the VIIRS Snow/Ice Cover Rolling Tile Gridded IP in conformance with the XML format file in Attachment A.5 of JPSS Algorithm Specification Vol II: Data Dictionary for Ancillary Data Handling Gridding and Granulation (474-00448-02-07).	F	Grid IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	2.0.0-AAT
SRS.01.07_173	The Grid-to-Gran software shall generate the VIIRS Snow/Ice Cover 750m IP in conformance with the XML format file in Attachment A.6 of the JPSS Algorithm Specification Vol II: Data Dictionary for Ancillary Data Handling Gridding and Granulation	F	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	2.0.0-AAT

Req ID	Requirement Text	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Verification Event
	(474-00448-02-07).									
SRS.01.07_174	The Grid-to-Grid software shall generate the VIIRS Surface Reflectance, Brightness Temperatures, & Vegetation Index Monthly Final gridded IP in conformance with the XML format file in Attachment A.7 of the JPSS Algorithm Specification Vol II: Data Dictionary for Ancillary Data Handling Gridding and Granulation (474-00448-02-07).	F	Grid IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	2.0.0-AAT
SRS.01.07_996	The Gran-to-Grid software shall generate the VIIRS Daily Surface Reflectance tile gridded IP in conformance with the XML format file in Attachment A.9 of the JPSS Algorithm Specification Vol II: Data Dictionary for Ancillary Data Handling Gridding and Granulation (474-00448-02-07).	F	Grid IP	S-NPP JPSS-1 JPSS-2	CGS			Inspection	NA	2.0.0-AAT
SRS.01.07_145	The VIIRS Land Surface Albedo 17-day Tile software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for Ancillary Data, Gridding and Granulation (474-00448-04-07) <LSA_GridIP><QF>.	Q	Grid IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	2.0.0-AAT
SRS.01.07_159	The JPSS Common Ground System shall execute the Gran to Grid algorithms.	Ai	Grid IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	2.0.0-AAT
SRS.01.07_969	The JPSS Common Ground System shall execute the Grid to Grid algorithms.	Ai	Grid IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	2.0.0-AAT
SRS.01.07_970	The JPSS Common Ground System	Ai	IP	S-NPP	CGS	2.0.0	3.0.0	Inspection	NA	2.0.0-AAT

Req ID	Requirement Text	Level 3 Type	Product Type	Mission Effectivity	Allocated To	Block Start	Block End	Block 2.0.0 VM	Block 2.1.0 VM	Verification Event
	shall execute the Grid to Gran algorithms.			JPSS-1 JPSS-2						
SRS.01.07_163	The JPSS Common Ground System shall execute a computing algorithm for granulating the VIIRS Snow/Ice Cover 750m granulated IP.	Ai	IP	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA	2.0.0-AAT