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Joint Polar Satellite System (JPSS)
Algorithm Specification Volume I:
Software Requirement Specification
(SRS) for the Land Surface Temperature



National Aeronautics and
Space Administration

Goddard Space Flight Center
Greenbelt, Maryland

Joint Polar Satellite System (JPSS) Algorithm Specification Volume I: Software Requirement Specification (SRS) for the Land Surface Temperature JPSS Review/Approval Page

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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:

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Change History Log

Revision	Effective Date	Description of Changes (Reference the CCR & CCB/ERB Approve Date)
Rev -	August 15, 2013	This version incorporates 474-CCR-13-1125 which was approved by the JPSS Ground ERB on the effective date shown.
A	Jan 16, 2014	This version incorporates 474-CCR-13-1445 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	Nov 18, 2014	This version incorporates 474-CCR-14-1721, 474-CCR-14-1741, 474-CCR-14-1781, 474-CCR-14-1793, 474-CCR-14-2110 and 474-CCR-14-2119 which was approved by JPSS Ground ERB on the effective date shown.
C	Apr 5, 2016	This version incorporates 474-CCR-15-2452, 474-CCR-15-2480, 474-CCR-15-2657, and 474-CCR-16-2821 which was approved by JPSS Ground ERB on the effective date shown.

List of TBx Items

TBx	Type	ID	Text	Action
None				

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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. The first JPSS satellite mission, the Suomi National Polar-orbiting Partnership (S-NPP) satellite, successfully launched in October 2011. S-NPP, along with the legacy NOAA Polar Operational Environmental Satellites (POES), provides continuous environmental observations. Two JPSS satellites will follow S-NPP: 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 (± 10) Local Time of the Ascending Node (LTAN) orbit, NOAA also leverages mission partner assets for complete global coverage. These partner assets include the Department of Defense (DoD) Defense Meteorological Satellite Program (DMSP) operational weather satellites (in the 1730 - 1930 LTAN orbit), the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) Meteorological Operational (Metop) satellites (in the 2130 LTAN orbit) and the Japanese Aerospace Exploration Agency (JAXA) Global Change Observation Mission-Water (GCOM-W) satellite (in the 1330 LTAN orbit). JPSS routes Metop data from McMurdo Station, Antarctica to the EUMETSAT facility in Darmstadt, Germany and EUMETSAT, in turn, 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, processes GCOM-W data and delivers GCOM-W products to the JPSS users who have JAXA permissions.

Additionally, the JPSS Program provides data acquisition and routing support to the DMSP and the WindSat Coriolis Program. JPSS routes DMSP data from McMurdo Station to the 557th Weather Wing at Offutt Air Force Base in Omaha, NE. After processing, the 557th releases the DMSP data for public consumption over the Internet via the National Geophysical Data Center in Boulder, CO. The JPSS Program provides data routing support to the National Science Foundation (NSF), as well as the National Aeronautics and Space Administration (NASA) Space Communications and Navigation (SCaN)-supported missions, which include the Earth Observing System (EOS). As part of the agreements for the use of McMurdo Station, JPSS provides 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.

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 for the Land Surface Temperature (LST) Environmental Data Record (EDR). LST play an important role in land-surface processes on a regional as well as on a global scale. They are of fundamental importance to the net radiation budget at the Earth's surface and to monitoring the state of crops. LST is a good indicator of both the greenhouse effect and the energy flux between the atmosphere and the ground. Satellite-derived LST assimilates to climate, mesoscale and land surface models to estimate the sensible heat flux and latent heat flux from the Earth's surface. Satellite based LST measurement has not been used operationally in regional weather forecasting and climate prediction due to large uncertainties. However they have the potential to provide LST information over vast remote regions such as deserts.

The accuracy of satellite LST measurement is primarily limited by the complexity of land surface types, the atmospheric correction, and sensor performance. The published satellite multichannel LST algorithm permits global LST retrievals within 3 to 4 K measurement accuracy.

The overall scientific objective of the VIIRS LST retrieval is to provide improved measurements of global and regional LST fields. The VIIRS LST EDR requires a 1.4 K measurement accuracy and 2.5 K measurement precision. The requirement of measurement precision is difficult to meet because of the large variations of LST in both space and time, and most importantly the variation in emissivity within each land type. LSTs can vary by 10 K in just a few meters and by 50 K over the daily cycle

1.2 Algorithm Overview

The VIIRS cloud cover, snow/ice, and land/ocean masks are used to eliminate cloud contaminated, ice-covered, and ocean pixels. Land cover type is retrieved from visible and near-IR bands by the VIIRS Land software module. The LST is retrieved using a regression equation, with separate coefficients for each land cover type. For the VIIRS baseline split window algorithm, only knowledge of the land type is needed and no emissivity information is required.

1.3 Document Overview

Section	Description
Section 1	Introduction - Provides a brief overview of the JPSS Ground System and the relevant

Section	Description
	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.

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
D0001-M01-S01-022	Joint Polar Satellite System (JPSS) VIIRS Land Surface Temperature Algorithm Theoretical Basis Document (ATBD)
474-00448-02-21	Joint Polar Satellite System (JPSS) Algorithm Specification Volume II: Data Dictionary for the Land Surface Temperature
474-00448-04-21	Joint Polar Satellite System (JPSS) Algorithm Specification Volume IV: Software Requirements Specification Parameter File (SRSPF) for the Land Surface Temperature

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
474-00448-03-21	Joint Polar Satellite System (JPSS) Algorithm Specification Volume III: Operational Algorithm Description (OAD) for the Land Surface Temperature
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

3 Algorithm Requirements

3.1 States and Modes

3.1.1 Normal Mode Performance

SRS.01.21_147 The Land Surface Temperature EDR software shall calculate LST with a measurement accuracy of 1.4 K, measured as a bias.

Rationale: The measurement accuracy was flowed down from the Level 1 and Level 2 documents. Measurement Accuracy (and Measurement Precision) performance will be verified and validated for an aggregated 4 km horizontal cell to provide for adequate comparability of performance across the scan.

Mission Effectivity: JPSS-1, JPSS-2

SRS.01.21_148 The Land Surface Temperature EDR software shall calculate LST with a 1-sigma measurement precision of 2.5 K.

Rationale: The measurement precision was flowed down from the Level 1 and Level 2 documents. Measurement Accuracy (and Measurement Precision) performance will be verified and validated for an aggregated 4 km horizontal cell to provide for adequate comparability of performance across the scan.

Mission Effectivity: JPSS-1, JPSS-2

SRS.01.21_151 The Land Surface Temperature EDR software shall calculate LST within the observable range of 213 K to 343 K.

Rationale: The measurement range was flowed down from the Level 1 and Level 2 documents.

Mission Effectivity: JPSS-1, JPSS-2

3.1.2 Graceful Degradation Mode Performance

SRS.01.21_255 The Land Surface Temperature EDR software shall use Quarterly Surface Type EDR for fallback processing when the Surface Type EDR input is not available.

Rationale: The EDR software through its algorithm must generate products using back up data sources to meet the graceful degradation requirement. These degraded products are not required to meet the algorithm performance requirements.

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

SRS.01.21_256 The Land Surface Temperature EDR software shall use NAAPS Aerosol Optical Depth (AOD) current forecast for fallback processing when the AOT IP input is not available.

Rationale: The EDR software through its algorithm must generate products using back up data sources to meet the graceful degradation requirement. These degraded products are not required to meet the algorithm performance requirements.

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

SRS.01.21_258 The Land Surface Temperature EDR software shall use NAAPS Aerosol Optical Depth (AOD) extended forecast for fallback processing when the AOT IP input and the NAAPS Aerosol Optical Depth (AOD) current forecast are not available.

Rationale: The EDR software through its algorithm must generate products using back up data sources to meet the graceful degradation requirement. These degraded products are not required to meet the algorithm performance requirements.

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

SRS.01.21_257 The Land Surface Temperature EDR software shall use Global Aerosol Climatology Project (GACP) AOD climatology for fallback processing when both the AOT IP and NAAPS AOD current and extended forecast inputs are not available.

Rationale: The EDR software through its algorithm must generate products using back up data sources to meet the graceful degradation requirement. These degraded products are not required to meet the algorithm performance requirements.

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

3.2 Algorithm Functional Requirements

3.2.1 Product Production Requirements

Not applicable.

3.2.2 Algorithm Science Requirements

SRS.01.21_140 The Land Surface Temperature EDR software shall incorporate a computing algorithm provided for land surface temperature.

Rationale: The EDR software through its computing algorithm must compute the land surface temperature In accordance with the JPSS VIIRS Land Surface Temperature ATBD (D0001-M01-S01-022).

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

3.2.3 Algorithm Exception Handling

SRS.01.21_141 The Land Surface Temperature EDR software shall set each <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for the Land Surface Temperature (474-00448-04-21) <LandSurfaceTemp_EDR><fill>.

Rationale: The EDR software through its computing algorithm must fill the LST EDR values based on the established fill conditions to satisfy exclusion and fill conditions.

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

3.3 External Interfaces

3.3.1 Inputs

SRS.01.21_144 The Land Surface Temperature EDR software shall incorporate inputs specified in Table 3.1.

Rationale: The EDR software must be able to receive and process the resource interaction items shown in Table 3-1 in order to produce the intended Land Surface Temperature EDR products.

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

SRS.01.21_259 The Land Surface Temperature EDR software shall ingest tables and coefficients formatted in accordance with Section 7 of the JPSS Algorithm Specification Vol II: Data Dictionary for Land Surface Temperature (474-00448-02-21).

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.

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 and third columns include the short name and mnemonic for the data. Blanks indicate there is no mnemonic. The fourth and fifth 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.

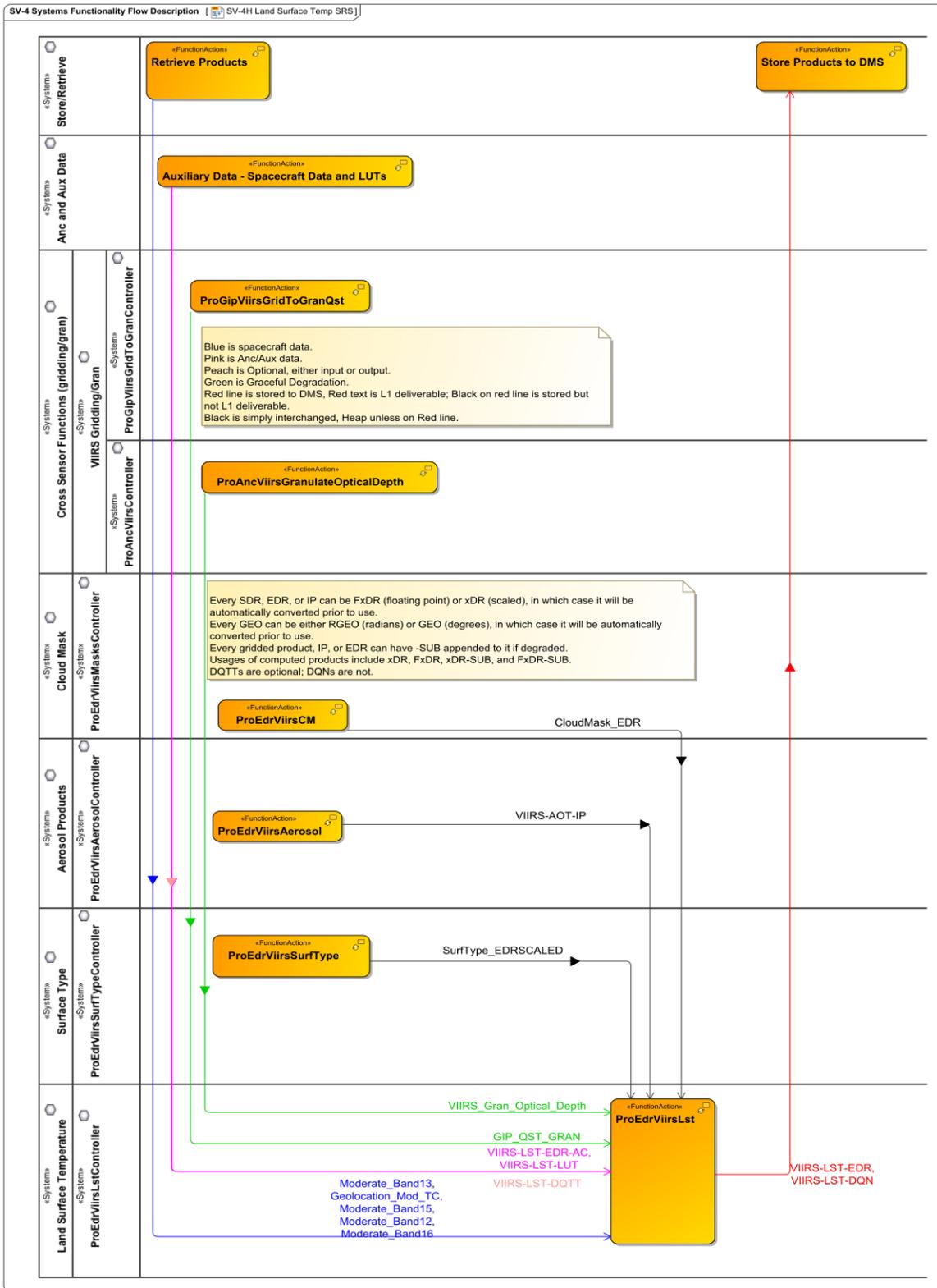


Figure: 3-1 Land Surface Temperature Data Flows

Table: 3-1 Systems Resource Flow Matrix: Land Surface Temperature

	Data Product Name	Collection Short Name	Mnemonic	Sending SRS	Receiving SRS	Sending Function	Receiving Function
1	•Moderate_Band13 •Geolocation_Mod_TC •Moderate_Band15 •Moderate_Band12 •Moderate_Band16	•VIIRS-M13-SDR •VIIRS-MOD-RGEO-TC •VIIRS-M15-SDR •VIIRS-M12-SDR •VIIRS-M16-SDR	•SDRE-VM13-C0030 •None •SDRE-VM15-C0030 •SDRE-VM12-C0030 •SDRE-VM16-C0030	Store/Retrieve (VIIRS SDR)	Land Surface Temperature	Retrieve Products	ProEdrViirsLst
2	•VIIRS-LST-EDR-AC •VIIRS-LST-LUT	•VIIRS-LST-EDR-AC •VIIRS-LST-Coef-LUT	•DP_NU-LM2020-022 •NP_NU-LM0233-012	Anc and Aux Data	Land Surface Temperature	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsLst
3	•VIIRS-LST-DQTT	•VIIRS-LST-EDR-DQTT	•DP_NU-LM2030-000	Anc and Aux Data	Land Surface Temperature	Auxiliary Data - Spacecraft Data and LUTs	ProEdrViirsLst
4	•VIIRS-AOT-IP	•VIIRS-Aeros-Opt-Thick-IP	•IMPI_VAOT_R0100	Aerosol Properties	Land Surface Temperature	ProEdrViirsAerosol	ProEdrViirsLst
5	•CloudMask_EDR	•VIIRS-CM-EDR	•EDRE_CMIP_C0030	Cloud Mask	Land Surface Temperature	ProEdrViirsCM	ProEdrViirsLst
6	•GIP_QST_GRAN	•VIIRS-GridIP-VIIRS-Qst-Mod-Gran	•None	Grid Gran	Land Surface Temperature	ProGipViirsGridToGranQst	ProEdrViirsLst
7	•VIIRS_Gran_Optical_Depth	•VIIRS-ANC-Optical-Depth-Mod-Gran	•None	Grid Gran	Land Surface Temperature	ProAncViirsGranulateOpticalDepth	ProEdrViirsLst
8	•SurfType_EDRSCALE_D	•VIIRS-ST-EDR	•EDRE-VSTV-C0030	Surface Type	Land Surface Temperature	ProEdrViirsSurfType	ProEdrViirsLst
9	•VIIRS-LST-EDR •VIIRS-LST-DQN	•VIIRS-LST-EDR •VIIRS-LST-EDR-DQN	•EDRE-VLST-C0030 •DP_NU-L00510-000	Land Surface Temperature	Store/Retrieve	ProEdrViirsLst	Store Products to DMS

3.3.2 Outputs

SRS.01.21_142 The Land Surface Temperature EDR software shall generate the Land Surface Temperature product in conformance with the XML format file in Attachment A.1 of the JPSS Algorithm Specification Vol II: Data Dictionary for the Land Surface Temperature (474-00448-02-21).

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

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

SRS.01.21_143 The Land Surface Temperature EDR software shall use the terrain-corrected geolocation for the VIIRS M-band.

Rationale: The EDR product must be associated with the terrain-corrected geolocation to meet the accuracy requirement.

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.01.21_152 The Land Surface Temperature EDR software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for the Land Surface Temperature (474-00448-04-21) <LandSurfaceTemp_EDR><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

SRS.01.21_145 The Land Surface Temperature EDR software shall send data quality notifications to the operator according to logic specified in the JPSS Algorithm Specification Vol IV: SRSPF for the Land Surface Temperature (474-00448-04-21) <LandSurfaceTemp_EDR> <Notifications>.

Rationale: Notifications must be generated and sent based on the established logic and conditions.

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

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.01.21_194 The JPSS Common Ground System shall execute the land surface temperature EDR algorithm.

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.

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, 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
SRS.01.21_147	The Land Surface Temperature EDR software shall calculate LST with a measurement accuracy of 1.4 K, measured as a bias.	P	EDR	JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA
SRS.01.21_148	The Land Surface Temperature EDR software shall calculate LST with a 1-sigma measurement precision of 2.5 K.	P	EDR	JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA
SRS.01.21_151	The Land Surface Temperature EDR software shall calculate LST within the observable range of 213 K to 343 K.	P	EDR	JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Test	NA
SRS.01.21_255	The Land Surface Temperature EDR software shall use Quarterly Surface Type EDR for fallback processing when the Surface Type EDR input is not available.	G	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA
SRS.01.21_256	The Land Surface Temperature EDR software shall use NAAPS Aerosol Optical Depth (AOD) current forecast for fallback processing when the AOT IP input is not available.	G	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA
SRS.01.21_258	The Land Surface Temperature EDR software shall use NAAPS Aerosol Optical Depth (AOD) extended forecast for fallback processing when the AOT IP input and the NAAPS Aerosol Optical Depth (AOD) current forecast are not available.	G	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA
SRS.01.21_257	The Land Surface Temperature EDR software shall use Global Aerosol	G	EDR	S-NPP JPSS-1	CGS	2.0.0	3.0.0	Inspection	NA

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
	Climatology Project (GACP) AOD climatology for fallback processing when both the AOT IP and NAAPS AOD current and extended forecast inputs are not available.			JPSS-2					
SRS.01.21_140	The Land Surface Temperature EDR software shall incorporate a computing algorithm provided for land surface temperature.	Ap	EDR	S-NPP JPSS-1 JPSS-2	algorithm provider	2.0.0	3.0.0	Inspection	NA
SRS.01.21_141	The Land Surface Temperature EDR software shall set each <FillField> to <FillValue> according to <FillCondition> specified in the JPSS Algorithm Specification Vol IV: SRSPF for the Land Surface Temperature (474-00448-04-21) <LandSurfaceTemp_EDR><fill>.	E	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA
SRS.01.21_144	The Land Surface Temperature EDR software shall incorporate inputs specified in Table 3.1.	I	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA
SRS.01.21_259	The Land Surface Temperature EDR software shall ingest tables and coefficients formatted in accordance with Section 7 of the JPSS Algorithm Specification Vol II: Data Dictionary for Land Surface Temperature (474-00448-02-21).	Ft	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA
SRS.01.21_142	The Land Surface Temperature EDR software shall generate the Land Surface Temperature product in conformance with the XML format file in Attachment A.1 of the JPSS Algorithm Specification Vol II: Data Dictionary for the Land Surface	F	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA

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
	Temperature (474-00448-02-21).								
SRS.01.21_143	The Land Surface Temperature EDR software shall use the terrain-corrected geolocation for the VIIRS M-band.	Fg	GEO	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA
SRS.01.21_152	The Land Surface Temperature EDR software shall report for each <FlagScope> quality flags using <FlagLogic> as specified in the JPSS Algorithm Specification Vol IV: SRSPF for the Land Surface Temperature (474-00448-04-21) <LandSurfaceTemp_EDR><QF>.	Q	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA
SRS.01.21_145	The Land Surface Temperature EDR software shall send data quality notifications to the operator according to logic specified in the JPSS Algorithm Specification Vol IV: SRSPF for the Land Surface Temperature (474-00448-04-21) <LandSurfaceTemp_EDR> <Notifications>.	N	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA
SRS.01.21_194	The JPSS Common Ground System shall execute the land surface temperature EDR algorithm.	Ai	EDR	S-NPP JPSS-1 JPSS-2	CGS	2.0.0	3.0.0	Inspection	NA