NATIONAL POLAR-ORBITING OPERATIONAL ENVIRONMENTAL SATELLITE SYSTEM (NPOESS)

NPOESS Common Data Format Control Book - External Volume VIII – Look Up Table Formats D34862-08 Rev A

CDRL No. A014

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D34862-08 Rev A
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1.0 INTRODUCTION

1.1 Document Purpose and Scope

Volume VIII of the Common Data Format Control Book - External (CDFCB-X) contains the specifications for the format of Look Up Tables (LUT) and Processing Coefficients (PC). These formats are used to create the NPP/NPOESS Data Products and are made available to authorized external users of the National Polar-orbiting Operational Environmental Satellite System (NPOESS) as well as delivered to the Comprehensive Large Array-data Stewardship System (CLASS).

For overview information and the reference documents for the CDFCB-X, see the CDFCB-X Volume I - Overview, D34862-01.

1.2 Document Overview

For ease of reading, understanding, and use of this document, the sections of this volume are organized in the following manner:

Section 1.0: Introduction – Provides a brief overview of the document's purpose, scope, and an explanation of the data formats used in this volume.

Section 2.0: Look Up Tables – Provides the data format definitions for Radiative Transfer Models' (RTM) LUTs and LUTs provided from external vendors such as Optimal Spectral Sampling (OSS).

Section 3.0: Processing Coefficients – Provides the data format definitions for the Processing Coefficients used by NPOESS – includes Tunable Parameters and non-Tunable Parameters.

Appendix A: Data Mnemonic to Interface Mapping - A mapping of data mnemonics to their corresponding logical interface mnemonics.

1.3 LUT Formats Template Overview

LUT data formats are files that contain data used to create NPOESS Data Products. The template used for these formats in this document is described below.

Data Mnemonic: This is a unique identifier. The method for defining data mnemonics is defined in the CDFCB-X Volume I, D34862-01.

Description/Purpose: A brief description of the data format and its purpose.

File-Naming Construct: A description of the file-naming constructs for those data units that apply. See the CDFCB-X Volume I, D34862-01, for file-naming conventions.

File Size: The size of the data file.

File Format Type: The format type of the data file.

Production Frequency: Production frequency is the interval of time for data generation. A production frequency equal to dynamic implies that it is only as requested or as needed.

Data Format/Structure: This defines the actual data format. The definitions provide information for every data element in the data unit.

In the described formats:

- The field names are all mandatory, unless specified otherwise.
- Fill data is specified, where applicable.
- Strings are left-aligned and integers are right-aligned, unless specified otherwise.
- For information regarding Coordinated Universal Time (UTC) and IDPS Epoch Time (IET) conventions, see the CDFCB-X Volume I, D34862-01.
- For all references of the ASCII Standard, the corresponding International Standards Organization (ISO) standard is ISO/IEC 10646. The specific Unicode is UTF8, unless stated otherwise.
- The fields are presented in order (either top – down or most significant first), unless stated otherwise.

2.0 Look Up Tables

Algorithm LUTs are files that contain tables of pre-computed values which are used in lieu of real-time algorithm computations. These table values are typically the result of RTM executions, and other environmental model simulations. This data typically covers a broad, multi-dimensional parameter space which is unique to each algorithm.

2.1 CrIMSS LUTs

2.1.1 CrIMSS Channel Selection LUT

Data Mnemonic	NP_NU-LM0030-000
Description/ Purpose	The Cross-track Infrared (IR) Microwave Sounder Suite (CrIMSS) Channel Selection LUT identifies which channels are used in the retrievals for the creation of the Atmospheric Vertical Moisture Profile (AVMP), the Atmospheric Vertical Temperature Profile (AVTP), and the Atmospheric Vertical Pressure Profile (AVPP). This file is used in the CrIMSS Environmental Data Records (EDR) algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	10,440 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.1.1-1, CrIMMS Channel Selection LUT Data Format

Table 2.1.1-1, CrIMSS Channel Selection LUT Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
irChanSel	5220	32-bit integer	0 – 1	unitless	1 Dimensional Array IR Channel Size of Dimension(s): 1305
freq	5220	32-bit floating point	1.9E15 – 7.6E15	Hz	1 Dimensional Array Frequency Size of Dimension(s): 1305

2.1.2 CrIMSS IR Optimal Spectral Sampling Coefficients LUT

Data Mnemonic	NP_NU-LM0030-001
Description/ Purpose	The CrIMSS IR Optimal Spectral Sampling Coefficients LUT provides the IR OSS coefficient and channel information. This file identifies which channels are used in the retrievals and covers both IR and microwave data. This file is used by the CrIMSS EDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	1,978,412 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.1.2-1, CrIMSS IR OSS Coefficients LUT Data Format

Table 2.1.2-1, CrIMSS IR OSS Coefficients LUT Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
nchan	4	32-bit integer	1 – 1305	unitless	Number of sensor channels for which data is provided
nfSel	4	32-bit integer	MinInt - MaxInt	unitless	Number of selected monochromatic spectral points
nChMax	4	32-bit integer	MinInt - MaxInt	unitless	Maximum number of selected points per sensor channel
cFreq	10400	32-bit floating point	Minfloat - Maxfloat	nm	Center Frequencies of the sensor channels 1 Dimensional Array: MAX_OSSIR_CHANS I Size of Dimension(s): 2600
nChSmp	48000	32-bit integer	1 – 1305	unitless	Number of channels which use a particular selected monochromatic spectral Pojnt 1 Dimensional Array: MAX_IR_FSAMP Size of Dimension(s): 12000
coef	960000	32-bit floating point	Minfloat - Maxfloat	unitless	OSS IR absorption coefficients for the selected monochromatic spectral points 2 Dimensional Array: MAX_IR_FSAMP x MAX_OSSIR_COEFF_CHAN Dimensions: 12000 x 20

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
iChMap	960000	32-bit integer	MinInt - MaxInt	unitless	Channel mapping data to relate coef to a particular sensor channel 2 Dimensional Array: MAX_IR_FSAMP x MAX_OSSIR_COEFF_CHAN Dimensions: 12000 x 20

2.1.3 CrIMSS MW Absorption Coefficients LUT

Data Mnemonic	NP_NU-LM0030-002
Description/ Purpose	The CrIMSS Microwave (MW) Absorption Coefficients LUT file provides the MW absorption coefficients at OSS levels as well as temperature and water vapor data. This file covers both IR and MW data. This file is used in the CrIMSS EDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	160,029,208 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.1.3-1, CrIMSS MW Absorption Coefficients LUT Data Format

Table 2.1.3-1, CrIMSS MW Absorption Coefficients LUT Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
nLayers	4	32-bit integer	1 – 100	unitless	Number of layers
nTemps	4	32-bit integer	MinInt - MaxInt	unitless	Number of temperature elements
watVap	4	32-bit integer	MinInt - MaxInt	unitless	Number of water vapor elements
pRef	404	32-bit floating point	0 – 1100.0	hPa	Reference pressure for each layer 1 Dimensional Array: OSS_MW_LEVS Size of Dimension(s): 101
tempTable	20000	32-bit floating point	Minfloat - Maxfloat	Kelvin	Temperature table 2 Dimensional Array: OSS_MW_LAYERS x MAX_OSSMW_TEMPS Size of Dimension(s): 100 x 50
fixTable	400	32-bit floating point	Minfloat - Maxfloat	g/kg	Fixed gas table 1 Dimensional Array: OSS_MW_LAYERS Size of Dimension(s): 100
wvpTable	8000	32-bit floating point	Minfloat - Maxfloat	g/kg	Water vapor table 2 Dimensional Array: OSS_MW_LAYERS x MAX_OSSMW_WV Size of Dimension(s): 100 x 20

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
vFreq	400	32-bit floating point	Minfloat - Maxfloat	nm	Frequencies associated with absorption coefficients 1 Dimensional Array: MAX_MW_FSMP Size of Dimension(s): 100
kFix	40000000	32-bit floating point	Minfloat - Maxfloat	unitless	Fixed gas absorption coeffiecients 2 Dimensional Array: MAX_MW_FSMP x NUM_MW_AC Size of Dimension(s): 100 x 100000
dkFix	40000000	32-bit floating point	Minfloat - Maxfloat	unitless	Water vapor self continuum absorption coefficients 2 Dimensional Array: MAX_MW_FSMP x NUM_MW_AC Size of Dimension(s): 100 x 100000
kH2o	40000000	32-bit floating point	Minfloat - Maxfloat	unitless	Absorption coefficients for fixed gases for water 2 Dimensional Array: MAX_MW_FSMP x NUM_MW_AC Dimensions: 100 x 100000
dkH2o	40000000	32-bit floating point	Minfloat - Maxfloat	unitless	Interpolation coefficients for the absorption coefficients 2 Dimensional Array: MAX_MW_FSMP x NUM_MW_AC Dimensions: 100 x 100000

2.1.4 CrIMSS MW Optimal Spectral Sampling Coefficients LUT

Data Mnemonic	NP_NU-LM0030-004
Description/ Purpose	The CrIMSS MW Optimal Spectral Sampling Coefficients LUT file contains the MW OSS coefficient and channel information. This file covers both IR and MW data. This file is used in the CrIMSS EDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	5,404 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	See Table 2.1.4-1, CrIMSS MW OSS Coefficients LUT Data Format

Table 2.1.4-1, CrIMSS MW OSS Coefficients LUT Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
nchan	4	32-bit integer	0 – 22	unitless	Number of sensor channels for which data is provided
cFreq	200	32-bit floating point	Minfloat - Maxfloat	unitless	Number of selected monochromatic spectral point 1 Dimensional Array: ossmwChannel Size of Dimension(s): 50
nChSmp	400	32-bit integer	0 – 22	unitless	1 Dimensional Array: mwFsamp Size of Dimension(s): 100
coef	2400	32-bit floating point	Minfloat - Maxfloat	unitless	2 Dimensional Array: mwFsamp x ossmwCoeffChan Size of Dimension(s): 100 x 6
iChMap	2400	32-bit integer	1 – 22	unitless	2 Dimensional Array: mwFsamp x ossmwCoeffChan Size of Dimension(s): 100 x 6

2.1.5 CrIMSS Surface Emissivity LUT

Data Mnemonic	NP_NU-LM0030-005
Description/ Purpose	The CrIMSS Surface Emissivity LUT file contains the IR surface emissivity hinge points. This file covers both IR and MW data. This file is used in the CrIMSS EDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	52 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.1.5-1, CrIMSS Surface Emissivity LUT Data Format

Table 2.1.5-1, CrIMSS Surface Emissivity LUT Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
numIrEmiss	4	32 bit integer	MinInt - MaxInt	unitless	Number of IR emissivities in the data buffer
freqSfcHp	48	32-bit floating point	Minfloat - Maxfloat	nm	IR surface emissivity hinge point frequencies. The number of hinge points is equal to the number of surface IR emissivities in the geophysical domain 1 Dimensional Array: freqHp Size of Dimension(s): 12

2.1.6 CrIMSS IR Absorption Coefficients LUT

Data Mnemonic	NP_NU-LM0030-006
Description/ Purpose	The CrIMSS IR Absorption Coefficients LUT file provides the IR absorption coefficients at OSS levels, as well as temperature and water vapor data. This file contains both IR and MW data. This file is used by the CrIMSS EDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	384,349,296 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.1.6-1, CrIMSS IR Absorption Coefficients LUT Data Format

Table 2.1.6-1, CrIMSS IR Absorption Coefficients LUT Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
nLayers	4	32-bit integer	1 - 100	unitless	Number of layers
nTemps	4	32-bit integer	MinInt - MaxInt	unitless	Number of temperature elements
nMol	4	32-bit integer	1 – 7	unitless	Number of molecule IDs
molId	80	32-bit integer	1 – 5	unitless	Molecule IDs 1 Dimensional Array: molIds Size of Dimension(s): 20
pRef	404	32-bit floating point	0 – 1100	hPa	Reference pressure 1 Dimensional Array: ossIrLev Size of Dimension(s): 101
tempTable	4000	32-bit floating point	Minfloat – Maxfloat	Kelvin	Temperature table 2 Dimensional Array: ossIrLayer x ossirTemp Size of Dimension(s): 100 x 10

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
wvpTable	8800	32-bit floating point	Minfloat – Maxfloat	g/kg	Water vapor tabl e 2 Dimensional Array: ossIrLayer x ossirWv Size of Dimension(s): 100 x 22
vFreq	96000	64-bit floating point	Minfloat – Maxfloat	nm	Frequencies associated with absorption coeffs 1 Dimensional Array: irFsamp Size of Dimension(s): 12000
nMols	48000	32-bit integer	MinInt – MaxInt	unitless	Number of molecules at each frequency for which there is an absorption coefficient 1 Dimensional Array: irFsamp Size of Dimension(s): 12000
iMols	240000	32-bit integer	1 – 5	unitless	Molecule index array 2 Dimensional Array: irFsamp x mol Size of Dimension(s): 12000 x 5

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
kFix	48000000	32-bit floating point	Minfloat – Maxfloat	unitless	Fixed gas absorption coefficients 2 Dimensional Array: irFsamp x irAc Size of Dimension(s): 12000 x 1000
dkH2o	48000000	32-bit floating point	Minfloat – Maxfloat	unitless	Water vapor self continuum absorption coefficients 2 Dimensional Array: irFsamp x irAc Size of Dimension(s): 12000 x 1000
kH2o	48000000	32-bit floating point	Minfloat – Maxfloat	unitless	Water vapor lines plus the foreign continuum absorption coefficients 2 Dimensional Array: irFsamp x irAc Size of Dimension(s): 12000 x 1000
kVar	240000000	32-bit floating point	Minfloat – Maxfloat	unitless	Absorption coefficient tables for the variable gases 2 Dimensional Array: irFsamp x irVg Size of Dimension(s): 12000 x 5000

2.2 VIIRS LUTs

2.2.1 VIIRS AOT LUT

Data Mnemonic	NP_NU-LM0040-000
Description/ Purpose	The VIIRS Aerosol Optical Thickness (AOT) LUT file contains transmittances (used for both upward and downward), spherical albedo, ratios of AOT at the VIIRS band wavelengths to AOT at 550 nm and atmospheric reflectance. Contains values for all land and ocean aerosol models. This file is used in the VIIRS AOT algorithm
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	46,622,120 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.1-1, VIIRS AOT LUT Data Format

Table 2.2.1-1, VIIRS AOT LUT Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
szen	168	64-bit floating point	0 - 1.3962634	radians	1 Dimensional Array: SOL_ZEN_DIM Size of Dimension(s): 21
vzen	160	64-bit floating point	0 – 1.21455298	radians	1 Dimensional Array: SAT_ZEN_DIM Size of Dimension(s): 20
scat_ang_incr	8	64-bit floating point	0.06981317	radians	Scattering angle increment
aot	60	32-bit floating point	0 – 2	unitless	1 Dimensional Array: AOT_DIM Size of Dimension(s): 15
trans	176400	32-bit floating point	0 – 1	unitless	4 Dimensional Array: AERO_MOD_DIM x AOT_DIM x BAND_DIM x SOL_ZEN_DIM Size of Dimension(s): 14 x 15 x 10 x 21
albedo	8400	32-bit floating point	0 – 1	unitless	3 Dimensional Array: AERO_MOD_DIM x AOT_DIMx BAND_DIM Size of Dimension(s): 14 x 15 x 10
atau	8400	32-bit floating point	0 – 2	unitless	3 Dimensional Array: AERO_MOD_DIM x AOT_DIM x BAND_DIM Size of Dimension(s): 14 x 15 x 10

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
reflec	46,426,800	32-bit floating point	0 – 10	unitless	4 Dimensional Array: AERO_MOD_DIM x AOT_DIM x BAND_DIM x SCAT_ANG_DIM Size of Dimension(s): 14 x 15 x 10 x 5527
band	44	unsigned 32-bit integer	0 – 9	unitless	1 Dimensional Array: BANDS_DIM Size of Dimension(s): 11
scat_ang_val	1680	32-bit integer	0 – 5491	unitless	1 Dimensional Array: SCAT_ANG_VAL_DIM Size of Dimension(s): 420

2.2.2 VIIRS AOT Sunglint LUT

Data Mnemonic	NP_NU-LM0040-001
Description/ Purpose	The VIIRS AOT Sunglint LUT file contains the normalized integral of downward irradiance by sunglint directional reflectance (also used for normalized integral of upward radiance by sunglint directional reflectance). This file is used in the AOT algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	30,006,204 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.2-1, VIIRS AOT Sunglint LUT Data Format

Table 2.2.2-1, VIIRS AOT Sunglint LUT Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
szen	168	64-bit floating point	0 - 1.3962634	radians	1 Dimensional Array: SG_SOL_ZEN_DIM Size of Dimension(s): 21
vzen	168	64-bit floating point	0 - 1.3962634	radians	1 Dimensional Array: SG_SEN_ZEN_DIM Size of Dimension(s): 21
relaz	168	64-bit floating point	0 - 3.14159265	radians	1 Dimensional Array: SG_REL_AZI_DIM Size of Dimension(s): 21
rhobar	30,005,640	32-bit floating point	0 – 1	unitless	6 Dimensional Array: SG_AER_MOD_DIM x SG_AOT_DIM x SG_BAND_DIM x SG_SOL_ZEN_DIM x SG_SEN_ZEN_DIM x SG_REL_AZI_DIM Size of Dimension(s): 9 x 15 x 6 x 21 x 21 x 21
aot	60	32-bit floating point	0 – 2	unitless	1 Dimensional Array: SG_AOT_DIM Size of Dimension(s): 15

2.2.3 VIIRS COP Ice Cloud LUT

Data Mnemonic	NP_NU-LM0040-002
Description/ Purpose	The VIIRS Cloud Optical Properties (COP) Ice Cloud LUT is created from the University of California at Los Angeles' (UCLA) Line-by-Line Equivalent (LBLE) RTM for the purpose of simulating cloudy reflectance for a variety of cloud relationships. This file contains reflectances and radiances generated for a variety of conditions. This file is used by the VIIRS COP algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	162,017,200 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.3-1, VIIRS COP Ice Cloud LUT Data Format

Table 2.2.3-1, VIIRS COP Ice Cloud LUT Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
sol_zen_bins	76	32-bit floating point	0 – pi/2	Radians	1 Dimensional Array: COP_ICE_SOL_ZEN_BINS Size of Dimension(s): 19
sen_zen_bins	76	32-bit floating point	0 – pi /2	Radians	1 Dimensional Array: COP_ICE_SEN_ZEN_BINS Size of Dimension(s): 19
rel_az_bins	88	32-bit floating point	0 – pi	Radians	1 Dimensional Array: COP_ICE_REL_AZ_BINS Size of Dimension(s): 22
sfc_albedo_bins	40	32-bit floating point	0 – 0.9	unitless	1 Dimensional Array: COP_ICE_ALBEDO_BINS Size of Dimension(s): 10
sfc_emiss_bins	4	32-bit floating point	0.9	unitless	1 Dimensional Array: COP_ICE_EMISS_BINS Size of Dimension(s): 1
eps_indexes	24	32-bit integer	MinInt - MaxInt	unitless	1 Dimensional Array: COP_ICE_EPS_BINS Size of Dimension(s): 6
eps_bins	24	32-bit floating point	24 – 124	Micrometers	1 Dimensional Array: COP_ICE_EPS_BINS Size of Dimension(s): 6

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
cot_bins	68	32-bit floating point	0.125 – 30	unitless	1 Dimensional Array: COP_ICE_COT_BINS Size of Dimension(s): 17
precalcM5_refl	32403360	32-bit floating point	Minfloat – Maxfloat	unitless	7 Dimensional Array: COP_ICE_COT_BINS x COP_ICE_EPS_BINS x COP_ICE_EMISS_BINS x COP_ICE_ALBEDO_BINS x COP_ICE_REL_AZ_BINS x COP_ICE_SEN_ZEN_BINS x COP_ICE_SOL_ZEN_BINS Size of Dimension(s): 17 x 6 x 1 x 10 x 22 x 19 x 19
precalcM8_refl	32403360	32-bit floating point	Minfloat – Maxfloat	unitless	7 Dimensional Array: COP_ICE_COT_BINS x COP_ICE_EPS_BINS x COP_ICE_EMISS_BINS x COP_ICE_ALBEDO_BINS x COP_ICE_REL_AZ_BINS x COP_ICE_SEN_ZEN_BINS x COP_ICE_SOL_ZEN_BINS Size of Dimension(s): 17 x 6 x 1 x 10 x 22 x 19 x 19

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
precalcM10_refl	32403360	32-bit floating point	Minfloat – Maxfloat	unitless	7 Dimensional Array: COP_ICE_COT_BINS x COP_ICE_EPS_BINS x COP_ICE_EMISS_BINS x COP_ICE_ALBEDO_BINS x COP_ICE_REL_AZ_BINS x COP_ICE_SEN_ZEN_BINS x COP_ICE_SOL_ZEN_BINS Size of Dimension(s): 17 x 6 x 1 x 10 x 22 x 19 x 19
precalcM11_refl	32403360	32-bit floating point	Minfloat – Maxfloat	unitless	7 Dimensional Array: COP_ICE_COT_BINS x COP_ICE_EPS_BINS x COP_ICE_EMISS_BINS x COP_ICE_ALBEDO_BINS x COP_ICE_REL_AZ_BINS x COP_ICE_SEN_ZEN_BINS x COP_ICE_SOL_ZEN_BINS Size of Dimension(s): 17 x 6 x 1 x 10 x 22 x 19 x 19
precalcM12_rad	32403360	32-bit floating point	Minfloat – Maxfloat	W/(m2 sr um)	7 Dimensional Array: COP_ICE_COT_BINS x COP_ICE_EPS_BINS x COP_ICE_EMISS_BINS x COP_ICE_ALBEDO_BINS x COP_ICE_REL_AZ_BINS x COP_ICE_SEN_ZEN_BINS x COP_ICE_SOL_ZEN_BINS Size of Dimension(s): 17 x 6 x 1 x 10 x 22 x 19 x 19

2.2.4 VIIRS COP Water Cloud LUT

Data Mnemonic	NP_NU-LM0040-003
Description/ Purpose	The VIIRS COP Water Cloud LUT file is created from UCLA's LBLE RTM for the purpose of simulating cloudy reflectance for a variety of cloud relationships. This file is used in the VIIRS COP algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	217,293,552 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.4-1, VIIRS COP Water Cloud LUT Data Format

Table 2.2.4-1, VIIRS COP Water Cloud LUT Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
sol_zen_bins	76	32-bit floating point	0 – pi/2	Radians	1 Dimensional Array: COP_WATER_SOL_ZEN_BINS Size of Dimension(s): 19
sen_zen_bins	76	32-bit floating point	0 – pi/2	Radians	1 Dimensional Array: COP_WATER_SEN_ZEN_BINS Size of Dimension(s): 19
rel_az_bins	88	32-bit floating point	0 – pi	Radians	1 Dimensional Array: COP_WATER_REL_AZ_BINS Size of Dimension(s): 22
sfc_albedo_bins	40	32-bit floating point	0 – 0.9	unitless	1 Dimensional Array: COP_WATER_ALBEDO_BINS Size of Dimension(s): 10
sfc_emiss_bins	4	32-bit floating point	0.9	unitless	1 Dimensional Array: COP_WATER_EMISS_BINS Size of Dimension(s): 1
eps_indexes	36	32-bit integer	MinInt - MaxInt	unitless	1 Dimensional Array: COP_WATER_EPS_BINS Size of Dimension(s): 9
eps_bins	36	32-bit floating point	2 – 30	Micrometers	1 Dimensional Array: COP_WATER_EPS_BINS Size of Dimension(s): 9

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
cot_bins	76	32-bit floating point	0.125 – 200	unitless	1 Dimensional Array: COP_WATER_COT_BINS Size of Dimension(s): 19
precalcM5_refl	54323280	32-bit floating point	Minfloat – Maxfloat	unitless	7 Dimensional Array: COP_WATER_COT_BINS x COP_WATER_EPS_BINS x COP_WATER_EMISS_BINS x COP_WATER_ALBEDO_BINS x COP_WATER_REL_AZ_BINS x COP_WATER_SEN_ZEN_BINS x COP_WATER_SOL_ZEN_BINS Size of Dimension(s): 19 x 9 x 1 x 10 x 22 x 19 x 19
precalcM8_refl	54323280	32-bit floating point	Minfloat – Maxfloat	unitless	7 Dimensional Array: COP_WATER_COT_BINS x COP_WATER_EPS_BINS x COP_WATER_EMISS_BINS x COP_WATER_ALBEDO_BINS x COP_WATER_REL_AZ_BINS x COP_WATER_SEN_ZEN_BINS x COP_WATER_SOL_ZEN_BINS Size of Dimension(s): 19 x 9 x 1 x 10 x 22 x 19 x 19

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
precalcM10_refl	54323280	32-bit floating point	Minfloat – Maxfloat	unitless	7 Dimensional Array: COP_WATER_COT_BINS x COP_WATER_EPS_BINS x COP_WATER_EMISS_BINS x COP_WATER_ALBEDO_BINS x COP_WATER_REL_AZ_BINS x COP_WATER_SEN_ZEN_BINS x COP_WATER_SOL_ZEN_BINS Size of Dimension(s): 19 x 9 x 1 x 10 x 22 x 19 x 19
precalcM11_refl	54323280	32-bit floating point	Minfloat – Maxfloat	unitless	7 Dimensional Array: COP_WATER_COT_BINS x COP_WATER_EPS_BINS x COP_WATER_EMISS_BINS x COP_WATER_ALBEDO_BINS x COP_WATER_REL_AZ_BINS x COP_WATER_SEN_ZEN_BINS x COP_WATER_SOL_ZEN_BINS Size of Dimension(s): 19 x 9 x 1 x 10 x 22 x 19 x 19

2.2.5 VIIRS CTP COT LUT

Data Mnemonic	NP_NU-LM0040-004
Description/ Purpose	The VIIRS Cloud Top Parameters (CTP) COT LUT file contains factors for the conversion of COT at 0.55 microns to 10.763 microns. This file is used in the VIIRS CTP algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	31,208 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.5-1, VIIRS CTP COT LUT Data Format

Table 2.2.5-1, VIIRS CTP COT LUT Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
data	31208	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array: COT_ROWS x COT_COLS Size of Dimension(s): 3901 x 2

2.2.6 VIIRS CTP MSC LUT

Data Mnemonic	NP_NU-LM0040-005
Description/ Purpose	The VIIRS CTP Multiple Scattering Correction (MSC) file contains regression coefficients for multiple scattering corrections. This file is used by the VIIRS CTP algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	4,412 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.6-1, VIIRS CTP Multiple Scattering Correction LUT Data Format

Table 2.2.6-1, VIIRS CTP MSC LUT Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
grid_ndims	4	32-bit integer	3	unitless	Number of input dimensions. That is, the data vectors are specified on a grid in 'grid_ndims'-dimensional space
data_ndims	4	32-bit integer	4	unitless	Dimension of data values. Data variables are vectors with 'data_ndims' elements
ntics	12	32-bit integer	11	unitless	Number of 'tic marks' for each dimension. 'tic marks' are essentially the grid coordinates. The value in ntics[i] is the number of grid coordinates for dimension number 'i' 1 Dimensional Array: GRID_NDIMS Size of Dimension(s): 3
factor	12	32-bit integer	MinInt - MaxInt	unitless	Factors for indexing values 1 Dimensional Array: GRID_NDIMS Size of Dimension(s): 3
tic_min	12	32-bit floating point	Minfloat – Maxfloat	unitless	Min tic value used for interpolation 1 Dimensional Array: GRID_NDIMS Size of Dimension(s): 3
tic_max	12	32-bit floating point	Minfloat – Maxfloat	unitless	Max tic value used for interpolation 1 Dimensional Array: GRID_NDIMS Size of Dimension(s): 3

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
tic	132	32-bit floating point	Minfloat – Maxfloat	unitless	Tic mark (grid coordinate) table. The value in tic[i][j] is the 'j'th grid coordinate for dimension 'i' 2 Dimensional Array: GRID_NDIMS x NUM_TIC Size of Dimension(s): 3 x 11
data	4224	32-bit floating point	Minfloat – Maxfloat	unitless	Regression coefficients for multiple scattering correction 2 Dimensional Array: DATA_NDIMS x NUM_DATA Size of Dimension(s): 4 x 264

2.2.7 VIIRS CTP OSS OD Look Up Table

Data Mnemonic	NP_NU-LM0040-006
Description/ Purpose	The VIIRS CTP OSS OD LUT file contains the OSS forward model input parameters. This file is used in the VIIRS Cloud Top Pressure (CTP) algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	144,106,076 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.7-1, VIIRS OSS OD LUT Data Format

Table 2.2.7-1, VIIRS CTP OSS OD LUT Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
NmolFix	2	16 bit integer	MinInt – MaxInt	unitless	
Nmol	2	16 bit integer	MinInt – MaxInt	unitless	
MolIDFix	24	16 bit integer	MinInt – MaxInt	unitless	1 Dimensional Array: NUM_MOLIDFIX Size of Dimension(s): 12
MolID	24	16 bit integer	MinInt – MaxInt	unitless	1 Dimensional Array: NUM_MOLID Size of Dimension(s): 12
Spare	2	16-bit integer	MinInt – MaxInt	unitless	
NLayOD	4	32-bit integer	MinInt – MaxInt	unitless	
NTmpOD	4	32-bit integer	MinInt – MaxInt	unitless	
pref	404	32-bit floating point	Minfloat – Maxfloat	unitless	1 Dimensional Array: NUM_PREF Size of Dimension(s): 101
tmptab	4000	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array: TMPTAB_ROWS x TMPTAB_COLS Size of Dimension(s): 100 x 10

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
wvptab	5600	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array: WVPTAB_ROWS x WVPTAB_COLS Size of Dimension(s): 100 x 14
padFloat	4	32-bit floating point	Minfloat – Maxfloat	unitless	Pad
vFreq	96000	64-bit floating point	Minfloat – Maxfloat	unitless	1 Dimensional Array: NUM_VFREQ Size of Dimension(s): 12000
NmolS_tmp	2	16 bit integer	MinInt - MaxInt	unitless	
ImolS_tmp	10	16 bit integer	MinInt - MaxInt	unitless	1 Dimensional Array: NUM_IMOLS Size of Dimension(s): 5
Padshort	4	16-bit integer	MinInt - MaxInt	unitless	Spare 1 Dimensional Array: Size of Dimension(s): 2
kfix	48000000	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array: KFIX_ROWS x KFIX_COLS Size of Dimension(s): 12000 x 1000

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
dkh2o	48000000	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array: DKH2O_ROWS x DKH2O_COLS Size of Dimension(s): 12000 x 1000
kh2o	48000000	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array: KH2O_ROWS x KH2O COLS Size of Dimension(s): 12000 x 1000

2.2.8 VIIRS CTP OSS SEL LUT

Data Mnemonic	NP_NU-LM0040-007
Description/ Purpose	The VIIRS OSS SEL LUT file contains the OSS SEL regression coefficients. This file is used in the VIIRS CTP algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	994,012 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.8-1, VIIRS OSS SEL LUT Data Format

Table 2.2.8-1, VIIRS CTP OSS SEL LUT Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
nchan	4	32-bit integer	MinInt - MaxInt	unitless	
nf_sel	4	32-bit integer	MinInt - MaxInt	unitless	
nchmax	4	32-bit integer	MinInt - MaxInt	unitless	
cFreq	10000	32-bit floating point	Minfloat – Maxfloat	unitless	1 Dimensional Array: NUM_CFREQ Size of Dimension(s): 2500
nch	24000	16 bit integer	MinInt - MaxInt	unitless	1 Dimensional Array: NUM_NCH Size of Dimension(s): 12000
coef	480000	32-bit floating point	Minfloat – Maxfloat	unitless	1 Dimensional Array: COEF_ROWS COEF_COLS Size of Dimension(s): 12000 x 10
ichmap	480000	32-bit integer	MinInt - MaxInt	unitless	1 Dimensional Array: ICH_ROWS ICH_COLS Size of Dimension(s): 12000 x 10

2.2.9 VIIRS Sea Ice Broadband Atmospheric Transmittance LUT

Data Mnemonic	NP_NU-LM0040-008
Description/ Purpose	The VIIRS Sea Ice Broadband Atmospheric Transmittance LUT file is generated using the 6S radiative transfer routine and the algorithm. This file is used in the VIIRS Sea Ice Age algorithm
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	332 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.9-1, VIIRS Sea Ice Broadband Atmospheric Transmittance LUT Data Format

Table 2.2.9-1, VIIRS Sea Ice Broadband Atmospheric Transmittance LUT Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
aotbin	24	32-bit floating point	0.0 – 1.0 Initial Values = [0.0,0.01,0.1,0.2,0.6,1.0]	unitless	AOT Boundary Values 1 Dimensional Array: NAOT Size of Dimension(s): 6
szabin	44	32-bit floating point	-90 – 90 Initial Values = [48.0,52.0,56.0,60.0,64.0, 68.0,72.0,76.0,80.0,84.0, 88.0]	degree	Solar Zenith Angle Boundary Values 1 Dimensional Array: NSZA Size of Dimension(s): 11

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
bbtranslut	264	32-bit floating point	0.0 – 1.0 Initial Values = [0.913416 0.913416 0.883998 0.852080 0.734581 0.634458 **(1)** 0.906948 0.906948 0.874509 0.839625 0.714074 0.610474 **(2)** 0.898996 0.898996 0.862829 0.824371 0.689830 0.583017**(3)** 0.889093 0.889093 0.848281 0.805525 0.661177 0.551780**(4)** 0.876536 0.876536 0.829884 0.781987 0.627344 0.516514**(5)** 0.860251 0.860251 0.806199 0.752198 0.587501 0.477124**(6)** 0.838493 0.838493 0.774994 0.713922 0.540873 0.433793**(7)** 0.808251 0.808251 0.732683 0.663920 0.487026 0.387159**(8)** 0.763895 0.763895 0.673236 0.597567 0.426465 0.338517**(9)** 0.705639 0.705639 0.596868 0.514757 0.359083 0.287918**(10)** 0.633377 0.633377 0.503474 0.415542 0.284933 0.235338**(11)]**	unitless	Atmospheric Broadband Transmittance values, extracted from 6S RTM. Transmittance is provided in this field, one for each “naot” bin (6 total) and a set of 6 for each solar zenith angle (as listed in the szabin field). 2 Dimensional Array: NSZA x NAOT Size of Dimension(s): 11 x 6

2.2.10 VIIRS Sea Ice Reflectance LUT

Data Mnemonic	NP_NU-LM0040-009
Description/ Purpose	The VIIRS Sea Ice Reflectance LUT file contains top of the atmosphere reflectance, spectral albedo and broad band albedo values for snow/ice surfaces which are treated as flat surfaces. This file is used in the VIIRS Sea Ice Age algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	9,314,508 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.10-1, VIIRS Sea Ice Reflectance LUT Data Format

Table 2.2.10-1, VIIRS Sea Ice Reflectance LUT Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
snowThick	24	32-bit floating point	>0.0 Values initially set to: [0.0, 0.25, 0.5, 1.0, 2.0, 3.0]	cm	Snow Depth Bin Values 1 Dimensional Array: DEPTH Size of Dimension(s): 6
snowGrainSize	4	32-bit floating point	Value initially set to = 250.0	micrometers	Snow Grain Size
snowDensity	4	32-bit floating point	Value initially set to = 0.3	g/cm^3	Snow Density
iceThick	20	32-bit floating point	>0.0 Values initially set to: [5,10,20,30,40]	cm	Ice Thickness Bin Values 1 Dimensional Array: THICK Size of Dimension(s): 5
iceGrainSize	4	32-bit floating point	Minfloat - Maxfloat	micrometers	Ice Grain Size
iceDensity	4	32-bit floating point	Value initially set to = 0.917	g/cm^3	Ice Density
normIceDensity	4	32-bit floating point	Minfloat – Maxfloat	g/cm^3	
brineGrainSize	4	32-bit floating point	Minfloat – Maxfloat	unitless	Brine Grain Size
brineDensity	4	32-bit floating point	Minfloat – Maxfloat	g/cm^3	Brine Grain Density
subRefl	4	32-bit floating point	Minfloat - Maxfloat	unitless	

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
sunZen	44	32-bit floating point	-1.0 – 1.0	unitless (values are cosines)	Solar Zenith Angle Bin Values 1 Dimensional Array: N_SZA Size of Dimension(s): 11
viewZen	28	32-bit floating point	-1.0 – 1.0	unitless (values are cosines)	View Zenith Angle Bin Values 1 Dimensional Array: N_VZA Size of Dimension(s): 7
relAzm	28	32-bit floating point	0 – 180	degree	Relative Azimuth Angle Bin Values 1 Dimensional Array: N_RELAZ Size of Dimension(s): 7
snowType	4	32-bit floating point	Minfloat - Maxfloat	unitless	Snow Type
h2oVapor	12	32-bit floating point	>=0.0 Values initially set to: [0.0, 0.4323, 2.0]	gm/cm^2	Precipitable Water Bin Values 1 Dimensional Array: N_WVOT Size of Dimension(s): 3
totClmnOzn	12	32-bit floating point	>=0.0 Values initially set to: [0.0, 0.1967, 0.5]	milli-atm-cm	Ozone Column Bin Values 1 Dimensional Array: N_OOT Size of Dimension(s): 3

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
aeroModel	8	32-bit floating point		unitless	Aerosol Model 1 Dimensional Array: N_AEROMDL Size of Dimension(s): 2
aotBin	16	32-bit floating point	>=0.0 Values initially set to: [0.0, 0.2366, 0.5472,1.0]	unitless	AOT Bin Values 1 Dimensional Array: N_AOT Size of Dimension(s): 4
iceRefl	9313920	32-bit floating point	> 0.0	unitless	TOA Reflectances From 6S RTM 10 Dimensional Array N_AM x N_BANDS x N_THICK x N_DEPTH x N_AOT x N_WVOT x N_OOT x N_SZA x N_VZA x N_RELAZ Size of Dimension(s): 2 x 2 x 5 x 6 x 4 x 3 x 3 x 11 x 7 x 7
sphrAlbedo	120	32-bit floating point	0.0 – 1.0	unitless	Broadband From 6S radiative transfer model (RTM) 2 Dimensional Array: N_DEPTH x N_THICK Size of Dimension(s): 6 x 5
narrowSphrAlbedo	240	32-bit floating point	0.0 – 1.0	unitless	Spectral Albedo from 6S RTM 3 Dimensional Array: N_BANDS x N_DEPTH x N_THICK Size of Dimension(s): 2 x 6 x 5

2.2.11 VIIRS ACO/OCC Aerosol LUT

Data Mnemonic	NP_NU-LM0040-010
Description/ Purpose	The VIIRS ACO/OCC Aerosol LUT file contains parameters used to compute the aerosol contribution to the TOA reflectance. This file is used in the VIIRS ACO/OCC algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	73,735,340 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.11-1, VIIRS ACO/OCC Aerosol LUT Data Format

Table 2.2.11-1, VIIRS ACO/OCC Aerosol LUT Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
cost	36,867,600	32-bit floating point	Minfloat - Maxfloat	unitless	1) Coefficients for fit as rho_a + rho_ra vs. rho_as for the VIIRS bands, or 2) Coefficients for fit rho_as vs. (rho_a + rho_ra) for the VIIRS NIR bands. Coefficients are used to compute the multi-scattering aerosol reflectance for bands M1-M5. Note: AERO_COEF dimension (size = 5) corresponds to a,b,c,d,e (i.e. acost) 6 Dimensional Array: AERO_COEF x MODEL x ACOBANDS x MSUN x MPHI x NRAD Size of Dimension(s): 5 x 12 x 7 x 33 x 19 x 35

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
cost_rev	36,867,600	32-bit floating point	Minfloat - Maxfloat	unitless	1) Coefficients for fit as rho_a + rho_ra vs. rho_as for the VIIRS bands, or 2) coefficients for fit rho_as vs. (rho_a + rho_ra) for the VIIRS NIR bands. Single-scattering aerosol (M6 – M7) reflectance coefficients are stored in these arrays (acost_rev, …). Note: AERO_COEF dimension (size = 5) corresponds to a,b,c,d,e (i.e. acost_rev) 6 Dimensional Array: AERO_COEF x MODEL x ACOBANDS x MSUN x MPHI x NRAD Size of Dimension(s): 5 x 12 x 7 x 33 x 19 x 35
thetav	140	32-bit floating point	Minfloat - Maxfloat	degrees	Sensor zenith angles 1 Dimensional Array: NRAD Size of Dimension(s): 35

2.2.12 VIIRS ACO/OCC Aerosol Properties LUT

Data Mnemonic	NP_NU-LM0040-011
Description/ Purpose	The VIIRS ACO/OCC Aerosol Properties LUT file contains aerosol parameters pertaining to 12 different aerosol models. This file is used in the VIIRS ACO/OCC algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	76,600 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.12-1, VIIRS ACO/OCC Aerosol Properties LUT Data Format

Table 2.2.12-1, VIIRS ACO/OCC Aerosol Properties LUT Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
angle	300	32-bit floating point	0 ≤ angle ≤ 180 (increments vary)	degrees	Scattering angles 1 Dimensional Array: NUM_SCAT_ANGLES Size of Dimension(s): 75
wavelength	28	32-bit floating point	[412,443,448, 555,670,748, 865]	nm	VIIRS band center wavelengths 1 Dimensional Array: ACOBANDS Size of Dimension(s): 7
omega0	336	32-bit floating point	Minfloat – Maxfloat	unitless	Aerosol Single Scattering Albedo 2 Dimensional Array: MODEL x ACOBANDS Size of Dimension(s): 12 x 7
extinc	336	32-bit floating point	Minfloat – Maxfloat	unitless	Aerosol extinction coefficient 2 Dimensional Array: MODEL x ACOBANDS Size of Dimension(s): 12 x 7

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
s11	25,200	32-bit floating point	Minfloat – Maxfloat	unitless	Aerosol Scattering Phase Function 3 Dimensional Array: MODEL x ACOBANDS x NUM_SCAT_ANGLES Size of Dimension(s): 12 x 7 x 75
ylog	25,200	32-bit floating point	Dependant on the original y values	unitless	Logs of s11 (scattering phase function) 3 Dimensional Array: MODEL x ACOBANDS x NUM_SCAT_ANGLES Size of Dimension(s): 12 x 7 x 75
y2	25,200	32-bit floating point	Dependant on the original y values	unitless	Spline (second derivative) of s11 (scattering phase function) 3 Dimensional Array: MODEL x ACOBANDS x NUM_SCAT_ANGLES Size of Dimension(s): 12 x 7 x 75

2.2.13 VIIRS ACO/OCC Diffuse Transmittance LUT

Data Mnemonic	NP_NU-LM0040-012
Description/ Purpose	The VIIRS ACO/OCC Diffuse Transmittance LUT file contains values of fitting coefficients used to compute the diffuse transmittance. This file is used in the VIIRS ACO/OCC algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	22,176 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.13-1, VIIRS ACO/OCC Diffuse Transmittance LUT Data Format

Table 2.2.13-1, VIIRS ACO/OCC Diffuse Transmittance LUT Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
tt_coef_a	11,088	32-bit floating point	Minfloat – Maxfloat	unitless	Diffuse Transmittance Coefficient 3 Dimensional Array: MSUN x ACOBANDS x MODEL Size of Dimension(s): 33 x 7 x 12
tt_coef_b	11,088	32-bit floating point	Minfloat – Maxfloat	unitless	Diffuse Transmittance Coefficient 3 Dimensional Array: MSUN x ACOBANDS x MODEL Size of Dimension(s): 33 x 7 x 12

2.2.14 VIIRS ACO/OCC Rayleigh Scattering LUT

Data Mnemonic	NP_NU-LM0040-013
Description/ Purpose	The VIIRS ACO/OCC Rayleigh Scattering LUT file contains values used to compute the Rayleigh Component of the TOA reflectance. This file is used in the VIIRS ACO/OCC (ACO module) algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	3,719,952 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.14-1, VIIRS ACO/OCC Rayleigh Scattering LUT Data Format

Table 2.2.14-1, VIIRS ACO/OCC Rayleigh Scattering PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
ray_tau	28	32-bit floating point	Minfloat – Maxfloat	unitless	Rayleigh Optical Thickness values for bands M1-M7 1 Dimensional Array: ACOBANDS Size of Dimension(s): 7
sigma_g	32	32-bit floating point	Minfloat – Maxfloat	unitless	Surface Roughness Parameter (Not used in the code) 1 Dimensional Array: NSIGMA Size of Dimension(s): 8
ray_dep	28	32-bit floating point	Minfloat – Maxfloat	unitless	Depolarization Factor for bands M1-M7 1 Dimensional Array: ACOBANDS Size of Dimension(s): 7
ray_sun	180	32-bit floating point	Minfloat – Maxfloat	degrees	Solar Zenith Angles 1 Dimensional Array: NSUN Size of Dimension(s): 45
ray_ang	164	32-bit floating point	Minfloat – Maxfloat	degrees	Sensor Zenith Angles 1 Dimensional Array: NRAD_RAY Size of Dimension(s): 41

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
ray_for_i	1,239,840	32-bit floating point	Minfloat – Maxfloat	unitless	I Stokes Parameter 5 Dimensional Array: NRAD_RAY x NORDER x NSUN x NSIGMA x ACOBANDS Size of Dimension(s): 41 x 3 x 45 x 8 x 7
ray_for_q	1,239,840	32-bit floating point	Minfloat – Maxfloat	unitless	Q Stokes Parameter 5 Dimensional Array: NRAD_RAY x NORDER x NSUN x NSIGMA x ACOBANDS Size of Dimension(s): 41 x 3 x 45 x 8 x 7
ray_for_u	1,239,840	32-bit floating point	Minfloat – Maxfloat	unitless	U Stokes Parameter 5 Dimensional Array: NRAD_RAY x NORDER x NSUN x NSIGMA x ACOBANDS Size of Dimension(s): 41 x 3 x 45 x 8 x 7

2.2.15 VIIRS Surface Albedo Skylight Diffussion Coefficients LUT

EDFCB8-TBR-10516

Data Mnemonic	NP_NU-LM0040-014
Description/ Purpose	The VIIRS Surface Albedo (SA) Skylight Diffussion Coefficients LUT file contains the Dark Pixel Sub-Algorithm (DPSA) Fraction of Diffuse Skylight (per band, per solar zenith angle, per aot value and per aerosol model, 5 currently). This file relates the fraction of diffuse skylight as a function of band, zenith angles, aerosol optical thickness values and aerosol model. It is used to produce the interpolated value of the diffuse skylight used in conjunction with the black sky and white sky albedo. The Five Aerosol models, in order, are: Dust, Smoke High, Smoke Low, Urban High and Urban Low. This file is used in the VIIRS Surface Albedo algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	2,443,392 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.15-1, VIIRS Surface Albedo Skylight Diffusion Coefficients LUT Data Format

Table 2.2.15-1, VIIRS Surface Albedo Skylight Diffusion Coefficients LUT Data Format

EDFCB8-TBR-10516

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
M1	271488	32-bit floating point	Minfloat – Maxfloat	unitless	Fraction of diffuse skylight for the M1 band 3 Dimensional Array: NUM_AERO_MODELS x NUM_BINS_AOT x NUM_BINS_SOLAR_ZENITH Size of Dimension(s): 5 x 101 x 86 Aerosol models, in order, are: Dust, Smoke High, Smoke Low, Urban High and Urban Low.
M2	271488	32-bit floating point	Minfloat – Maxfloat	unitless	Fraction of diffuse skylight for the M2 band 3 Dimensional Array: NUM_AERO_MODELS x NUM_BINS_AOT x NUM_BINS_SOLAR_ZENITH Size of Dimension(s): 5 x 101 x 86

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
M3	271488	32-bit floating point	Minfloat – Maxfloat	unitless	Fraction of diffuse skylight for the M3 band 3 Dimensional Array: NUM_AERO_MODELS x NUM_BINS_AOT x NUM_BINS_SOLAR_ZENITH Size of Dimension(s): 5 x 101 x 86
M4	271488	32-bit floating point	Minfloat – Maxfloat	unitless	Fraction of diffuse skylight for the M4 band 3 Dimensional Array: NUM_AERO_MODELS x NUM_BINS_AOT x NUM_BINS_SOLAR_ZENITH Size of Dimension(s): 5 x 101 x 86
M5	271488	32-bit floating point	Minfloat – Maxfloat	unitless	Fraction of diffuse skylight for the M5 band 3 Dimensional Array: NUM_AERO_MODELS x NUM_BINS_AOT x NUM_BINS_SOLAR_ZENITH Size of Dimension(s): 5 x 101 x 86

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
M7	271488	32-bit floating point	Minfloat – Maxfloat	unitless	Fraction of diffuse skylight for the M7 band 3 Dimensional Array: NUM_AERO_MODELS x NUM_BINS_AOT x NUM_BINS_SOLAR_ZENITH Size of Dimension(s): 5 x 101 x 86
M8	271488	32-bit floating point	Minfloat – Maxfloat	unitless	Fraction of diffuse skylight for the M8 band 3 Dimensional Array: NUM_AERO_MODELS x NUM_BINS_AOT x NUM_BINS_SOLAR_ZENITH Size of Dimension(s): 5 x 101 x 86
M10	271488	32-bit floating point	Minfloat – Maxfloat	unitless	Fraction of diffuse skylight for the M10 band 3 Dimensional Array: NUM_AERO_MODELS x NUM_BINS_AOT x NUM_BINS_SOLAR_ZENITH Size of Dimension(s): 5 x 101 x 86

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
M11	271488	32-bit floating point	Minfloat – Maxfloat	unitless	Fraction of diffuse skylight for the M11 band 3 Dimensional Array: NUM_AERO_MODELS x NUM_BINS_AOT x NUM_BINS_SOLAR_ZENITH Size of Dimension(s): 5 x 101 x 86

2.2.16 VIIRS Surface Albedo BPSA Regression Weight Coefficients LUT

EDFCB8-TBR-10517

Data Mnemonic	NP_NU-LM0040-015
Description/ Purpose	The VIIRS Surface Albedo BPSA Regression Weight Coefficients LUT file contains the Bright Pixel Sub-Algorithm (BPSA) Regression Weight Coefficients (one per five aerosol models, per solar zenith angle, per view zenith angle and per relative azimuth) for bands M1-M5, M7, M8, M10, M11 and an additional coefficient for the linear regression's constant term. This file is used for bright pixels when VIIRS AOT is suspect and cannot be used. Linear regression coefficients are used to directly obtain an albedo value using 10 coefficients (constant value + 9 M-band coefficients). This file is used in the VIIRS Surface Albedo algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	359,040 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.16-1, VIIRS Surface Albedo Regression Weight Coefficients LUT Data Format

Table 2.2.16-1, VIIRS Surface Albedo BPSA Regression Weight Coefficients LUT Data Format

EDFCB8-TBR-10517

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
BPSA regression weight coefficients	359040	32-bit floating point	Minfloat – Maxfloat	unitless	BPSA linear regression coefficients. 5 Dimensional Array: BPSA_NUM_BINS_SOLAR_ZENITH x BPSA_NUM_BINS_VIEW_ZENITH x BPSA_NUM_BINS_REL_AZIMUTH x NUM_BPSA_AERO_MODELS x NUM_COEFFS Size of Dimension(s): 12 x 17 x 11 x 5 x 10)

2.2.17 VIIRS Surface Albedo DPSA Narrowband to Broadband Conversion Coefficients LUT

EDFCB8-TBR-10518

Data Mnemonic	NP_NU-LM0040-016
Description/ Purpose	The VIIRS Surface Albedo DPSA Narrowband to Broadband Coefficients LUT file contains coefficients needed to convert the spectral surface albedo to broadband albedo. One coefficient per M-band is used plus a constant term (10 terms total). Coefficients are derived (via multivariate regression analysis) from radiative transfer simulations. This file is used in the VIIRS Surface Albedo algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	40 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.17-1, VIIRS Surface Albedo DPSA Narrowband to Broadband Conversion Coefficients LUT Data Format

Table 2.2.17-1, VIIRS Surface Albedo DPSA Narrowband to Broadband Conversion Coefficients LUT Data Format

EDFCB8-TBR-10518

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
C	4	32-bit floating point	Minfloat – Maxfloat	unitless	Regression coefficient (Constant Term)
M1	4	32-bit floating point	Minfloat – Maxfloat	unitless	Regression coefficient for the M1 Narrowband Albedo variable
M2	4	32-bit floating point	Minfloat – Maxfloat	unitless	Regression coefficient for the M2 Narrowband Albedo variable
M3	4	32-bit floating point	Minfloat – Maxfloat	unitless	Regression coefficient for the M3 Narrowband Albedo variable
M4	4	32-bit floating point	Minfloat – Maxfloat	unitless	Regression coefficient for the M4 Narrowband Albedo variable
M5	4	32-bit floating point	Minfloat – Maxfloat	unitless	Regression coefficient for the M5 Narrowband Albedo variable
M7	4	32-bit floating point	Minfloat – Maxfloat	unitless	Regression coefficient for the M7 Narrowband Albedo variable
M8	4	32-bit floating point	Minfloat – Maxfloat	unitless	Regression coefficient for the M8 Narrowband Albedo variable
M10	4	32-bit floating point	Minfloat – Maxfloat	unitless	Regression coefficient for the M10 Narrowband Albedo variable
M11	4	32-bit floating point	Minfloat – Maxfloat	unitless	Regression coefficient for the M11 Narrowband Albedo variable

2.2.18 DELETED

2.2.19 VIIRS Sea Ice Snow Depth/Ice Thickness LUT

Data Mnemonic	NP_NU-LM0233-006
Description/ Purpose	The VIIRS Sea Ice Snow Depth/Ice Thickness LUT contains snow depth on sea ice and ice thickness. The table values are model computations based on NCEP surface temperature and precipitation rate climatology data.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	1,508,812 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.19-1, VIIRS Sea Ice Snow Depth/Ice Thickness LUT Data Format

Table 2.2.19-1, VIIRS Snow Depth/Ice Thickness Climatology LUT Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
nlat_bins	92	32-bit floating point	-90 ≤ nlat_bins ≤ 90 Values initially set to a 2.5 degree spacing from 35.0 to 90.0 degrees: [35., 37.5, 40…85., 87.5, 90.]	degree	Northern Hemisphere latitudes at 2.5 deg increments 1 Dimensional Array: N_NLAT Size of Dimension(s): 23
slat_bins	68	32-bit floating point	-90 ≤ slat_bins ≤ 90 Values initially set to a 2.5 degree spacing from -90.0 to -50.0 degrees: [-90., -87.5, -85…-55., -52.5, -50.]	degree	Southern Hemisphere latitudes at 2.5 deg increments 1 Dimensional Array: N_SLAT Size of Dimension(s): 17
lon_bins	580	32-bit floating point	-180 ≤ lon_bins ≤ 180 Values initially set to a 2.5 degree spacing from 0 to 360.0 degrees: [0, 2.5, 5.0…355, 357.5, 360.]	degree	Longitudes at 2.5 deg increments 1 Dimensional Array: N_LON Size of Dimension(s): 145
date_bins	52	32-bit floating point	> 0.0 Values initially set to a 30.5 day spacing from 15.5 to 381.5: [15.5, 46., 76.5…320.5, 351., 381.5]	Day number	Day of year for the middle of each month 1 Dimensional Array: N_DATE Size of Dimension(s): 13

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
ice_bins	20	32-bit floating point	> 0.0 Values initially set to: [5.0,10.0,20.0,30.0,40.0]	cm	Ice Thickness 1 Dimensional Array: N_ICE Size of Dimension(s): 5
sdc_n	867,100	32-bit floating point	> 0.0	cm	Snow depth from climatology model for Northern Hemisphere 4 Dimensional Array: N_DATE x N_LON x N_NLAT x N_ICE Size of Dimension(s): 13 x 145 x 23 x 5
sdc_s	640,900	32-bit floating point	> 0.0	cm	Snow depth form climatology model for Southern Hemisphere 4 Dimensional Array: N_DATE x N_LON x N_SLAT x N_ICE Size of Dimension(s): 13 x 145 x 17 x 5

2.2.20 VIIRS NHF COART LUT

Data Mnemonic	NP_NU-LM0234-000
Description/ Purpose	The NHF COART LUT This file contains Ocean Albedo and albedo weight Look-up data for the VIIRS NHF algorithm. Table data is from the Coupled Ocean and Atmospheric Radiative Transfer (COART) model.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	819,440 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.20-1, VIIRS NHF COART LUT Data Format

Table 2.2.20-1, VIIRS NHF COART LUT Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
ocnalbtab	806,400	32-bit floating point	Minfloat – Maxfloat	unitless	Ocean Albedo 2 Dimensional Array: OCNALB_NUM_RECS x COART_REC_SIZ Size of Dimension(s): 8400 x 24
albwt	23,040	32-bit floating point	Minfloat – Maxfloat	unitless	Albedo Weights 2 Dimensional Array: ALBWT_NUM_RECS x COART_REC_SIZ Size of Dimension(s): 240 x 24

2.2.21 VIIRS NHF RTM LUT

Data Mnemonic	NP_NU-LM0234-001
Description/ Purpose	The NHF RTM LUT This file contains the RRTM (Rapid Radiative Transfer Model) correlated-k absorption coefficients for calculating radiative fluxes.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	839,872 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.21-1, VIIRS NHF RTM LUT Data Format

Table 2.2.21-1, VIIRS NHF RTM LUT Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
K1_ka	4160	32-bit floating point	Minfloat - Maxfloat	unitless	3 Dimensional Array Size of Dimension(s): 16 x 13 x 5
K1_kb	15040	32-bit floating point	Minfloat – Maxfloat	unitless	3 Dimensional Array Size of Dimension(s): 16 x 47 x 5
K1_forref	256	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 4
K1_selfref	640	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 10
K1_ka_mn2	1216	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 19
K1_kb_mn2	1216	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 19
K2_ka	4160	32-bit floating point	Minfloat – Maxfloat	unitless	3 Dimensional Array Size of Dimension(s): 16 x 13 x 5
K2_kb	15040	32-bit floating point	Minfloat - Maxfloat	unitless	3 Dimensional Array Size of Dimension(s): 16 x 47 x 5

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
K2_forref	256	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 4
K2_selfref	640	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 10
K3_ka	37440	32-bit floating point	Minfloat – Maxfloat	unitless	4 Dimensional Array Size of Dimension(s): 16 x 13 x 5 x 9
K3_kb	75200	32-bit floating point	Minfloat – Maxfloat	unitless	4 Dimensional Array Size of Dimension(s): 16 x 47 x 5 x 5
K3_forref	256	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 4
K3_selfref	640	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 10
K3_ka_mn2o	10944	32-bit floating point	Minfloat – Maxfloat	unitless	3 Dimensional Array Size of Dimension(s): 16 x 19 x 9
K3_kb_mn2o	6080	32-bit floating point	Minfloat - Maxfloat	unitless	3 Dimensional Array Size of Dimension(s): 16 x 19 x 5

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
K4_ka	37440	32-bit floating point	Minfloat – Maxfloat	unitless	4 Dimensional Array Size of Dimension(s): 16 x 13 x 5 x 9
K4_kb	75200	32-bit floating point	Minfloat – Maxfloat	unitless	4 Dimensional Array Size of Dimension(s): 16 x 47 x 5 x 5
K4_forref	256	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 4
K4_selfref	640	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 10
K5_ka	37440	32-bit floating point	Minfloat – Maxfloat	unitless	4 Dimensional Array Size of Dimension(s): 16 x 13 x 5 x 9
K5_kb	75200	32-bit floating point	Minfloat – Maxfloat	unitless	4 Dimensional Array Size of Dimension(s): 16 x 47 x 5 x 5
K5_forref	256	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 4
K5_selfref	640	32-bit floating point	Minfloat - Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 10

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
K5_ka_mo3	10944	32-bit floating point	Minfloat – Maxfloat	unitless	3 Dimensional Array Size of Dimension(s): 16 x 19 x 9
K6_ka	4160	32-bit floating point	Minfloat – Maxfloat	unitless	3 Dimensional Array Size of Dimension(s): 16 x 13 x 5
K6_forref	256	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 4
K6_selfref	640	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 10
K6_ka_mco2	1216	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 19
K7_ka	37440	32-bit floating point	Minfloat – Maxfloat	unitless	4 Dimensional Array Size of Dimension(s): 16 x 13 x 5 x 9
K7_kb	15040	32-bit floating point	Minfloat – Maxfloat	unitless	3 Dimensional Array Size of Dimension(s): 16 x 47 x 5
K7_forref	256	32-bit floating point	Minfloat - Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 4

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
K7_selfref	640	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 10
K7_ka_mco2	10944	32-bit floating point	Minfloat – Maxfloat	unitless	3 Dimensional Array Size of Dimension(s): 16 x 19 x 9
K7_kb_mco2	1216	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 19
K8_ka	4160	32-bit floating point	Minfloat – Maxfloat	unitless	3 Dimensional Array Size of Dimension(s): 16 x 13 x 5
K8_kb	15040	32-bit floating point	Minfloat – Maxfloat	unitless	3 Dimensional Array Size of Dimension(s): 16 x 47 x 5
K8_forref	256	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 4
K8_selfref	640	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 10
K8_ka_mco2	1216	32-bit floating point	Minfloat - Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 19

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
K8_ka_mo3	1216	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 19
K8_ka_mn2o	1216	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 19
K8_kb_mco2	1216	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 19
K8_kb_mn2o	1216	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 19
K9_ka	37440	32-bit floating point	Minfloat – Maxfloat	unitless	4 Dimensional Array Size of Dimension(s): 16 x 13 x 5 x 9
K9_kb	15040	32-bit floating point	Minfloat – Maxfloat	unitless	3 Dimensional Array Size of Dimension(s): 16 x 47 x 5
K9_forref	256	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 4
K9_selfref	640	32-bit floating point	Minfloat - Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 10

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
K9_ka_mn2o	10944	32-bit floating point	Minfloat – Maxfloat	unitless	3 Dimensional Array Size of Dimension(s): 16 x 19 x 9
K9_kb_mn2o	1216	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 19
K10_ka	4160	32-bit floating point	Minfloat – Maxfloat	unitless	3 Dimensional Array Size of Dimension(s): 16 x 13 x 5
K10_kb	15040	32-bit floating point	Minfloat – Maxfloat	unitless	3 Dimensional Array Size of Dimension(s): 16 x 47 x 5
K10_forref	256	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 4
K10_selfref	640	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 10
K11_ka	4160	32-bit floating point	Minfloat - Maxfloat	unitless	3 Dimensional Array Size of Dimension(s): 16 x 13 x 5
K11_kb	15040	32-bit floating point	Minfloat - Maxfloat	unitless	3 Dimensional Array Size of Dimension(s): 16 x 47 x 5

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
K11_forref	256	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 4
K11_selfref	640	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 10
K11_ka_mo2	1216	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 19
K11_kb_mo2	1216	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 19
K12_ka	37440	32-bit floating point	Minfloat – Maxfloat	unitless	4 Dimensional Array Size of Dimension(s): 16 x 13 x 5 x 9
K12_forref	256	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 4
K12_selfref	640	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 10
K13_ka	37440	32-bit floating point	Minfloat - Maxfloat	unitless	4 Dimensional Array Size of Dimension(s): 16 x 13 x 5 x 9

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
K13_forref	256	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 4
K13_selfref	640	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 10
K13_ka_mco2	10944	32-bit floating point	Minfloat – Maxfloat	unitless	3 Dimensional Array Size of Dimension(s): 16 x 19 x 9
K13_ka_mco	10944	32-bit floating point	Minfloat – Maxfloat	unitless	3 Dimensional Array Size of Dimension(s): 16 x 19 x 9
K13_kb_mo3	1216	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 19
K14_ka	4160	32-bit floating point	Minfloat – Maxfloat	unitless	3 Dimensional Array Size of Dimension(s): 16 x 13 x 5
K14_kb	15040	32-bit floating point	Minfloat – Maxfloat	unitless	3 Dimensional Array Size of Dimension(s): 16 x 47 x 5
K14_forref	256	32-bit floating point	Minfloat - Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 4

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
K14_selfref	640	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 10
K15_ka	37440	32-bit floating point	Minfloat – Maxfloat	unitless	3 Dimensional Array Size of Dimension(s): 16 x 13 x 5 x 9
K15_forref	256	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 4
K15_selfref	640	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 10
K15_ka_mn2	10944	32-bit floating point	Minfloat – Maxfloat	unitless	3 Dimensional Array Size of Dimension(s): 16 x 19 x 9
K16_ka	37440	32-bit floating point	Minfloat – Maxfloat	unitless	4 Dimensional Array Size of Dimension(s): 16 x 13 x 5 x 9
K16_kb	15040	32-bit floating point	Minfloat – Maxfloat	unitless	3 Dimensional Array Size of Dimension(s): 16 x 47 x 5
K16_forref	256	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 4

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
K16_selfref	640	32-bit floating point	Minfloat - Maxfloat	unitless	2 Dimensional Array Size of Dimension(s): 16 x 10

2.2.22 VIIRS NHF Ice Roughness LUT

Data Mnemonic	NP_NU-LM0234-002
Description/ Purpose	The NHF Ice Roughness LUT … EDFCB8-TBD-10472
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	EDFCB8-TBD-10472 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.22-1, VIIRS NHF Ice Roughness LUT Data Format

Table 2.2.22-1, VIIRS NHF Ice Roughness LUT

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
EDFCB8-TBD-10472					

2.2.23 VIIRS NHF Ice Albedo LUT

Data Mnemonic	NP_NU-LM0234-003
Description/ Purpose	The NHF Ice Albedo LUT EDFCB8-TBD-10473
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	EDFCB8-TBD-10473 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.23-1, VIIRS NHF COART LUT Data Format

Table 2.2.23-1, VIIRS NHF Ice Albedo LUT

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
EDFCB8-TBD-10473					

2.2.24 VIIRS NHF RRTM-SW LUT

Data Mnemonic	NP_NU-LM0234-004
Description/ Purpose	The NHF RRTM-SW LUT EDFCB8-TBD-10474
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	EDFCB8-TBD-10474 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.24-1, VIIRS NHF COART LUT Data Format

Table 2.2.24-1, VIIRS NHF RRTM-SW LUT

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
EDFCB8-TBD-10474					

2.2.25 VIIRS NHF RRTM-LW LUT

Data Mnemonic	NP_NU-LM0234-005
Description/ Purpose	The NHF RRTM-LW LUT contains … EDFCB8-TBD-10475
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	EDFCB8-TBD-10475 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.25-1, VIIRS NHF RRTM-LW LUT Data Format

Table 2.2.25-1, VIIRS NHF RRTM-LW LUT

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
EDFCB8-TBD-10475					

2.2.26 VIIRS NHF RRTM Aerosol Models LUT

Data Mnemonic	NP_NU-LM0234-006
Description/ Purpose	The NHF RRTM Aerosol Models LUT contains … EDFCB8-TBD-10476
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	EDFCB8-TBD-10476 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.26-1, VIIRS NHF RRTM Aerosol Models LUT Data Format

Table 2.2.26-1, VIIRS NHF RRTM Aerosol Models LUT

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
EDFCB8-TBD-10476					

2.2.27 VIIRS NHF RRTM Ozone Climatology LUT

This LUT is an ancillary table. For format details see the CDFCB-X, Volume VI, D34862-06, Section 2.1.3.9, Ozone Profile: Fortuin and Kelder Climatology, 1998 Files.

2.2.28 VIIRS Bright Pixel PSF MOD LUT

Data Mnemonic	NP_NU-LM0235-003
Description/ Purpose	The VIIRS Bright Pixel PSF MOD LUT file contains the Point Spread Function (PSF) parameters for use in determining Bright Pixels. This file is used in the VIIRS Bright Pixel algorithm
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	106,624 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.28-1, VIIRS Bright Pixel PSF MOD LUT Data Format

Table 2.2.28-1, VIIRS Bright Pixel PSF MOD LUT

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
psf	8	64-bit floating point	-0.446723 – 0.144059	unitless	Point Spread Function (PSF) values 3 Dimensional Array NUM_750M_BANDS NUM_MOD_PSF_ROW NUM_MOD_PSF_COL Size of Dimension(s): 16 x 33 x 97

2.2.29 VIIRS Bright Pixel Sub Radiance LUT

Data Mnemonic	NP_NU-LM0235-001
Description/ Purpose	The VIIRS Bright Pixel Sub Radiance LUT file contains substitute radiance values used for saturated pixels. Note: The dimension of the radianceValues field includes the Imagery Bands in addition to the Moderate Bands (16 + 5 = 21 total). The Imagery bands are not currently used in the algorithm, but retained in this table for possible future inclusion. This file is used in the VIIRS Bright Pixel algorithm
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	336 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.29-1, VIIRS Bright Pixel Sub Radiance LUT Data Format

Table 2.2.29-1, VIIRS Bright Pixel Sub Radiance LUT

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
radianceValues	4	32-bit floating point	0 – 4276.912767	W/(m^2 um sr)	2 Dimensional Array NUM_BANDS (MOD + IMG) NUM_BP_RAD_COLUMNS Size of Dimension(s): 21 x 4 (For NUM_IMG_MOD_BANDS = 21, Bands 1-16 are Moderate Bands M1-M16, 17-21 are Imagery Bands I1 – I5)

2.2.30 VIIRS Surface Albedo Kernel black-sky and white-sky albedo LUT

Data Mnemonic	NP_NU-LM0233-019
Description/ Purpose	The VIIRS Surface Albedo Kernel black-sky and white-sky albedo LUT file contains the values of the black sky and white sky albedos for each of the kernel models (Volumetric and Geometric) used in the inversion process of the DPSA. This file is used in the VIIRS Surface Albedo / DPSA algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	5472 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.30-1, VIIRS Surface Albedo Kernel black-sky and white-sky albedo LUT Data Format

Table 2.2.30-1, VIIRS Surface Albedo Kernel black-sky and white-sky albedo LUT Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
whiteSky	32	32-bit floating point	Minfloat - Maxfloat	Unitless	Kernel White Sky Albedo 1 Dimensional Array: NUM_KERNELS Size of Dimension(s): 8 The 8 Kernels are, in order: 1. Ross-Thick Volumetric Scattering 2. Ross-Thin Volumetric Scattering 3. Non-reciprocal Li-Sparse 4. Reciprocal Li-Sparse 5. non-Reciprocal Li-Dense 6. Reciprocal Li-Dense 7.non-Reciprocal Li-Transit 8. Roujean

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
blackSky	5440	32-bit floating point		Unitless	Kernel Black Sky Albedo 2 Dimensional Array: NUM_KERNELS x NUMBINS_KERNELBLACKSKYALBEDO Size of Dimension(s): 8 x 170 The 8 Kernels are, in order: 1. Ross-Thick Volumetric Scattering 2. Ross-Thin Volumetric Scattering 3. Non-reciprocal Li-Sparse 4. Reciprocal Li-Sparse 5. non-Reciprocal Li-Dense 6. Reciprocal Li-Dense 7.non-Reciprocal Li-Transit 8. Roujean

2.3 OMPS LUTs

EDFCB8-TBD-10181

3.0 PROCESSING COEFFICIENTS

PCs are files containing parameters used in the creation of NPP/NPOESS Data Products by ground processing.

3.1 Automated PCs

Automated PCs are files containing parameters updated and/or created during the processing of the NPP/NPOESS Data Products by the processing algorithms. These updated files are subsequently used in the processing environment without human review of their contents. In some instances, these files are used immediately for processing, in other instances these files are used for future processing (e.g. for the next granule in the production data stream).

3.1.1 CrIS Automatic PCs

3.1.1.1 CrIS Correction Matrix PC

Data Mnemonic	NP_NU-LM0130-000
Description/ Purpose	The Cross-track Infrared Sounder (CrIS) Correction Matrix PC is applied to spectra as they are ejected from a sliding window. The 4-minute Engineering packet is used as input to create it. It is created at least once an orbit, estimated.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	76,700,596 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.1.1.1-1, CrIS Correction Matrix PC Data Format

Table 3.1.1.1-1, CrIS Correction Matrix PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
padding	2	16 bit integer	MinInt – MaxInt	unitless	
Version	2	16 bit integer	MinInt – MaxInt	unitless	
lowestWavenumber_LW_FOV_1	8	64-bit floating point	Minfloat – Maxfloat	cm-1	
deltaSigma_LW_FOV_1	8	64-bit floating point	Minfloat – Maxfloat	cm-1	Specifies wavenumber spacing for Resampling for LW
theMatrix_LW_FOV_1	5971968	64-bit floating point	Minfloat – Maxfloat	unitless	Correction Matrix Operator (CMO) 2 Dimensional Array: LW_POINTS_DECIMATED_INTERFEROGRAM x LW_POINTS_DECIMATED_INTERFEROGRAM Size of Dimension(s): 864 x 864
lowestWavenumber_LW_FOV_2	8	64-bit floating point	Minfloat – Maxfloat	cm-1	

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
deltaSigma_LW_FOV_2	8	64-bit floating point	Minfloat – Maxfloat	cm-1	Specifies wavenumber spacing for Resampling for LW for FOV 2
theMatrix_LW_FOV_2	5971968	64-bit floating point	Minfloat – Maxfloat	unitless	Correction Matrix Operator (CMO) 2 Dimensional Array: LW_POINTS_DECIMATED_INTERFEROGRAM x LW_POINTS_DECIMATED_INTERFEROGRAM Size of Dimension(s): 864 x 864
lowestWavenumber_LW_FOV_3	8	64-bit floating point	Minfloat – Maxfloat	unitless	
deltaSigma_LW_FOV_3	8	64-bit floating point	Minfloat – Maxfloat	cm-1	Specifies wavenumber spacing for Resampling for LW for FOV 3

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
theMatrix_LW_FOV_3	5971968	64-bit floating point	Minfloat – Maxfloat	unitless	Correction Matrix Operator (CMO) 2 Dimensional Array: LW_POINTS_DECIMATED_INTERFEROGRAM x LW_POINTS_DECIMATED_INTERFEROGRAM Size of Dimension(s): 864 x 864
lowestWavenumber_LW_FOV_4	8	64-bit floating point	Minfloat – Maxfloat	cm-1	
deltaSigma_LW_FOV_4	8	64-bit floating point	Minfloat – Maxfloat	cm-1	Specifies wavenumber spacing for Resampling for LW for FOV 4
theMatrix_LW_FOV_4	5971968	64-bit floating point	Minfloat – Maxfloat	unitless	Correction Matrix Operator (CMO) 2 Dimensional Array: LW_POINTS_DECIMATED_INTERFEROGRAM x LW_POINTS_DECIMATED_INTERFEROGRAM Size of Dimension(s): 864 x 864

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
lowestWavenumber_LW_FOV_5	8	64-bit floating point	Minfloat – Maxfloat	cm-1	
deltaSigma_LW_FOV_5	8	64-bit floating point	Minfloat – Maxfloat	cm-1	Specifies wavenumber spacing for Resampling for LW for FOV 5
theMatrix_LW_FOV_5	5971968	64-bit floating point	Minfloat – Maxfloat	unitless	Correction Matrix Operator (CMO) 2 Dimensional Array: LW_POINTS_DECIMATED_INTERFEROGRAM x LW_POINTS_DECIMATED_INTERFEROGRAM Size of Dimension(s): 864 x 864
lowestWavenumber_LW_FOV_6	8	64-bit floating point	Minfloat – Maxfloat	cm-1	
deltaSigma_LW_FOV_6	8	64-bit floating point	Minfloat – Maxfloat	cm-1	Specifies wavenumber spacing for Resampling for LW for FOV 6

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
theMatrix_LW_FOV_6	5971968	64-bit floating point	Minfloat – Maxfloat	unitless	Correction Matrix Operator (CMO) 2 Dimensional Array: LW_POINTS_DECIMATED_INTERFEROGRAM x LW_POINTS_DECIMATED_INTERFEROGRAM Size of Dimension(s): 864 x 864
lowestWavenumber_LW_FOV_7	8	64-bit floating point	Minfloat – Maxfloat	cm-1	
deltaSigma_LW_FOV_7	8	64-bit floating point	Minfloat – Maxfloat	cm-1	Specifies wavenumber spacing for Resampling for LW for FOV 7
theMatrix_LW_FOV_7	5971968	64-bit floating point	Minfloat – Maxfloat	unitless	Correction Matrix Operator (CMO) 2 Dimensional Array: LW_POINTS_DECIMATED_INTERFEROGRAM x LW_POINTS_DECIMATED_INTERFEROGRAM Size of Dimension(s): 864 x 864

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
lowestWavenumber_LW_FOV_8	8	64-bit floating point	Minfloat – Maxfloat	cm-1	
deltaSigma_LW_FOV_8	8	64-bit floating point	Minfloat – Maxfloat	cm-1	Specifies wavenumber spacing for Resampling for LW for FOV 8
theMatrix_LW_FOV_8	5971968	64-bit floating point	Minfloat – Maxfloat	unitless	Correction Matrix Operator (CMO) 2 Dimensional Array: LW_POINTS_DECIMATED_INTERFEROGRAM x LW_POINTS_DECIMATED_INTERFEROGRAM Size of Dimension(s): 864 x 864
lowestWavenumber_LW_FOV_9	8	64-bit floating point	Minfloat – Maxfloat	cm-1	
deltaSigma_LW_FOV_9	8	64-bit floating point	Minfloat – Maxfloat	cm-1	Specifies wavenumber spacing for Resampling for LW for FOV 9

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
theMatrix_LW_FOV_9	5971968	64-bit floating point	Minfloat – Maxfloat	unitless	Correction Matrix Operator (CMO) 2 Dimensional Array: LW_POINTS_DECIMATED_INTERFEROGRAM x LW_POINTS_DECIMATED_INTERFEROGRAM Size of Dimension(s): 864 x 864
lowestWavenumber_MW_FOV_1	8	64-bit floating point	Minfloat – Maxfloat	cm-1	
deltaSigma_MW_FOV_1	8	64-bit floating point	Minfloat – Maxfloat	cm-1	Specifies wavenumber spacing for Resampling for MW for FOV 1
theMatrix_MW_FOV_1	2230272	64-bit floating point	Minfloat – Maxfloat	unitless	Correction Matrix Operator (CMO) 2 Dimensional Array: LW_POINTS_DECIMATED_INTERFEROGRAM x LW_POINTS_DECIMATED_INTERFEROGRAM Size of Dimension(s): 864 x 864

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
lowestWavenumber_MW_FOV_2	8	64-bit floating point	Minfloat – Maxfloat	cm-1	
deltaSigma_MW_FOV_2	8	64-bit floating point	Minfloat – Maxfloat	cm-1	Specifies wavenumber spacing for Resampling for MW for FOV 2
theMatrix_MW_FOV_2	2230272	64-bit floating point	Minfloat – Maxfloat	unitless	Correction Matrix Operator (CMO) 2 Dimensional Array: LW_POINTS_DECIMATED_INTERFEROGRAM x LW_POINTS_DECIMATED_INTERFEROGRAM Size of Dimension(s): 864 x 864
lowestWavenumber_MW_FOV_3	8	64-bit floating point	Minfloat – Maxfloat	cm-1	
deltaSigma_MW_FOV_3	8	64-bit floating point	Minfloat – Maxfloat	cm-1	Specifies wavenumber spacing for Resampling for MW for FOV 3

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
theMatrix_MW_FOV_3	2230272	64-bit floating point	Minfloat – Maxfloat	unitless	Correction Matrix Operator (CMO) 2 Dimensional Array: LW_POINTS_DECIMATED_INTERFEROGRAM x LW_POINTS_DECIMATED_INTERFEROGRAM Size of Dimension(s): 864 x 864
lowestWavenumber_MW_FOV_4	8	64-bit floating point	Minfloat – Maxfloat	cm-1	
deltaSigma_MW_FOV_4	8	64-bit floating point	Minfloat – Maxfloat	cm-1	Specifies wavenumber spacing for Resampling for MW for FOV 4
theMatrix_MW_FOV_4	2230272	64-bit floating point	Minfloat – Maxfloat	unitless	Correction Matrix Operator (CMO) 2 Dimensional Array: LW_POINTS_DECIMATED_INTERFEROGRAM x LW_POINTS_DECIMATED_INTERFEROGRAM Size of Dimension(s): 864 x 864

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
lowestWavenumber_MW_FOV_5	8	64-bit floating point	Minfloat – Maxfloat	cm-1	
deltaSigma_MW_FOV_5	8	64-bit floating point	Minfloat – Maxfloat	cm-1	Specifies wavenumber spacing for Resampling for MW for FOV 5
theMatrix_MW_FOV_5	2230272	64-bit floating point	Minfloat – Maxfloat	unitless	Correction Matrix Operator (CMO) 2 Dimensional Array: LW_POINTS_DECIMATED_INTERFEROGRAM x LW_POINTS_DECIMATED_INTERFEROGRAM Size of Dimension(s): 864 x 864
lowestWavenumber_MW_FOV_6	8	64-bit floating point	Minfloat – Maxfloat	cm-1	
deltaSigma_MW_FOV_6	8	64-bit floating point	Minfloat – Maxfloat	cm-1	Specifies wavenumber spacing for Resampling for MW for FOV 6

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
theMatrix_MW_FOV_6	2230272	64-bit floating point	Minfloat – Maxfloat	unitless	Correction Matrix Operator (CMO) 2 Dimensional Array: LW_POINTS_DECIMATED_INTERFEROGRAM x LW_POINTS_DECIMATED_INTERFEROGRAM Size of Dimension(s): 864 x 864
lowestWavenumber_MW_FOV_7	8	64-bit floating point	Minfloat – Maxfloat	cm-1	
deltaSigma_MW_FOV_7	8	64-bit floating point	Minfloat – Maxfloat	cm-1	Specifies wavenumber spacing for Resampling for MW for FOV 7
theMatrix_MW_FOV_7	2230272	64-bit floating point	Minfloat – Maxfloat	unitless	Correction Matrix Operator (CMO) 2 Dimensional Array: LW_POINTS_DECIMATED_INTERFEROGRAM x LW_POINTS_DECIMATED_INTERFEROGRAM Size of Dimension(s): 864 x 864

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
lowestWavenumber_MW_FOV_8	8	64-bit floating point	Minfloat – Maxfloat	cm-1	
deltaSigma_MW_FOV_8	8	64-bit floating point	Minfloat – Maxfloat	cm-1	Specifies wavenumber spacing for Resampling for MW for FOV 8
theMatrix_MW_FOV_8	2230272	64-bit floating point	Minfloat – Maxfloat	unitless	Correction Matrix Operator (CMO) 2 Dimensional Array: LW_POINTS_DECIMATED_INTERFEROGRAM x LW_POINTS_DECIMATED_INTERFEROGRAM Size of Dimension(s): 864 x 864
lowestWavenumber_MW_FOV_9	8	64-bit floating point	Minfloat – Maxfloat	cm-1	
deltaSigma_MW_FOV_9	8	64-bit floating point	Minfloat – Maxfloat	cm-1	Specifies wavenumber spacing for Resampling for MW for FOV 9

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
theMatrix_MW_FOV_9	2230272	64-bit floating point	Minfloat – Maxfloat	unitless	Correction Matrix Operator (CMO) 2 Dimensional Array: LW_POINTS_DECIMATED_INTERFEROGRAM x LW_POINTS_DECIMATED_INTERFEROGRAM Size of Dimension(s): 864 x 864
lowestWavenumber_SW_FOV_1	8	64-bit floating point	Minfloat – Maxfloat	cm-1	
deltaSigma_SW_FOV_1	8	64-bit floating point	Minfloat – Maxfloat	cm-1	Specifies wavenumber spacing for Resampling for SW for FOV 1
theMatrix_SW_FOV_1	320000	64-bit floating point	Minfloat – Maxfloat	unitless	Correction Matrix Operator (CMO) 2 Dimensional Array: LW_POINTS_DECIMATED_INTERFEROGRAM x LW_POINTS_DECIMATED_INTERFEROGRAM Size of Dimension(s): 864 x 864

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
lowestWavenumber_SW_FOV_2	8	64-bit floating point	Minfloat – Maxfloat	cm-1	
deltaSigma_SW_FOV_2	8	64-bit floating point	Minfloat – Maxfloat	cm-1	Specifies wavenumber spacing for Resampling for SW for FOV 2
theMatrix_SW_FOV_2	320000	64-bit floating point	Minfloat – Maxfloat	unitless	Correction Matrix Operator (CMO) 2 Dimensional Array: LW_POINTS_DECIMATED_INTERFEROGRAM x LW_POINTS_DECIMATED_INTERFEROGRAM Size of Dimension(s): 864 x 864
lowestWavenumber_SW_FOV_3	8	64-bit floating point	Minfloat – Maxfloat	cm-1	
deltaSigma_SW_FOV_3	8	64-bit floating point	Minfloat – Maxfloat	cm-1	Specifies wavenumber spacing for Resampling for SW for FOV 3

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
theMatrix_SW_FOV_3	320000	64-bit floating point	Minfloat – Maxfloat	unitless	Correction Matrix Operator (CMO) 2 Dimensional Array: LW_POINTS_DECIMATED_INTERFEROGRAM x LW_POINTS_DECIMATED_INTERFEROGRAM Size of Dimension(s): 864 x 864
lowestWavenumber_SW_FOV_4	8	64-bit floating point	Minfloat – Maxfloat	cm-1	
deltaSigma_SW_FOV_4	8	64-bit floating point	Minfloat – Maxfloat	cm-1	Specifies wavenumber spacing for Resampling for SW for FOV 4
theMatrix_SW_FOV_4	320000	64-bit floating point	Minfloat – Maxfloat	unitless	Correction Matrix Operator (CMO) 2 Dimensional Array: LW_POINTS_DECIMATED_INTERFEROGRAM x LW_POINTS_DECIMATED_INTERFEROGRAM Size of Dimension(s): 864 x 864

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
lowestWavenumber_SW_FOV_5	8	64-bit floating point	Minfloat – Maxfloat	cm-1	
deltaSigma_SW_FOV_5	8	64-bit floating point	Minfloat – Maxfloat	cm-1	Specifies wavenumber spacing for Resampling for SW for FOV 5
theMatrix_SW_FOV_5	320000	64-bit floating point	Minfloat – Maxfloat	unitless	Correction Matrix Operator (CMO) 2 Dimensional Array: LW_POINTS_DECIMATED_INTERFEROGRAM x LW_POINTS_DECIMATED_INTERFEROGRAM Size of Dimension(s): 864 x 864
lowestWavenumber_SW_FOV_6	8	64-bit floating point	Minfloat – Maxfloat	cm-1	
deltaSigma_SW_FOV_6	8	64-bit floating point	Minfloat – Maxfloat	cm-1	Specifies wavenumber spacing for Resampling for SW for FOV 6

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
theMatrix_SW_FOV_6	320000	64-bit floating point	Minfloat – Maxfloat	unitless	Correction Matrix Operator (CMO) 2 Dimensional Array: LW_POINTS_DECIMATED_INTERFEROGRAM x LW_POINTS_DECIMATED_INTERFEROGRAM Size of Dimension(s): 864 x 864
lowestWavenumber_SW_FOV_7	8	64-bit floating point	Minfloat – Maxfloat	cm-1	
deltaSigma_SW_FOV_7	8	64-bit floating point	Minfloat – Maxfloat	cm-1	Specifies wavenumber spacing for Resampling for SW for FOV 7
theMatrix_SW_FOV_7	320000	64-bit floating point	Minfloat – Maxfloat	unitless	Correction Matrix Operator (CMO) 2 Dimensional Array: LW_POINTS_DECIMATED_INTERFEROGRAM x LW_POINTS_DECIMATED_INTERFEROGRAM Size of Dimension(s): 864 x 864

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
lowestWavenumber_SW_FOV_8	8	64-bit floating point	Minfloat – Maxfloat	cm-1	
deltaSigma_SW_FOV_8	8	64-bit floating point	Minfloat – Maxfloat	cm-1	Specifies wavenumber spacing for Resampling for SW for FOV 8
theMatrix_SW_FOV_8	320000	64-bit floating point	Minfloat – Maxfloat	unitless	Correction Matrix Operator (CMO) 2 Dimensional Array: LW_POINTS_DECIMATED_INTERFEROGRAM x LW_POINTS_DECIMATED_INTERFEROGRAM Size of Dimension(s): 864 x 864
lowestWavenumber_SW_FOV_9	8	64-bit floating point	Minfloat – Maxfloat	cm-1	
deltaSigma_SW_FOV_9	8	64-bit floating point	Minfloat – Maxfloat	cm-1	Specifies wavenumber spacing for Resampling for SW for FOV 9

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
theMatrix_SW_FOV_9	320000	64-bit floating point	Minfloat – Maxfloat	unitless	Correction Matrix Operator (CMO) 2 Dimensional Array: LW_POINTS_DECIMATED_INTERFEROGRAM x LW_POINTS_DECIMATED_INTERFEROGRAM Size of Dimension(s): 864 x 864

3.1.2 OMPS Automatic PCs

3.1.2.1 OMPS TC Darks PC

Data Mnemonic	NP_NU-LM0240-000
Description/ Purpose	The OMPS TC Darks PC table contains detector dark signal in counts This file is used in the OMPS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to a dash ("-"). The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	2,160,132 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.1.2.1-1, OMPS TC Darks PC Data Format

Table 3.1.2.1-1, OMPS TC Darks PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
recid_dark Array	4	32-bit integer	>= 0	unitless	record identification number 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
lseq_dark Array	4	32-bit floating point	>= 0	unitless	logical sequence number 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
iyear_dark Array	4	32-bit floating point	2000 – 2050	years	year of observation 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
iday_dark Array	4	32-bit integer	1 – 366	days	day of observation 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
time_start_dark Array	8	64-bit floating point	>= 0	seconds	time start of observation 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
time_end_dark Array	8	64-bit floating point	>= 0	seconds	time end of observation 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
expose_dark	8	64-bit floating point	>= 0	seconds	exposure time of dark current
geosrc_dark Array	4	32-bit integer	0 – 1	unitless	geolocation flag 1 Dimensional Array: tc::MAX_COADDS_S + tc::MAX_COADDS_E + tc::MAX_COADDS_L + tc::MAX_COADDS_D Size of Dimension(s): 1068
good_darks	4	32-bit integer	>=0	percent	percentage of good pixels (out of the total number of pixels on the fully sampled CCDs image)

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
sat_pos_dark Array	4	32-bit floating point	Minfloat – Maxfloat	meters	XYZ satellite position in Earth Center Inertial frame, at begin and end of observation 3 Dimensional Array: tc::MAX_COADDS_D x NUM_TIMES_PER_OB x VEC_SIZE Size of Dimension(s): 5 x 2 x 3
sat_vel_dark Array	4	32-bit floating point	Minfloat – Maxfloat	m/s	XYZ satellite velocity in Earth Center Inertial frame, at begin and end of observation 3 Dimensional Array: tc::MAX_COADDS_D x NUM_TIMES_PER_OB x VEC_SIZE Size of Dimension(s): 5 x 2 x 3
scrpy_dark Array	4	32-bit floating point	Minfloat – Maxfloat	radians	spacecraft roll pitch and yaw at begin and end of observation 3 Dimensional Array: tc::MAX_COADDS_D x NUM_TIMES_PER_OB x VEC_RPY_SIZE Size of Dimension(s): 5 x 2 x 3

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
rtasc_dark Array	4	32-bit floating point	0 – 2pi	radians	right ascension at begin and end of observation 2 Dimensional Array: tc::MAX_COADDS_D x NUM_TIMES_PER_OB Size of Dimension(s): 5 x 2
decli_dark Array	4	32-bit floating point	0 – 2pi	radians	declination at begin and end of observation 2 Dimensional Array: tc::MAX_COADDS_D x NUM_TIMES_PER_OB Size of Dimension(s): 5 x 2
solaz_dark Array	4	32-bit floating point	0 – 2pi	radians	solar azimuth at begin and end of observation 2 Dimensional Array: tc::MAX_COADDS_D x NUM_TIMES_PER_OB Size of Dimension(s): 5 x 2
solel_dark Array	4	32-bit floating point	0 – 2pi	radians	solar elevation at begin and end of observation 2 Dimensional Array: tc::MAX_COADDS_D x NUM_TIMES_PER_OB Size of Dimension(s): 5 x 2

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
sublat_dark Array	4	32-bit floating point	-90 – 90	degrees	nadir subsatellite latitude 2 Dimensional Array: tc::MAX_COADDS_D x NUM_TIMES_PER_OB Size of Dimension(s): 5 x 2
sublng_dark Array	4	32-bit floating point	-180 – 180	degrees	nadir subsatellite longitude at begin and end of observation 2 Dimensional Array: tc::MAX_COADDS_D x NUM_TIMES_PER_OB Size of Dimension(s): 5 x 2
alti_dark Array	4	32-bit floating point	>=0	meters	altitude of satellite at begin and end of observation 2 Dimensional Array: tc::MAX_COADDS_D x NUM_TIMES_PER_OB Size of Dimension(s): 5 x 2
qual_dark Array	2	16-bit integer	MinInt – MaxInt	unitless	quality of processing 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
istat_dark Array	2	16-bit integer	MinInt – MaxInt	unitless	Instrument/data record status 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
analog_dark Array	4	32-bit floating point	MinInt – MaxInt	unitless	Instrument/data record status 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
extsrc_dark Array	2	16-bit integer	0h – Fh	unitless	external data source 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
saa_dark Array	4	32-bit floating point	0 – 100	percent	South Atlantic Anomaly severity flag 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
tccdtc_dark Array	2	16-bit integer	>= 0	counts	Temperature of CCD 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
tmotnad_dark Array	2	16-bit integer	>= 0	counts	Temperature of motor 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
tlmpnad_dark Array	2	16-bit integer	>= 0	counts	Temperature of lamp 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
tradnad_dark Array	2	16-bit integer	>= 0	counts	Temperature of radiator 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
tel1nad_dark Array	2	16-bit integer	>= 0	counts	Temperature of electronics1 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
tel2nad_dark Array	2	16-bit integer	>= 0	counts	Temperature of electronics2 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
pccdtc_dark Array	2	16-bit integer	MinInt – MaxInt	counts	Profile of CCD 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
vtectc_dark Array	2	16-bit integer	>= 0	counts	Voltage of electronics in Counts 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
ctectc_dark Array	2	16-bit integer	>= 0	counts	Voltage of electronics 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
dark_data Array	4	32-bit floating point	MinInt – MaxInt	counts	corrected dark current counts 2 Dimensional Array: tc::MAX_NSPEC_CCD x tc::NO_SPAT_PIX Size of Dimension(s): 364 x 740
err_dark Array	4	32-bit floating point	>= 0	counts	corrected dark current counts 2 Dimensional Array: tc::MAX_NSPEC_CCD x tc::NO_SPAT_PIX Size of Dimension(s): 364 x 740
dark_med	4	32-bit floating point	>= 0	counts	median dark current level
dark_stddev	4	32-bit floating point	MinInt – MaxInt	counts	dark current level standard deviation

3.1.2.2 OMPS TC SAA Darks PC

Data Mnemonic	NP_NU-LM0240-001
Description/ Purpose	The OMPS TC SAA Darks PC table contains detected dark signal in counts during South Atlantic Anomaly This file is used in the OMPS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to a dash (“-“). The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	10,779,666 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.1.2.2-1, OMPS TC SAA Darks PC Data Format

Table 3.1.2.2-1, OMPS TC SAA Darks PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
recid_darksaa	20	32-bit integer	>= 0	unitless	record identification number 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
lseq_darksaa	20	32-bit integer	>= 0	unitless	logical sequence number 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
iyear_darksaa	20	32-bit integer	2000 – 2050	years	year of observation 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
iday_darksaa	20	32-bit integer	1 – 366	days	day of observation 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
time_start_darksaa	40	64-bit floating point	>= 0	seconds	time start of observation 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
time_end_darksaa	40	64-bit floating point	>= 0	seconds	time end of observation 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
delta_time_darksaa	40	64-bit floating point	>= 0	seconds	integration time during observation
geosrc_darksaa	4272	32-bit integer	0 – 1	unitless	geolocation flag 1 Dimensional Array: tc::MAX_COADDS_S + tc::MAX_COADDS_E + tc::MAX_COADDS_L + tc::MAX_COADDS_D Size of Dimension(s): 1068
excess_darksaa_frames	4	32-bit integer	MinInt – MaxInt	unitless	

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
sat_pos_darksaa	120	32-bit floating point	Minfloat – Maxfloat	meters	XYZ satellite position in Earth Center Inertial frame, at begin and end of observation 3 Dimensional Array: tc::MAX_COADDS_D x NUM_TIMES_PER_OB x VEC_SIZE Size of Dimension(s): 5 x 2 x 3
sat_vel_darksaa	120	32-bit floating point	Minfloat – Maxfloat	meters	XYZ satellite velocity in Earth Center Inertial frame, at begin and end of observation 3 Dimensional Array: tc::MAX_COADDS_D x NUM_TIMES_PER_OB x VEC_SIZE Size of Dimension(s): 5 x 2 x 3
scrpy_darksaa	120	32-bit floating point	Minfloat – Maxfloat	unitless	spacecraft roll pitch and yaw at begin and end of observation 3 Dimensional Array: tc::MAX_COADDS_D x NUM_TIMES_PER_OB x VEC_RPY_SIZE Size of Dimension(s): 5 x 2 x 3

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
rtasc_darksaa	40	32-bit floating point	0 – 2pi	radians	right ascension at begin and end of observation 2 Dimensional Array: tc::MAX_COADDS_D x NUM_TIMES_PER_OB Size of Dimension(s): 5 x 2
decli_darksaa	40	32-bit floating point	0 – 2pi	radians	declination at begin and end of observation 2 Dimensional Array: tc::MAX_COADDS_D x NUM_TIMES_PER_OB Size of Dimension(s): 5 x 2
solaz_darksaa	40	32-bit floating point	0 – 2pi	radians	solar azimuth at begin and end of observation 2 Dimensional Array: tc::MAX_COADDS_D x NUM_TIMES_PER_OB Size of Dimension(s): 5 x 2

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
solel_darksaa	40	32-bit floating point	0 – 2pi	radians	solar elevation at begin and end of observation 2 Dimensional Array: tc::MAX_COADDS_D x NUM_TIMES_PER_OB Size of Dimension(s): 5 x 2
sublat_darksaa	40	32-bit floating point	-90 – 90	degrees	nadir subsatellite latitude 2 Dimensional Array: tc::MAX_COADDS_D x NUM_TIMES_PER_OB Size of Dimension(s): 5 x 2
sublng_darksaa	40	32-bit floating point	-180 – 180	degrees	nadir subsatellite longitude at begin and end of observation 2 Dimensional Array: tc::MAX_COADDS_D x NUM_TIMES_PER_OB Size of Dimension(s): 5 x 2
alti_darksaa	40	32-bit floating point	Minfloat – Maxfloat	meters	altitude of satellite at begin and end of observation 2 Dimensional Array: tc::MAX_COADDS_D x NUM_TIMES_PER_OB Size of Dimension(s): 5 x 2

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
saa_darksaa	20	32-bit floating point	0 – 100	percent	South Atlantic Anomaly severity flag 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
istat_darksaa	10	16-bit integer	MinInt – MaxInt	unitless	Instrument/data record status 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
analog_darksaa	20	32-bit floating point	MinInt – MaxInt	unitless	Instrument/data record status 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
extsrc_darksaa	10	16-bit integer	0h – Fh	unitless	external data source 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
tccdtc_darksaa	10	16-bit integer	>= 0	counts	Temperature of CCD 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
tmotnad_darksaa	10	16-bit integer	>= 0	counts	Temperature of motor 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
tlmpnad_darksaa	10	16-bit integer	>= 0	counts	Temperature of lamp 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
tradnad_darksaa	10	16-bit integer	>= 0	counts	Temperature of radiator 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
tel1nad_darksaa	10	16-bit integer	>= 0	counts	Temperature of electronics1 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
tel2nad_darksaa	10	16-bit integer	>= 0	counts	Temperature of electronics2 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
pccdtc_darksaa	10	16-bit integer	MinInt – MaxInt	counts	profile of CCD at middle 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
vtectc_darksaa	10	16-bit integer	>= 0	counts	Voltage of electronics 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
ctectc_darksaa	10	16-bit integer	>= 0	counts	Current of electronics 1 Dimensional Array: tc::MAX_COADDS_D Size of Dimension(s): 5
darksaa_array	5387200	16-bit integer	>= 0	counts	corrected dark current counts for SAA observation; smear values are in individual pixels 3 Dimensional Array: tc::MAX_COADDS_D x tc::MAX_NSPEC_CCD x tc::NO_SPAT_PIX Size of Dimension(s): 5 x 364 x 740
sqrt_abs_darksaa_array	5387200	32-bit floating point	>= 0	counts	precision of SAA dark counts 3 Dimensional Array: tc::MAX_COADDS_D x tc::MAX_NSPEC_CCD x tc::NO_SPAT_PIX Size of Dimension(s): 5 x 364 x 740

3.1.2.3 OMPS TC Bias PC

Data Mnemonic	NP_NU-LM0240-002
Description/ Purpose	The OMPS TC Bias PC table contains detector electronic offset in counts. This file is used in the OMPS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to a dash ("-"). The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	8 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.1.2.3-1, OMPS TC Bias PC Data Format

Table 3.1.2.3-1, OMPS TC Bias PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
bias1	4	32-bit floating point	0 – 1e5	counts	bias electronics 1st CCD
bias2	4	32-bit floating point	0 – 1e5	counts	bias electronics 2nd CCD

3.1.2.4 OMPS TC Flat Fields History PC

Data Mnemonic	NP_NU-LM0240-003
Description/ Purpose	The OMPS TC Flat Fields History PC table contains relative multiplication factors for each pixel used in binning for an Earth spatial cell. This file is used in the OMPS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to a dash ("-"). The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	62,492,100 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.1.2.4-1, OMPS TC Flat Fields History PC Data Format

Table 3.1.2.4-1, OMPS TC Flat Fields History PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
obs_year Array	4	32-bit integer	2000 – 2050	years	1 Dimensional Array: tc::TC_CAL_DAYS Size of Dimension(s): 29
obs_day Array	4	32-bit integer	1 – 366	days	1 Dimensional Array: tc::TC_CAL_DAYS Size of Dimension(s): 29
old_nmonitor Array	4	32-bit integer	1 – 20	unitless	number of observations used in trending 1 Dimensional Array: tc::TC_CAL_DAYS Size of Dimension(s): 29
monitor_year Array	4	32-bit integer	2000 – 2050	years	last year of data used for flat field trending 1 Dimensional Array: tc::TC_CAL_DAYS Size of Dimension(s): 29
monitor_day Array	4	32-bit integer	1 – 366	days	last day of data used for flat field trending 1 Dimensional Array: tc::TC_CAL_DAYS Size of Dimension(s): 29

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
flat Array	4	32-bit floating point	Minfloat – Maxfloat	unitless	flat field: local relative normalized radiometric sensitivities 3 Dimensional Array: tc::TC_CAL_DAYS x tc::MAX_NSPEC_CCD x tc::NO_SPAT_PIX Size of Dimension(s): 29 x 364 x 740
flat_err Array	4	32-bit floating point	Minfloat – Maxfloat	unitless	precision of flat field 3 Dimensional Array: tc::TC_CAL_DAYS x tc::MAX_NSPEC_CCD x tc::NO_SPAT_PIX Size of Dimension(s): 29 x 364 x 740

3.1.2.5 OMPS TC Wavmon PC

Data Mnemonic	NP_NU-LM0240-004
Description/ Purpose	The OMPS TC Wavemon PC table contains bandcenter wavelength shifts relative to the baseline solar measurement This file is used in the OMPS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to a dash (“-“). The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	168,402 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.1.2.5-1, OMPS TC Wavmon PC Data Format

Table 3.1.2.5-1, OMPS TC Wavmon PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
refname	30	unsigned 8-bit integer	0 – 1e5	unitless	Solar Spectrum Filename 1 Dimensional Array: tc::NAMELEN Size of Array(s): 30
tablename	36	unsigned 8-bit integer	0 – 1e5	unitless	Line-Shift Table Filename 1 Dimensional Array: tc::TAB_NAMELEN Size of Array(s): 36
wmin	4	32-bit floating point	290 – 390	nanometers	Wavelength Minimum
wmax	4	32-bit floating point	290 – 390	nanometers	Wavelength Maximum
nlines	2	16-bit integer	1 – 10	unitless	Number of Monitor Lines
line_locates	20	16-bit integer	1 – 192	pixels	Line Pixel Numbers 1 Dimensional Array: tc::MAXLINES Size of Array(s): 10

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
offset_pix	2	16-bit integer	1 – 3	pixels	Offset Pixel Monitored
waveline	40	32-bit floating point	290 – 390	nanometers	Line Monitor Wavelengths 1 Dimensional Array: tc::MAXLINES Size of Array(s): 10
year	40	32-bit integer	2000 – 2050	years	Year 1 Dimensional Array: tc:: MAX_TREND_POINTS Size of Array(s): 10
day	40	32-bit integer	1 – 366	days	Day 1 Dimensional Array: tc:: MAX_TREND_POINTS Size of Array(s): 10
avg_solar_beta	40	32-bit floating point	-180 – 180	degrees	Solar Mean Beta-Angle 1 Dimensional Array: tc:: MAX_TREND_POINTS Size of Array(s): 10

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
diffuser	20	16 bit integer	1 – 7	unitless	Diffuser Surface 1 Dimensional Array: tc:: MAX_TREND_POINTS Size of Array(s): 10
nadd	40	32-bit integer	1 – 28	unitless	Number of Solar observations 1 Dimensional Array: tc:: MAX_TREND_POINTS Size of Array(s): 10
resolution	80	64-bit floating point	>=0	nanometers	FWHM wavelength resolution 1 Dimensional Array: tc:: MAX_TREND_POINTS Size of Array(s): 10
no_observations	4	32-bit integer	0 – 10	unitless	
r_delw_c	8400	64-bit floating point	Minfloat – Maxfloat	nanometers	Waveshift 2 Dimensional Array: tc::MAX_TREND_POINTS x tc::MAXCTPX Size of Array(s): 10 x 105

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
r_err_c	8400	64-bit floating point	>=0	nanometers	Precision of Waveshift 2 Dimensional Array: tc::MAX_TREND_POINTS x tc::MAXCTPX Size of Array(s): 10 x 105
r_scale_c	8400	64-bit floating point	Minfloat – Maxfloat	unitless	Wavestretch 2 Dimensional Array: tc::MAX_TREND_POINTS x tc::MAXCTPX Size of Array(s): 10 x 105
r_scerr_c	8400	64-bit floating point	>=0	unitless	Precision of Wavestretch 2 Dimensional Array: tc::MAX_TREND_POINTS x tc::MAXCTPX Size of Array(s): 10 x 105
r_rchisq_c	8400	64-bit floating point	>=0	unitless	Reduced Chi^2 2 Dimensional Array: tc::MAX_TREND_POINTS x tc::MAXCTPX Size of Array(s): 10 x 105

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
r_delw_line	8400	64-bit floating point	Minfloat – Maxfloat	nanometers	Group lineshift 2 Dimensional Array: tc::MAX_TREND_POINTS x tc::MAXCTPX Size of Array(s): 10 x 105
r_err_l	8400	64-bit floating point	>=0	nanometers	Precision of group lineshift 2 Dimensional Array: tc::MAX_TREND_POINTS x tc::MAXCTPX Size of Array(s): 10 x 105
r_add_l	8400	64-bit floating point	Minfloat – Maxfloat	nanometers	fit lineshift 2 Dimensional Array: tc::MAX_TREND_POINTS x tc::MAXCTPX Size of Array(s): 10 x 105
r_stretch_l	8400	64-bit floating point	Minfloat – Maxfloat	unitless	fit slope 2 Dimensional Array: tc::MAX_TREND_POINTS x tc::MAXCTPX Size of Array(s): 10 x 105

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
r_correl_l	8400	64-bit floating point	-1 – 1	unitless	correlation 2 Dimensional Array: tc::MAX_TREND_POINTS x tc::MAXCTPX Size of Array(s): 10 x 105
shift	42000	32-bit floating point	Minfloat – Maxfloat	nanometers	Individual Lineshifts 3 Dimensional Array: tc::MAX_TREND_POINTS x tc::MAXLINES tc::MAXCTPX Size of Array(s): 10 x 10 x 105
err	42000	32-bit floating point	Minfloat – Maxfloat	nanometers	Precision of individual lineshifts 3 Dimensional Array: tc::MAX_TREND_POINTS x tc::MAXLINES tc::MAXCTPX Size of Array(s): 10 x 10 x 105

3.1.2.6 OMPS CF Solar PC

Data Mnemonic	NP_NU-LM0240-005
Description/ Purpose	The OMPS CF Solar PC table contains radiometric calibration factors for the solar illuminated pixels This file is used in the OMPS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to a dash (“-“). The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	62,492,100 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.1.2.6-1, OMPS CF Solar PC Data Format

Table 3.1.2.6-1, OMPS CF Solar PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
obs_year Array	116	32-bit integer	2000 – 2050	years	Year 1 Dimensional Array: tc::TC_CAL_DAYS Size of Array(s): 29
obs_day Array	116	32-bit integer	1 – 366	days	Day 1 Dimensional Array: tc::TC_CAL_DAYS Size of Array(s): 29
old_nmonitor Array	116	32-bit integer	1 – 20	unitless	number of observations used in trending 1 Dimensional Array: tc::TC_CAL_DAYS Size of Array(s): 29
monitor_year Array	116	32-bit integer	2000 – 2050	years	last year of data used for flat field trending 1 Dimensional Array: tc::TC_CAL_DAYS Size of Array(s): 29

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
monitor_day Array	116	32-bit integer	1 – 366	days	last day of data used for flat field trending 1 Dimensional Array: tc::TC_CAL_DAYS Size of Array(s): 29
extrap_cfsolar Array	31245760	32-bit floating point	>=0	unitless	radiometric calibration factors 3 Dimensional Array: tc::TC_CAL_DAYS x tc::MAX_NSPEC_CCD x tc::NO_SPAT_PIX Size of Array(s): 29 x 364 x 740
extrap_err Array	31245760	32-bit floating point	>=0	unitless	precision of radiometric calibration factors 3 Dimensional Array: tc::TC_CAL_DAYS x tc::MAX_NSPEC_CCD x tc::NO_SPAT_PIX Size of Array(s): 29 x 364 x 740

3.1.2.7 OMPS Flux PC

Data Mnemonic	NP_NU-LM0240-006
Description/ Purpose	The OMPS Flux PC table contains solar signal corrected for detector spectral shifts. This file is used in the OMPS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to a dash ("-"). The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	23,820,518 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.1.2.7-1, OMPS Flux PC Data Format

Table 3.1.2.7-1, OMPS Flux PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
rsf_iyear	4	32-bit integer	2000 – 2050	years	reference solar flux observation year
rsf_iday	4	32-bit integer	1 – 366	days	reference solar flux observation day
rsf_solar_beta	4	32-bit floating point	-180 – 180	degrees	angle between orbital plane and sun vector
rsf_diffuser_surface	2	16-bit integer	1 – 2	unitless	diffuser surface number
rsf_number_coadds	4	32-bit integer	1 – 28	unitless	number of solar observations constituting reference flux
rsf_avg_scan_time	8	64-bit floating point	>=0	seconds	average exposure time of reference solar flux observations
rsf_expose	8	64-bit floating point	>=0	seconds	total exposure time of reference solar flux
rsf_data	1135680	32-bit floating point	0 – 1800	W/cm^3	The baseline reference solar flux 2 Dimensional Array: tc::MAX_NSPEC_CCD x tc::NO_SPAT_CCD Size of Dimension(s): 364 x 780

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
rsf_counts	1135680	32-bit floating point	Minfloat – Maxfloat	counts	The baseline reference solar counts 2 Dimensional Array: tc::MAX_NSPEC_CCD x tc::NO_SPAT_CCD Size of Dimension(s): 364 x 780
no_observations	4	32-bit integer	MinInt – MaxInt	unitless	
iyear_solar	40	32-bit integer	2000 – 2050	years	year of current solar data 1 Dimensional Array: tc::MAX_TREND_POINTS Size of Dimension(s): 10
iday_solar	40	32-bit integer	1 – 366	days	day of current solar data 1 Dimensional Array: tc::MAX_TREND_POINTS Size of Dimension(s): 10

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
avg_solar_beta	40	32-bit floating point	-180 – 180	degrees	angle between current orbital plane and sun vector 1 Dimensional Array: tc::MAX_TREND_POINTS Size of Dimension(s): 10
no_work_frames	40	32-bit integer	>=0	unitless	number of solar data observations constituting raw flux 1 Dimensional Array: tc::MAX_TREND_POINTS Size of Dimension(s): 10
avg_sol_scan_time	80	64-bit floating point	>=0	seconds	average exposure time of raw flux solar data 1 Dimensional Array: tc::MAX_TREND_POINTS Size of Dimension(s): 10

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
total_sol_expose	80	64-bit floating point	>=0	seconds	total exposure time of raw flux solar data 1 Dimensional Array: tc::MAX_TREND_POINTS Size of Dimension(s): 10
shift_flux	10774400	32-bit floating point	Variable, but around and about 0.5 to 1.5 should be usual	unitless	The current solar flux, ratioed by the baseline solar flux, both at the baseline wavelengths 3 Dimensional Array: tc::MAX_TREND_POINTS x tc::MAX_NSPEC_CCD x tc::NO_SPAT_PIX Size of Dimension(s): 10 x 364 x 740

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
shift_flux_err	10774400	32-bit floating point	Variable, but around and about 0.5 to 1.5 should be usual	unitless	Uncertainty (error) in the wavelength shifted flux ratio 3 Dimensional Array: tc::MAX_TREND_POINTS x tc::MAX_NSPEC_CCD x tc::NO_SPAT_PIX Size of Dimension(s): 10 x 364 x 740

3.1.2.8 OMPS Raw Flux PC

Data Mnemonic	NP_NU-LM0240-007
Description/ Purpose	The OMPS Raw Flux PC table contains solar signals corrected for detector and normalized by the baseline solar signals This file is used in the OMPS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to a dash ("-"). The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	4,426,310 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.1.2.8-1, OMPS Raw Flux PC Data Format

Table 3.1.2.8-1, OMPS Raw Flux PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
rsf_iyear	4	32-bit integer	2000 – 2050	years	reference solar flux observation year
rsf_iday	4	32-bit integer	1 – 366	days	reference solar flux observation day
rsf_solar_beta	4	32-bit floating point	-180 – 180	degrees	angle between orbital plane and sun vector
rsf_diffuser_surface	2	16-bit integer	1 – 2	unitless	diffuser surface number
rsf_number_coadds	4	32-bit integer	1 – 28	unitless	number of solar observations constituting reference flux
rsf_avg_scan_time	8	64-bit floating point	>=0	seconds	average exposure time of reference solar flux observations
rsf_expose	8	64-bit floating point	>=0	seconds	total exposure time of reference solar flux
rsf_data Array	1135680	32-bit floating point	0 – 1800	W/cm^3	reference solar flux 2 Dimensional Array: tc::MAX_NSPEC_CCD x tc::NO_SPAT_CCD Size of Dimension(s): 364 x 780

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
rsf_counts Array	1135680	32-bit floating point	Minfloat – Maxfloat	counts	reference solar counts 2 Dimensional Array: tc::MAX_NSPEC_CCD x tc::NO_SPAT_CCD Size of Dimension(s): 364 x 780
latest_year	4	32-bit integer	2000 – 2050	years	year of current solar data
latest_day	4	32-bit integer	1 – 366	days	day of current solar data
avg_solar_beta	4	32-bit floating point	-180 – 180	degrees	angle between current orbital plane and sun vector
n	4	32-bit integer	-1 – 1	unitless	working diffuser surface number
m	4	32-bit integer	>=0	unitless	number of solar data observations constituting raw flux
avg_sol_scan_time	8	64-bit floating point	>=0	seconds	average exposure time of raw flux solar data
t_expose	8	64-bit floating point	>=0	seconds	total exposure time of raw flux solar data

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
counts_ccd	1077440	32-bit floating point	any, but about 1	unitless	ratio of current observed solar counts to reference solar counts 2 Dimensional Array: tc::MAX_NSPEC_CCD x tc::NO_SPAT_PIX Size of Dimension(s): 364 x 740
counts_err_ccd	1077440	32-bit floating point	>0	unitless	2 Dimensional Array: tc::MAX_NSPEC_CCD x tc::NO_SPAT_PIX Size of Dimension(s): 364 x 740

3.1.2.9 OMPS NP Darks PC

Data Mnemonic	**EDFCB7-TBD-10205**
Description/ Purpose	The OMPS NP Darks PC table contains detector dark signal in counts This file is used in the OMPS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to a dash (“-“). The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	**EDFCB7-TBD-10205** bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.1.2.9-1, OMPS NP Darks PC Data Format

Table 3.1.2.9-1, OMPS NP Darks PC Data Format

EDFCB7-TBD-10205

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.1.2.10 OMPS NP SAA Darks PC

Data Mnemonic	EDFCB7-TBD-10205
Description/ Purpose	The OMPS NP SAA Darks PC table contains detected dark signal in counts during South Atlantic Anomaly This file is used in the OMPS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to a dash ("-"). The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	EDFCB7-TBD-10205 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.1.2.10-1, OMPS NP SAA Darks PC Data Format

Table 3.1.2.10-1, OMPS NP SAA Darks PC Data Format

EDFCB7-TBD-10205

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.1.2.11 OMPS NP Bias PC

Data Mnemonic	**EDFCB7-TBD-10205**
Description/ Purpose	The OMPS NP Bias PC table contains detector electronic offset in counts. This file is used in the OMPS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to a dash ("-"). The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	**EDFCB7-TBD-10205** bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.1.2.11-1, OMPS NP Bias PC Data Format

Table 3.1.2.11-1, OMPS NP Bias PC Data Format

EDFCB7-TBD-10205

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.1.2.12 OMPS NP Flat Fields History PC

Data Mnemonic	**EDFCB7-TBD-10205**
Description/ Purpose	The OMPS NP Flat Fields History PC table contains relative multiplication factors for each pixel used in binning for an Earth spatial cell. This file is used in the OMPS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to a dash ("-"). The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	**EDFCB7-TBD-10205** bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.1.2.12-1, OMPS NP Flat Fields History PC Data Format

Table 3.1.2.12-1, OMPS NP Flat Fields History PC Data Format

EDFCB7-TBD-10205

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.1.2.13 OMPS NP Wavmon PC

Data Mnemonic	**EDFCB7-TBD-10205**
Description/ Purpose	The OMPS NP Wavemon PC table contains bandcenter wavelength shifts relative to the baseline solar measurement This file is used in the OMPS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to a dash ("-"). The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	**EDFCB7-TBD-10205** bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.1.2.13-1, OMPS NP Wavmon PC Data Format

Table 3.1.2.13-1, OMPS NP Wavmon PC Data Format

EDFCB7-TBD-10205

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.1.2.14 OMPS NP CF Solar PC

Data Mnemonic	**EDFCB7-TBD-10205**
Description/ Purpose	The OMPS NP CF Solar PC table contains radiometric calibration factors for the solar illuminated pixels This file is used in the OMPS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to a dash ("-"). The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	**EDFCB7-TBD-10205** bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.1.2.14-1, OMPS NP CF Solar PC Data Format

Table 3.1.2.14-1, OMPS NP CF Solar PC Data Format

EDFCB7-TBD-10205

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.1.2.15 OMPS NP Flux PC

Data Mnemonic	**EDFCB7-TBD-10205**
Description/ Purpose	The OMPS NP Flux PC table contains solar signal corrected for detector spectral shifts. This file is used in the OMPS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to a dash ("-"). The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	**EDFCB7-TBD-10205** bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.1.2.15-1, OMPS NP Flux PC Data Format

Table 3.1.2.15-1, OMPS NP Flux PC Data Format

EDFCB7-TBD-10205

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.1.2.16 OMPS NP Raw Flux PC

Data Mnemonic	**EDFCB7-TBD-10205**
Description/ Purpose	The OMPS NP Raw Flux PC table contains solar signals corrected for detector and normalized by the baseline solar signals This file is used in the OMPS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to a dash ("-"). The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	**EDFCB7-TBD-10205** bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.1.2.16-1, OMPS NP Raw Flux PC Data Format

Table 3.1.2.16-1, OMPS NP Raw Flux PC Data Format

EDFCB7-TBD-10205

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.2 Manual Processing Coefficients

Manual PCs are files that contain PC parameters used in the creation of NPP/NPOESS Data Products. All of these files require human review prior to their insertion into the operational processing environment.

3.2.1 Initialization Processing Coefficients

Initialization PCs are files containing the initial sets of PC parameters used to create NPP/NPOESS Data Products and are not updated frequently.

3.2.1.1 CrIMSS PCs

3.2.1.1.1 CrIMSS Daytime LAA PC

Data Mnemonic	NP_NU-LM0230-000
Description/ Purpose	The CrIMSS Daytime Local Angle Adjustment (LAA) PC file contains the regression coefficients used for the daytime local adjustment of the Field Of View (FOV) radiances. This file is used in the CrIMSS EDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	13,154,400 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.1.1-1, CrIMSS Daytime LAA PC Data Format

Table 3.2.1.1.1-1, CrIMSS Daytime LAA PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
rCoeff	12528000	32-bit floating point	Minfloat – Maxfloat	unitless	4 Dimensional Array: CRIS_SCAN_ANGLES x CRIS_FOV-1 x MAX_LAA_EOFS x MAX_IR_CHAN Size of Dimension(s): 15 x 8 x 20 x 1305
cCoeff	626400	32-bit floating point	Minfloat – Maxfloat	unitless	3 Dimensional Array: CRIS_SCAN_ANGLES x CRIS_FOV-1 x MAX_IR_CHAN Size of Dimension(s): 15 x 8 x 1305

3.2.1.1.2 CrIMSS Daytime LAA EOF PC

Data Mnemonic	NP_NU-LM0230-001
Description/ Purpose	The CrIMSS Daytime LAA EOF PC file contains the EOFs used for the daytime LAA of the CrIS FOVs. This file is used in the CrIMSS EDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	208,800 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.1.2-1, CrIMSS Daytime LAA EOF PC Data Format

Table 3.2.1.1.2-1, CrIMSS Daytime LAA EOF PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
eofday	208,800	64-bit floating point	Minfloat – Maxfloat	unitless	EOFs used for daytime local angle adjustment of CrIS FOVs 2 Dimensional Array: MAX_IR_CHAN x MAX_LAA_EOFS Size of Dimension(s): 1305 x 20

3.2.1.1.3 CrIMSS IR Channel Atmospheric Noise PC

Data Mnemonic	NP_NU-LM0230-002
Description/ Purpose	The CrIMSS IR Channel Atmospheric Noise PC file contains the noise values for all of the CrIS and ATMS channels. This file is used in the CrIMSS EDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	10,444 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.1.3-1, CrIMSS IR Channel Atmospheric Noise PC Data Format

Table 3.2.1.1.3-1, CrIMSS IR Channel Atmospheric Noise PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
nChan	4	32-bit integer	1 – 1305	unitless	Number of Channels Used
freqIR	5220	32-bit floating point	Minfloat – Maxfloat	nanometers	Frequency for IR Channels 1 Dimensional Array: MAX_IR_CHAN Size of Dimension(s): 1305
atmosphericNoise	5220	32-bit floating point	Minfloat – Maxfloat	unitless	Atmospheric noise for the IR channels 1 Dimensional Array: MAX_IR_CHAN Size of Dimension(s): 1305

3.2.1.1.4 CrIMSS IR Channel NEdN PC

Data Mnemonic	NP_NU-LM0230-003
Description/ Purpose	The CrIMSS IR Channel Atmospheric Noise Equivalent delta Noise (NEdN) PC file contains the noise values for all of the CrIS and ATMS channels. This file is used in the CrIMSS EDR algorithm
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	20,944 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.1.4-1, CrIMSS IR Channel NEdN PC Data Format

Table 3.2.1.1.4-1, CrIMSS IR Channel NEdN PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
bnFreq	16	32-bit floating point	Minfloat – Maxfloat	unitless	End points for noise calculations 1 Dimensional Array: MAX_FRQ_CLASS Size of Dimension(s): 4
sceneTemp	48	32-bit floating point	0 – 330	Kelvin	Scene temperatures for which NEdNs were calculated 2 Dimensional Array: NUM_NOISE_TEMPERATURES x MAX_FRQ_CLASS Size of Dimension(s): 3 x 4
irDevNoise	20880	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array: MAX_FRQ_CLASS x MAX_IR_CHAN Size of Dimension(s): 4 x 1305

3.2.1.1.5 CrIMSS MW Atmospheric Noise PC

Data Mnemonic	NP_NU-LM0230-004
Description/ Purpose	The CrIMSS MW Atmospheric Noise PC file contains the noise for all of the CrIS and ATMS channels. This file is used in the CrIMMS EDR algorithm
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	92 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.1.5-1, CrIMSS MW Atmospheric Noise PC Data Format

Table 3.2.1.1.5-1, CrIMSS MW Atmospheric Noise PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
nChan	4	32-bit integer	1 – 22	unitless	Number of channels used
atmosphericNoise	88	32-bit floating point	Minfloat – Maxfloat	unitless	Atmospheric noise for the MW channels 1 Dimensional Array MAX_MW_CHAN Size of Dimension(s): 22

3.2.1.1.6 CrIMSS MW Frequency Polarization PC

Data Mnemonic	NP_NU-LM0230-005
Description/ Purpose	The CrIMSS MW Frequency Polarization PC files contain the MW frequencies, weights, and polarization information. This file is used in the CrIMSS EDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	444 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.1.6-1, CrIMSS MW Frequency Polarization PC Data Format

Table 3.2.1.1.6-1, CrIMSS MW Frequency Polarization PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
numChans	4	32-bit integer	1 – 22	unitless	Number of MW Channels
freq	88	32-bit floating point	Minfloat – Maxfloat	unitless	MW OSS RTM frequency points 1 Dimensional Array MAX_MW_CHAN Size of Dimension(s): 22
s1	88	32-bit floating point	Minfloat – Maxfloat	unitless	s1 variable 1 Dimensional Array MAX_MW_CHAN Size of Dimension(s): 22
s2	88	32-bit floating point	Minfloat – Maxfloat	unitless	s2 variable 1 Dimensional Array MAX_MW_CHAN Size of Dimension(s): 22
hw	88	32-bit floating point	Minfloat – Maxfloat	unitless	Weight value 1 Dimensional Array MAX_MW_CHAN Size of Dimension(s): 22
pol	88	32-bit floating point	Minfloat – Maxfloat	unitless	1 Dimensional Array MAX_MW_CHAN Size of Dimension(s): 22

3.2.1.1.7 CrIMSS MW Noise Amplification PC

Data Mnemonic	NP_NU-LM0230-006
Description/ Purpose	The CrIMSS MW Noise Amplification PC file contains the noise amplification data for all of the CrIS and ATMS channels. This file is used in the CrIMSS EDR algorithm
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	2740 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.1.7-1, CrIMSS MW Noise Amplification PC Data Format

Table 3.2.1.1.7-1, CrIMSS MW Noise Amplification PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
numFor	4	32-bit integer	1 – 30	unitless	MWNA data is for numFor FORs per scan. This must match the number of FORs per scan in the data being processed.
numElements	4	32-bit integer	1 – 9	unitless	Number of noise amplification elements
numMwChans	4	32-bit integer	1 – 22	unitless	Number of MW channels for the MWNA data
indexMwNa	88	32-bit integer	Minint – MaxInt	unitless	Index into the MWNA data 1 Dimensional Array: MAX_MW_CHAN Size of Dimension(s): 22
mwNoiseAmp	2640	32-bit floating point	Minfloat – Maxfloat	unitless	MW noise amplification data 2 Dimensional Array: MAX_MW_CHAN x CRIS_SCAN_FORS Size of Dimension(s): 22 x 30

3.2.1.1.8 CrIMSS MW Noise PC

Data Mnemonic	NP_NU-LM0230-007
Description/ Purpose	The CrIMSS MW Noise PC file contains the noise data for all of the CrIS and ATMS channels. This file is used in the CrIMSS EDR algorithm
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	92 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.1.8-1, CrIMSS MW Noise PC Data Format

Table 3.2.1.1.8-1, CrIMSS MW Noise PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
mwChannel	4	32-bit integer	1 – 22	unitless	Number of channels for which noise data exists in the data
mwNoise	88	32-bit floating point	Minfloat – Maxfloat	unitless	Mw channel noise vector 1 Dimensional Array: MAX_MW_CHAN Size of Dimension(s): 22

3.2.1.1.9 CrIMSS Nighttime LAA PC

Data Mnemonic	NP_NU-LM0230-008
Description/ Purpose	The CrIMSS Nighttime LAA PC file contains the regression coefficients used for nighttime LAA of the FOV radiances. This file is used in the CrIMSS EDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	13,154,400 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.1.9-1, CrIMSS Nighttime LAA PC Data Format

Table 3.2.1.1.9-1, CrIMSS Nighttime LAA PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
rCoeff	12,528,000	32-bit floating point	Minfloat – Maxfloat	unitless	Local angle adjustment regression coefficients 4 Dimensional Array: CRIS_SCAN_ANGLES x LAA_FOVS x MAX_LAA_EOFS x MAX_IR_CHAN Size of Dimension(s): 15 x 8 x 20 x 1305
cCoeff	626,400	32-bit floating point	Minfloat – Maxfloat	unitless	3 Dimensional Array: crisScanAngle x crisFov x irChannel Size of Dimension(s): 15 x 8 x 1305

3.2.1.1.10 CrIMSS Nighttime LAA EOF PC

Data Mnemonic	NP_NU-LM0230-009
Description/ Purpose	The CrIMSS Nighttime LAA EOF PC file contains the EOFs used for the nighttime LAA of the CrIS FOVs. This file is used in the CrIMSS EDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	208,800 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.1.10-1, CrIMSS Nighttime LAA EOF PC Data Format

Table 3.2.1.1.10-1, CrIMSS Nighttime LAA EOF PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
eofNight	208800	64-bit floating point	Minfloat – Maxfloat	unitless	EOFs used for nighttime local angle adjustment of CrIS FOVs 2 Dimensional Array: MAX_IR_CHAN x MAX_LAA_EOFS Size of Dimension(s): 1305 x 20

3.2.1.1.11 CrIMSS NWP Temperature PC

Data Mnemonic	NP_NU-LM0230-010
Description/ Purpose	The CrIMSS Numerical Weather Prediction (NWP) Temperature PC file includes both the climatological means and covariances of all of the state variables used in the CrIS inversion algorithm. This file also includes part of the optimal inverse non-linear method employed by CrIMSS. Separate covariances are included for several geographic/climatological regions This file is used in the CrIMSS EDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	41,420 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.1.11-1, CrIMSS NWP Temperature PC Data Format

Table 3.2.1.1.11-1, CrIMSS NWP Temperature PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
numTempLevels	4	32-bit integer	1 – 18	unitless	Number of levels for which the coeffs were generated
indxIndep	104	32-bit integer	1 – 101	unitless	Indices for the mapping NWP temperature level data to OSS levels before interpolation 1 Dimensional Array: ncepLayerEnum Size of Dimension(s): 26
pressLevs	104	32-bit integer	1 - 18	hPa	Pressure levels for which the interpolation coefficients were generated 1 Dimensional Array: ncepLayerEnum Size of Dimension(s): 26
coef	40804	32-bit floating point	Minfloat – Maxfloat	unitless	Matrix used in conversion of temperatures from NWP levels to CrIMSS EDR levels. 2 Dimensional Array: ossLevel x ossLevel Size of Dimension(s): 101 x 101
coef0	404	32-bit floating point	Minfloat – Maxfloat	unitless	Vector used in conversion of temperatures from NWP levels to CrIMSS EDR levels. 1 Dimensional Array: OSS_LEVELS Size of Dimension(s): 101

3.2.1.1.12 CrIMSS NWP Water Vapor PC

Data Mnemonic	NP_NU-LM0230-011
Description/ Purpose	The CrIMSS NWP Water Vapor PC file includes both the climatological means and covariances of all of the state variables used in the CrIS inversion algorithm. This file includes a part of the optimal inverse non-linear inverse method employed by CrIMSS. Separate covariances are included for several geographic/climatological regions. This file is used in the CrIMSS EDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	41,420 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.1.12-1, CrIMSS NWP Water Vapor PC Data Format

Table 3.2.1.1.12-1, CrIMSS NWP Water Vapor PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
numWatVapLevels	4	32-bit integer	1 – 13	unitless	Number of levels for which the coeffs were generated
indxIndep	104	32-bit integer	1 – 101	unitless	Indices for the mapping NWP water vapor level data to OSS levels before interpolation 1 Dimensional Array: ncepLayerEnum Size of Dimension(s): 26
pressLevs	104	32-bit integer	1 - 18	hPa	1 Dimensional Array: ncepLayerEnum Size of Dimension(s): 26
coef	40804	32-bit floating point	Minfloat – Maxfloat	unitless	2 Dimensional Array ossLevel x ossLevel Size of Dimension(s): 101 x 101
coef0	404	32-bit floating point	Minfloat – Maxfloat	unitless	1 Dimensional Array: ossLevel Size of Dimension(s): 101

3.2.1.1.13 CrIMSS Solar Irradiance and IR Frequency PC

Data Mnemonic	NP_NU-LM0230-012
Description/ Purpose	The CrIMSS Solar Irradiance and IR Frequency PC file contains solar irradiance and IR frequency data. This file is used in the CrIMSS EDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	20,880 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.1.13-1, CrIMSS Solar Irradiance and IR Frequency PC Data Format

Table 3.2.1.1.13-1, CrIMSS Solar Irradiance and IR Frequency PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
freqIR	5220	32-bit floating point	Minfloat – Maxfloat	unitless	IR frequency grid. Data is used in the OSS model 1 Dimensional Array: MAX_IR_CHAN Size of Dimension(s): 1305
solRad	15660	32-bit floating point	Minfloat – Maxfloat	mW/m^2/sr/cm^-1	Extraterrestrial solar irradiance. One value per apodization method per channel 2 Dimensional Array: MAX_IR_CHAN x MAX_APOD Size of Dimension(s): 1305 x 3

3.2.1.1.14 CrIMSS Trace Gas Reference Profiles PC

Data Mnemonic	NP_NU-LM0230-013
Description/ Purpose	The CrIMSS Trace Gas Reference Profiles PC file contains the trace gas reference profiles. This file is used in the CrIMSS EDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	2020 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.1.14-1, CrIMSS Trace Gas Reference Profiles PC Data Format

Table 3.2.1.1.14-1, CrIMSS Trace Gas Reference Profiles PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
trref	2020	32-bit floating point	Minfloat – Maxfloat	unitless	Trace gas profiles 2 Dimensional Array: OSS_LEVELS x NUM_TRACE_GASES Size of Dimension(s): 101 x 5

3.2.1.1.15 CrIMSS Tropopause Reference Profiles PC

Data Mnemonic	NP_NU-LM0230-014
Description/ Purpose	The CrIMSS Tropopause Reference Profiles PC file contains the above tropopause reference profiles. This file is used in the CrIMSS EDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	808 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.1.15-1, CrIMSS Tropopause Reference Profiles PC Data Format

Table 3.2.1.1.15-1, CrIMSS Tropopause Reference Profiles PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
pn2oref	404	32-bit floating point	Minfloat – Maxfloat	g/kg	Reference profile for nitrous oxide 1 Dimensional Array: OSS_LEVELS Size of Dimension(s): 101
pch4ref	404	32-bit floating point	Minfloat – Maxfloat	g/kg	Reference profile for methane 1 Dimensional Array: OSS_LEVELS Size of Dimension(s): 101

3.2.1.1.16 CrIMSS Climatological PC

Data Mnemonic	NP_NU-LM0230-015
Description/ Purpose	The CrIMSS Climatological PC file provides the climatological means and covariances of all state variables used in the CrIS inversion algorithm. Separate covariances are included for several geographic/climatological regions. This file is used in the CrIMSS EDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	976,928 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.1.16-1, CrIMSS Climatological PC Data Format

Table 3.2.1.1.16-1, CrIMSS Climatological PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
covMatrix	161312	32-bit floating point	Minfloat – Maxfloat	unitless	Two dimensional array containing MW and IR error covariance matrices for each environmental condition 3 Dimensional Array: Land Type x irRetProfLen x irRetProfLen Size of Dimension(s): 8 x 71 x 71
eof	804288	32-bit floating point	Minfloat – Maxfloat	unitless	Contains EOFs for stratified environmental conditions 3 Dimensional Array: Land Type x irRetProfLen x irGeoProfLen Size of Dimension(s): 8 x 71 x 354
background	11328	32-bit floating point	Minfloat – Maxfloat	unitless	MW and IR background mean profiles(climatic means) 2 Dimensional Array: Land Type x irGeoProfLen Size of Dimension(s): 8 x 354

3.2.1.2 ATMS PCs

3.2.1.2.1 ATMS Footprint Matching Kernels PC

Data Mnemonic	NP_NU-LM0231-000
Description/ Purpose	The ATMS Remap Footprint Matching Kernels PC file provides the coefficients for resampling the ATMS observed brightness temperature using the Backus-Gilbert technique to the CrIS Field of Regard (FOR). This file is used in the ATMS Remap algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	1,058,648 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.2.1-1, ATMS Remap Footprint Matching Kernels PC Data Format

Table 3.2.1.2.1-1, ATMS Footprint Matching Kernels PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
maxPosTrackOffset	4	32-bit integer	0 - 10	unitless	Maximum positive track offset
maxNegTrackOffset	4	32-bit integer	0 - 10	unitless	Maximum negative track offset
numResBeamPos	2640	32-bit integer	1 - 100	unitless	Number of beam positions (ie. data points) to use in resampling each channel to a CrIS FOR. 2 Dimensional Array: CrIS FOR x ATMS Channel Size of Dimension(s): 30 x 22
scanPos	264000	32-bit integer	1 - 96	unitless	The scan position of each of the values used in resampling to a CrIS FOR for a given channel. 3 Dimensional Array: CrIS FOR x ATMS Channel x Beam Use Size of Dimension(s): 30 x 22 x 100
trackOff	264000	32-bit integer	-10 – 10	unitless	The along-track (ie. scan) offset of each beam position used in resampling to a CrIS FOR for a given channel. Offset is from the synched ATMS scan. 3 Dimensional Array: CrIS FOR x ATMS Channel x Beam Use Size of Dimension(s): 30 x 22 x 100

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
bgCoeffs	528000	64-bit floating point	0 – 1	unitless	Backus-Gilbert coefficients to use in resampling ATMS data to CrIS FORs. There is one coeff for each data point to be used in resampling an ATMS channel to a CRIS FOR. 3 Dimensional Array: CrIS FOR x ATMS Channel x Beam Use Size of Dimension(s): 30 x 22 x 100

3.2.1.3 OMPS PCs

3.2.1.3.1 OMPS TC Calibration Constant PC

Data Mnemonic	NP_NU-LM0240-008
Description/ Purpose	The OMPS TC Calibration Constant PC contains radiance calibration constant (from pre-launch calibration). This file is used in the OMPS TC SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names. The version for this table is set to a default "-" in the AUX filename.
File Size	2,271,360 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.1-1, OMPS TC Calibration Constant PC Data Format

Table 3.2.1.3.1-1, OMPS TC Calibration Constant PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
radevresp Array	2,271,360	32-bit floating point	2.89661 to 3299.13	counts/W/cm^3/sr	Radiometric sensitivities 3 Dimensional Array: tc::NUM_ELECTRONICS x tc::MAX_NSPEC_CCD x tc::NO_SPAT_CCD Size of Dimension(s): 2 x 364 x 780

3.2.1.3.2 OMPS TC Field Angles Map PC Table

Data Mnemonic	NP_NU-LM0240-009
Description/ Purpose	The OMPS TC Field Angles Map PC Table contains the detector map of pixel optical angles This file is used in the OMPS TC SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names. The version for this table is set to a default "-" in the AUX filename.
File Size	2,271,360 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.2-1, OMPS TC Field Angles Map PC Table Data Format

Table 3.2.1.3.2-1, OMPS TC Field Angles Map PC Table Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
angles Array	2,271,360	64-bit floating point	-1 – 8.6044729E-02	nanometers	Pre-launch cross-track view angles map 2 Dimensional Array: tc::NO_SPAT_CCD x tc::NUM_IMAGE_HALF Size of Dimension(s): 780 x 2

3.2.1.3.3 OMPS TC Observed Solar PC Table

Data Mnemonic	NP_NU-LM0240-010
Description/ Purpose	The OMPS TC Observed Solar PC Table contains observed reference solar irradiances. This file is used in the OMPS TC SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names. The version for this table is set to a default “-“ in the AUX filename.
File Size	2,271,360 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.3-1, OMPS TC Observed Solar PC Table Data Format

Table 3.2.1.3.3-1, OMPS TC Observed Solar PC Table Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
rsf_data Array	1135680	32-bit floating point	0 – ~1316	W/cm^3/sr	Baseline OMPS observed reference solar irradiances 2 Dimensional Array: tc::MAX_NSPEC_CCD x tc::NO_SPAT_CCD Size of Dimension(s): 364 x 780
rsf_counts Array	1135680	32-bit floating point	24,531.2 – 16,708,400	counts	Baseline OMPS observed reference solar counts 2 Dimensional Array: tc::MAX_NSPEC_CCD x tc::NO_SPAT_CCD Size of Dimension(s): 364 x 780

3.2.1.3.4 OMPS TC Predicted Solar PC Table

Data Mnemonic	NP_NU-LM0240-011
Description/ Purpose	The OMPS TC Predicted Solar PC Table contains solar irradiances and solar wavelengths predicted from spectral functions. This file is used in the OMPS TC SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names. The version for this table is set to a default “-“ in the AUX filename.
File Size	1,920,000 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.3-1, OMPS TC Predicted Solar PC Table Data Format

Table 3.2.1.3.4-1, OMPS TC Predicted Solar PC Table Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
womps Array	960,000	64-bit floating point	298 – 380	nanometers	OMPS solar wavelengths predicted from spectral functions 1 Dimensional Array: tc::MAXPTS_SPEC Size of Dimension(s): 120,000
fomps Array	960,000	64-bit floating point	400 – 1504	W/cm^3/sr	OMPS solar irradiances predicted from spectral functions 1 Dimensional Array: tc::MAXPTS_SPEC Size of Dimension(s): 120,000

3.2.1.3.5 OMPS TC Solar Irradiance PC Table

Data Mnemonic	NP_NU-LM0240-012
Description/ Purpose	The OMPS TC Solar Irradiance PC Table contains solar wavelengths and irradiances of calibration standard. This file is used in the OMPS TC SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names. The version for this table is set to a default "-" in the AUX filename.
File Size	1,920,000 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.5-1, OMPS TC Solar Irradiance PC Table Data Format

Table 3.2.1.3.5-1, OMPS TC Solar Irradiance PC Table Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
wsun Array	960,000	64-bit floating point	298 to 380	nanometers	Solar wavelengths of calibration standard 1 Dimensional Array: tc::MAXPTS_SPEC Size of Dimension(s): 120,000
fsun Array	960,000	64-bit floating point	400 to 1504	W/cm^3/sr	Solar irradiances of calibration standard 1 Dimensional Array: tc::MAXPTS_SPEC Size of Dimension(s): 120,000

3.2.1.3.6 OMPS TC Spec Rcn Table

Data Mnemonic	NP_NU-LM0240-013
Description/ Purpose	The OMPS TC Spec Rcn Table contains Spectral Response Functions. This file is used in the OMPS TC SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names. The version for this table is set to a default "-" in the AUX filename.
File Size	198,992 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.6-1, OMPS TC Spec Rcn Table Data Format

Table 3.2.1.3.6-1, OMPS TC Spec Rcn Table Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
wave_prof Array	192	64-bit floating point	290 – 390	nanometer	Wavelengths 1 Dimensional Array: tc::NFUNC Size of Dimension(s): 24
offsetw Array	7952	64-bit floating point	-2.6 – 2.6	nanometers	Offset wavelengths 1 Dimensional Array: tc::NSAMP Size of Dimension(s): 994
wavefunc Array	190848	64-bit floating point	0 – 1	unitless	Spectral responses 2 Dimensional Array: tc::NSAMP x tc::NFUNC Size of Dimension(s): 994 x 24

3.2.1.3.7 OMPS TC Wave Fitting Parameters Table

Data Mnemonic	NP_NU-LM0240-014
Description/ Purpose	The OMPS TC Wave Fitting Parameters Table contains the Wavelength fitting parameters This file is used in the OMPS TC SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names. The version for this table is set to a default "-" in the AUX filename.
File Size	198,992 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.7-1, OMPS TC Wave Fitting Parameters Table Data Format

Table 3.2.1.3.7-1, OMPS TC Wave Fitting Parameters Table Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
inputLine Array	72	8-bit character	Minchar – Maxchar	unitless	Describes file content 1 Dimensional Array: tc::LINE_LEN Size of Dimension(s): 72
iterate	4	32-bit integer	True = 1 False = 0	unitless	processing switch
write_fit	4	32-bit integer	True = 1 False = 0	unitless	processing switch
weight	4	32-bit integer	True = 1 False = 0	unitless	processing switch
mirror	4	32-bit integer	True = 1 False = 0	unitless	processing switch
autodiff	4	32-bit integer	True = 1 False = 0	unitless	processing switch
wavelo	8	64-bit floating point	303.5 – 376.5	nanometers	wavelength limits for fitting
wavehi	8	64-bit floating point	303.5 – 376.5	nanometers	wavelength limits for fitting
delchi	8	64-bit floating point	1e-12	unitless	convergence criteria

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
provar	8	64-bit floating point	1e-12	unitless	convergence criteria
var Array	512	64-bit floating point	1.00E-12	unitless	polynomial parameters 1 Dimensional Array: tc::MMAX Size of Dimension(s): 64
if_varied Array	256	32-bit integer	True = 1 False = 0	unitless	vary parameter 1 Dimensional Array: tc::MMAX Size of Dimension(s): 64
diff Array	512	64-bit floating point	>0	unitless	increment parameter 1 Dimensional Array: tc::MMAX Size of Dimension(s): 64
lock Array	256	32-bit integer	0	unitless	unused lock 1 Dimensional Array: tc::MMAX Size of Dimension(s): 64

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
alock Array	512	64-bit floating point	0	unitless	unused lock 1 Dimensional Array: tc::MMAX Size of Dimension(s): 64
block Array	512	64-bit floating point	0	unitless	unused lock 1 Dimensional Array: tc::MMAX Size of Dimension(s): 64

3.2.1.3.8 OMPS TC Solar Irradiance Calibration Constants Table

Data Mnemonic	NP_NU-LM0240-015
Description/ Purpose	The OMPS TC Solar Irradiance Calibration Constants Table contains the solar irradiance calibration constants. This file is used in the OMPS TC SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names. The version for this table is set to a default "-" in the AUX filename.
File Size	15,899,520 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.8-1, OMPS TC Solar Irradiance Calibration Constants Table Data Format

Table 3.2.1.3.8-1, OMPS TC Solar Irradiance Calibration Constants Table Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
radevresp Array	15,899,520	32-bit floating point	2.89661 – 3299.13	counts/W/cm^3/sr	Radiometric sensitivities 4 Dimensional Array: tc::NUM_ELECTRONICS x tc::NO_DIFFUSER_POSITIONS x tc::MAX_NSPEC_CCD x tc::NO_SPAT_CCD Size of Dimension(s): 7 x 2 x 364 x 780

3.2.1.3.9 OMPS TC BRDFGRIDS Table

Data Mnemonic	NP_NU-LM0240-017
Description/ Purpose	The OMPS TC BRDF GRIDS Table contains Sensor diffuser irradiance goniometry characteristics. This file is used in the OMPS TC SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names. The version for this table is set to a default “-“ in the AUX filename.
File Size	bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.10-1, OMPS TC BRDF GRIDS Table Data Format

Table 3.2.1.3.9-1, OMPS TC BRDF GRIDS Table Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
BRDF_grid Array	1774080000	32-bit floating point	Minfloat - Maxfloat	unitless	Bireflectance directional functions 5 Dimensional Array tc::NO_DIFFUSER_POSITIONS x tc::NO_SPEC_PIX x tc::BRDF_SPAT_PIX x tc::GRID_SIZE x tc::GRID_SIZE Size of Dimension(s): 7 x 198 x 200 x 40 x 40
minAzim Array	28	32-bit floating point	Minfloat - Maxfloat	unitless	Minimum azimuth angles 1 Dimensional Array tc::NO_DIFFUSER_POSITIONS Size of Dimension(s): 7
maxAzim Array	28	32-bit floating point	Minfloat - Maxfloat	unitless	Maximum azimuth angles 1 Dimensional Array tc::NO_DIFFUSER_POSITIONS Size of Dimension(s): 7
minElev Array	28	32-bit floating point	Minfloat - Maxfloat	unitless	Minimum elevation angles 1 Dimensional Array tc::NO_DIFFUSER_POSITIONS Size of Dimension(s): 7

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
maxElev Array	28	32-bit floating point	Minfloat - Maxfloat	unitless	Maximum elevation angles 1 Dimensional Array tc::NO_DIFFUSER_POSITIONS Size of Dimension(s): 7
gspat_offset Array	28	32-bit integer	Minint - Maxint	unitless	starting spatial index for calibrated data 1 Dimensional Array tc::NO_DIFFUSER_POSITIONS Size of Dimension(s): 7
gspec_offset Array	28	32-bit integer	Minint - Maxint	unitless	starting spectral index for calibrated data 1 Dimensional Array tc::NO_DIFFUSER_POSITIONS Size of Dimension(s): 7
gspat_size Array	28	32-bit integer	Minint - Maxint	unitless	extent of spatial indices for calibrated data 1 Dimensional Array tc::NO_DIFFUSER_POSITIONS Size of Dimension(s): 7

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
gspec_size Array	28	32-bit integer	Minint - Maxint	unitless	extent of spectral indices for calibrated data 1 Dimensional Array tc::NO_DIFFUSER_POSITIONS Size of Dimension(s): 7
gazim_size Array	28	32-bit integer	Minint - Maxint	unitless	number of azimuth angles 1 Dimensional Array tc::NO_DIFFUSER_POSITIONS Size of Dimension(s): 7
gelev_size Array	28	32-bit integer	Minint - Maxint	unitless	number of elevation angles 1 Dimensional Array tc::NO_DIFFUSER_POSITIONS Size of Dimension(s): 7

3.2.1.3.10 OMPS TC Line Shifts Table

Data Mnemonic	NP_NU-LM0240-018
Description/ Purpose	The OMPS TC Line Shifts Table contains bandcenter spectral shift information for calibration/wavelength registration. This file is used in the OMPS TC SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names. The version for this table is set to a default "-" in the AUX filename.
File Size	29,750 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.11-1, OMPS TC Line Shifts Table Data Format

Table 3.2.1.3.10-1, OMPS TC Line Shifts Table Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
instrument Array	12	8-bit character	"Total Column"	unitless	instrument name 1 Dimensional Array tc::INSTR_NAMELEN Size of Dimension(s): 12
nlines	2	16-bit integer	10	unitless	number of lines
indexes Array	20	16-bit integer	5 – 163	pixels	line pixel number 1 Dimensional Array tc:: MAXLINES Size of Dimension(s): 10
offset	2	16-bit integer	1	pixels	pixel offset
nshifts	2	16-bit integer	167	unitless	number of shifts
wlines Array	80	64-bit floating point	302 – 369	nanometers	Selected wavelength lines for monitoring 1 Dimensional Array tc:: MAXLINES Size of Dimension(s): 10

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
refshifts Array	13360	64-bit floating point	Minfloat – Maxfloat	nanometers	Selected wavelength shifts for monitoring 2 Dimensional Array tc::MAXLINES x tc:: TC_MAX_SHIFTS Size of Dimension(s): 10 x 167
irrad_diff Array	13360	64-bit floating point	Minfloat – Maxfloat	unitless	Selected irradiance shifts for monitoring 2 Dimensional Array tc::MAXLINES x tc:: TC_MAX_SHIFTS Size of Dimension(s): 10 x 167
wref_l Array	2912	64-bit floating point	300 – 380	nanometers	reference wavelengths 1 Dimensional Array tc::MAX_NSPEC_CCD Size of Dimension(s): 364

3.2.1.3.11 OMPS TC Spectral Registration Pixel Map Table

Data Mnemonic	NP_NU-LM0240-019
Description/ Purpose	The OMPS TC Spectral Registration Pixel Map Table contains the wavelength mapping of the CCD for spatial and spectral dimensions. This file is used in the OMPS TC SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names. The version for this table is set to a default “-“ in the AUX filename.
File Size	2,271,360 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.12-1, OMPS TC Spectral Registration Pixel Map Table Data Format

Table 3.2.1.3.11-1, OMPS TC Spectral Registration Pixel Map Table Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
wmap Array	12	64-bit floating point	290 – 390	nanometers	wavelength map 2 Dimensional Array tc::MAX_NSPEC_CCD x tc::NO_SPAT_CCD Size of Dimension(s): 364 x 780

3.2.1.3.12 OMPS TC Timing Pattern Ground Table

Data Mnemonic	NP_NU-LM0240-020
Description/ Purpose	The OMPS TC Timing Pattern Ground Table contains integration times and offsets for Earth View, Solar, LED and Dark. This file is used in the OMPS TC SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to: IDzzz-Vxxx-yyy Where zzz is the ID number and xxx-yyy is the version number of the table. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	996 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.13-1, OMPS TC Timing Pattern Ground Table Data Format

Table 3.2.1.3.12-1, OMPS TC Timing Pattern Ground Table Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
TPev_num	4	32-bit integer	1	unitless	number of Earth View Frames
TPsol_num	4	32-bit integer	1	unitless	number of solar frames
TPdark_num	4	32-bit integer	1	unitless	number of dark frames
TPled_num	4	32-bit integer	1	unitless	number of lamp frames
TPev_conum	4	32-bit integer	1	unitless	number of Earth View coadds
TPsol_conum	4	32-bit integer	1 – 7	unitless	number of solar coadds
TPdark_conum	4	32-bit integer	1	unitless	number of dark coadds
TPled_conum	4	32-bit integer	1 – 83	unitless	number of lamp coadds
TPev_time Array	60	32-bit floating point	>=1	seconds	total integration time for each frame – Earth View 1 Dimensional Array tc::NO_SCANS_PER_GRANULE Size of Dimension(s): 15

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
TPsol_time Array	252	32-bit floating point	>=1	seconds	total integration time for each frame - Solar 1 Dimensional Array tc::NO_SOLAR_IMAGES Size of Dimension(s): 63
TPdark_time Array	20	32-bit floating point	>=1	seconds	total integration time for each frame - Dark 1 Dimensional Array tc::NO_DARK_IMAGES Size of Dimension(s): 5
TPled_time Array	600	32-bit floating point	>=1	seconds	total integration time for each frame - LED 1 Dimensional Array tc::NO_LAMP_IMAGES Size of Dimension(s): 150
ev_time_offset	8	64-bit integer		seconds	EV time offset
sol_time_offset	8	64-bit integer		seconds	Solar time offset
dark_time_offset	8	64-bit integer		seconds	Dark time offset
led_time_offset	8	64-bit integer		seconds	LED time offset

3.2.1.3.13 OMPS TC Linearity Ground Table

Data Mnemonic	NP_NU-LM0240-021
Description/ Purpose	The OMPS TC Linearity Ground Table contains linearity coefficients for primary and reduntand CCD1 and CCD2. This file is used in the OMPS TC SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to: IDzzz-Vxxx-yyy Where zzz is the ID number and xxx-yyy is the version number of the table. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	262,144 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.14-1, OMPS TC Linearity T Ground able Data Format

Table 3.2.1.3.13-1, OMPS TC Linearity Ground Table Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
linearity_table Array	262,144	32-bit floating point	1 – 100,000	unitless	linearity coefficients for: primary CCD1, primary CCD2, redundant CCD1, redundant CCD2 3 Dimensional Array tc::NUM_ELECTRONICS x tc::NUM_IMAGE_HALF x tc::LAMPLUTSIZE Size of Dimension(s): 2 x 2 x 16,384

3.2.1.3.14 OMPS TC Earth View Sample Ground Table

Data Mnemonic	NP_NU-LM0240-022
Description/ Purpose	The OMPS TC Earth View Sample Ground Table contains the BATC generated database of utilized pixels. This file is used in the OMPS TC SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to: IDzzz-Vxxx-yyy Where zzz is the ID number and xxx-yyy is the version number of the table. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	1,135,680 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.15-1, OMPS TC Earth View Sample Ground Table Data Format

Table 3.2.1.3.14-1, OMPS TC Earth View Sample Ground Table Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
macrot	1,135,680	32-bit integer	0-3: 0 = unused pixel 1 = macropixel A 2 = macropixel B 3 = bad pixel	unitless	Flight-like Earth-view sample table array. 2 Dimensional Array tc::MAX_NSPEC_CCD x tc::NO_SPAT_CCD x Size of Dimension(s): 364 x 780

3.2.1.3.15 OMPS TC Macropixel Ground Table

Data Mnemonic	NP_NU-LM0240-023
Description/ Purpose	The OMPS TC Macropixel Ground Table contains the ccd map of EV macropixels This file is used in the OMPS TC SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to: IDzzz-Vxxx-yyy Where zzz is the ID number and xxx-yyy is the version number of the table. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	1,135,680 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.16-1, OMPS TC Macropixel Ground Table Data Format

Table 3.2.1.3.15-1, OMPS TC Macropixel Ground Table Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
macrot Array	1,135,680	32-bit integer	-N to N: negative number indicates all bad macropixel, N goes from 1 to the number of macropixels	unitless	Macropixel table array 2 Dimensional Array tc::MAX_NSPEC_CCD x tc::NO_SPAT_CCD x Size of Dimension(s): 364 x 780

3.2.1.3.16 OMPS TC LED Sample Ground Table

Data Mnemonic	NP_NU-LM0240-024
Description/ Purpose	The OMPS TC LED Sample Table contains the ccd map of LAMP pixels. This file is used in the OMPS TC SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to: IDzzz-Vxxx-yyy Where zzz is the ID number and xxx-yyy is the version number of the table. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	1,135,680 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.17-1, OMPS TC LED Sample Ground Table Data Format

Table 3.2.1.3.16-1, OMPS TC LED Sample Ground Table Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
lampsample Array	1,135,680	32-bit integer	0-2: 0 = unused pixel 1 = macropixel A 2 = macropixel B	unitless	linearity LED sample table array, 3rd dimension is for the primary and redundant CCDs 2 Dimensional Array tc::MAX_NSPEC_CCD x tc::NO_SPAT_CCD x Size of Dimension(s): 364 x 780

3.2.1.3.17 OMPS TC Solar Sample Ground Table

Data Mnemonic	NP_NU-LM0240-025
Description/ Purpose	The OMPS TC Solar Sample Ground Table contains the sample table array for each of 7 solar diffuser positions. This file is used in the OMPS TC SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to: IDzzz-Vxxx-yyy Where zzz is the ID number and xxx-yyy is the version number of the table. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	7,949,760 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.18-1, OMPS TC Solar Sample Ground Table Data Format

Table 3.2.1.3.17-1, OMPS TC Solar Sample Ground Table Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
macrot Array	7,949,760	32-bit integer	0-2: 0 = unused pixel 1 = macropixel A 2 = macropixel B	unitless	Sample table array for each of 7 solar diffuser positions. 2 Dimensional Array tc::NO_DIFFUSER_POSITIONS x tc::MAX_NSPEC_CCD x tc::NO_SPAT_CCD Size of Dimension(s): 7 x 364 x 780

3.2.1.3.18 OMPS TC Wavelengths Ground Table

Data Mnemonic	NP_NU-LM0240-026
Description/ Purpose	The OMPS TC Wavelengths Ground Table contains … This file is used in the OMPS TC SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to: IDzzz-Vxxx-yyy Where zzz is the ID number and xxx-yyy is the version number of the table. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	7,949,760 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.19-1, OMPS TC Wavelengths Ground Table Data Format

Table 3.2.1.3.18-1, OMPS TC Wavelengths Ground Table Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
obs_year Array	58	16-bit integer	2000 – 2050	years	Year 1 Dimensional Array tc::TC_CAL_DAYS Size of Dimension(s): 29
obs_day Array	58	16-bit integer	1 – 366	days	Day 1 Dimensional Array tc::TC_CAL_DAYS Size of Dimension(s): 29
resolution Array	232	64-bit floating point	>0	nanometers	FWHM wavelength resolution 1 Dimensional Array tc::TC_CAL_DAYS Size of Dimension(s): 29
intercept Array	24360	64-bit floating point	Minfloat – Maxfloat	nanometers	Intercept line 2 Dimensional Array tc::TC_CAL_DAYS x tc::MAXCTPX Size of Dimension(s): 29 x 105

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
slope Array	24360	64-bit floating point	Minfloat – Maxfloat	unitless	Slope line 2 Dimensional Array tc::TC_CAL_DAYS x tc::MAXCTPX Size of Dimension(s): 29 x 105
correl Array	24360	64-bit floating point	>0	unitless	Correlation 2 Dimensional Array tc::TC_CAL_DAYS x tc::MAXCTPX Size of Dimension(s): 29 x 105
ntrends Array	116	32-bit integer	>3	unitless	Number of calibrations used for trend 1 Dimensional Array tc::TC_CAL_DAYS Size of Dimension(s): 29
newestyear Array	58	16-bit integer	2000 – 2050	years	Year of newest calibration trended 1 Dimensional Array tc::TC_CAL_DAYS Size of Dimension(s): 29

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
newestday Array	58	16-bit integer	1 – 366	days	Day of newest calibration 1 Dimensional Array tc::TC_CAL_DAYS Size of Dimension(s): 29
wbands Array	8867040	64-bit floating point	290 – 390	nanometers	Wavelengths 3 Dimensional Array tc::TC_CAL_DAYS x tc::MAX_NSPEC_CCD x tc::MAXCTPX Size of Dimension(s): 29 x 364 x 105
sig_w Array	8867040	64-bit floating point	>0	nanometers	Precision of Wavelengths 3 Dimensional Array tc::TC_CAL_DAYS x tc::MAX_NSPEC_CCD x tc::MAXCTPX Size of Dimension(s): 29 x 364 x 105

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
gamma Array	8867040	64-bit floating point	>0	unitless	irradiance corrections for shifts 3 Dimensional Array tc::TC_CAL_DAYS x tc::MAX_NSPEC_CCD x tc::MAXCTPX Size of Dimension(s): 29 x 364 x 105

3.2.1.3.19 OMPS TC CF Earth Ground Table

Data Mnemonic	NP_NU-LM0240-027
Description/ Purpose	The OMPS TC CF Earth Ground Table contains radiometric calibration factors for the Earth scene spatial cells. This file is used in the OMPS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to: IDzzz-Vxxx-yyy Where zzz is the ID number and xxx-yyy is the version number of the table. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	8,867,620 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.20-1, OMPS TC CF Earth Ground Table Data Format

Table 3.2.1.3.19-1, OMPS TC CF Earth Ground Table Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
obs_year Array	116	32-bit integer	2000 – 2050	years	year of calibration record 1 Dimensional Array tc::TC_CAL_DAYS Size of Dimension(s): 29
obs_day Array	116	32-bit integer	1 – 366	days	day of calibration record 1 Dimensional Array tc::TC_CAL_DAYS Size of Dimension(s): 29
old_nmonitor Array	116	32-bit integer	>0	unitless	number of observations used in trending 1 Dimensional Array tc::TC_CAL_DAYS Size of Dimension(s): 29
monitor_year Array	116	32-bit integer	2000 – 2050	years	last year of data used for flat field trending 1 Dimensional Array tc::TC_CAL_DAYS Size of Dimension(s): 29

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
monitor_day Array	116	32-bit integer	1 – 366	days	last day of data used for flat field trending 1 Dimensional Array tc::TC_CAL_DAYS Size of Dimension(s): 29
cfearth Array	4433520	32-bit floating point	>0	unitless	radiometric calibration factors 3 Dimensional Array tc::TC_CAL_DAYS x tc::MAX_NSPEC_CCD x tc::MAXCTPX Size of Dimension(s): 29 x 364 x 105
cfearth_err Array	4433520	32-bit floating point	>0	unitless	precision of radiometric calibration factors 3 Dimensional Array tc::TC_CAL_DAYS x tc::MAX_NSPEC_CCD x tc::MAXCTPX Size of Dimension(s): 29 x 364 x 105

3.2.1.3.20 OMPS NP Calibration Constant PC

Data Mnemonic	**EDFCB7-TBD-10205**
Description/ Purpose	The OMPS NP Calibration Constant PC contains radiance calibration constant (from pre-launch calibration). This file is used in the OMPS NP SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names. The version for this table is set to a default "-" in the AUX filename.
File Size	**EDFCB7-TBD-10205** bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.20-1, OMPS NP Calibration Constant PC Data Format

Table 3.2.1.3.20-1, OMPS NP Calibration Constant PC Data Format

EDFCB7-TBD-10205

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.2.1.3.21 OMPS NP Field Angles Map PC Table

Data Mnemonic	**EDFCB7-TBD-10205**
Description/ Purpose	The OMPS NP Field Angles Map PC Table contains the detector map of pixel optical angles This file is used in the OMPS NP SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names. The version for this table is set to a default "-" in the AUX filename.
File Size	**EDFCB7-TBD-10205** bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.21-1, OMPS NP Field Angles Map PC Table Data Format

Table 3.2.1.3.21-1, OMPS NP Field Angles Map PC Table Data Format

EDFCB7-TBD-10205

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.2.1.3.22 OMPS NP Observed Solar PC Table

Data Mnemonic	**EDFCB7-TBD-10205**
Description/ Purpose	The OMPS NP Observed Solar PC Table contains observed reference solar irradiances. This file is used in the OMPS NP SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names. The version for this table is set to a default "-" in the AUX filename.
File Size	**EDFCB7-TBD-10205** bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.22-1, OMPS NP Observed Solar PC Table Data Format

Table 3.2.1.3.22-1, OMPS NP Observed Solar PC Table Data Format

EDFCB7-TBD-10205

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.2.1.3.23 OMPS NP Predicted Solar PC Table

Data Mnemonic	EDFCB7-TBD-10205
Description/ Purpose	The OMPS NP Predicted Solar PC Table contains solar irradiances and solar wavelengths predicted from spectral functions. This file is used in the OMPS NP SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names. The version for this table is set to a default "-" in the AUX filename.
File Size	EDFCB7-TBD-10205 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.23-1, OMPS NP Predicted Solar PC Table Data Format

Table 3.2.1.3.23-1, OMPS NP Predicted Solar PC Table Data Format

EDFCB7-TBD-10205

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.2.1.3.24 OMPS NP Solar Irradiance PC Table

Data Mnemonic	**EDFCB7-TBD-10205**
Description/ Purpose	The OMPS NP Solar Irradiance PC Table contains solar wavelengths and irradiances of calibration standard. This file is used in the OMPS NP SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names. The version for this table is set to a default "-" in the AUX filename.
File Size	**EDFCB7-TBD-10205** bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.24-1, OMPS NP Solar Irradiance PC Table Data Format

Table 3.2.1.3.24-1, OMPS NP Solar Irradiance PC Table Data Format

EDFCB7-TBD-10205

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.2.1.3.25 OMPS NP Spec Rcn Table

Data Mnemonic	**EDFCB7-TBD-10205**
Description/ Purpose	The OMPS NP Spec Rcn Table contains Spectral Response Functions. This file is used in the OMPS NP SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names. The version for this table is set to a default "-" in the AUX filename.
File Size	**EDFCB7-TBD-10205** bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.25-1, OMPS NP Spec Rcn Table Data Format

Table 3.2.1.3.25-1, OMPS NP Spec Rcn Table Data Format

EDFCB7-TBD-10205

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.2.1.3.26 OMPS NP Wave Fitting Parameters Table

Data Mnemonic	**EDFCB7-TBD-10205**
Description/ Purpose	The OMPS NP Wave Fitting Parameters Table contains the Wavelength fitting parameters This file is used in the OMPS NP SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names. The version for this table is set to a default "-" in the AUX filename.
File Size	**EDFCB7-TBD-10205** bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.26-1, OMPS NP Wave Fitting Parameters Table Data Format

Table 3.2.1.3.26-1, OMPS NP Wave Fitting Parameters Table Data Format

EDFCB7-TBD-10205

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.2.1.3.27 OMPS NP Solar Irradiance Calibration Constants Table

Data Mnemonic	**EDFCB7-TBD-10205**
Description/ Purpose	The OMPS NP Solar Irradiance Calibration Constants Table contains the solar irradiance calibration constants. This file is used in the OMPS NP SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names. The version for this table is set to a default "-" in the AUX filename.
File Size	**EDFCB7-TBD-10205** bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.27-1, OMPS NP Solar Irradiance Calibration Constants Table Data Format

Table 3.2.1.3.27-1, OMPS NP Solar Irradiance Calibration Constants Table Data Format

EDFCB7-TBD-10205

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.2.1.3.28 OMPS NP BRDFGRIDS Table

Data Mnemonic	EDFCB7-TBD-10205
Description/ Purpose	The OMPS NP BRDF GRIDS Table contains Sensor diffuser irradiance goniometry characteristics. This file is used in the OMPS NP SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names. The version for this table is set to a default "-" in the AUX filename.
File Size	EDFCB7-TBD-10205 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.28-1, OMPS NP BRDF GRIDS Table Data Format

Table 3.2.1.3.28-1, OMPS NP BRDF GRIDS Table Data Format

EDFCB7-TBD-10205

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.2.1.3.29 OMPS NP Line Shifts Table

Data Mnemonic	**EDFCB7-TBD-10205**
Description/ Purpose	The OMPS NP Line Shifts Table contains bandcenter spectral shift information for calibration/wavelength registration. This file is used in the OMPS NP SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names. The version for this table is set to a default "-" in the AUX filename.
File Size	**EDFCB7-TBD-10205** bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.29-1, OMPS NP Line Shifts Table Data Format

Table 3.2.1.3.29-1, OMPS NP Line Shifts Table Data Format

EDFCB7-TBD-10205

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.2.1.3.30 OMPS NP Spectral Registration Pixel Map Table

Data Mnemonic	**EDFCB7-TBD-10205**
Description/ Purpose	The OMPS NP Spectral Registration Pixel Map Table contains the wavelength mapping of the CCD for spatial and spectral dimensions. This file is used in the OMPS NP SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names. The version for this table is set to a default "-" in the AUX filename.
File Size	**EDFCB7-TBD-10205** bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.30-1, OMPS NP Spectral Registration Pixel Map Table Data Format

Table 3.2.1.3.30-1, OMPS NP Spectral Registration Pixel Map Table Data Format

EDFCB7-TBD-10205

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.2.1.3.31 OMPS NP Timing Pattern Ground Table

Data Mnemonic	**EDFCB7-TBD-10205**
Description/ Purpose	The OMPS NP Timing Pattern Ground Table contains integration times and offsets for Earth View, Solar, LED and Dark. This file is used in the OMPS NP SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to: IDzzz-Vxxx-yyy Where zzz is the ID number and xxx-yyy is the version number of the table. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	**EDFCB7-TBD-10205** bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.31-1, OMPS NP Timing Pattern Ground Table Data Format

Table 3.2.1.3.31-1, OMPS NP Timing Pattern Ground Table Data Format

EDFCB7-TBD-10205

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.2.1.3.32 OMPS NP Linearity Ground Table

Data Mnemonic	**EDFCB7-TBD-10205**
Description/ Purpose	The OMPS NP Linearity Ground Table contains linearity coefficients for primary and reduntand CCD1 and CCD2. This file is used in the OMPS NP SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to: IDzzz-Vxxx-yyy Where zzz is the ID number and xxx-yyy is the version number of the table. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	**EDFCB7-TBD-10205** bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.32-1, OMPS NP Linearity T Ground able Data Format

Table 3.2.1.3.32-1, OMPS NP Linearity Ground Table Data Format

EDFCB7-TBD-10205

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.2.1.3.33 OMPS NP Earth View Sample Ground Table

Data Mnemonic	**EDFCB7-TBD-10205**
Description/ Purpose	The OMPS NP Earth View Sample Ground Table contains the BATC generated database of utilized pixels. This file is used in the OMPS NP SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to: IDzzz-Vxxx-yyy Where zzz is the ID number and xxx-yyy is the version number of the table. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	**EDFCB7-TBD-10205** bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.33-1, OMPS NP Earth View Sample Ground Table Data Format

Table 3.2.1.3.33-1, OMPS NP Earth View Sample Ground Table Data Format

EDFCB7-TBD-10205

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.2.1.3.34 OMPS NP Macropixel Ground Table

Data Mnemonic	**EDFCB7-TBD-10205**
Description/ Purpose	The OMPS NP Macropixel Ground Table contains the ccd map of EV macropixels This file is used in the OMPS NP SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to: IDzzz-Vxxx-yyy Where zzz is the ID number and xxx-yyy is the version number of the table. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	**EDFCB7-TBD-10205** bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.34-1, OMPS NP Macropixel Ground Table Data Format

Table 3.2.1.3.34-1, OMPS NP Macropixel Ground Table Data Format

EDFCB7-TBD-10205

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.2.1.3.35 OMPS NP LED Sample Ground Table

Data Mnemonic	**EDFCB7-TBD-10205**
Description/ Purpose	The OMPS NP LED Sample Table contains the ccd map of LAMP pixels. This file is used in the OMPS NP SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to: IDzzz-Vxxx-yyy Where zzz is the ID number and xxx-yyy is the version number of the table. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	**EDFCB7-TBD-10205** bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.35-1, OMPS NP LED Sample Ground Table Data Format

Table 3.2.1.3.35-1, OMPS NP LED Sample Ground Table Data Format

EDFCB7-TBD-10205

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.2.1.3.36 OMPS NP Solar Sample Ground Table

Data Mnemonic	**EDFCB7-TBD-10205**
Description/ Purpose	The OMPS NP Solar Sample Ground Table contains the sample table array for each of 7 solar diffuser positions. This file is used in the OMPS NP SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to: IDzzz-Vxxx-yyy Where zzz is the ID number and xxx-yyy is the version number of the table. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	**EDFCB7-TBD-10205** bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.36-1, OMPS NP Solar Sample Ground Table Data Format

Table 3.2.1.3.36-1, OMPS NP Solar Sample Ground Table Data Format

EDFCB7-TBD-10205

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.2.1.3.37 OMPS NP Wavelengths Ground Table

Data Mnemonic	**EDFCB7-TBD-10205**
Description/ Purpose	The OMPS NP Wavelengths Ground Table contains … This file is used in the OMPS NP SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to: IDzzz-Vxxx-yyy Where zzz is the ID number and xxx-yyy is the version number of the table. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	**EDFCB7-TBD-10205** bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.37-1, OMPS NP Wavelengths Ground Table Data Format

Table 3.2.1.3.37-1, OMPS NP Wavelengths Ground Table Data Format

EDFCB7-TBD-10205

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.2.1.3.38 OMPS NP CF Earth Ground Table

Data Mnemonic	**EDFCB7-TBD-10205**
Description/ Purpose	The OMPS NP CF Earth Ground Table contains radiometric calibration factors for the Earth scene spatial cells. This file is used in the OMPS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Version Number field of the File-Naming Convention for OMPS Automatic PCs will set to: IDzzz-Vxxx-yyy Where zzz is the ID number and xxx-yyy is the version number of the table. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	**EDFCB7-TBD-10205** bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.3.38-1, OMPS NP CF Earth Ground Table Data Format

Table 3.2.1.3.38-1, OMPS NP CF Earth Ground Table Data Format

EDFCB7-TBD-10205

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.2.1.4 VIIRS PCs

3.2.1.4.1 VIIRS CBH Liquid Water Content PC

Data Mnemonic	NP_NU-LM0233-001
Description/ Purpose	The VIIRS Cloud Base Height (CBH) Liquid Water Content (LWC) PC file contains the cloud Liquid Water Content values. This file contains a single fixed LWC value for each cloud type (cirrus, stratus, etc.). This file is used in the VIIRS CBH algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	48 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.1-1, VIIRS CBH Liquid Water Content PC Data Format

Table 3.2.1.4.1-1, VIIRS CBH LWC PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
lwc	48	64-bit floating point	0.000: no cloud 0.293: stratus 0.455: altocumulus or altostratus 0.580: cumulus 0.010: cirrus 0.010: cirrocumulus	g/m3	1 Dimensional Array: cloudType Size of Dimension(s): 6

3.2.1.4.2 VIIRS CCL Cloud Type PC

Data Mnemonic	NP_NU-LM0233-002
Description/ Purpose	The VIIRS CCL Cloud Type PC file contains the attribute values of cloud types. These values are derived from standard meteorological definitions. This file is used in the VIIRS Cloud Cover/Layers (CCL) algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	60 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.2-1, VIIRS CCL Cloud Type PC Data Format

Table 3.2.1.4.2-1, VIIRS CCL Cloud Type PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
height	20	32-bit float	stratus = 1.3 altocumulus = 3.5 cumulus = 3.3 cirrus = 9.0 cirrocumulus = 10.5	Kilometers	Mean Cloud Top Height 1 Dimensional Array: height Size of Dimension(s): 5
size	20	32-bit float	stratus = 13.5 altocumulus = 17.0 cumulus = 27.5 cirrus = 55.0 cirrocumulus = 75.0	Micrometers	Mean Cloud Effective Particle Size 1 Dimensional Array: size Size of Dimension(s): 5
op_thick	20	32-bit float	stratus = 5.5 altocumulus = 17.0 cumulus = 26.5 cirrus = 2.5 cirrocumulus = 4.5	unitless	Mean Cloud Optical Thickness 1 Dimensional Array: op_thick Size of Dimension(s): 5

3.2.1.4.3 VIIRS COP SA and Emissivity PC

Data Mnemonic	NP_NU-LM0233-003
Description/ Purpose	The VIIRS COP SA and Emissivity PC file contains the albedo and emissivity fields. Provides 5 bands by 6 surface types. This file is used in the VIIRS COP algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	240 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.3-1, VIIRS COP SA and Emissivity PC Data Format

Table 3.2.1.4.3-1, VIIRS COP SA and Emissivity PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
albedo	120	32-bit floating point	0 – 1	unitless	2 Dimensional Array: COP_SURFACE_TYPES x COP_MAX_BANDS Size of Dimension(s): 6 x 5
emissivity	120	32-bit floating point	0 – 1	unitless	2 Dimensional Array: COP_SURFACE_TYPES x COP_MAX_BANDS Size of Dimension(s): 6 x 5

3.2.1.4.4 VIIRS CCL/GCE Cloud Aggregation PC

Data Mnemonic	NP_NU-LM0233-005
Description/ Purpose	The VIIRS CCL/GCE Cloud Aggregation PC file contains the data that identifies the cell sizes appropriate for the CCL data products (both the clustering cells and the aggregation cells). This file is used in the VIIRS CCL and GCE algorithms
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	930,352 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.4-1, VIIRS CCL/GCE Aggregation PC Data Format

Table 3.2.1.4.4-1, VIIRS CCL/GCE PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
numAtCellsPerScan	4	32-bit integer	>=0	unitless	Number of along-track (rows) horizontal cells per scan
numXtCellsPerScan	4	32-bit integer	>=0	unitless	Number of cross-track (columns) horizontal cells per
numAtPixPerScan	4	32-bit integer	>=0	unitless	Number of along-track (rows) pixels per scan
numXtPixPerScan	4	32-bit integer	>=0	unitless	Number of cross-track (columns) pixels per scan
crow	4	32-bit integer	>=0	unitless	Cell row index Size of Dimension(s): [VIIRS_AGGTBL_ENTRIES]
ccol	155056	32-bit integer	>=0	unitless	Cell column index Size of Dimension(s): [VIIRS_AGGTBL_ENTRIES]
scan	155056	32-bit integer	>=0	unitless	Scan index Size of Dimension(s): [VIIRS_AGGTBL_ENTRIES]
row	155056	32-bit integer	>=0	unitless	Pixel row index Size of Dimension(s): [VIIRS_AGGTBL_ENTRIES]
col	155056	32-bit integer	>=0	unitless	Pixel column index Size of Dimension(s): [VIIRS_AGGTBL_ENTRIES]

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
type	155056	32-bit integer	1 = CLUSTER_CELL 2 = PRODUCT_CELL 3 = PRODUCT_AND_CLUSTER CELL	unitless	Cell type Size of Dimension(s): [VIIRS_AGGTBL_ENTRIES

3.2.1.4.5 DELETED

3.2.1.4.6 VIIRS Sea Ice Concentration PC

Data Mnemonic	NP_NU-LM0233-008
Description/ Purpose	The VIIRS Sea Ice Concentration PC file contains ice concentration parameters. This file is used in the VIIRS Sea Ice Concentration algorithm
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	332 x 2 tables = 664 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.6-1, VIIRS Sea Ice Concentration PC Data Format

Table 3.2.1.4.6-1, VIIRS Sea Ice Concentration PC

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
hmin	12	32 bit float	[0.0, 0.0, 0.0]	[unitless, unitless, Kelvin]	Minimum range of histogram, by band. If hmin = hmax then code must derive hmin. 1 Dimensional Array: IC_BANDS Size of Dimension(s): 3
hmax	12	32 bit float	[0.0, 0.0, 0.0]	[unitless, unitless, Kelvin]	Maximum range of histogram, by band. If hmax = hmin then code must derive hmax. 1 Dimensional Array: IC_BANDS Size of Dimension(s): 3
thre_def	12	32 bit float	[0.2, 0.17, 269.0]	[unitless, unitless, Kelvin]	Default ice/water thresholds by band 1 Dimensional Array: IC_BANDS Size of Dimension(s): 3
thre_max	12	32 bit float	[0.25, 0.22, 270.0]	[unitless, unitless, Kelvin]	Maximum ice/water thresholds by band 1 Dimensional Array: IC_BANDS Size of Dimension(s): 3

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
thre_min	12	32 bit float	[0.15, 0.13, 268.0]	[unitless, unitless, Kelvin]	Minimum ice/water threshold by band 1 Dimensional Array: IC_BANDS Size of Dimension(s): 3
wat_def	12	32 bit float	[0.08, 0.07, 271.4]	[unitless, unitless, Kelvin]	Default water tie points 1 Dimensional Array: IC_BANDS Size of Dimension(s): 3
wat_max	12	32 bit float	[0.1, 0.08, 278.0]	[unitless, unitless, Kelvin]	Default maximum water tie point 1 Dimensional Array: IC_BANDS Size of Dimension(s): 3
wat_min	12	32 bit float	[0.04, 0.03, 270.0]	[unitless, unitless, Kelvin]	Default minimum water tie point 1 Dimensional Array: IC_BANDS Size of Dimension(s): 3
wat_wsize	2	unsigned 16-bit integer	15	unitless	Size of search window for local water tie points
max_wsize	2	unsigned 16-bit integer	15	unitless	Maximum local window search size in pixels.

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
min_wsize	2	unsigned 16-bit integer	8	unitless	Minimum local window search size in pixels
min_pix_win	2	unsigned 16-bit integer	200	unitless	Minimum number of “good” ice pixels, in a search window, required for a reliable histogram
min_pix_wat	2	unsigned 16-bit integer	50	unitless	Minimum number of “good” water pixels, in a search window, required for a reliable histogram
nbig	2	unsigned 16-bit integer	100	unitless	Number of bins in the reflectance or temperature histograms (global)
nbin	2	unsigned 16-bit integer	50	unitless	Number of bins in the reflectance or temperature histograms (local)
ning	2	unsigned 16-bit integer	5	unitless	Number of bins for boxcar smoothing of global histograms
nint	2	unsigned 16-bit integer	10	unitless	Number of bins for boxcar smoothing of local histograms
pad	2	unsigned 8-bit integer		unitless	Pad Bytes 1 Dimensional Array: pad Size of Dimension(s): 2

3.2.1.4.7 VIIRS Surface Temperature PC

Data Mnemonic	NP_NU-LM0233-009
Description/ Purpose	The VIIRS Surface Temperature PC file contains the regression coefficients for baseline and fallback algorithms. Includes values for both day and night time. This file is used in the VIIRS Surface Temperature IP algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	64 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.7-1, VIIRS Surface Temperature PC Data Format

Table 3.2.1.4.7-1, VIIRS Surface Temperature PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
StipCoeffs	64	float32	minfloat – maxfloat	unitless	LUT Coefficients / ST IP LUT data file 4 Dimensional Array: NTERMS x NDAYNIGHT x NALGORITHMS Size of Dimension(s): 4 x 2 x 2

3.2.1.4.8 VIIRS Ice Quality PC

Data Mnemonic	NP_NU-LM0233-010
Description/ Purpose	The VIIRS Ice Quality PC file contains ice quality algorithm tunable parameters and thresholds. This file is used in the VIIRS Sea Ice Quality EDR and Surface Temperature IP algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	664 bytes Note: 664 = (332 bytes x 2). The file consists of 2 table identical entries. The order of the fields and sizes of dimensions are the same for both entries.
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.8-1, VIIRS Ice Quality PC Data Format

Table 3.2.1.4.8-1, VIIRS Ice Quality PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
bandWgts	12	32-bit floating point	>= 0.0 Initially set to: [0.3, 0.6, 0.1]	unitless	Initial Ice Quality Band Weights 1 Dimensional Array: IQ_N_BANDS Size of Dimension(s): 3
cldWgts	84	32-bit floating point	>= 0.0 Initially set to: [0.5, 0.5, 0.5;**(1)** 0.5, 0.5, 0.5;**(2)** 0.5, 0.5, 0.5;**(3)** 0.5, 0.5, 0.5;**(4)** 0.6, 0.6, 0.6;**(5)** 0.3, 0.3, 1.0;**(6)** 0.8, 0.8, 0.8]**(7)**	unitless	Cloud weights corresponding to the three imagery bands (I1, I2, I5) and the seven cloud properties - four phases = Default (1), Water (2), Ice (3), Mixed (4), and 3 types = cirrus (5), shadow (6), adjacency (7); the parenthetical values correspond to the rows of the matrix shown in the “Units/Range” cell, the column represent the bands I1, I2, and I5. 2 Dimensional Array: IQ_N_BANDS x IQ_N_CLD_TYPES Size of Dimension(s): 7 x 3

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
cotThresh	96	32-bit floating point	>= 0.0 Initially set to: (Default, Water, Ice, Mixed) (I1) (I2) (I5) [0.5, 0.5, 0.5;**(1)** 0.2, 0.2, 0.2] **(2)** (Phases follow the order shown above)	unitless	Cloud Optical Thickness Thresholds used when COT is used to determine ***cloud confidence*** in the Ice Quality Flags IP output. The “4” in the “Data Type/Size” cell corresponds to the four phases (Default(1), Water(2), Ice(3), Mixed(4)). “IQ_N_THRESH” corresponds to the rows of each set of matrices which are a function of cloud phase; the “(1)’s” represent the YELLOW/RED cot thresholds and the “(2)’s” represent the GREEN/YELLOW COT thresholds. 3 Dimensional Array: IQ_N_BANDS x IQ_N_THRESH x IQ_N_PHASES Size of Dimension(s): 3 x 2 x 4
fwRange	16	32-bit floating point	- PI <= fw_range(1,2) <= PI - PI/2 <= fw_range(3,4) <=PI/2 Initially set to: [1.308997 (75°), -1.65806 (-95°), 0.872664(50°), 0.69813 (40°)]	Radians	Fresh Water Ice Latitude/Longitude Range Lat/Lon Boundaries. 1 Dimensional Array: IQ_N_FW Size of Dimension(s): 4
min_nlat	4	32-bit floating point	-PI/2 ≤ minNLat ≤ PI/2 Initially set to: 0.62831 (36°)	Radians	Sea Ice Latitude Range – Minimum Northern Latitude

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
max_slat	4	32-bit floating point	-PI/2 ≤ maxSLat ≤ PI/2 Initially set to: [0.0,0.15,0.5,1.0]	Radians	Sea Ice Latitude Range – Maximum Southern Latitude
aotBin	16	32-bit floating point	>= 0.0 Initially set to: [0.0,0.15,0.5,1.0]	unitless	AOT bin boundary values 1 Dimensional Array: IQ_N_AOT_BINS Size of Dimension(s): 4
qAOTSunZen	64	32-bit floating point	- PI/2 <= qAOTSunZen <= PI/2 Initially set to: (**I1,I2**) **(G/Y) (Y/R)** [1.308997(75°),1.48353(85°)**(1)** 1.22173(70°) ,1.48353(85°)**(2)** 1.13446(65°) ,1.39626(80°);**(3)** 1.04719(60°),1.308997(75°)]**(4)** (Bands follow the order shown above)	Radians	Solar Zenith Angle values that correspond to the Solar Zenith Angle quality regimes (G/Y = “Green/Yellow”, Y/R = “Yellow/Red”) 3 Dimensional Array: IQ_N_AOT_BANDS x IQ_N_AOT_BINS x IQ_N_AOT_SUNZEN Size of Dimension(s): 2 x 4 x 2

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
qualWgts	36	32-bit floating point	>= 0.0 Initially set to: **(I1) (I2) (I5)** [0.060,0.12, 0.195;**(1)** 0.12 ,0.24, 0.39 ; **(2)** 0.02 ,0.04 ,0.065]**(3)**	unitless	Overall Ice Quality Band Weights for each band (I1, I2, I5) and for each set of weights for each band; the (1)="RED", (2)="YELLOW" and (3)="GREEN" quality regions. 2 Dimensional Array: EQ_N_BANDS x IQ_N_WGTS Size of Dimension(s): 3 x 3

3.2.1.4.9 VIIRS IST PC

Data Mnemonic	NP_NU-LM0233-011
Description/ Purpose	The VIIRS Ice Surface Temperature (IST) PC file contains regression coefficients for the baseline and fallback algorithms for both day and night. This file is used in the VIIRS IST algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	64 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.9-1, VIIRS IST PC Data Format

Table 3.2.1.4.9-1, VIIRS IST PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
IstCoeffs	64	32-bit floating point	Daynight: 0 = night, 1 = day Algorithm: 0 = “dual”, 1 = “split”	unitless	4 Dimensional Array: Term x Day or Night x Algorithm x Regime Size of Dimension(s): 4 x 2 x 2 x 1

3.2.1.4.10 VIIRS LST PC

Data Mnemonic	NP_NU-LM0233-012
Description/ Purpose	The VIIRS Land Surface Temperature (LST) PC file contains regression coefficients for each of the 17 IGBP land cover types for baseline and fallback algorithms. This file contains values for both day and night time. This file is used in the VIIRS LST algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	4,896 Bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.10-1, VIIRS LST PC Data Format

Table 3.2.1.4.10-1, VIIRS LST PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
LstLut	4896	64-bit floating point	Daynight: 0 = night, 1 = day Surfacetype: 0 – 16 Algorithm: 0 = “dual”, 1 = “split”	unitless	Dual Window has 9, Split Window has 5 for term 5 Dimensional Array: Term x Day or Night x Surface Type x Algorithm x Regime Size of Dimension(s): 9 x 2 x 17 x 2 x 1

3.2.1.4.11 VIIRS NCC Gain Value Versus Scene Lunar Zenith PC Data Format

Data Mnemonic	NP_NU-LM0233-013
Description/ Purpose	The VIIRS NCC Gain Value Versus Scene Lunar Zenith PC file contains the gain values for the lunar illuminated scene signal for the Day/Night Band (DNB) for various lunar zenith angles. Note: It is not a function of elevation angle, despite the word “elevation” in the name (a heritage artifact). It is, however, indirectly a function, since the elevation angle is the complement of the zenith angle. This file is used in the VIIRS Near Constant Contrast (NCC) algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	848 bytes
File Format Type	Binary
Production Frequency	One time per instrument during intensive Cal/Val using the Algorithm Support Function (ASF).
Data Content and Data Format	For details see Table 3.2.1.4.11-1, VIIRS NCC Gain Value Versus Scene Lunar Elevation PC Data Format

Table 3.2.1.4.11-1, VIIRS NCC Gain Value Versus Scene Lunar Zenith PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
angle	424	32-bit floating point	0 – 105	Degrees	2 Dimensional Array: Angle Bin Size of Dimension(s): 106
gain	424	32-bit floating point	0.9 – 1e+11	unitless	2 Dimensional Array: Gain Bin Size of Dimension(s): 106

3.2.1.4.12 VIIRS Gain Value Versus Scene Solar Elevation PC

Data Mnemonic	NP_NU-LM0233-014
Description/ Purpose	The VIIRS NCC Gain Value Versus Scene Solar Elevation (GVVSSE) PC file contains gain values for the solar illuminated scene signal from the DNB for various solar zenith angles. Note: It is not a function of elevation angle, despite the word “elevation” in the name (a heritage artifact). It is, however, indirectly a function, since the elevation angle is the complement of the zenith angle. This file is used in the VIIRS NCC algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	848 bytes
File Format Type	Binary
Production Frequency	Once per instrument during intensive Cal/Val
Data Content and Data Format	For details see Table 3.2.1.4.12-1, VIIRS NCC Gain Value Versus Scene Solar Elevation PC Data Format

Table 3.2.1.4.12-1, VIIRS Gain Value Versus Scene Solar Elevation PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
angle	424	32-bit floating point	0 – 105	Degrees	1 Dimensional Array: Angle Bin Size of Dimension(s): 106
gain	424	32-bit floating point	0.9 – 1e+11	Unitless	1 Dimensional Array: Gain Bin Size of Dimension(s): 106

3.2.1.4.13 VIIRS Lunar BRDF PC

Data Mnemonic	NP_NU-LM0233-015
Description/ Purpose	The VIIRS NCC Lunar BRDF PC file contains the anisotropic reflectance factors for the lunar scene signal from the VIIRS DNB. Note: This is not truly a Bidirectional Reflectance Distribution Function (BRDF) since it is not in units of sr^{-1}, though dividing the values in the file by pi steradians produces a true BRDF. This file is used in the VIIRS NCC algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	1,600 bytes
File Format Type	Binary
Production Frequency	Once before launch
Data Content and Data Format	For details see Table 3.2.1.4.13-1, VIIRS NCC Lunar BRDF PC Data Format

Table 3.2.1.4.13-1, VIIRS Lunar BRDF PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
zenith_angle	28	32-bit floating point	0 – 105	Degrees	1 Dimensional Array: ZENITH Size of Dimension(s): 7
view_angle	24	32-bit floating point	0 – 57	Degrees	1 Dimensional Array: VIEW Size of Dimension(s): 6
relative_azimuth	36	32-bit floating point	-180 – 180	Degrees	1 Dimensional Array: RELA Size of Dimension(s): 9
brdf	1512	32-bit floating point	0.5 – 1.5	unitless	Anisotropic reflectance factors 3 Dimensional Array: ZENITH x VIEW x RELA Size of Dimension(s): 7 x 6 x 9

3.2.1.4.14 VIIRS Lunar Phase PC

Data Mnemonic	NP_NU-LM0233-016
Description/ Purpose	The VIIRS NCC Lunar Phase PC file contains values used in calculation of the lunar irradiance as a function of the phase angle of the moon. Note: The lunar radiance as defined here as the radiance that would be observed from a 100% albedo surface where the lunar zenith angle is zero. This file is used in the VIIRS NCC algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	40 bytes
File Format Type	Binary
Production Frequency	Once before launch
Data Content and Data Format	For details see Table 3.2.1.4.14-1, VIIRS NCC Lunar Phase PC Data Format

Table 3.2.1.4.14-1, VIIRS Lunar Phase PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
Lunar_phase_bins	20	32-bit floating point	0 – 180	degrees	1 Dimensional Array: LPHASE (lunar phase angle) Size of Dimension(s): 5
Lunar_source	20	32-bit floating point	–1e10 – 1e-07	W/(cm^2 sr)	1 Dimensional Array: LSRC (Lunar Source Irradiance) Size of Dimension(s): 5

3.2.1.4.15 VIIRS Solar BRDF PC

Data Mnemonic	NP_NU-LM0233-017
Description/ Purpose	The VIIRS NCC Solar BRDF PC file contains the anisotropic reflectance factors for the solar scene signal from the DNB. Note: This is not truly a Bidirectional Reflectance Distribution Function (BRDF) since it is not in units of sr^{-1}, though dividing the values in the file by pi steradians produces a true BRDF. This file is used in the VIIRS NCC and Bright Pixel algorithms.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	1,600 bytes
File Format Type	Binary
Production Frequency	Once before launch
Data Content and Data Format	For details see Table 3.2.1.4.15-1, VIIRS NCC Solar BRDF PC Data Format

Table 3.2.1.4.15-1, VIIRS Solar BRDF PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
zenith_angle	28	32-bit floating point	0 – 105	Degrees	1 Dimensional Array: ZENITH Size of Dimension(s): 7
view_angle	24	32-bit floating point	0 – 57	Degrees	1 Dimensional Array: VIEW Size of Dimension(s): 6
relative_azimuth	36	32-bit floating point	-180 – 180	Degrees	1 Dimensional Array: RELA Size of Dimension(s): 9
brdf	1512	32-bit floating point	0.5 – 1.5	unitless	Anisotropic reflectance factors 3 Dimensional Array: ZENITH x VIEW x RELA Size of Dimension(s): 7 x 6 x 9

3.2.1.4.16 VIIRS SST PC

Data Mnemonic	NP_NU-LM0233-018
Description/ Purpose	The VIIRS Sea Surface Temperature (SST) Processing Coefficients file contains the coefficients for each term in the SST retrieval algorithms according to the regimes of predefined conditions. This file is used in the VIIRS SST algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	256 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.16-1, VIIRS SST PC Data Format

Table 3.2.1.4.16-1, VIIRS SST PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
data	256	32-bit floating point	-9 – 2	unitless	5 Dimensional Array: MAXCOEFFS x DAYNGT x SKNBLK x WNDOW x MOISTURE STRATIFICATIONS Size of Dimension(s): 4 x 2 x 2 x 2 x 2

3.2.1.4.17 DELETED

3.2.1.4.18 VIIRS SDR BB Thermistor PC

Data Mnemonic	NP_NU-LM0233-021
Description/ Purpose	The VIIRS Blackbody (BB) Thermistor Processing Coefficients file contains an array of coefficient values for each BB thermistor. These values include voltages, currents, and resistances of the BB circuitry as required for the BB temperature calculation. This file is used in the VIIRS Sensor Data Record (SDR) algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	240 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.18-1, VIIRS BB Thermistor PC Data Format

Table 3.2.1.4.18-1, VIIRS BB Thermistor PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
I0	48	64-bit floating point	minfloat - maxfloat	EDFCB8-TBD-10225	1 Dimensional Array: NUM_BB_THERMISTORS Size of Dimension(s): 6
V0	48	64-bit floating point	minfloat - maxfloat	EDFCB8-TBD-10225	1 Dimensional Array: NUM_BB_THERMISTORS Size of Dimension(s): 6
Rp	48	64-bit floating point	minfloat - maxfloat	EDFCB8-TBD-10225	1 Dimensional Array: NUM_BB_THERMISTORS Size of Dimension(s): 6
G	48	64-bit floating point	minfloat - maxfloat	EDFCB8-TBD-10225	1 Dimensional Array: NUM_BB_THERMISTORS Size of Dimension(s): 6
Const1	48	64-bit floating point	minfloat - maxfloat	EDFCB8-TBD-10225	1 Dimensional Array: NUM_BB_THERMISTORS Size of Dimension(s): 6

3.2.1.4.19 VIIRS SDR Detector Response (Coefficient A) PC

Data Mnemonic	NP_NU-LM0233-022
Description/ Purpose	The VIIRS Detector Response PC file contains the temperature dependent coefficients of the detector response functions, which are specific to HAM side and gain state. This file is used in the VIIRS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	270,336 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.19-1, VIIRS Detector Response PC Data Format

Table 3.2.1.4.19-1, VIIRS Detector Response PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
data	270336	64-bit floating point	-7.2647e+06 - 4.88472e+08	unitless	7 Dimensional Array: NUM_ELECTRONICS_SIDE x NUM_VIIRS_BANDS x MAX_NUM_DETECTOR x NUM_MIRROR_SIDES x NUM_TELE_LEVEL x 4 Size of Dimension(s): 2 x 22 x 32 x 2 x 5 x 4

3.2.1.4.20 VIIRS Electronic Response (Coefficient B) PC

Data Mnemonic	NP_NU-LM0233-023
Description/ Purpose	The VIIRS Electronic Response PC file contains the temperature dependent coefficients of the electronics response functions, which are specific to HAM side and gain state. This file is used in the VIIRS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	270,336 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.20-1, VIIRS Electronic Response PC Data Format

Table 3.2.1.4.20-1, VIIRS Electronic Response PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
data	270336	64-bit floating point	-999.9 - 300	unitless	6 Dimensional Array: NUM_ELECTRONICS_SIDE x NUM_VIIRS_BANDS x MAX_NUM_DETECTOR x NUM_MIRROR_SIDES x NUM_TELE_LEVEL x 4 Size of Dimension(s): 2 x 22 x 32 x 2 x 5 x 4

3.2.1.4.21 VIIRS Delta C Temperature PC

Data Mnemonic	NP_NU-LM0233-024
Description/ Purpose	The VIIRS Delta C Temperature PC file contains the detector specific and temperature dependent (electronics and detector temperature) adjustments to the coefficients of the radiance response functions. This file is used in the VIIRS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	3,649,728 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.21-1, VIIRS Delta C Temperature PC Data Format

Table 3.2.1.4.21-1, VIIRS Delta C Temperature PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
DeltaC	1824768	64-bit floating point	-0.000902409 - 3.86727	unitless	7 Dimensional Array: electronicsSideNum x viirsBandNum x detectorNum x gainNum x mirrorNum x coeffNum x telecThermistorNum Size of Dimension(s): 2 x 22 x 32 x 3 x 2 x 3 x 25
Tele	1824768	64-bit floating point	240 – 300	unitless	2 Dimensional Array: electronicsSideNum x tdetLevelNum Size of Dimension(s): 2 x 5
Tdet	192	64-bit floating point	0 - 300	unitless	3 Dimensional Array: electronicsSideNum x focalPlaneNum x tdetLevelNum Size of Dimension(s): 2 x 4 x 5

3.2.1.4.22 VIIRS DNB C PC

Data Mnemonic	NP_NU-LM0233-025
Description/ Purpose	The VIIRS DNB C PC file contains the aggregation zone specific DN to radiance calibration coefficients, which are dependent on along-track pixel and DNB gain state. This file is used in the VIIRS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	73,728 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.22-1, VIIRS DNB C PC Data Format

Table 3.2.1.4.22-1, VIIRS DNB C PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
DNBCoeffs	73728	64-bit floating point	0 - 3.56965e-06	unitless	5 Dimensional Array: electronicsSideNum x zoneNum x detectorDnbNum x gainNum x polynomialDegree Size of Dimension(s): 2 x 32 x 16 x 3 x 3

3.2.1.4.23 VIIRS DNB Digital Count 0 PC

Data Mnemonic	NP_NU-LM0233-026
Description/ Purpose	The VIIRS DNB Digital Count 0 (DN0) PC file contains DN sv0 values for DNB calibration. This file is used in the VIIRS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	1,560,576 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.23-1, VIIRS DNB Digital Count PC Data Format

Table 3.2.1.4.23-1, VIIRS DNB Digital Count PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
data	1560576	32-bit floating point	134.293 – 258.399	unitless	4 Dimensional Array: evDnbFrame x detectorDnbNum x dnbGainState x mirrorSideNum Size of Dimension(s): 4064 x 16 x 3 x 2

3.2.1.4.24 VIIRS DNB Frame to Zone PC

Data Mnemonic	NP_NU-LM0233-027
Description/ Purpose	The VIIRS DNB Frame to Zone PC file contains the DNB Frame to Zone values. This file is used in the VIIRS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	16,256 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.24-1, VIIRS DNB Frame to Zone PC Data Format

Table 3.2.1.4.24-1, VIIRS DNB Frame to Zone PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
FrameToZone	16256	32-bit integer	MinInt – MaxInt	unitless	DayNight Band Frame to Zone 1 Dimensional Array: evDnbFrame Size of Dimension(s): 4064

3.2.1.4.25 VIIRS DNB Response Versus Angle PC

Data Mnemonic	NP_NU-LM0233-028
Description/ Purpose	The VIIRS DNB Response Versus Angle PC file contains the DNB response versus angle values. This file is used in the VIIRS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	520,192 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.25-1, VIIRS DNB Response Versus Angle PC Data Format

Table 3.2.1.4.25-1, VIIRS DNB Response Versus Angle PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
dnbrvs	520192	32-bit floating point	MinInt – MaxInt	unitless	3 Dimensional Array: evDnbFrame x detectorDnbNum x mirrorSideNum Size of Dimension(s): 4064 x 16 x 2

3.2.1.4.26 VIIRS Equivalent BB Temperature PC

Data Mnemonic	NP_NU-LM0233-029
Description/ Purpose	The VIIRS Equivalent BB Temperature (EBBT) PC file contains the values for converting radiances to brightness temperatures. This file is used in the VIIRS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	16,800,056 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.26-1, VIIRS EBBT PC Data Format

Table 3.2.1.4.26-1, VIIRS EBBT PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
EBBT_indices	56	32-bit integer	MinInt – MaxInt	unitless	2 Dimensional Array: hamerFileNum x bufferIndexNum Size of Dimension(s): 7 x 2
L_to_EBBT_tp	8400000	64-bit floating point	Minfloat – Maxfloat	Kelvin	Array of Temperatures corresponding to the radiances in L_to_EBBT_rad 1 Dimensional Array: ebbtIndex Size of Dimension(s): 1050000
L_to_EBBT_rad	8400000	64-bit floating point	Minfloat – Maxfloat	W/(m^2 um sr)	Array of Radiances corresponding to the Temperatures in L_to_EBBT_tp 1 Dimensional Array: ebbtIndex Size of Dimension(s): 1050000

3.2.1.4.27 VIIRS Emissivity PC

Data Mnemonic	NP_NU-LM0233-030
Description/ Purpose	The VIIRS Emissivity PC file contains the values for emissive band calibration. This file is used in the VIIRS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	48 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.27-1, VIIRS Emissivity PC Data Format

Table 3.2.1.4.27-1, VIIRS Emissivity PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
wordBoundaryPad	2	16 bit integer	MinInt – MaxInt	unitless	
SV_DN_first_frame_to_use	2	16 bit integer	1	Count	
SV_DN_number_of_frames_to_use	2	16 bit integer	48	Count	
SV_DN_moon_include_frames	2	16 bit integer	25	Count	
BB_DN_first_frame_to_use	2	16 bit integer	1	Count	
BB_DN_number_of_frames_to_use	2	16 bit integer	48	Count	
T_mir_function_flag	8	32-bit integer	1	Count	1 Dimensional Array: tMirrorThermistorNum Size of Dimension(s): 2
t_mir_default	4	32-bit floating point	256	Count	
BB_Weight	24	32-bit floating point	1	unitless	1 Dimensional Array bbThermistorNum Size of Dimension(s): 6

3.2.1.4.28 VIIRS F Table PC

Data Mnemonic	NP_NU-LM0233-031
Description/ Purpose	The VIIRS F Table PC file contains the values calculated by the VIIRS Solar Diffuser algorithm. This file is used in the VIIRS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	33,792 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.28-1, VIIRS F Table PC Data Format

Table 3.2.1.4.28-1, VIIRS F Table PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
data	33792	64-bit floating point	0 – 1.01	unitless	4 Dimensional Array: viirsBandNum x detectorNum x gainNum x mirrorSideNum Size of Dimension(s): 22 x 32 x 3 x 2

3.2.1.4.29 VIIRS Gain Table PC

Data Mnemonic	NP_NU-LM0233-032
Description/ Purpose	The VIIRS Gain Table PC file contains the gain values for each of the VIIRS bands. This file is used in the VIIRS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	176 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.29-1, VIIRS Gain Table PC Data Format

Table 3.2.1.4.29-1, VIIRS Gain Table PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
data	176	64-bit floating point	-999.9 - 0.000234167	unitless	1 Dimensional Array: viirsBandNum Size of Dimension(s): 22

3.2.1.4.30 DELETED

3.2.1.4.31 DELETED

3.2.1.4.32 VIIRS HAM PC

Data Mnemonic	NP_NU-LM0233-036
Description/ Purpose	The VIIRS Half Angle Mirror (HAM) PC file contains the values for calculating the emitted radiance of the HAM based on its temperature. This file is used in the VIIRS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	120,024 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.32-1, VIIRS HAM PC Data Format

Table 3.2.1.4.32-1, VIIRS HAM PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
HAM_ER_indices	56	32-bit integer	MinInt – MaxInt	unitless	HAM Emitted Radiance Indices 2 Dimensional Array: file x bufferIndexNum Size of Dimension(s): 7 x 2
HAM_ER_top	59984	64-bit floating point	Minfloat – Maxfloat	W/(m^2 um sr)	HAM Emitted Radiance Indices 1 Dimensional Array: hamErIndex Size of Dimension(s): 7498
HAM_ER_rad	59984	64-bit floating point	Minfloat – Maxfloat	W/(m^2 um sr)	HAM Emitted Radiance 1 Dimensional Array: hamErIndex Size of Dimension(s): 7498

3.2.1.4.33 VIIRS OBC Emitted Radiance PC

Data Mnemonic	NP_NU-LM0233-037
Description/ Purpose	The VIIRS OBC Emitted Radiance PC file contains the values for calculating the emitted radiance of the BB based on the temperature. This file is used in the VIIRS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	120,024 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.33-1, VIIRS OBC Emitted Radiance PC Data Format

Table 3.2.1.4.33-1, VIIRS OBC Emitted Radiance PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
OBC_ER_indices	56	32-bit integer	MinInt – MaxInt	units	2 Dimensional Array: obceFileNum x bufferIndexNum Size of Dimension(s): 7 x 2
OBC_ER_tp	59984	64-bit floating point	Minfloat – Maxfloat	Kelvin	Array of Temperatures corresponding to radiances in OBC_ER_rad 1 Dimensional Array: obcErIndex Size of Dimension(s): 7498
OBC_ER_rad	59984	64-bit floating point	Minfloat – Maxfloat	W/(m^2 um sr)	Array of Radiances corresponding to Temperatures in OBC_ER_tp 1 Dimensional Array: obcErIndex Size of Dimension(s): 7498

3.2.1.4.34 VIIRS OBC Reflected Radiance PC

Data Mnemonic	NP_NU-LM0233-038
Description/ Purpose	The VIIRS OBC Reflected Radiance PC file contains the values for calculating the reflected radiance of the BB based on the temperature. This file is used in the VIIRS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	120,024 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.34-1, VIIRS OBC Reflected Radiance PC Data Format

Table 3.2.1.4.34-1, VIIRS OBC Reflected Radiance PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
OBC_RR_indices	56	32-bit integer	MinInt – MaxInt	unitless	2 Dimensional Array: obcrrFileNum x bufferIndexNum Size of Dimension(s): 7 x 2
OBC_RR_tp	59984	64-bit floating point	Minfloat – Maxfloat	Kelvin	Array of Temperatures corresponding to Radiances in OBC_RR_rad 1 Dimensional Array: obcRrIndex Size of Dimension(s): 7498
OBC_RR_rad	59984	64-bit floating point	Minfloat – Maxfloat	W/(m^2 um sr)	Array of Radiances corresponding to Temperatures in OBC_RR_tp 1 Dimensional Array: obcRrIndex Size of Dimension(s): 7498

3.2.1.4.35 VIIRS OBS to Pixel PC

Data Mnemonic	NP_NU-LM0233-039
Description/ Purpose	The VIIRS OBS to Pixel PC file contains the dual gain band along-scan samples to aggregated pixel frame number mapping table. This file is used in the VIIRS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	25,216 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.35-1, VIIRS OBS to Pixel PC Data Format

Table 3.2.1.4.35-1, VIIRS OBS to Pixel PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
pixels	25216	32-bit integer	MinInt – MaxInt	unitless	Contains the dual gain band along-scan samples to aggregated pixel frame number mapping table 1 Dimensional Array: EV_FRAMES_750m_DG Size of Dimension(s): 6304

3.2.1.4.36 VIIRS Quality Assurance PC

Data Mnemonic	NP_NU-LM0233-040
Description/ Purpose	The VIIRS Quality Assurance PC file contains detectors, quality flags, and moon offset limits science data sets. This file is used in the VIIRS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	3,812 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.36-1, VIIRS Quality Assurance PC Data Format

Table 3.2.1.4.36-1, VIIRS Quality Assurance PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
Detector_Quality_Flag_Values	3456	8 bit unsigned integer	0 – 245	unitless	2 Dimensional Array: detectorNum x bitNum Size of Dimension(s): 432 x 8
moon_offset_limits	352	32-bit floating point	-55 – 55	unitless	2 Dimensional Array: bandNum x moonOffsetLimitNum Size of Dimension(s): 22 x 4
saa_threshold	4	32-bit floating point	0 – 100	Percent	

3.2.1.4.37 VIIRS Radiometric Parameters PC

Data Mnemonic	NP_NU-LM0233-041
Description/ Purpose	The VIIRS Radiometric Parameters PC file contains various temperatures used during radiometric calibration. This file is used in the VIIRS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	212 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.37-1, VIIRS Radiometric Parameters PC Data Format

Table 3.2.1.4.37-1, VIIRS Radiometric Parameters PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
Telec_Therm_Indexs	36	32-bit integer	11 - 19	unitless	1 Dimensional Array: telecThermistorNum Size of Dimension(s): 9
Telec_Therm_Weights	36	32-bit floating point	0 – 0.25	unitless	1 Dimensional Array: telecThermistorNum Size of Dimension(s): 9
Tsh_Indexes	8	32-bit integer	9 – 10	unitless	1 Dimensional Array: thermistorRank Size of Dimension(s): 2
Tsh_Weights	8	32-bit floating point	0.5	unitless	1 Dimensional Array: thermistorRank Size of Dimension(s): 2
Ttele_Indexes	8	32-bit integer	9 – 10	unitless	1 Dimensional Array: thermistorRank Size of Dimension(s): 2
Ttele_Weights	8	32-bit floating point	0.5	unitless	1 Dimensional Array: thermistorRank Size of Dimension(s): 2
Ttele_Offset	4	32-bit floating point	>0	Kelvin	

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
Trta_Indexes	8	32-bit integer	9 – 10	unitless	1 Dimensional Array: thermistorRank Size of Dimension(s): 2
Trta_Weights	8	32-bit floating point	0.5	unitless	1 Dimensional Array: thermistorRank Size of Dimension(s): 2
Trta_Offset	4	32-bit floating point	>0	Kelvin	
Tcav_Indexes	8	32-bit integer	9 – 10	unitless	1 Dimensional Array: thermistorRank Size of Dimension(s): 2
Tcav_Weights	8	32-bit floating point	0.5	unitless	1 Dimensional Array: thermistorRank Size of Dimension(s): 2
Tmir_Indexes	8	32-bit integer	9 – 10	unitless	1 Dimensional Array: thermistorRank Size of Dimension(s): 2
Tmir_Weights	8	32-bit floating point	0.5	unitless	1 Dimensional Array: thermistorRank Size of Dimension(s): 2
Tfpsm_Indexes	8	32-bit integer	9 – 10	unitless	1 Dimensional Array: thermistorRank Size of Dimension(s): 2

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
Tfpsm_Weights	8	32-bit floating point	0.5	unitless	1 Dimensional Array: thermistorRank Size of Dimension(s): 2
Tfplw_Indexes	8	32-bit integer	9 – 10	unitless	1 Dimensional Array: thermistorRank Size of Dimension(s): 2
Tfplw_Weights	8	32-bit floating point	0.5	unitless	1 Dimensional Array: thermistorRank Size of Dimension(s): 2
Ttel_Tsh_Tcav_Weights	12	32-bit floating point	0.333 – 0.334	unitless	1 Dimensional Array: numWeights Size of Dimension(s): 3
Tmax	4	32-bit floating point	330	Kelvin	Max Temperature
Tmin	4	32-bit floating point	270	Kelvin	Min Temperature

3.2.1.4.38 VIIRS Reflective Values PC

Data Mnemonic	NP_NU-LM0233-042
Description/ Purpose	The VIIRS Reflective Values PC file contains the values for calibrating reflective bands. The values include first frame to use for OBC average, number of frames to use for OBC average, and RSB moon include. This file is used in the VIIRS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	8 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.38-1, VIIRS Reflective Values PC Data Format

Table 3.2.1.4.38-1, VIIRS Reflective Values PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
DN_obc_avg_first_frame	2	16 bit integer	>0	unitless	First frame to use for OBC average
DN_obc_avg_num_frames	2	16 bit integer	>0	unitless	Number of frames to use for OBC average
RSB_SV_DN_moon_include_frames	2	16 bit integer	>0	unitless	RSB moon include
WordBoundaryPad	2	16 bit integer	MinInt – MaxInt	unitless	Pad

3.2.1.4.39 VIIRS RSR PC

Data Mnemonic	NP_NU-LM0233-043
Description/ Purpose	The VIIRS Relative Spectral Response (RSR) PC file contains part of the Calc D Tables used in calculating the D coefficients LUT. This file is used in the VIIRS SDR algorithm
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	22,456 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.39-1, VIIRS RSR PC Data Format

Table 3.2.1.4.39-1, VIIRS RSR PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
num_x2y2_pts	56	32-bit integer	9 – 31	Count	1 Dimensional Array: reflectiveBandNum Size of Dimension(s): 14
x2	11200	64-bit floating point	-1 – 2312.16	unitless	1 Dimensional Array: reflectiveBandNum Size of Dimension(s): 1400
y2	11200	64-bit floating point	-1 – 1	unitless	1 Dimensional Array: reflectiveBandNum Size of Dimension(s): 1400

3.2.1.4.40 VIIRS RTA Processing Coefficients

Data Mnemonic	NP_NU-LM0233-044
Description/ Purpose	The VIIRS Rotating Telescope Assembly (RTA) PC file contains the VIIRS RTA emissive radiance tables for each VIIRS emissive band (I4-I5), (M12-M16). This file is used in the VIIRS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	120,024 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.40-1, VIIRS RTA PC Data Format

Table 3.2.1.4.40-1, VIIRS RTA PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
RTA_ER_indices	56	32-bit integer	MinInt – MaxInt	unitless	2 Dimensional Array: rtaerFileNum x bufferIndexNum Size of Dimension(s): 7 x 2
RTA_ER_tp	59984	64-bit floating point	>0	Kelvin	Array of Temperatures corresponding to RTA_ER_rad Radiances 1 Dimensional Array: rtaErIndex Size of Dimension(s): 7498
RTA_ER_rad	59984	64-bit floating point	Minfloat – Maxfloat	W/(m^2 um sr)	Array of Radiances corresponding to RTA_ER_tp Temperatures 1 Dimensional Array: rtaErIndex Size of Dimension(s): 7498

3.2.1.4.41 VIIRS Response Versus Frame PC

Data Mnemonic	NP_NU-LM0233-045
Description/ Purpose	The VIIRS Response Versus Frame PC file contains the RTA angles range from -180 to 180 degrees. This file is used in the VIIRS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	17,533,440 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.41-1, VIIRS Response Versus Frame PC Data Format

Table 3.2.1.4.41-1, VIIRS Response Versus Frame PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
RVS_375m	8192000	32-bit floating point	-180 – 180	Degrees	4 Dimensional Array: 375mBandNum x 375mDetectorNum x ev375mFrame x mirrorNum Size of Dimension(s): 5 x 32 x 6400 x 2
RVS_750m_SG	3686400	32-bit floating point	-180 – 180	Degrees	4 Dimensional Array: 750mSgBandNum x 750mDetectorNum x ev750mSgFrame x mirrorSideNum Size of Dimension(s): 9 x 16 x 3200 x 2
RVS_750m_DG	5648384	32-bit floating point	-180 – 180	Degrees	4 Dimensional Array: 750mSgBandDgBandNum x 750mDetectorNum x ev750mDgFrame x mirrorSideNum Size of Dimension(s): 7 x 16 x 6304 x 2
RVS_375m_SV	1280	32-bit floating point	-180 – 180	Degrees	3 Dimensional Array: 375mbandNum x 375mDetectorNum x mirrorSideNum Size of Dimension(s): 5 x 32 x 2
RVS_750m_SV_SG	1152	32-bit floating point	-180 – 180	Degrees	3 Dimensional Array: 750mSgBandNum x 750mDetectorNum x mirrorSideNum Size of Dimension(s): 9 x 16 x 2
RVS_750m_SV_DG	896	32-bit floating point	-180 – 180	Degrees	3 Dimensional Array: 750mDgBandNum x 750mDetectorNum x mirrorSideNum Size of Dimension(s): 7 x 16 x 2

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
RVS_375m_BB	1280	32-bit floating point	-180 – 180	Degrees	3 Dimensional Array: 375mBandNum x 375mDetectorNum x mirrorSideNum Size of Dimension(s): 5 x 32 x 2
RVS_750m_BB_SG	1152	32-bit floating point	-180 – 180	Degrees	3 Dimensional Array: 750mSgBandNum x 750mDetectorNum x mirrorSideNum Size of Dimension(s): 9 x 16 x 2
RVS_750m_BB_DG	896	32-bit floating point	-180 – 180	Degrees	3 Dimensional Array: 750mDgBandNum x 750mDetectorNum x mirrorSideNum Size of Dimension(s): 7 x 16 x 2

3.2.1.4.42 VIIRS Solar Irradiances PC

Data Mnemonic	NP_NU-LM0233-047
Description/ Purpose	The VIIRS Solar Irradiances PC file contains the solar power table needed for calculation of D coefficients, which are used in the reflectance algorithm. This file is used in the VIIRS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	1,200,004 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.42-1, VIIRS Solar Irradiances PC Data Format

Table 3.2.1.4.42-1, VIIRS Solar Irradiances PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
num_xy_pts	4	32-bit integer	49951	Count	
x	600000	64-bit floating point	-1 – 200000	unitless	1 Dimensional Array: x Size of Dimension(s): 75000
y	600000	64-bit floating point	-1 - 6.07e+26	unitless	1 Dimensional Array: y Size of Dimension(s): 75000

3.2.1.4.43 VIIRS Telemetry PC

Data Mnemonic	NP_NU-LM0233-048
Description/ Purpose	The VIIRS Telemetry PC file contains Calibration coefficients for VIIRS thermistors as provided by Raytheon SBRS This file is used in the VIIRS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	624 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.43-1, VIIRS Telemetry PC Data Format

Table 3.2.1.4.43-1, VIIRS Telemetry PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
teleCoeffs	624	32-bit floating point	-1.01154e-06 - 292.452	unitless	2 Dimensional Array: NUM_MAX_THERMISTORS x NUM_TEMP_COEFFS Size of Dimension(s): 26 x 6
defaultValue	52	16-bit integer	MinInt – MaxInt	unitless	1 Dimensional Array: NUM_MAX_THERMISTORS Size of Dimension(s): 26

3.2.1.4.44 VIIRS Solar Diffuser A PC

Data Mnemonic	NP_NU-LM0233-049
Description/ Purpose	The VIIRS Solar Diffuser A PC file contains the temperature dependent coefficients of the detector response functions, which are specific to HAM side and gain state during solar diffuser calibration. (These are identical with VIIRS Detector Response (Coefficient A) PC). This file is used in the VIIRS Solar Diffuser algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	15,404 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.44-1, VIIRS Solar Diffuser A PC Data Format

Table 3.2.1.4.44-1, VIIRS Solar Diffuser A PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
A0	5120	64-bit floating point	0 - 1.7976931348623e+308	Electron	4 Dimensional Array: NUM_GAINS x NDETMAX x NUM_HAMSIDES x NTemperature Size of Dimension(s): 2 x 32 x 2 x 5
A1	5120	64-bit floating point	0 - 1.7976931348623e+308	Electron/V	4 Dimensional Array: NUM_GAINS x NDETMAX x NUM_HAMSIDES x NTemperature Size of Dimension(s): 2 x 32 x 2 x 5
A2	5120	64-bit floating point	0 - 1.7976931348623e+308	Electron/V^2	4 Dimensional Array: NUM_GAINS x NDETMAX x NUM_HAMSIDES x NTemperature Size of Dimension(s): 2 x 32 x 2 x 5
Temperature	40	64-bit floating point	0 – 400	Kelvin	1 Dimensional Array: NTemperature Size of Dimension(s): 5
nTemperatures	4	32-bit integer	0 - 2147483647	Count	

3.2.1.4.45 VIIRS Solar Diffuser B PC

Data Mnemonic	NP_NU-LM0233-050
Description/ Purpose	The VIIRS Solar Diffuser B PC file contains the temperature dependent coefficients of the electronics response functions, which are specific to HAM side and gain state during solar diffuser calibration. (These are identical with VIIRS Electronic Response (Coefficient B) PC). This file is used in the VIIRS Solar Diffuser algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	15,404 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.45-1, VIIRS Solar Diffuser B PC Data Format

Table 3.2.1.4.45-1, VIIRS Solar Diffuser B PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
B0	5120	64-bit floating point	0 - 1.7976931348623e+308	Electron	4 Dimensional Array: NUM_GAINS x NDETMAX x NUM_HAMSIDES x NTemperature Size of Dimension(s): 2 x 32 x 2 x 5
B1	5120	64-bit floating point	0 - 1.7976931348623e+308	Electron/V	4 Dimensional Array: NUM_GAINS x NDETMAX x NUM_HAMSIDES x NTemperature Size of Dimension(s): 2 x 32 x 2 x 5
B2	5120	64-bit floating point	0 - 1.7976931348623e+308	Electron/V^2	4 Dimensional Array: NUM_GAINS x NDETMAX x NUM_HAMSIDES x NTemperature Size of Dimension(s): 2 x 32 x 2 x 5
Temperature	40	64-bit floating point	0 – 400	Kelvin	1 Dimensional Array: NTemperature Size of Dimension(s): 5
nTemperature	4	32-bit integer	0 - 2147483647	Count	

3.2.1.4.46 VIIRS Solar Diffuser Delta C PC

Data Mnemonic	NP_NU-LM0233-051
Description/ Purpose	The VIIRS Solar Diffuser Delta C PC file contains the detector specific and temperature dependent (electronics and detector temperature) adjustments to the coefficients of the radiance response functions during solar diffuser calibration. (These are identical with VIIRS Delta C Temperature PC). This file is used in the VIIRS Solar Diffuser algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	43,008 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.46-1, VIIRS Solar Diffuser Delta C PC Data Format

Table 3.2.1.4.46-1, VIIRS Solar Diffuser Delta C PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
coeffs	43008	64-bit floating point	-0.000131021 - 0.00762839	unitless	5 Dimensional Array: Number of Mirror Sides x Number of Gain Values x Number of Reflective Bands x Maximum Number of Detectors x Number of C Coefficients Size of Dimension(s): 2 x 2 x 14 x 32 x 3

3.2.1.4.47 VIIRS Solar Diffuser Gain PC

Data Mnemonic	NP_NU-LM0233-052
Description/ Purpose	The VIIRS Solar Diffuser Gain PC file contains the gain value for each VIIRS band during solar diffuser calibration. This file is used in the VIIRS Solar Diffuser algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	112 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.47-1, VIIRS Solar Diffuser Gain PC Data Format

Table 3.2.1.4.47-1, VIIRS Solar Diffuser Gain PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
data	112	64-bit floating point	7.13368e-06 - 0.000234167	unitless	1 Dimensional Array: NUM_Reflective_Bands Size of Dimension(s): 14

3.2.1.4.48 VIIRS Solar Diffuser Lambda PC

Data Mnemonic	NP_NU-LM0233-053
Description/ Purpose	The VIIRS Solar Diffuser Lambda PC file contains the Solar Flux between 0 and 20 micron. This file is used in the VIIRS Solar Diffuser algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	7,000 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.48-1, VIIRS Solar Diffuser Lambda PC Data Format

Table 3.2.1.4.48-1, VIIRS Solar Diffuser Lambda PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
Nlambda	56	32-bit floating point	9 – 31	unitless	1 Dimensional Array: NUM_Reflective_Bands Size of Dimension(s): 14
data	3472	64-bit floating point	-999.9 – 1	unitless	2 Dimensional Array: NUM_Reflective_Bands x MAX_NUM_LAMBDA Size of Dimension(s): 14 x 31
lambda	3472	64-bit floating point	-999.9 – 0.01	unitless	2 Dimensional Array: NUM_Reflective_Bands x MAX_NUM_LAMBDA Size of Dimension(s): 14 x 31

3.2.1.4.49 VIIRS Solar Diffuser Phi PC

Data Mnemonic	NP_NU-LM0233-054
Description/ Purpose	The VIIRS Solar Diffuser Phi PC file contains parameters for the spectral output of the Sun and corresponding wavelengths. EDFCB8-TBD-10257 This file is used in the VIIRS Solar Diffuser algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	799,216 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.49-1, VIIRS Solar Diffuser Phi PC Data Format

Table 3.2.1.4.49-1, VIIRS Solar Diffuser Phi PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
data	399608	64-bit floating point	5.60982e+17 - 6.11283e+26	W/micrometer	Spectral output power of the sun 1 Dimensional Array: MAX_PHI Size of Dimension(s): 49951
lambda	399608	64-bit floating point	0.2 – 200	micrometers	1 Dimensional Array: MAX_PHI Size of Dimension(s): 49951

3.2.1.4.50 VIIRS Solar Diffuser PC

Data Mnemonic	NP_NU-LM0233-055
Description/ Purpose	The VIIRS Solar Diffuser PC file contains the Operational constants required by the Solar Diffuser algorithm. This file is used in the VIIRS Solar Diffuser algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	92 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.50-1, VIIRS Solar Diffuser PC Data Format

Table 3.2.1.4.50-1, VIIRS Solar Diffuser PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
H	4	32-bit floating point	0.999	unitless	Transmittance of SD screen
averageDistanceEarthToSun	8	64-bit floating point	1.49598e+11	meters	Average Distance between the Earth and Sun in meters
maxSpaceViewIntensity_DN	8	64-bit floating point	0 - 0.90606	unitless	Maximum allowable space view intensity in detector counts for the SWIR band
spaceViewThresh	4	32-bit floating point	0.5	unitless	Threshold for statistical filter
SDThreshold	4	32-bit floating point	2.5	unitless	Threshold for statistical filter
spaceViewVector	16	32-bit floating point		unitless	Vector in instrument coordinates of the mean space-view 1 Dimensional Array Size of Dimension(s): 4
limitsPhiV	8	32-bit floating point	[5.0, 41.0]	unitless	angular limit on which to reject a scan due to insufficient alignment of sun with solar diffuser 1 Dimensional Array Size of Dimension(s): 2

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
limitsPhiH	8	32-bit floating point	[-170.0, -15.0]	unitless	angular limit on which to reject a scan due to insufficient alignment of sun with solar diffuser 1 Dimensional Array Size of Dimension(s): 2
frameLimitsSDM	8	32-bit integer	[1, 45] frameLimitsSDM[0] = start frame frameLimitsSDM[1] = number of frames	unitless	Limit on which frames are used for diffuser collect 1 Dimensional Array Size of Dimension(s): 2
frameLimitsSDI	8	32-bit integer	[3, 90] frameLimitsSDI[0] = start frame frameLimitsSDI[1] = number of frames	unitless	Limit on which frames are used for diffuser collect 1 Dimensional Array Size of Dimension(s): 2
frameLimitsSVM	8	32-bit integer	[-170.0, -15.0] frameLimitsSV[0] = start frame frameLimitsSV[1] = number of frames	unitless	Limit on which frames are used for space view collect 1 Dimensional Array Size of Dimension(s): 2
frameLimitsSVI	8	32-bit integer	[-170.0, -15.0] frameLimitsSV[0] = start frame frameLimitsSV[1] = number of frames	unitless	Limit on which frames are used for space view collect 1 Dimensional Array Size of Dimension(s): 2

3.2.1.4.51 VIIRS Solar Diffuser Reflectance PC

Data Mnemonic	NP_NU-LM0233-056
Description/ Purpose	The VIIRS Solar Diffuser Reflectance PC file contains the solar diffuser (SD) BRDF as a function of incidence angles on the SD screen for each reflective band detector. This file is used in the VIIRS Solar Diffuser algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	730,040 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.51-1, VIIRS Solar Diffuser Reflectance PC Data Format

Table 3.2.1.4.51-1, VIIRS Solar Diffuser Reflectance PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
phi_h	808	64-bit floating point	3.5 – 44.5	unitless	Description: binned horizontal angles 1 Dimensional Array: NUM_PHI_H_SAMPLES Size of Dimension(s): 101
phi_v	88	64-bit floating point	10 – 20	unitless	Description: Binned vertical angles 1 Dimensional Array: NUM_PHI_V_SAMPLES Size of Dimension(s): 11
lambda	328	64-bit floating point	0.35 – 2.35	unitless	Description: binned wavelengths 1 Dimensional Array: NUM_LAMBDA_SAMPLES Size of Dimension(s): 41
brdf	364408	64-bit floating point	0.288452 – 2.35	unitless	Array of bidirectional reflectance distribution function values 3 Dimensional Array: NUM_PHI_H_SAMPLES x NUM_PHI_V_SAMPLES x NUM_LAMBDA_SAMPLES Size of Dimension(s): 101 x 11 41
tau	364408	64-bit floating point	0.127239 – 2.35	unitless	Array of tau values 3 Dimensional Array: NDETMAX x BANDGROUP x NUM_TAU_SAMPLES Size of Dimension(s): 32 x 2 x 45551

3.2.1.4.52 VIIRS Solar Diffuser RVS PC

Data Mnemonic	NP_NU-LM0233-057
Description/ Purpose	The VIIRS Solar Diffuser RVS PC file contains the response versus scan angle for the moderate and imagery bands during solar diffuser calibration. This file is used in the VIIRS Solar Diffuser algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	224 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.52-1, VIIRS Solar Diffuser RVS PC Data Format

Table 3.2.1.4.52-1, VIIRS Solar Diffuser RVS PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
data	224	64-bit floating point	0.999996	unitless	2 Dimensional Array: NUM_Reflective_Bands x NUM_MIRROR_SIDES Size of Dimension(s): 14 x 2

3.2.1.4.53 VIIRS Solar Diffuser Thermal PC

Data Mnemonic	NP_NU-LM0233-058
Description/ Purpose	The VIIRS Solar Diffuser Thermal PC file contains the thermistor coefficients and weights used to convert thermistor counts to temperature during solar diffuser calibration. This file is used in the VIIRS Solar Diffuser algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	672 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.53-1, VIIRS Solar Diffuser Thermal PC Data Format

Table 3.2.1.4.53-1, VIIRS Solar Diffuser Thermal PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
data	672	64-bit floating point	-6.455e-16 – 292.5	unitless	Thermistor coefficients 2 Dimensional Array: NUM_REFLECTIVE_THERMISTORS x NUM_THERMISTOR_COEFFS Size of Dimension(s): 14 x 6

3.2.1.4.54 VIIRS Solar Diffuser Aggregation PC

Data Mnemonic	NP_NU-LM0233-059
Description/ Purpose	The VIIRS Solar Diffuser Aggregation PC file contains frame and scan aggregation parameters. Included are frame limits, orbits to aggregate, min/max DN values and sigmas, and min SNRs. This file is used in the VIIRS SDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	1,208 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.54-1, VIIRS Solar Diffuser Aggregation PC Data Format

Table 3.2.1.4.54-1, VIIRS Solar Diffuser Aggregation PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
limitsSDM	8	32-bit integer	[0, 1]	unitless	Solar Diffuser frame limits [0]=start [1]=number of frames 1 Dimensional Array: Index Size of Dimension(s): 2
limitsSDI	8	32-bit integer	[0, 1]	unitless	Solar Diffuser frame limits [0]=start [1]=number of frames 1 Dimensional Array: Index Size of Dimension(s): 2
limitsSVM	8	32-bit integer	[0, 1]	unitless	Space view frame limits [0]=start [1]=number of frames 1 Dimensional Array: Index Size of Dimension(s): 2
limitsSVI	8	32-bit integer	[0, 1]	unitless	Space view frame limits [0]=start [1]=number of frames 1 Dimensional Array: Index Size of Dimension(s): 2
minFrameCount	56	32-bit integer	MinInt – MaxInt	unitless	Minimum number of frames 1 Dimensional Array: NUM_Reflective_Bands Size of Dimension(s): 14

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
minDNsv	112	32-bit integer	MinInt – MaxInt	unitless	Min DN for SpaceView by band and gain 2 Dimensional Array: NUM_Reflective_Bands x NUM_GAIN Size of Dimension(s): 14 x 2
maxDNsv	112	32-bit integer	MinInt – MaxInt	unitless	Max DN for SpaceView by band and gain 2 Dimensional Array: NUM_Reflective_Bands x NUM_GAIN Size of Dimension(s): 14 x 2
maxDNsvSigma	112	32-bit integer	MinInt – MaxInt	unitless	Max DN Sigma for SpaceView by band and gain 2 Dimensional Array: NUM_Reflective_Bands x NUM_GAIN Size of Dimension(s): 14 x 2
minDNsd	112	32-bit integer	MinInt – MaxInt	unitless	Min DN for SolarDiffuser by band and gain 2 Dimensional Array: NUM_Reflective_Bands x NUM_GAIN Size of Dimension(s): 14 x 2
maxDNsd	112	32-bit integer	MinInt – MaxInt	unitless	Max DN for SolarDiffuser by band and gain 2 Dimensional Array: NUM_Reflective_Bands x NUM_GAIN Size of Dimension(s): 14 x 2

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
maxDNsdSigma	112	32-bit integer	MinInt – MaxInt	unitless	Max DN Sigma for SolarDiffuser by band and gain 2 Dimensional Array: NUM_Reflective_Bands x NUM_GAIN Size of Dimension(s): 14 x 2
minSNR	224	64-bit floating point	Minfloat – Maxfloat	unitless	Min SNR value for Band and Gain 2 Dimensional Array: NUM_Reflective_Bands x NUM_GAIN Size of Dimension(s): 14 x 2
physicsSigma	224	64-bit floating point	Minfloat – Maxfloat	unitless	Sigma from external physics analysis by band and gain 2 Dimensional Array: NUM_Reflective_Bands x NUM_GAIN Size of Dimension(s): 14 x 2

3.2.1.4.55 DELETED

3.2.1.4.56 DELETED

3.2.1.4.57 VIIRS AOT Climatology PC

The VIIRS AOT Climatology PC is an ancillary rather than an auxiliary product. This product is documented in the CDFCB-X, Vol VI, Section 2.1.3.1, Aerosol Optical Thickness Climatology File.

3.2.1.4.58 VIIRS COP Surface PC

Data Mnemonic	NP_NU-LM0233-063
Description/ Purpose	The VIIRS COP Surface PC file contains the Surface Albedo and emissivity for the surface types identified by the VCM. This file is used in the VIIRS Cloud Optical Properties (COP) IP algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	240 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.58-1, VIIRS COP Surface PC Data Format

Table 3.2.1.4.58-1, VIIRS COP Surface PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
albedo	120	32-bit floating point	0 – 1	unitless	2 Dimensional Array: COP_SURFACE_TYPES x COP_MAX_BANDS Size of Dimension(s): 6 x 5
emissivity	120	32-bit floating point	0 – 1	unitless	2 Dimensional Array: COP_SURFACE_TYPES x COP_MAX_BANDS Size of Dimension(s): 6 x 5

3.2.1.4.59 VIIRS Surface Reflectance AOT Values PC

Data Mnemonic	NP_NU-LM0233-064
Description/ Purpose	The VIIRS Surface Reflectance AOT PC file contains the ratio of AOT at VIIRS wavelengths to AOT at 550 nm calculated using 6S RTM. Contains values for all land and ocean aerosol models. These same tables are used in AOT. This file is used in the VIIRS Surface Reflectance IP algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	60 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.59-1, VIIRS Surface Reflectance AOT PC Data Format

Table 3.2.1.4.59-1, VIIRS Surface Reflectance AOT PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
data	60	32-bit floating point	1.00E-02 – 2.00E+00	unitless	1 Dimensional Array: AOT_DIM Size of Dimension(s): 15

3.2.1.4.60 VIIRS Surface Reflectance Atmospheric Reflectance LUT

Data Mnemonic	NP_NU-LM0233-065
Description/ Purpose	The VIIRS Surface Reflectance Atmospheric Reflectance LUT contains the atmospheric reflectance calculated using 6S RTM. Contains values for all land and ocean aerosol models. These same tables are used in AOT. This file is used in the VIIRS Surface Reflectance IP algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	16,581,000 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.60-1, VIIRS Surface Reflectance Atmospheric Reflectance LUT Data Format

Table 3.2.1.4.60-1, VIIRS Surface Reflectance Atmospheric Reflectance LUT Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
data	16581000	32-bit floating point	1.18E-38 – 3.40E+38	unitless	4 Dimensional Array: AERO_MODEL_DIM x AOT_DIM x BAND_DIM x ANG_DIM Size of Dimension(s): 5 x 15 x 10 x 5527

3.2.1.4.61 VIIRS Surface Reflectance Downward Transmittance LUT

Data Mnemonic	NP_NU-LM0233-066
Description/ Purpose	The VIIRS Surface Reflectance Downward Transmittance LUT contains the downward transmittance calculated using 6S RTM. Contains values for all land and ocean aerosol models. These same tables are used in AOT. This file is used in the VIIRS Surface Reflectance IP algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	63,000 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.61-1, VIIRS Surface Reflectance Down Trans Reflectance PC Data Format

Table 3.2.1.4.61-1, VIIRS Surface Reflectance Down Trans PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
data	63000	32-bit floating point	1.18E-38 – 3.40E+38	unitless	4 Dimensional Array: AERO_MODEL_DIM x AOT_DIM x BAND_DIM x SOL_ZEN_DIM Size of Dimension(s): 5 x 15 x 10 x 21

3.2.1.4.62 VIIRS Surface Reflectance Incremental Scattering Angles LUT

Data Mnemonic	NP_NU-LM0233-067
Description/ Purpose	The VIIRS Surface Reflectance Incremental Scattering Angles LUT file is used to compute the four scattering angles that come closest to the input scattering angle that will be used to interpolate the atmospheric reflectance. This table contains the incremental scattering angle (= step_length). This file is used in the VIIRS Surface Reflectance IP algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	4 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.62-1, VIIRS Surface Reflectance Inc Scattering Angles PC Data Format

Table 3.2.1.4.62-1, VIIRS Surface Reflectance Inc Scattering Angles PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
data	4	32-bit floating point	Initially set to 4.0	Degrees	Incremental scattering angles Step Length

3.2.1.4.63 VIIRS Surface Reflectance Solar Zenith Angle LUT

Data Mnemonic	NP_NU-LM0233-068
Description/ Purpose	The VIIRS Surface Reflectance Solar Zenith Angle LUT file is used to compute the four solar zenith angles that come closest to the input solar zenith angle that will be used in interpolation. This file is used in the VIIRS Surface Reflectance IP algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	80 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.63-1, VIIRS Surface Reflectance SZA PC Data Format

Table 3.2.1.4.63-1, VIIRS Surface Reflectance SZA PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
data	80	32-bit floating point	0.0 – 1.4	Radians	1 Dimensional Array: SAT_ZEN_DIM Size of Dimension(s): 21

3.2.1.4.64 VIIRS Surface Reflectance Scattering Angle Dimensions LUT

Data Mnemonic	NP_NU-LM0233-069
Description/ Purpose	The VIIRS Surface Reflectance Scattering Angle Dimensions LUT file is used to determine how many scattering angles correspond to the given solar and satellite zenith angles. This file is used in the VIIRS Surface Reflectance IP algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	1,680 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.64-1, VIIRS Surface Reflectance Scattering Angle Dimensions PC Data Format

Table 3.2.1.4.64-1, VIIRS Surface Reflectance Scattering Angle Dimensions PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
data	1680	32-bit integer	1 – 36	Radians	1 Dimensional Array: SOL_ZEN_DIM*SAT_ZEN_DIM Size of Dimension(s): 420

3.2.1.4.65 VIIRS Surface Satellite Zenith Angles LUT

Data Mnemonic	NP_NU-LM0233-070
Description/ Purpose	The VIIRS Surface Reflectance Satellite Zenith Angles LUT file is used to compute the four satellite zenith angles that come closest to the input solar satellite angle that will be used in interpolation. This file is used in the VIIRS Surface Reflectance IP algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	48 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.65-1, VIIRS Surface Reflectance Solsen Angles PC Data Format

Table 3.2.1.4.65-1, VIIRS Surface Reflectance Solsen Angles PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
data	48	32-bit floating point	0.0 – 1.21	Radians	1 Dimensional Array: SOL_ZEN_DIM Size of Dimension(s): 20

3.2.1.4.66 VIIRS Surface Reflectance Spherical Albedo LUT

Data Mnemonic	NP_NU-LM0233-071
Description/ Purpose	The VIIRS Surface Reflectance Spherical Albedo LUT file contains spherical albedo calculated using 6S RTM. Contains values for all land and ocean aerosol models. These same tables are used in AOT. This file is used in the VIIRS Surface Reflectance IP algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	3,000 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.66-1, VIIRS Surface Reflectance SPH Albedo PC Data Format

Table 3.2.1.4.66-1, VIIRS Surface Reflectance Spherical Albedo LUT Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
Data	3000	32-bit floating point	1.18E-38 – 3.40E+38	unitless	3 Dimensional Array: AERO_MODEL_DIM x AOT_DIM x BAND_DIM Size of Dimension(s): 5 x 15 x 10

3.2.1.4.67 VIIRS SCD Snow Cover Quality PC

Data Mnemonic	NP_NU-LM0233-072
Description/ Purpose	The VIIRS SCD Snow Cover Quality PC file contains weight reduction factors for cloud contamination and degradation/ exclusion threshold limits. This file is used in the VIIRS Snow Cover EDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	1,620 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.67-1, VIIRS SCD Snow Cover Qual PC Data Format

Table 3.2.1.4.67-1, VIIRS SCD Snow Cover Qual PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
nbands_i	4	Unsigned 32-bit integer	> 0 (Initially set to 4)	unitless	Number of Imagery Resolution Bands
nbands_m	4	Unsigned 32-bit integer	> 0 (Initially set to 9)	unitless	Number of Moderate Resolution Bands
band_wgt	36	32-bit floating point	0.0 – 1.0 (Initially set to 1.0 for all bands)	unitless	Default Moderate Resolution Band Weights 1 Dimensional Array: SCD_NBANDS_M Size of Dimension(s): 9
num_aot_bins	4	Unsigned 32-bit integer	> 0 (Initially set to 4)	unitless	Number of AOT bins, corresponding to the number of AOT values used for thresholding (aot_bins, this table)
aot_bins	16	32-bit floating point	0.0 – 1.0 (Initially set to: [0.0, 0.15, 0.50, 1.0])	unitless	AOT Bin Boundary Values 1 Dimensional Array: SCD_NUM_AOT_BINS Size of Dimension(s): 4
num_thresh	4	Unsigned 32-bit integer	> 0 (Initially set to 2)	unitless	Number of Solar Zenith Angle Thresholds

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
q_aot_sza	384	32-bit floating point	-pi/2 – pi/2 All bands initially set to the same default values: [*,1,1:2] = 75.0, 85.0 [*,2,1:2] = 70.0, 85.0 [*,3,1:2] = 65.0, 80.0 [*,4,1:2] = 60.0, 75.0	Radians	Solar Zenith Angle values that correspond to the Solar Zenith Angle quality regimes The order for each num_aot_bin x num_thresh matrix of angles is: I1, I2, I3, M1, M2, M3, M4, M5, M7, M8, M10, and M11 3 Dimensional Array: SCD_NUM_THRESH x SCD_NUM_AOT_BINS x SCD_NBANDS_TOTAL Size of Dimension(s): 2 x 4 x 12
cot_switch	4	Unsigned 32-bit integer	0 – 1 (Initially set to 0)	unitless	Switch to flag the availability of the Cloud Optical Thickness IP 0 = COT Not Available (Use VCM mode) 1 = COT Available (Use COT mode) Initially a placeholder – cot_switch is used in the code, but not from this field in this table. The cot_switch used in the code has been placed in the VIIRS Snow Cover/Depth Tunable Parameters, Table 3.2.2.5.17-1
num_cloud_types	4	Unsigned 32-bit integer	> 0 (Initially set to 7)	unitless	Number of Cloud Types

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
cloud_wgts	336	32-bit floating point	0.0 – 1.0 All bands initially set to the same default values for each cloud type: [0.5;**(1)** 0.5;**(2)** 0.5;**(3)** 0.5;**(4)** 0.6;**(5)** 0.3;**(6)** 0.8]**(7)**	unitless	Cloud weights corresponding to the 3 imagery bands + 9 moderate bands and the 7 cloud properties - 4 phases = Default (1), Water (2), Ice (3), Mixed (4), and 3 types = cirrus (5), shadow (6), adjacency (7); the parenthetical values correspond to the rows of the matrix shown in the "Units/Range" cell, the column represent the bands I1, I2, I3, M1, M2, M3, M4, M5, M7, M8, M10, and M11 in this order. 2 Dimensional Array: SCD_NBANDS_TOTAL x SCD_NUM_CLOUD_TYPES Size of Dimension(s): 12 x 7
cot_gy	336	32-bit floating point	(Initially set to 0.2 for all bands and cloud types)	unitless	Cloud Optical Thickness "GREEN/YELLOW" quality threshold values 2 Dimensional Array: SCD_NBANDS_TOTAL x SCD_NUM_CLOUD_TYPES Size of Dimension(s): 7 x 12
cot_yr	336	32-bit floating point	(Initially set to 0.5 for all bands and cloud types)	unitless	Cloud Optical Thickness "YELLOW/RED" quality threshold values 2 Dimensional Array: SCD_NBANDS_TOTAL x SCD_NUM_CLOUD_TYPES Size of Dimension(s): 7 x 12

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
qwgt_r	48	32-bit floating point	(Initially set to 0.3 for all bands)	unitless	Solar Zenith Angle boundaries "RED" 1 Dimensional Array: SCD_NBANDS_TOTAL Size of Dimension(s): 12
qwgt_y	48	32-bit floating point	(Initially set to 0.5 for all bands)	unitless	Solar Zenith Angle boundaries "YELLOW" 1 Dimensional Array: SCD_NBANDS_TOTAL Size of Dimension(s): 12
qwgt_g	48	32-bit floating point	(Initially set to 0.7 for all bands)	unitless	Solar Zenith Angle boundaries "GREEN" 1 Dimensional Array: SCD_NBANDS_TOTAL Size of Dimension(s): 12
frac_wgt_yr	4	32-bit floating point	0 – 1 (Initially set to 0.4)	unitless	Fractional Weight "YELLOW/RED" Threshold
frac_wgt_gy	4	32-bit floating point	0 – 1 (Initially set to 0.6)	unitless	Fractional Weight "GREEN/YELLOW" Threshold
sfrac_bmap_excl_thresh1	4	32-bit floating point	0.2	unitless	Snow fraction threshold lower limit for binary map exclusion (0.2 < snow fraction < 0.7)
sfrac_bmap_excl_thresh2	4	32-bit floating point	0.7	unitless	Snow fraction threshold upper limit for binary map exclusion (0.2 < snow fraction < 0.7)

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
sza_sfrac_degrad_thresh1	4	32-bit floating point	70*Deg2Rad	Radians	Solar zenith angle threshold lower limit for degraded snow fraction condition (70 deg <=sza<=85 deg)
sza_sfrac_degrad_thresh2	4	32-bit floating point	85*Deg2Rad	Radians	Solar zenith angle threshold upper limit for degraded snow fraction condition (70 deg <=sza<=85 deg)
sza_bmap_excl_thresh	4	32-bit floating point	60*Deg2Rad	Radians	Solar zenith angle threshold for binary map exclusion (sza > 60 deg)
sza_sfrac_excl_thresh	4	32-bit floating point	85*Deg2Rad	Radians	Solar zenith angle threshold for snow fraction exclusion (sza > 85 deg)
aot_excl_thresh	4	32-bit floating point	1.0	unitless	Aerosol optical thickness exclusion threshold (aot>1.0)
sza_daynight_thresh	4	32-bit floating point	85*Deg2Rad	Radians	Solar zenith angle threshold for day to night transition (night defined as sza > 85 deg)

3.2.1.4.68 VIIRS SCD Snow Cover PC

Data Mnemonic	NP_NU-LM0233-073
Description/ Purpose	The VIIRS SCD Snow Cover PC file contains thresholds, switches, and coeffiecients used to derive TOA reflectance for each of the nine moderate resolution bands used for snow fraction. This file is used in the VIIRS Snow Cover EDR algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	132 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.68-1, VIIRS SCD Snow CoverPC Data Format

Table 3.2.1.4.68-1, VIIRS SCD Snow Cover PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
nbands_m	4	Unsigned 32-bit integer	> 0 (initially set to 9)	unitless	Number of moderate resolution bands SCD_NBANDS_M
band_m	36	Unsigned 32-bit integer	1 – 11 (initially set to"M1", "M2", "M3", "M4", "M5", "M7", "M8", "M10", "M11")	unitless	Band Numbers (nbands_m in size) 1 Dimensional Array: SCD_NBANDS_M Size of Dimension(s): 9
num_r_water	4	Unsigned 32-bit integer	> 0 (initially set to 2)	unitless	Number of water reflectance thresholds (For I1 and I2) SCD_NUM_R_WATER
r_water	36	32-bit floating point	0.0 – 1.0 (initially set to [0.11, 0.11])	unitless	Water Reflectance Thresholds (For I1 and I2) 1 Dimensional Array: SCD_NUM_R_WATER Size of Dimension(s): 2
ndsi_thre1	4	32-bit floating point	(Initially set to 0.4)	unitless	First NDSI Threshold
ndsi_thr2	4	32-bit floating point	(Initially set to 0.1)	unitless	Second NDSI Threshold
n_max_coeff	4	Unsigned 32-bit integer	> 0 (Initially set to 4)	unitless	Number of NDVI Maximum Coefficients SCD_N_MAX_COEFF

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
ndvi_max_coeff	16	32-bit floating point	-12.0 – 10 (Initially set to [-0.28, 6.4, -12.0, 10.0])	unitless	NDVI Maximum Coefficients 1 Dimensional Array: SCD_N_MAX_COEFF Size of Dimension(s): 4
n_min_coeff	4	Unsigned 32-bit integer	> 0 (Initially set to 2)	unitless	Number of NDVI Minimum Coefficients SCD_N_MIN_COEFF
ndvi_min_coeff	8	32-bit floating point	(Initially set to [0.32, -0.7])	unitless	NDVI Minimum Coefficients 1 Dimensional Array: SCD_N_MIN_COEFF Size of Dimension(s): 2
btmax	4	32-bit floating point	(Initially set to 283.0)	Kelvin	Brightness Temperature Threshold
ntypes	4	Unsigned 32-bit integer	1 – 24	unitless	Number of Snow Types (6 grain size * 4 impurities = 24 types) (Initially a placeholder – Not used in code)
frac_option	4	Unsigned 32-bit integer	(Initially set to 1)	unitless	Flag which determines which snow fraction algorithm to run 0 = Spectral Mixing Algorithm 1 = Binary Snow Map Aggregation 2 = Both Initially set to 1 as default

3.2.1.4.69 VIIRS Gridded SIN Tiles Earth Land PC

Data Mnemonic	NP_NU-LM0233-074
Description/ Purpose	The VIIRS Sinusoidal Map Earth/Land PC file contains earth/off-earth information for each tile on the Sinusoidal Grid. This file is used in the VIIRS GridToGran algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	72 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.69-1, VIIRS Sinusoidal Map Earth/Land PC Data Format

Table 3.2.1.4.69-1, VIIRS Gridded SIN Tiles Earth Land PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
classification	5184	unsigned 8-bit integer	[0, 1, 3]	unitless	0 = off the earth 1 = on the earth - not land 3 = on the earth – land 2 Dimensional Array: SinusoidalGridRow x SinusoidalGridCol Size of Dimension(s): 72 x 72

3.2.1.4.70 VIIRS COP Transmittance PC

Data Mnemonic	NP_NU-LM0040-017
Description/ Purpose	This file is used in the VIIRS COP algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	4,768 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 2.2.5-1, VIIRS COP Transmittance LUT Data Format

Table 3.2.1.4.70-1, VIIRS COP Transmittance LUT Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
Altitude	208	32-bit floating point	0 – 100	meters	1 Dimensional Array: COP_ALTITUDE_LAYERS Size of Dimension(s): 52
Trans_ref	416	64-bit floating point	0 – 1	unitless	1 Dimensional Array: COP_ALTITUDE_LAYERS Size of Dimension(s): 52
transdT_ref	1664	64-bit floating point	0 – 1	unitless	2 Dimensional Array: 4 x COP_ALTITUDE_LAYERS Size of Dimension(s): 4 x 52
transdq_ref	1664	64-bit floating point	0 – 1	unitless	2 Dimensional Array: 4 x COP_ALTITUDE_LAYERS Size of Dimension(s): 4 x 52
t_ref	408	64-bit floating point	0 – 1	unitless	1 Dimensional Array: COP_TRANSMITTANCE_LAYERS Size of Dimension(s): 51
du_ref	408	64-bit floating point	0 – 1	unitless	1 Dimensional Array: COP_TRANSMITTANCE_LAYERS Size of Dimension(s): 51

3.2.1.4.71 VIIRS AOT Climatology PC

The VIIRS AOT Climatology PC is an ancillary rather than an Auxiliary product. This product is documented in the CDFCB-X, Vol VI, Section 2.1.3.1, Aerosol Optical Thickness Climatology File.

3.2.1.4.72 VIIRS Bright Pixel Flag Threshold LUT

Data Mnemonic	NP_NU-LM0235-002
Description/ Purpose	The VIIRS Bright Pixel Flag Threshold PC file contains bit patterns that match corresponding percents of scattered light. These thresholds are used to determine the output 4-bit state flag that is the output of the Bright Pixel Algorithm. This file is used in the VIIRS Bright Pixel algorithm
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	1050 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.72-1, VIIRS Bright Pixel Flag Threshold PC Data Format

Table 3.2.1.4.72-1, VIIRS Bright Pixel Flag Threshold PC

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
pattern	210	unsigned 8-bit integer	(The Bit patterns are the same for all 21 bands) 0001 (0.01% < scattered light <= 0.02%) 0010 (0.02% < scattered light <= 0.05%) 0011 (0.05% < scattered light <= 0.10%) 0100 (0.10% < scattered light <= 0.20%) 0101 (0.20% < scattered light <= 0.50%) 0110 (0.50% < scattered light <= 1.00%) 0111 (1.00% < scattered light <= 2.00%) 1000 (2.00% < scattered light <= 5.00%) 1001 (5.00% < scattered light <= 10.00%) 1010 (10.00% < scattered light)	unitless	Bit Pattern that matches the % scattered light thresholds(table entries are actually fractional scattered light, not percents) – entries correspond to the thresholds field. 2 Dimensional Array NUM_IMG_MOD_BANDS NUM_BP_THRESHOLDS Size of Dimension(s): 21 x 10 (For NUM_IMG_MOD_BANDS = 21, Bands 1-16 are Moderate Bands M1-M16, 17-21 are Imagery Bands I1 – I5)

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
thresholds	840	32-bit floating point	(The Bit threshold values are the same for all 21 bands) 0.0001 (0.01%) 0.0002 (0.02%) 0.0005 (0.05%) 0.0010 (0.10%) 0.0020 (0.20%) 0.0050 (0.50%) 0.0100 (1.00%) 0.0200 (2.00%) 0.0500 (5.00%) 0.1000 (10.0%)	percent (of scattered light)	Thresholds for percent of scattered light - entries correspond to the patterns field. 2 Dimensional Array NUM_IMG_MOD_BANDS NUM_BP_THRESHOLDS Size of Dimension(s): 21 x 10 (For NUM_IMG_MOD_BANDS = 21, Bands 1-16 are Moderate Bands M1-M16, 17-21 are Imagery Bands I1 – I5)

3.2.1.4.73 VIIRS Sea Ice Quality PC

Data Mnemonic	NP_NU-LM0260-000
Description/ Purpose	The VIIRS Sea Ice Quality PC This file is used in the VIIRS Sea Ice Quality and Sea Ice Concentration algorithms. This file contains a duplication of the table (two PC tables) to allow for different inputs for the Cloud Optical Thickness in the algorithm. This feature is currently usused and therefore the tables are identical.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	332 x 2 tables = 664 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.73.-1, VIIRS Sea Ice Quality PC Data Format

Table 3.2.1.4.73-1, VIIRS Sea Ice Quality PC

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
bandWgts	12	32-bit floating point	>= 0.0 Initially set to: [0.3, 0.6, 0.1]	unitless	Initial Ice Quality Band Weights 1 Dimensional Array: IQ_N_BANDS Size of Dimension(s): 3
cldWgts	84	32-bit floating point	>= 0.0 Initially set to: [0.5, 0.5, 0.5;**(1)** 0.5, 0.5, 0.5;**(2)** 0.5, 0.5, 0.5;**(3)** 0.5, 0.5, 0.5;**(4)** 0.6, 0.6, 0.6;**(5)** 0.3, 0.3, 1.0;**(6)** 0.8, 0.8, 0.8]**(7)**	unitless	Cloud weights corresponding to the three imagery bands (I1, I2, I5) and the seven cloud properties - four phases = Default (1), Water (2), Ice (3), Mixed (4), and 3 types = cirrus (5), shadow (6), adjacency (7); the parenthetical values correspond to the rows of the matrix shown in the “Units/Range” cell, the column represent the bands I1, I2, and I5. 2 Dimensional Array: IQ_N_BANDS x IQ_N_CLD_TYPES Size of Dimension(s): 3 x 7

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
cotThresh	96	32-bit floating point	>= 0.0 Initially set to: (Default, Water, Ice, Mixed) (I1) (I2) (I5) [0.5, 0.5, 0.5;**(1)** 0.2, 0.2, 0.2] **(2)** (Phases follow the order shown above)	unitless	Cloud Optical Thickness Thresholds used when COT is used to determine ***cloud confidence*** in the Ice Quality Flags IP output. The "4" in the "Data Type/Size" cell corresponds to the four phases (Default(1), Water(2), Ice(3), Mixed(4)). "IQ_N_THRESH" corresponds to the rows of each set of matrices which are a function of cloud phase; the "(1)'s" represent the YELLOW/RED cot thresholds and the "(2)'s" represent the GREEN/YELLOW COT thresholds. 3 Dimensional Array: IQ_N_BANDS x IQ_N_THRESH x IQ_N_PHASES Size of Dimension(s): 3 x 2 x 4
fwRange	16	32-bit floating point	-pi <= fw_range(1,2) <= pi -pi/2 <= fw_range(3,4) <= pi/2 Initially set to: [1.308997 (75°), -1.65806 (-95°), 0.872664(50°), 0.69813 (40°)]	radians	Fresh Water Ice Latitude/Longitude Range Lat/Lon Boundaries. Currently set to -75, -95 3 Dimensional Array: IQ_N_FW Size of Dimension(s): 4

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
minNLat	4	32-bit floating point	-PI/2 ≤ minNLat ≤ PI/2 Initially set to: 0.62831 (36°)	degree	Sea Ice Latitude Range - Minimum Northern Latitude
maxSLat	4	32-bit floating point	-PI/2 ≤ maxSLat ≤ PI/2 Initially set to: –0.87266 (-50°)	degree	Sea Ice Latitude Range - Maximum Southern Latitude
aotBin	16	32-bit floating point	>= 0.0 Initially set to: [0.0,0.15,0.5,1.0]	unitless	AOT bin boundary values 3 Dimensional Array: IQ_N_AOT_BINS Size of Dimension(s): 4

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
qAOTSunZen	64	32-bit floating point	(**I1,I2**) **(G/Y) (Y/R)** [1.308997(75°),1.48353(85°)**(1)** 1.22173(70°) ,1.48353(85°)**(2)** 1.13446(65°) ,1.39626(80°);**(3)** 1.04719(60°),1.308997(75°)]**(4)** (Bands follow the order shown above)	radians	Solar Zenith Angle values that correspond to the Solar Zenith Angle quality regimes (G/Y = “Green/Yellow”, Y/R = “Yellow/Red”) 3 Dimensional Array: IQ_N_AOT_BANDS x IQ_N_AOT_BINS x IQ_N_AOT_SUNZEN Size of Dimension(s): 2 x 4 x 2
qualWgts	36	32-bit floating point	>= 0.0 **(I1) (I2) (I5)** [0.060,0.12, 0.195;**(1)** 0.12 ,0.24, 0.39 ; **(2)** 0.02 ,0.04 ,0.065]**(3)**	unitless	Overall Ice Quality Band Weights for each band (I1, I2, I5) and for each set of weights for each band; the (1)="RED", (2)="YELLOW" and (3)="GREEN" quality regions. 2 Dimensional Array: EQ_N_BANDS x IQ_N_WGTS Size of Dimension(s): 3 x 3

3.2.1.4.74 VIIRS Surface Temperature IP PC

Data Mnemonic	NP_NU-LM0236-001
Description/ Purpose	The VIIRS Surface Temperature PC This file is used in the VIIRS Sea Ice Quality and Sea Ice Concentration algorithms. Coefficients are used to determine the surface temperature values.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	64 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.74.-1, VIIRS Surface Temperature PC Data Format

Table 3.2.2.5.74-1, VIIRS Surface Temperature PC

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
coeffs	64	32-bit floating point	Minfloat – Maxfloat	unitless	Coefficients used to determine the surface temperature values for Surface Temperature IP 3 Dimensional Array: STIP_LUT_MAX_TERMS x STIP_LUT_MAX_DN (day/night) x STIP_LUT_MAX_ALG Size of Dimension(s): 4 x 2 x 2

3.2.1.4.75 VIIRS Solar Diffuser Rotation Matrix PC

Data Mnemonic	NP_NU-LM0233-080
Description/ Purpose	The VIIRS Solar Diffuser Rotation Matrix PC contains the Solar Diffuser rotation matrix and the SDSM screen rotation matrix. These matrices are used to determine the orientation of the Solar Diffuser with respect to the spacecraft. This file is used in the VIIRS Solar Diffuser algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.75-1, VIIRS Solar Diffuser Rotation Matrix PC Data Format

Table 3.2.1.4.75-1, Solar Diffuser Rotation Matrix PC

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
SD	36	32-bit floating point	0 – 1	unitless	Solar Diffuser rotation matrix values 2 Dimensional Array Size of Dimension(s): 3 x 3
SDSM	36	32-bit floating point	0 – 1	unitless	Solar Diffuser rotation matrix values 2 Dimensional Array Size of Dimension(s): 3 x 3

3.2.1.4.76 VIIRS Solar Diffuser SDSM BRDF PC

Data Mnemonic	NP_NU-LM0233-081
Description/ Purpose	The VIIRS Solar Diffuser SDSM BRDF PC contains Solar Diffuser BRDF values as observed by the SDSM. This file is used in the VIIRS Solar Diffuser algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.76-1, VIIRS Solar Diffuser SDSM BRDF PC Data Format

Table 3.2.1.4.76-1, Solar Diffuser SDSM BRDF PC

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
Elevation	4	32-bit floating point	Initially set to: 30 – 50	degrees	Solar Elevation Angle 2 Dimensional Array Number of bands x elevations Size of Dimension(s): 8 x 41
azimuth	4	32-bit floating point	0 – 20	degrees	Solar Azimuth Angle 2 Dimensional Array Number of bands x azimuths Size of Dimension(s): 8 x 41
factor	4	32-bit floating point	Minfloat –Maxfloat	unitless	Factors based on Elevation and Azimuth 3 Dimensional Array Number of bands x azimuths x elevation Size of Dimension(s): 8 x 41 x 41

3.2.1.4.77 VIIRS Solar Diffuser SDSM Time PC

Data Mnemonic	NP_NU-LM0233-082
Description/ Purpose	The VIIRS Solar Diffuser SDSM Time PC contains scan fractions of SDSM sample times. This file is used in the VIIRS Solar Diffuser algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.77-1, VIIRS Solar Diffuser SDSM Time PC Data Format

Table x.x.x-1, Solar Diffuser SDSM Time PC

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
fraction	20	32-bit floating point	0 – 1	unitless (fraction of scan)	Collection of offsets by time fraction 1 Dimensional Array Size of Dimension(s): 5

3.2.1.4.78 VIIRS Solar Diffuser Transmittance Screen PC

Data Mnemonic	NP_NU-LM0233-083
Description/ Purpose	The VIIRS Solar Diffuser Transmittance Screen PC contains the transmittance screen for the Solar Diffuser. This file is used in the VIIRS Solar Diffuser algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.78-1, VIIRS Solar Diffuser Transmittance Screen PC Data Format

Table 3.2.1.4.78-1, Solar Diffuser Transmittance Screen PC

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
elevation	4	32-bit floating point	Initially set to: -5 – 5	degrees	Solar Elevation Angle 2 Dimensional Array Number of bands x elevations Size of Dimension(s): 8 x 51
azimuth	4	32-bit floating point	Initially set to: -10 – 10	degrees	SolarAzimuth Angle 2 Dimensional Array Number of bands x azimuths Size of Dimension(s): 8 x 51
factor	4	32-bit floating point	0 – 1	unitless	Factors based on Elevation and Azimuth 3 Dimensional Array Number of bands x azimuths x elevations Size of Dimension(s): 8 x 51 x 51

3.2.1.4.79 VIIRS Solar Diffuser Voltage PC

Data Mnemonic	NP_NU-LM0233-084
Description/ Purpose	The VIIRS Solar Diffuser Voltage PC contains scaling factors for converting scaled integer data to engineering units (volts). This file is used in the VIIRS Solar Diffuser algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.79-1, VIIRS Solar Diffuser Voltage PC Data Format

Table 3.2.1.4.79-1, Solar Diffuser Voltage PC

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
voltCoef	960	32-bit floating point		unitless	Conversion factors for polynomial conversions of SDSM data 3 Dimensional Array nsamples x ndetectors x ncoefficients Size of Dimension(s): 5 x 8 x 6
voltLowerLimit	160	32-bit integer	-8192 to 8191	unitless	Lower limit of unscaled data 2 Dimensional Array nsamples x ndetectors Size of Dimension(s): 5 x 8
voltUpperLimit	160	32-bit integer	-8192 to 8191	unitless	voltUpperLimit 2 Dimensional Array nsamples x ndetectors Size of Dimension(s): 5 x 8

3.2.1.4.80 VIIRS Solar Diffuser Transmittance Screen PC

Data Mnemonic	NP_NU-LM0233-085
Description/ Purpose	The VIIRS Solar Diffuser Transmittance Screen PC contains the transmittance screen for the Solar Diffuser. This file is used in the VIIRS Solar Diffuser algorithm.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	For details see Table 3.2.1.4.80-1, VIIRS Solar Transmittance Screen PC Data Format

Table 3.2.1.4.80-1, Solar Diffuser Transmittance Screen PC

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
elevation	4	32-bit floating point	Initially set to: -5 – 5	degrees	Solar Elevation Angle 2 Dimensional Array Number of bands x elevations Size of Dimension(s): 8 x 51
azimuth	4	32-bit floating point	Initially set to: -10 – 10	degrees	SolarAzimuth Angle 2 Dimensional Array Number of bands x azimuths Size of Dimension(s): 8 x 51
factor	4	32-bit floating point	0 – 1	unitless	Factors based on Elevation and Azimuth 3 Dimensional Array Number of bands x azimuths x elevations Size of Dimension(s): 8 x 51 x 51

3.2.2 Ephemeral PCs

Ephemeral PCs are files containing the processing coefficient parameters used to create NPP/NPOESS Data Products and are updated frequently. Ephemeral PC updates follow the data format definition provided in the CDFCB-X Volume VI, D34862-06 for PC Tables.

The following sections indicate the parameters included in each respective file.

Most Ephemeral PCs are applicable to a single sensor or sensor suite. However, the SAA table is independent of all sensors. The format is provided in Table 3.2.2-1, SAA PC Data Format.

The South Atlantic Anomaly (SAA) PC file contains the SAA intensity as modeled using a 2-d Gaussian to provide the intensity at any given latitude and longitude. Coefficients for the peak intensity (100%), and latitude/longitude widths and centers are also provided. The resulting values are typically binned into a percentage threshold range and a quality flag is set accordingly – this quality flag is present in multiple SDRs and EDRs.

Table 3.2.2-1, VIIRS SAA PC Data Format

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
centerLat	8	64-bit floating point	-pi/2 to pi/2	radians	Latitude of the center of the SAA (in radians, positive north)
centerLon	8	64-bit floating point	-pi to pi	radians	Longitude of the center of the SAA (in radians, positive East)
latHeight	8	64-bit floating point	0 to pi/2	radians	Latitude height of the SAA (in radians) equal to 1 standard deviation of the Gaussian distribution model

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
lonWidth	8	64-bit floating point	0 to pi	radians	Longitude width of the SAA (in radians) equal to 1 standard deviation of the Gaussian distribution model
maxIndex	8	64-bit floating point	0 - 100	percent	Maximum index value produced by the function

3.2.2.1 CrIMSS PCs

3.2.2.1.1 CrIMSS EDR Tunable Parameters

Table 3.2.2.1.1-1, CrIMSS EDR Tunable Parameters

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
localAngleAdj	4	32-bit integer	MinInt – MaxInt	unitless	Flag to perform local angle adjustments
iTrop	4	32-bit integer	MinInt – MaxInt	unitless	Flag to determine whether to find the tropopause level
mwCloud	4	32-bit integer	MinInt – MaxInt	unitless	Flag for Cloud retrieval
covSelectMethod	4	32-bit integer	MinInt – MaxInt	unitless	Covariance selection method
chanSelFlag	88	32-bit integer	MinInt – MaxInt	unitless	Array of channel selection flag for mw 1 Dimensional Array Size of Dimension(s): 22
landTypes	32	32-bit integer	MinInt – MaxInt	unitless	Array of land types used in the algorithm 1 Dimensional Array Size of Dimension(s): 8
fovFac	4	32-bit floating point	Minfloat – Maxfloat	unitless	Additional flag for MW channels 1 and 2
apodFlag	4	32-bit integer	MinInt – MaxInt	unitless	Apodization option flag
maxMwIter	4	32-bit integer	MinInt – MaxInt	unitless	Maximum number of iterations for MW retrieval
maxIrIter	4	32-bit integer	MinInt – MaxInt	unitless	Maximum number of iterations for IR+MW retrieval
sceneClassMode	4	32-bit integer	MinInt – MaxInt	unitless	Scene classification mode

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
freqIrSfcHp	48	32-bit floating point	Minfloat – Maxfloat	unitless	Array of Surface hinge points for IR emissivity 1 Dimensional Array Size of Dimension(s): 12
bkgCld	8	32-bit floating point	Minfloat – Maxfloat	unitless	Array of cloud backgrounds 1 Dimensional Array Size of Dimension(s): 2
cldRetrCov	16	32-bit floating point	Minfloat – Maxfloat	unitless	Array of Cloud retrieval covariance 1 Dimensional Array Size of Dimension(s): 2 x 2
chanFlagLowerMin	4	32-bit floating point	Minfloat – Maxfloat	unitless	Channel selection lower limit flag's minimum value
chanFlagLowerMax	4	32-bit floating point	Minfloat – Maxfloat	unitless	Channel selection lower limit flag's maximum value
chanFlagUpperMin	4	32-bit floating point	Minfloat – Maxfloat	unitless	Channel selection upper limit flag's minimum value
chanFlagUpperMax	4	32-bit floating point	Minfloat – Maxfloat	unitless	Channel selection upper limit flag's maximum value
maxTemp	4	32-bit floating point	Minfloat – Maxfloat	Kelvin	Maximum temperature
minTemp	4	32-bit floating point	Minfloat – Maxfloat	Kelvin	Minimum temperature

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
alpha1	4	32-bit floating point	Minfloat – Maxfloat	unitless	Constant used to calculate error covariance matrix
chiSqMwIterThresh	4	32-bit floating point	Minfloat – Maxfloat	unitless	MW convergence flag to finish iteration
chiSqMwThresh	4	32-bit floating point	Minfloat – Maxfloat	unitless	Threshold used to determine when to reset background and covariance
chiSqCldThresh	4	32-bit floating point	Minfloat – Maxfloat	unitless	Cloudy radiance convergence criterion
chiSqIrThresh	4	32-bit floating point	Minfloat – Maxfloat	unitless	Convergence threshold to finish IR iterations
htol	4	32-bit floating point	Minfloat – Maxfloat	unitless	Constant used for checking mixing ratio for super-saturation
debug	4	32-bit integer	Minfloat – Maxfloat	unitless	Debug flag
landThresh	4	32-bit floating point	Minfloat – Maxfloat	unitless	Land Threshold(Percentage of land)
oceanThresh	4	32-bit floating point	Minfloat – Maxfloat	unitless	Ocean Threshold(percentage of ocean)
tSkinMwThreshold1	4	32-bit floating point	Minfloat – Maxfloat	unitless	Assign threshold 1 background profiles and covariance matrices according to value

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
tSkinMwThreshold2	4	32-bit floating point	Minfloat – Maxfloat	unitless	Assign threshold 2 background profiles and covariance matrices according to value
tSkinMwThreshold3	4	32-bit floating point	Minfloat – Maxfloat	unitless	Assign threshold 3 background profiles and covariance matrices according to value
tSkinMwThreshold4	4	32-bit floating point	Minfloat – Maxfloat	unitless	Assign threshold 4 background profiles and covariance matrices according to value
firstCldTunApod0	4	32-bit floating point	Minfloat – Maxfloat	unitless	First cloud-clearing turning parameter for APOD 0
firstCldTunApod1	4	32-bit floating point	Minfloat – Maxfloat	unitless	First cloud-clearing turning parameter for APOD 1
firstCldTunApod2	4	32-bit floating point	Minfloat – Maxfloat	unitless	First cloud-clearing turning parameter for APOD 2
secondCldTunApod0	4	32-bit floating point	Minfloat – Maxfloat	unitless	Second cloud-clearing turning parameter for APOD 0
secondCldTunApod1	4	32-bit floating point	Minfloat – Maxfloat	unitless	Second cloud-clearing turning parameter for APOD 1
secondCldTunApod2	4	32-bit floating point	Minfloat – Maxfloat	unitless	Second cloud-clearing turning parameter for APOD 2
cldClearRngBnd1	8	32-bit floating point	Minfloat – Maxfloat	unitless	Array of Cloud-clearing spectral range for band 1 1 Dimensional Array Size of Dimension(s): 2

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
cldClearRngBnd3	8	32-bit floating point	Minfloat – Maxfloat	unitless	Array of Cloud-clearing spectral range for band 3 1 Dimensional Array Size of Dimension(s): 2
atmNoise	4	32-bit integer	MinInt – MaxInt	unitless	Atmospheric noise flag used in FOV selection routine
irChanRangNotUsed	8	32-bit floating point	Minfloat – Maxfloat	unitless	Array of IR channels not used in the retrieval 1 Dimensional Array Size of Dimension(s): 2
cloudIEmissAndRefl	4	32-bit floating point	Minfloat – Maxfloat	unitless	Emissivity and reflectivity for cloud I for all channels
cloudIIEmissAndRefl	4	32-bit floating point	Minfloat – Maxfloat	unitless	Emissivity and reflectivity for cloud II for all channels
irECMSpectRangeLow	8	32-bit floating point	Minfloat – Maxfloat	unitless	Array of IR lower spectral range to calculate error covariance matrix 1 Dimensional Array Size of Dimension(s): 2
irECMSpectRangeHigh	8	32-bit floating point	Minfloat – Maxfloat	unitless	Array of IR higher spectral range to calculate error covariance matrix 1 Dimensional Array Size of Dimension(s): 2
chiSqAirsMax	4	32-bit floating point	Minfloat – Maxfloat	unitless	AIRS chi-square threshold - quality flag is set if value is exceeded

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
chiSqMax	4	32-bit floating point	Minfloat – Maxfloat	unitless	Second stage chi-square threshold - quality flag is set if value exceeded
chiSqMwMax	4	32-bit floating point	Minfloat – Maxfloat	unitless	First stage (MW only) chi-square threshold - quality flag is set if is exceeded
chiSqMw2Max	4	32-bit floating point	Minfloat – Maxfloat	unitless	Second stage MW chi-square threshold - quality flag is set if value is exceeded
profDiffMax	4	32-bit floating point	Minfloat – Maxfloat	unitless	First vs. second stage retrieval profile difference threshold quality flag. Set if value is exceeded
ccThreshIrMw	4	32-bit floating point	Minfloat – Maxfloat	unitless	Cloud/Clear threshold for second stage chisquare value
ccThreshMw	4	32-bit floating point	Minfloat – Maxfloat	unitless	Cloud/Clear threshold for first stage chisquare value
ccThreshIrna	4	32-bit floating point	Minfloat – Maxfloat	unitless	Cloud/Clear threshold for the IR Noise Amplification Factor value
sunGlintThresh	4	32-bit floating point	Minfloat – Maxfloat	degrees	Sun glint threshold (degrees)
detectorQF	108	32-bit integer	MinInt – MaxInt	unitless	Detector quality flags (0=detector failure) 1 Dimensional Array Size of Dimension(s): 27

3.2.2.2 ATMS PCs

3.2.2.2.1 ATMS SDR Tunable Parameters

Table 3.2.2.2.1-1, ATMS SDR Tunable Parameters

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
scanWeightsWc	1760	64-bit floating point	0 – 1	unitless	Weighting factors applied to calibration target data 2 Dimensional Array: NUM_SCAN_WC x NUM_CHANNELS Size of Dimenions(s): 10 x 22
scanWeightsCc	1760	64-bit floating point	0 – 1	unitless	Weighting factors applied to calibration target data 2 Dimensional Array: NUM_SCAN_CC x NUM_CHANNELS Size of Dimenions(s): 10 x 22
scanBias	16896	64-bit floating point	-5 – 5	Kelvin	Scan-angle dependent BT biases for each channel coefficient of 0th order term in brightness temperature equation Tcorrected = AT + B 2 Dimensional Array: NUM_CHANNELS x NUM_BEAM_POSITIONS Size of Dimenions(s): 22 x 96

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
beamEfficiency Correction	16896	64-bit floating point	0 – 1.2	unitless	Scan-angle dependent beam efficiency correction factor for each channel coefficient of 1st order term in brightness temperature equation corrected = AT + B 2 Dimensional Array: NUM_CHANNELS x NUM_BEAM_POSITIONS Size of Dimenions(s): 22 x 96
warmBias Correction	528	64-bit floating point		a1: K a2: KC^{-1} a3: KC^{-2}	Coefficients for receiver temperature dependent warm bias corrections where correction equation is of form a1 + a2TR + a3TR**2 and coefficients are a1, a2, and a3. TR is the receiver temperature in degrees C. 2 Dimensional Array: NUM_BIAS_COEFFS x NUM_CHANNELS Size of Dimenions(s): 3 x 22
scanWeightsPrtKav	288	32-bit floating point	0 – 1	unitless	Weighting factors applied to KAV target PRT measurements 2 Dimensional Array: NUM_SCAN_PRT x NUM_PRT_KAV Size of Dimenions(s): 9 x 8

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
scanWeightsPrtWg	252	32-bit floating point	0 – 1	unitless	Weighting factors applied to WG target PRT measurements 2 Dimensional Array: NUM_SCAN_PRT x NUM_PRT_WG Size of Dimenions(s): 9 x 7
coldSpaceTbs	88	32-bit floating point	2.76 – 4.79	Kelvin	Brightness temperature of cosmic cold space, with Planck correction applied, for each ATMS channel 1 Dimensional Array: NUM_CHANNELS Size of Dimenions(s): 22
quadraticRc	1056	32-bit floating point	-0.85 – 0.854	Kelvin	Quadratic RC 3 Dimensional Array: NUM_COLD_PLATE_TEMP x NUM_REDUNCDANCY_CONFIGS x NUM_CHANNELS Size of Dimenions(s): 3 x 4 x 22
shelfTemp	48	32-bit floating point	-10 – 50	Celsius	Shelf temperature 2 Dimensional Array: NUM_COLD_PLATE_TEMP x NUM_SHELF_TEMPS Size of Dimenions(s): 3 x 4

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
beamAlignmentError	792	32-bit floating point	-0.665 – 0.656	Degrees	Beam alignment errors 3 Dimensional Array: NUM_CHANNELS x BEAM_POS_OFFSET x ATTITUDE Size of Dimenions(s): 22 x 3 x 3
coldBiasCorrection	352	32-bit floating point	0 – 0.6	Kelvin	Cold bias correction coefficients 2 Dimensional Array: NUM_COLD_SAMPLES x NUM_CHANNELS Size of Dimenions(s): 4 x 22
lowLimitPrt	8	32-bit floating point	245- 340	Kelvin	Lower limit PRT 1 Dimensional Array: NUM_BAND_CATEGORIES Size of Dimenions(s): 2
uppLimitPrt	8	32-bit floating point	245- 340	Kelvin	Upper limit PRT 1 Dimensional Array: NUM_BAND_CATEGORIES Size of Dimenions(s): 2
maxVarPrt	8	32-bit floating point	0 -10	Kelvin	Max variance PRT 1 Dimensional Array: NUM_BAND_CATEGORIES Size of Dimenions(s): 2

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
threeDBeamWidth	88	32-bit floating point	1.14 – 5.42	unitless	Three D beam width 1 Dimensional Array: NUM_CHANNELS Size of Dimenions(s): 22
lunarContaminationThreshold	88	32-bit floating point	0.2	Kelvin	Lunar contamination threshold 1 Dimensional Array: NUM_CHANNELS Size of Dimenions(s): 22
nominalAltitude	4	32-bit floating point		km	Altitude used as 1st guess in Earth normal computation loop
prtConvergence	4	32-bit floating point		celsius	Convergence criteria for Newton-Raphson computation of temperature from PRT resistance
wtThresholdPrt	4	32-bit floating point	0 -1	unitless	Weight threshold for PRT
wtThresholdWc	4	32-bit floating point	0 -1	unitless	Weight threshold for WC
wtThresholdCc	4	32-bit floating point	0 -1	unitless	Weight threshold for CC
dataLimits	592	32-bit floating point	minfloat – maxfloat	unitless	The valid value range for the Health & Status telemetry 2 Dimensional Array: MIN_MAX_DIM x NUM_HS_VARS Size of Dimenions(s): 2 x 74

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
spaceViewresolverCounts	64	32-bit integer	13746 - 15565	Count	Space view resolver counts 2 Dimensional Array: NUM_COLD_SAMPLES x NUM_COLD_SCAN_PROFILES Size of Dimenions(s): 4 x 4
blackBodyResolverCounts	64	32-bit integer	35286 – 35892	Count	Black body resolver counts 2 Dimensional Array: NUM_WARM_SAMPLES x NUM_WARM_SCAN_PROFILES Size of Dimenions(s): 4 x 4
lowLimitWc	88	32-bit integer	0 – 65635	Count	Lower limit WC 1 Dimensional Array: NUM_CHANNELS Size of Dimenions(s): 22
uppLimitWc	88	32-bit integer	0 – 65635	Count	Upper limit WC 1 Dimensional Array: NUM_CHANNELS Size of Dimenions(s): 22
maxVarWc	88	32-bit integer	0 – 65635	Count	Max variance WC 1 Dimensional Array: NUM_CHANNELS Size of Dimenions(s): 22

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
lowLimitCc	88	32-bit integer	0 – 65635	Count	Lower limit CC 1 Dimensional Array: NUM_CHANNELS Size of Dimenions(s): 22
uppLimitCc	88	32-bit integer	0 – 65635	Count	Upper limit CC 1 Dimensional Array: NUM_CHANNELS Size of Dimenions(s): 22
maxVarCc	88	32-bit integer	0 – 65635	Count	Max variance CC 1 Dimensional Array: NUM_CHANNELS Size of Dimenions(s): 22
numThresholdPrt	8	32-bit integer	1 – 8	unitless	Number of threshold PRTs 1 Dimensional Array: NUM_BAND_CATEGORIES Size of Dimenions(s): 2
mapRc	32	32-bit integer	1 – 4	unitless	Map of RC 1 Dimensional Array: NUM_MAP_RC_SIZE Size of Dimenions(s): 8
resolverOffset	4	32-bit integer	-200 – 200	Count	Offset of the resolver
epsilonCold	4	32-bit integer	7	unitless	Epsilon value for cold space view positions

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
epsilonWarm	4	32-bit integer	7	unitless	Epsilon value for warm blackbody view positions
allowableDev	4	32-bit integer	18	milliseconds	Allowable deviance
prtLoops	4	Unsigned 32-bit integer	1 – 200	unitless	Maximum allowable loops for PRT temperature calculations
useQuadraticTerm	1	bool	0 or 1	unitless	Flag indicating use of quadratic 0: do not use quadratic term 1: use quadratic term
useQuadraticTele	1	bool	0 or 1	unitless	Flag indicating use of quadratic telemetry
useBeamAlignTele	1	bool	0 or 1	unitless	Flag indicating use of beam alignment telemetry
useWarmBiasTele	1	bool	0 or 1	unitless	Flag indicating use of warm bias telemetry
useColdBiasTele	1	bool	0 or 1	unitless	Flag indicating use of cold bias telemetry
chkConsistWcCc	1	bool	0 or 1	unitless	Flag indicating whether the WC CC consistency is checked
chkConsistPrt	1	bool	0 or 1	unitless	Flag indicating whether the PRT consistency is checked
pad	5	8-bit char	0	unitless	Padding array 1 Dimensional Array: COEFF_PAD_SIZE Size of Dimenions(s): 5

3.2.2.2.2 ATMS Remap SDR Tunable Parameters

Table 3.2.2.2.2-1, ATMS Remap SDR Tunable Parameters

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
coefSumLimit	4	32-bit floating point	0 – 1	unitless	If the sum of the Backus-Gilbert coefficients used for resampling to a CrIS FOR does not exceed this value, the resampled data are set to erroneous fill.
expTimeDiff	4	32-bit integer	-1334 – 1334	ms	Expected time difference between the mid-point of CrIS FOR 15 and the mid-point of ATMS beam position 47. This parameter is needed to allow other synchronization schemes to be implemented without changing code. If synchronization scheme is middle of FOR 15 and beam position 47 this parameter should be zero.
synchDeltaMax	4	32-bit integer	0 – 20	ms	The maximum deviation from the ideal time synchronization.
viewVec	6480	64-bit floating point	-50.764764 – 1000.0	unitless	Exit vectors used for generating Geolocation when CrIS data is not available 3-Dimensional Array: NUM_CRIS_FORS x NUM_CRIS_FOVS x NUM_COMP Size of Dimension(s): 9 x 30 x 3

3.2.2.2.3 DELETED

3.2.2.3 CrIS PCs

3.2.2.3.1 CrIS SDR Tunable Parameters

Table 3.2.2.3.1-1, CrIS SDR Tunable Parameters

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
hammingParameter	8	64-bit floating pont	Minfloat – Maxfloat	unitless	Hamming apodization
ictPrt1Bias	8	64-bit floating pont	Minfloat – Maxfloat	Kelvin	Used to calculate ICT Temperature
ictPrt2Bias	8	64-bit floating pont	Minfloat – Maxfloat	Kelvin	Used to calculate ICT Temperature
laserWavelengthDriftTolerance	8	64-bit floating pont	Minfloat – Maxfloat	ppm	Used to determine if calculated laser wavelength should replace existing laser wavelength.
fceParamLwAmpThreshRejectLimit	8	64-bit floating pont	Minfloat – Maxfloat	unitless	Fringe count validation
fceParamMwAmpThreshRejectLimit	8	64-bit floating pont	Minfloat – Maxfloat	unitless	Fringe count validation
fceParamSwAmpThreshRejectLimit	8	64-bit floating pont	Minfloat – Maxfloat	unitless	Fringe count validation
fceParamLwDimensionThresholdLimit	8	64-bit floating pont	Minfloat – Maxfloat	unitless	Fringe count validation
fceParamMwDimensionThresholdLimit	8	64-bit floating pont	Minfloat – Maxfloat	unitless	Fringe count validation
fceParamSwDimensionThresholdLimit	8	64-bit floating pont	Minfloat – Maxfloat	unitless	Fringe count validation
fceParamLwFractionalFceThresholdLimit	8	64-bit floating pont	Minfloat – Maxfloat	unitless	Fringe count validation
fceParamMwFractionalFceThresholdLimit	8	64-bit floating pont	Minfloat – Maxfloat	unitless	Fringe count validation
fceParamSwFractionalFceThresholdLimit	8	64-bit floating pont	Minfloat – Maxfloat	unitless	Fringe count validation
fceParamMwGoodLinearFittingThreshLimi t	8	64-bit floating pont	Minfloat – Maxfloat	unitless	Fringe count validation

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
fceParamLwGoodLinearFittingThreshLimit	8	64-bit floating pont	Minfloat – Maxfloat	unitless	Fringe count validation
fceParamSwGoodLinearFittingThreshLimi t	8	64-bit floating pont	Minfloat – Maxfloat	unitless	Fringe count validation
fceParamLwMaxFceThreshLimit	8	64-bit floating pont	Minfloat – Maxfloat	unitless	Fringe count validation
fceParamMwMaxFceThreshLimit	8	64-bit floating pont	Minfloat – Maxfloat	unitless	Fringe count validation
fceParamSwMaxFceThreshLimit	8	64-bit floating pont	Minfloat – Maxfloat	unitless	Fringe count validation
postCalibrationSwA2	8	64-bit floating pont	Minfloat – Maxfloat	unitless	SW Parameter used to calculate Post Calibration correction matrix
postCalibrationMwA2	8	64-bit floating pont	Minfloat – Maxfloat	unitless	MW Parameter used to calculate Post Calibration correction mat
postCalibrationLwA2	8	64-bit floating pont	Minfloat – Maxfloat	unitless	LW Parameter used to calculate Post Calibration correction matrix
postCalibrationSwA4	8	64-bit floating pont	Minfloat – Maxfloat	unitless	SW Parameter used to calculate Post Calibration correction matrix
postCalibrationMwA4	8	64-bit floating pont	Minfloat – Maxfloat	unitless	MW Parameter used to calculate Post Calibration correction matrix
postCalibrationLwA4	8	64-bit floating pont	Minfloat – Maxfloat	unitless	LW Parameter used to calculate Post Calibration correction matrix
maximumFractionRejections	8	64-bit floating pont	Minfloat – Maxfloat	unitless	Fringe count validation
blackmanHarrisParamA0	8	64-bit floating pont	Minfloat – Maxfloat	unitless	Parameter used to calculate User Apodization correction matrix

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
blackmanHarrisParamA1	8	64-bit floating pont	Minfloat – Maxfloat	unitless	Parameter used to calculate User Apodization correction matrix
blackmanHarrisParamA2	8	64-bit floating pont	Minfloat – Maxfloat	unitless	Parameter used to calculate User Apodization correction matrix
blackmanHarrisParamA3	8	64-bit floating pont	Minfloat – Maxfloat	unitless	Parameter used to calculate User Apodization correction matrix
computedWavelengthRejectionThreshold	4	32-bit integer	MinInt – MaxInt	unitless	Threshold used to reject laser wavelengths during Neon Calibration
fceParamMwMaxIndex	4	32-bit integer	MinInt – MaxInt	unitless	Max index used in FCE detection
fceParamLwMaxIndex	4	32-bit integer	MinInt – MaxInt	unitless	Max index used in FCE detection
fceParamSwMaxIndex	4	32-bit integer	MinInt – MaxInt	unitless	Max index used in FCE detection
fceParamLwMinIndex	4	32-bit integer	MinInt – MaxInt	unitless	Min index used in FCE detection
fceParamMwMinIndex	4	32-bit integer	MinInt – MaxInt	unitless	Min index used in FCE detection
fceParamSwMinIndex	4	32-bit integer	MinInt – MaxInt	unitless	Min index used in FCE detection
fceParamDefaultDetectorBand	4	32-bit integer	MinInt – MaxInt	unitless	FCE default detector band
fceParamDefaultDetectorFOV	4	32-bit integer	MinInt – MaxInt	unitless	FCE default detector FOV
polarizationCorrectionFitOrder	4	32-bit integer	MinInt – MaxInt	unitless	Order of Polynomial fit used to calculate Polarization Curve

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
postCalibrationLwA1	4	32-bit integer	MinInt – MaxInt	unitless	LW Parameter used to calculate Post Calibration correction matrix
postCalibrationMwA1	4	32-bit integer	MinInt – MaxInt	unitless	MW Parameter used to calculate Post Calibration correction matrix
postCalibrationSwA1	4	32-bit integer	MinInt – MaxInt	unitless	SW Parameter used to calculate Post Calibration correction matrix
postCalibrationLwA3	4	32-bit integer	MinInt – MaxInt	unitless	LW Parameter used to calculate Post Calibration correction matrix
postCalibrationMwA3	4	32-bit integer	MinInt – MaxInt	unitless	MW Parameter used to calculate Post Calibration correction matrix
postCalibrationSwA3	4	32-bit integer	MinInt – MaxInt	unitless	SW Parameter used to calculate Post Calibration correction matrix
postCalibrationLwK	4	32-bit integer	MinInt – MaxInt	unitless	LW Parameter used to calculate Post Calibration correction matrix
postCalibrationLwK0	4	32-bit integer	MinInt – MaxInt	unitless	LW Parameter used to calculate Post Calibration correction matrix
postCalibrationLwK1	4	32-bit integer	MinInt – MaxInt	unitless	LW Parameter used to calculate Post Calibration correction matrix
postCalibrationMwK	4	32-bit integer	MinInt – MaxInt	unitless	MW Parameter used to calculate Post Calibration correction matrix

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
postCalibrationMwK0	4	32-bit integer	MinInt – MaxInt	unitless	MW Parameter used to calculate Post Calibration correction matrix
postCalibrationMwK1	4	32-bit integer	MinInt – MaxInt	unitless	MW Parameter used to calculate Post Calibration correction matrix
postCalibrationSwK	4	32-bit integer	MinInt – MaxInt	unitless	SW Parameter used to calculate Post Calibration correction matrix
postCalibrationSwK0	4	32-bit integer	MinInt – MaxInt	unitless	SW Parameter used to calculate Post Calibration correction matrix
postCalibrationSwK1	4	32-bit integer	MinInt – MaxInt	unitless	SW Parameter used to calculate Post Calibration correction matrix
numberOpdOverscanSamples	4	32-bit integer	MinInt – MaxInt	unitless	Number of samples of trim from each end of the interferogram
calibrationTargetDataValidityDuration	8	64-bit floating point	Minfloat – Maxfloat	unitless	Absolute temporal displacement to ES under calibration
calibrationTargetDataValidityDurationTolerance	8	64-bit floating point	Minfloat – Maxfloat	unitless	Max temporal displacement of FOR under calibration
elapsedTimeForValidScienceTlmData	8	64-bit floating point	Minfloat – Maxfloat	unitless	Absolute temporal displacement to ES under calibration
elapsedTimeForValidSpaceTargetTemperature	8	64-bit floating point	Minfloat – Maxfloat	unitless	Max temporal displacement of FOR under calibration
scienceTlmTimeDifferenceTolerance	8	64-bit floating point	Minfloat – Maxfloat	unitless	Absolute temporal displacement

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
spaceTargetTemperatureTimeDifferenceTolerance	8	64-bit floating point	Minfloat – Maxfloat	unitless	Max temporal displacement for temperature correlation
maxLunarRadiance	4	32-bit floating point	Minfloat – Maxfloat	unitless	Discards DS measurements above this threshold
movingAverageWindowSize	4	32-bit integer	MinInt – MaxInt	unitless	Specifies the reference window size (ES are half that)
maximumNumberOfFceTriesDuringIctDsSynchronization	4	32-bit integer	MinInt – MaxInt	unitless	Max fringe counts to try in both directions
maximumNumberOfIctDsSynchronizationTries	4	32-bit integer	MinInt – MaxInt	unitless	Max ES window depth to seek valid measurement
dsTemperatureOrigin	4	(enum) 32-bit integer	MinInt – MaxInt	unitless	Specifies origin for file
instrumentTemperatureOrigin	4	(enum) 32-bit integer	MinInt – MaxInt	unitless	Specifies source of value
ictEmissivityOrigin	4	(enum) 32-bit integer	MinInt – MaxInt	unitless	Specifies emissivities are used from main configuration file
allowCalibrationTargetDataMissing	1	bool	0 or 1	unitless	Allows for missing ICT/DS references measurements
allowEngineeringDataPacketsMissing	1	bool	0 or 1	unitless	Allows for missing reference measurements
allowSpaceTargetTemperatureDataMissing	1	bool	0 or 1	unitless	Allows for missing reference measurements
disableTimeStampBasedMovingWindow	1	bool	0 or 1	unitless	Adds additional constrains for packet timing
performRadiometricCalibration	1	bool	0 or 1	unitless	Allows for radiometric calibration
skipIctDsPhaseSynchronization	1	bool	0 or 1	unitless	Phase aligns initial ICT/DS reference window

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
useDeepSpaceRadiance	1	bool	0 or 1	unitless	Specifies calibration equation to consider cold target
useIctEnvironmentalCorrectionModel	1	bool	0 or 1	unitless	Sets ICT temp to include component contributions
useWavenumberDependentDsEmissivity	1	bool	0 or 1	unitless	Specifies emissivities are used from main config file
useWavenumberDependentIctEmissivity	1	bool	0 or 1	unitless	Specifies emissivities are used from main config file
allowScienceTlmDataMissing	1	bool	0 or 1	unitless	Allows for missing reference measurement
monitorLunarIntrusion	1	bool	0 or 1	unitless	Discards DS measurements about a threshold
edrMwDeltaSigma	8	64-bit floating point	Minfloat – Maxfloat	unitless	Specifies wavenumber spacing for Resampling for MW
edrLwDeltaSigma	8	64-bit floating point	Minfloat – Maxfloat	unitless	Specifies wavenumber spacing for Resampling for LW
edrSwDeltaSigma	8	64-bit floating point	Minfloat – Maxfloat	unitless	Specifies wavenumber spacing for Resampling for SW
edrSwMinimumWavenumber	8	64-bit floating point	Minfloat – Maxfloat	unitless	Specifies the low clipping range for SW
edrLwMaximumWavenumber	8	64-bit floating point	Minfloat – Maxfloat	unitless	Specifies the high clipping range for LW
edrMwMaximumWavenumber	8	64-bit floating point	Minfloat – Maxfloat	unitless	Specifies the high clipping range for MW
edrSwMaximumWavenumber	8	64-bit floating point	Minfloat – Maxfloat	unitless	Specifies the high clipping range for SW

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
edrMwMinimumWavenumber	8	64-bit floating point	Minfloat – Maxfloat	unitless	Specifies the low clipping range for MW
edrLwMinimumWavenumber	8	64-bit floating point	Minfloat – Maxfloat	unitless	Specifies the low clipping range for LW
impulseNoiseCountThreshold	4	32-bit integer	MinInt – MaxInt	unitless	Specifies limit to flag
edrSwNumberOfPoints	4	32-bit integer	MinInt – MaxInt	unitless	Specifies the number of points in range for SW
edrMwNumberOfPoints	4	32-bit integer	MinInt – MaxInt	unitless	Specifies the number of points in range for MW
edrLwNumberOfPoints	4	32-bit integer	MinInt – MaxInt	unitless	Specifies the number of points in range for LW
apodizationType	4	(enum) 32-bit integer	MinInt – MaxInt	unitless	Choice of apodization
laserDiodeWavelengthOrigin	4	(enum) 32-bit integer	MinInt – MaxInt	unitless	Identifies the source for measurement (telemetry or config)
applyPolarizationCorrections	1	bool	0 or 1	unitless	Specifies the application of scene specific correction
applyPostCalibrationFilterMatrixCorrection	1	bool	0 or 1	unitless	Specifies the application of matrix correction
applyIlsFovEffectsCorrection	1	bool	0 or 1	unitless	Specifies the application of ILS corrections
applyIlsResidualEffectCorrection	1	bool	0 or 1	unitless	Specifies the application of ILS residual correction
applyResamplingMatrix	1	bool	0 or 1	unitless	Specifies the application of resampling corrections
disableLaserMonitoring	1	bool	0 or 1	unitless	Specifies the monitoring for laser drift
performFringeCountErrorHandling	1	bool	0 or 1	unitless	Enables FCE Handling

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
performPolarizationCorrection	1	bool	0 or 1	unitless	Allows for polarization correction
performSpectralAndSpatialCorrection	1	bool	0 or 1	unitless	Allows spectral and spatial corrections
useSavedMatrices	1	bool	0 or 1	unitless	Allows for use of saved matrices
userSelectedClipping	1	bool	0 or 1	unitless	Set up clip guard bands
calibrationWindowSize	4	32-bit integer	MinInt – MaxInt	unitless	Calibration window size
outputStyle	4	32-bit integer	MinInt – MaxInt	unitless	Output style
calibrationType	4	32-bit integer	MinInt – MaxInt	unitless	Calibration type
maxBufferDepth	4	32-bit integer	MinInt – MaxInt	unitless	Maximum buffer depth
windowManagementStyle	4	32-bit integer	MinInt – MaxInt	unitless	Window management style
instrumentLocation	4	(enum) 32-bit integer	MinInt – MaxInt	unitless	Instrument location
detector	27	bool[9][3]	0 or 1	unitless	Detector
fieldOfRegard	34	bool[34]	0 or 1	unitless	Field of regard
requestNEdN	1	bool	0 or 1	unitless	Request
outputStyle_All	1	bool	0 or 1	unitless	Output style for all
outputStyle_Discard	1	bool	0 or 1	unitless	Output style for discard
dsTempBench	8	64-bit floating point	Minfloat – Maxfloat	unitless	Deep space temperature bench testing value
beamsplitterTempBench	8	64-bit floating point	Minfloat – Maxfloat	unitless	Beamsplitter temperature bench testing value
beamsplitterTempChamber	8	64-bit floating point	Minfloat – Maxfloat	unitless	Beamsplitter temperature chamber value
dsTempChamber	8	64-bit floating point	Minfloat – Maxfloat	unitless	Deep space temperature chamber value

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
ictTempBench	8	64-bit floating point	Minfloat – Maxfloat	unitless	Internal calibration target temperature bench testing value
ictTempChamber	8	64-bit floating point	Minfloat – Maxfloat	unitless	Internal calibration target temperature chamber value
meanDsEmissivityBench	8	64-bit floating point	Minfloat – Maxfloat	unitless	Mean deep space emissivity bench testing value
meanDsEmissivityChamber	8	64-bit floating point	Minfloat – Maxfloat	unitless	Mean deep space emissivity chamber testing value
omaTempBench	8	64-bit floating point	Minfloat – Maxfloat	unitless	OMA temperature value for bench testing
omaTempChamber	8	64-bit floating point	Minfloat – Maxfloat	unitless	OMA temperature value for chamber testing
scanBaffleTempBench	8	64-bit floating point	Minfloat – Maxfloat	unitless	Scan baffle temperature for bench testing
scanBaffleTempChamber	8	64-bit floating point	Minfloat – Maxfloat	unitless	Scan baffle temperature for the chamber
dsEffectiveEmissivityLW	6912	64-bit floating point	Minfloat – Maxfloat	unitless	Deep space effective emissivity long wave value 1 Dimensional Array Size of Dimension(s): 864
dsEffectiveEmissivityMW	4224	64-bit floating point	Minfloat – Maxfloat	unitless	Deep space effective emissivity medium wave value 1 Dimensional Array Size of Dimension(s): 528

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
dsEffectiveEmissivitySW	1600	64-bit floating point	Minfloat – Maxfloat	unitless	Deep space effective emissivity small wave value 1 Dimensional Array Size of Dimension(s): 200
laserDiodeWavelength	8	64-bit floating point	Minfloat – Maxfloat	unitless	Laser frequency used in absence of measurement
spaceTargetTemperatureDriftLimit	8	64-bit floating point	Minfloat – Maxfloat	unitless	Specifies limit to flag
lwBenchMeanIctEmissivity	8	64-bit floating point	Minfloat – Maxfloat	unitless	LW ICT Emissivity (Instrument Location = Bench)
lwChamberMeanIctEmissivity	8	64-bit floating point	Minfloat – Maxfloat	unitless	LW ICT Emissivity (Instrument Location = Chamber)
mwChamberMeanIctEmissivity	8	64-bit floating point	Minfloat – Maxfloat	unitless	MW ICT Emissivity (Instrument Location = Chamber)
swChamberMeanIctEmissivity	8	64-bit floating point	Minfloat – Maxfloat	unitless	SW ICT Emissivity (Instrument Location = Chamber)
swBenchMeanIctEmissivity	8	64-bit floating point	Minfloat – Maxfloat	unitless	SW ICT Emissivity (Instrument Location = Bench)
mwBenchMeanIctEmissivity	8	64-bit floating point	Minfloat – Maxfloat	unitless	MW ICT Emissivity (Instrument Location = Bench)
benchMeanIctEmissivity	4	32-bit floating point	Minfloat – Maxfloat	unitless	
chamberMeanIctEmissivity	4	32-bit floating point	Minfloat – Maxfloat	unitless	
forIdentifierDs	4	32-bit integer	MinInt – MaxInt	unitless	Specifies the DS of the ICT reference measurement

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
forIdentifierIct	4	32-bit integer	MinInt – MaxInt	unitless	Specifies the FOR of the ICT reference measurement
forwardSweepDirectionIdentifier	4	32-bit integer	MinInt – MaxInt	unitless	"0" by convention
lwDataPointsUndecimatedInterferogram	4	32-bit integer	MinInt – MaxInt	unitless	LW data points undecimated
lwDecimationFactor	4	32-bit integer	MinInt – MaxInt	unitless	LW decimation factor
mwDataPointsDecimatedInterferogram	4	32-bit integer	MinInt – MaxInt	unitless	MW data points decimated
mwDataPointsUndecimatedInterferogram	4	32-bit integer	MinInt – MaxInt	unitless	MW data points undecimated
swDataPointsDecimatedInterferogram	4	32-bit integer	MinInt – MaxInt	unitless	SW data points decimated
swDataPointsUndecimatedInterferogram	4	32-bit integer	MinInt – MaxInt	unitless	SW data points undecimated
mwDecimationFactor	4	32-bit integer	MinInt – MaxInt	unitless	MW decimation factor
numberFOR	4	32-bit integer	MinInt – MaxInt	unitless	Number of FOR
numberSpectralBands	4	32-bit integer	MinInt – MaxInt	unitless	Number of spectral bands
numberSamplesPerLaserWavelength	4	32-bit integer	MinInt – MaxInt	unitless	Number of samples per wavelength
numberFOV	4	32-bit integer	MinInt – MaxInt	unitless	Number of FOV
reverseSweepDirectionIdentifier	4	32-bit integer	MinInt – MaxInt	unitless	"1" by convention
swDecimationFactor	4	32-bit integer	MinInt – MaxInt	unitless	SW decimation factor
lwDataPointsDecimatedInterferogram	4	32-bit integer	MinInt – MaxInt	unitless	LW data points decimated
dataPointsUndecimatedInterferogram	12	32-bit integer	MinInt – MaxInt	unitless	Dimensions Correspond to Bands in this order: “LW”, “MW”, “SW” 1 Dimensional Array: Size of Dimension(s): 3

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
decimationFactor	12	32-bit integer	MinInt – MaxInt	unitless	Dimensions Correspond to Bands in this order: “LW”, “MW”, “SW” 1 Dimensional Array: Size of Dimension(s): 3
engineeringPacketAPID	4	32-bit integer	MinInt – MaxInt	unitless	
sciencePacketAPID	4	32-bit integer	MinInt – MaxInt	unitless	
forwardSweepDirectionLabel	2	8-bit character	“F”	unitless	"F" for forward 1 Dimensional Array: Size of Dimension(s): 2
lwBandLabel	3	8-bit character	“LW”	unitless	"LW" 1 Dimensional Array: Size of Dimension(s): 3
mwBandLabel	3	8-bit character	“MW”	unitless	"MW" 1 Dimensional Array: Size of Dimension(s): 3

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
reverseSweepDirectionLabel	2	8-bit character	“R”	unitless	"R" for reverse 1 Dimensional Array: Size of Dimension(s): 3
swBandLabel	3	8-bit character	“SW”	unitless	"SW" 1 Dimensional Array: Size of Dimension(s): 3
timingSequenceErrorThreshold	8	64-bit integer	>=0	seconds	Amount of time scan start times are allowed to vary from eight seconds with respect to adjacent scans’ start times
invalidNeonCalibrationPercentageThreshold	8	64-bit floating point	>=0	unitless	Percentage of the number of scans by the number of EV FORs by the number of FOVs by the number of bands neon calibration values are allowed to change
numOfValidPRTTempThreshold	4	32-bit integer	Minint - Maxint	unitless	Number of valid PRT temperature threshold
impulseNoiseCountThresh	4	32-bit integer	Minint - Maxint	unitless	Impulse noise count threshold
ictTempLowThreshold	4	32-bit integer	Minint - Maxint	**EDFCB8-TBD-10511**	ICT low temperature threshold
ictTempHighThreshold	4	32-bit integer	Minint - Maxint	**EDFCB8-TBD-10511**	ICT high temperature threshold
ictTempStabilityThreshold	4	32-bit floating point	Minint - Maxint	**EDFCB8-TBD-10511**	ICT temperature stability threshold

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
ictTempConsistencyThreshold	4	32-bit floating point	Minint - Maxint	**EDFCB8-TBD-10511**	ICT temperature consistency threshold

3.2.2.4 OMPS PCs

Table 3.2.2.4-1, OMPS PCs Tables List

Name	Collection Short Name	
OMPS Nadir Profile IP Algorithm Coefficients	OMPS-NP-IP-AC	
OMPS Total Column SDR Calibration Coefficients	OMPS-TC-SDR-CC	
OMPS Nadir Profile SDR Calibration Coefficients	OMPS-NP-SDR-CC	
OMPS Total Column EDR Algorithm Coefficients	OMPS-TC-EDR-AC	
OMPS Total Column SDR Calibration Coefficients	EDFCB8-TBD-10519	

3.2.2.4.1 OMPS Nadir Profile IP PCs

Table 3.2.2.4.1-1, Nadir Profile IP Parameters

EDFCB8-TBD-10271

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.2.2.4.2 OMPS Total Column SDR PCs

Table 3.2.2.4.2-1, OMPS Total Column SDR Parameters

EDFCB8-TBD- 10272

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.2.2.4.3 OMPS Nadir Profile SDR Calibration Coefficients

Table 3.2.2.4.3-1, OMPS Nadir Profile SDR Parameters

EDFCB8-TBD-10378

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.2.2.4.4 OMPS Total Column EDR Algorithm Coefficients

Table 3.2.2.4.4-1, OMPS Total Column EDR Parameters

EDFCB8-TBD-10379

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.2.2.4.5 OMPS Total Column SDR Calibration Coefficients

Table 3.2.2.4.4-1, OMPS Total Column SDR Calibration Coefficients

EDFCB8-TBD-10519

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.2.2.5 VIIRS PCs

3.2.2.5.1 VIIRS SDR PCs

Table 3.2.2.5.1-1, VIIRS SDR Parameters

EDFCB8-TBD-10274

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments

3.2.2.5.2 VIIRS Active Fires ARP Tunable Parameters

Table 3.2.2.5.2-1, VIIRS Active Fires ARP Tunable Parameters

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
aggregationBound	16	int[4]	0-2610	EDFCB8-TBD-10275	The aggregation boundary values (determines bow-tie width based upon the current column)
searchBound	8	int[2]	0-1000	EDFCB8-TBD-10275	The search boundary values (determines if the pixel is within search bounds)
aWidth	12	int[3]	0-1000	EDFCB8-TBD-10275	The bowtie boundary width (determines bow-tie width based upon the current column)
maxDistance	4	float	0.0-1000.0	EDFCB8-TBD-10275	The max distance, which is a float (greater than the configurable distance)
interval	36	int[9]	0-1000	EDFCB8-TBD-10275	The bowtie interval
prevPixel	36	int[9]	0-1000	EDFCB8-TBD-10275	The previous pixels
m13_confidence_day_max	4	float	0.0-1000.0	EDFCB8-TBD-10275	m13 confidence max (day)
m13_confidence_day_min	4	float	0.0-1000.0	EDFCB8-TBD-10275	m13 confidence min (day)

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
m13_confidence_night_max	4	float	0.0-1000.0	EDFCB8-TBD-10275	m13 confidence max (night)
m13_confidence_night_min	4	float	0.0-1000.0	EDFCB8-TBD-10275	m13 confidence min (night)
m13_deviation_confidence_max	4	float	0.0-1000.0	EDFCB8-TBD-10275	m13 deviation confidence max
m13_deviation_confidence_min	4	float	0.0-1000.0	EDFCB8-TBD-10275	m13 deviation confidence min
dt_confidence_max	4	float	0.0-1000.0	EDFCB8-TBD-10275	m13 - m15 confidence max
dt_confidence_min	4	float	0.0-1000.0	EDFCB8-TBD-10275	m13 - m15 confidence min
adj_water_confidence_max	4	float	0.0-1000.0	EDFCB8-TBD-10275	adjacent water confidence max
adj_water_confidence_min	4	float	0.0-1000.0	EDFCB8-TBD-10275	adjacent water confidence min
adj_cloud_confidence_max	4	float	0.0-1000.0	EDFCB8-TBD-10275	adjacent cloud confidence max
adj_cloud_confidence_min	4	float	0.0-1000.0	EDFCB8-TBD-10275	adjacent cloud confidence min

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
m13_bt_threshold	4	float	0.0-1000.0	EDFCB8-TBD-10275	m13 brightness temperature threshold
m13_bt_saturation	4	float	0.0-1000.0	EDFCB8-TBD-10275	m13 brightness temperature saturation
m15_bt_saturation	4	float	0.0-1000.0	EDFCB8-TBD-10275	m15 brightness temperature saturation
m16_bt_saturation	4	float	0.0-1000.0	EDFCB8-TBD-10275	m16 brightness temperature saturation
test2_sigma	4	float	0.0-1000.0	EDFCB8-TBD-10275	Test 2 sigma value
test4_sigma	4	float	0.0-1000.0	EDFCB8-TBD-10275	Test 4 sigma value
test6_sigma	4	float	0.0-1000.0	EDFCB8-TBD-10275	Test 6 sigma value
bkgoverride_fvalid	4	float	0.0-1000.0	EDFCB8-TBD-10275	background override value for fvalid
bkgoverride_nbfire	4	int	0-1	EDFCB8-TBD-10275	background override value for nb fire
bkgoverride_MeanM13	4	float	0.0-1000.0	EDFCB8-TBD-10275	background override value for mean of m13

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
bkgoverride_MadM13	4	float	0.0-1000.0	EDFCB8-TBD-10275	background override value for mean absolute deviation
bkgoverride_m7	4	float	0.0-1000.0	EDFCB8-TBD-10275	background override value of m7
bkgoverride_sigmaM13	4	float	0.0-1000.0	EDFCB8-TBD-10275	Background override sigma value for m13
glintlevel3_limit	4	float	0.0-1000.0	EDFCB8-TBD-10275	glint level 3 limit
glintlevel2_limit	4	float	0.0-1000.0	EDFCB8-TBD-10275	glint level 2 limit
glintlevel1_limit	4	float	0.0-1000.0	EDFCB8-TBD-10275	glint level 1 limit
glintlevel2_m5	4	float	0.0-1000.0	EDFCB8-TBD-10275	Glint level 2 m5 limit
glintlevel2_m7	4	float	0.0-1000.0	EDFCB8-TBD-10275	Glint level 2 m7 limit
glintlevel2_m11	4	float	0.0-1000.0	EDFCB8-TBD-10275	Glint level 2 m11 limit
bkgwater_m7	4	float	0.0-1000.0	EDFCB8-TBD-10275	Background water limit for m7

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
bkgwater_m11	4	float	0.0-1000.0	EDFCB8-TBD-10275	Background water limit for m11
bkgwater_NDVI	4	float	0.0-1000.0	EDFCB8-TBD-10275	Background water limit for NDVI
iscloud_test1	4	float	0.0-1000.0	EDFCB8-TBD-10275	Test 1 for internal cloud mask
iscloud_test2	4	float	0.0-1000.0	EDFCB8-TBD-10275	Test 2 for internal cloud mask
iscloud_test3	4	float	0.0-1000.0	EDFCB8-TBD-10275	Test 3 for internal cloud mask
iscloud_test4	4	float	0.0-1000.0	EDFCB8-TBD-10275	Test 4 for internal cloud mask
max_win_size	4	int	0-1000	EDFCB8-TBD-10275	Maximum window size
min_win_size	4	int	0-1000	EDFCB8-TBD-10275	Minimum window size
valid_win_ratio	4	float	0.0-1000.0	EDFCB8-TBD-10275	Valid window ratio
valid_win_size	4	int	0-1000	EDFCB8-TBD-10275	Valid window size

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
day_thresh_PF_m13	4	float	0.0-1000.0	EDFCB8-TBD-10275	Potential fire threshold for m13 (was m13b)
day_thresh_PF_DT	4	float	0.0-1000.0	EDFCB8-TBD-10275	potential fire threshold for m15 - m13
day_thresh_PF_m7	4	float	0.0-1000.0	EDFCB8-TBD-10275	potential fire threshold for m7
day_thresh_bkg_m13	4	float	0.0-1000.0	EDFCB8-TBD-10275	Background fire threshold for m13 (was m13b)
day_thresh_bkg_DT	4	float	0.0-1000.0	EDFCB8-TBD-10275	Background fire threshold for m15 - m13
day_thresh_m13	4	float	0.0-1000.0	EDFCB8-TBD-10275	Threshold for m13 (was threshold m13b)
day_min_bkg_DT	4	float	0.0-1000.0	EDFCB8-TBD-10275	minimum background for m15 - m13
day_devrp_m15	4	float	0.0-1000.0	EDFCB8-TBD-10275	Devrp value for m15 day granules
night_thresh_PF_m13	4	float	0.0-1000.0	EDFCB8-TBD-10275	Potential fire threshold for m13 (was m13b)
night_thresh_PF_DT	4	float	0.0-1000.0	EDFCB8-TBD-10275	potential fire threshold for m15 - m13

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
night_thresh_PF_m7	4	float	0.0-1000.0	EDFCB8-TBD-10275	potential fire threshold for m7
night_thresh_bkg_m13	4	float	0.0-1000.0	EDFCB8-TBD-10275	Background fire threshold for m13 (was m13b)
night_thresh_bkg_DT	4	float	0.0-1000.0	EDFCB8-TBD-10275	Background fire threshold for m15 - m13
night_thresh_m13	4	float	0.0-1000.0	EDFCB8-TBD-10275	Threshold for m13 (was threshold m13b)
night_min_bkg_DT	4	float	0.0-1000.0	EDFCB8-TBD-10275	minimum background for m15 - m13
night_devrp_m15	4	float	0.0-1000.0	EDFCB8-TBD-10275	Devrp value for m15 night granules

3.2.2.5.3 DELETED

3.2.2.5.4 DELETED

3.2.2.5.5 VIIRS CBH Tunable Parameters

Table 3.2.2.5.5-1, VIIRS Tunable Parameters

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
minCbh	4	float	0.0	km	Cloud base height min
maxCbh	4	float	20.0	km	Cloud base height max
c0	4	float	-0.006656	m^2/g	Ice Water Path (IWP) contants in equation IWP = Cot/[c_0 + (c_1 /2reff)]
c1	4	float	3.686	m^2 Micrometers/g	Ice Water Path (IWP) contants in equation IWP = Cot/[c_0 + (c_1 /2reff)]
c2	4	float	20.0	Celsius	Ice Water Concentration Constant
c3	4	float	2.455	Unitless	Ice Water Concentration Constant
c4	4	float	-0.2443	Unitless	Ice Water Concentration Constant
c5	4	float	0.001	Unitless	Ice Water Concentration Constant
c6	4	float	-7.6	Unitless	Ice Water Concentration Constant
c7	4	float	4.0	Unitless	Ice Water Concentration Constant
d0	4	float	2.0	gm/m^2	Liquid Water Concentration Constant
d3	4	float	3.0	Micrometers	Liquid Water Concentration Constant
minCtt	4	float	-60.0	Celcius	Cloud Top Temperature Minimum

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
maxCtt	4	float	-20.0	Celcius	Cloud Top Temperature Maximum

3.2.2.5.6 VIIRS CCL Tunable Parameters

Table 3.2.2.5.6-1, VIIRS CCL Tunable Parameters

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
wgtCth	4	float	0.0-1000.0	km	K-Means algorithm cluster assignment weight for cloud top height
wgtCot	4	float	0.0-1000.0	Unitless	K-Means algorithm cluster assignment weight for cloud optical thickness
wgtEps	4	float	0.0-1000.0	Micrometers	K-Means algorithm cluster assignment weight for cloud top height
wgtPhase	4	float	0.0-1000.0	Unitless	K-Means algorithm cluster assignment weight for cloud top height
EkmCthThresh1	4	float	0.0-1000.0	Unitless	Ekm_first_guess() threshold on CTH for not splitting layers
EkmCthThresh2	4	float	0.0-1000.0	Unitless	Ekm_first_guess() threshold on CTH for not splitting layers
EkmCthThresh3	4	float	0.0-1000.0	Unitless	Ekm_first_guess() threshold on CTH for not splitting layers
Cluster_Flag_Threshold	4	float	0.0-1000.0	Unitless	Percentage of cloudy product pixels
CTH_LOW_THRESH	4	float	0.0-1000.0	Unitless	Mbkm_first_guess() lower CTH threshold
CTH_MID_THRESH	4	float	0.0-1000.0	Unitless	Mbkm_first_guess() middle CTH threshold

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
CTH_HIGH_THRESH	4	float	0.0-1000.0	Unitless	Mbkm_first_guess() high CTH threshold
PHASE_WATER	4	float	0.0-1000.0	Unitless	Water cloud
PHASE_MIXED	4	float	0.0-1000.0	Unitless	Water and ice cloud
PHASE_ICE	4	float	0.0-1000.0	Unitless	Ice cloud
gracefulDegradationMode	1	int	0-255	Unitless	Switch for handling missing pixel data
kmeansAlgorithm	1	int	0-255	Unitless	Switch to select the first guess algorithm for layer analysis
kmeansMaxIter	1	int	0-255	Unitless	Maximum number of iterations
clusterConvergCrit	1	int	0-255	Unitless	Convergence criteria = number of pixel reassignments

3.2.2.5.7 VIIRS Cloud Mask IP Tunable Parameters

Table 3.2.2.5.7-1, VIIRS Cloud Mask IP Tunable Parameters

EDFCB8-TBD-10280

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
maxSolarZenith	4	float	0.0-1000.0	radians	
snow_thresh_BTM15	4	float	0.0-1000.0	Kelvin	
snow_thresh_RM7	4	float	0.0-1000.0	unitless	
ndsi_snow	4	float	0.0-1000.0	unitless	
snow_thinCiM9	4	float	0.0-1000.0	unitless	
snow_thinCiM15	4	float	0.0-1000.0	unitless	
snow_thresh_BTM14_M15	4	float	0.0-1000.0	Kelvin	
snow_thresh_BTM12_M15	4	float	0.0-1000.0	Kelvin	
HiElevThresh	4	float	0.0-2050.0	Meters	minimum high terrain value required for performing snow/day and snow/night M12 – M15 emission difference test
I4varthres	4	float	0.0-1000.0		I4 spatial variability brightness temperature thresholds
I5varthres	4	float	0.0-1000.0		I5 spatial variability brightness temperature thresholds

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
btdm14m15WaterThresh	4	float	0.0-1000.0	EDFCB8-TBD-10280	BT water threshold
fire_thresh_k	4	float	0.0-1000.0	EDFCB8-TBD-10280	Aero shadow Fire threshold
fire_thresh_diff	4	float	0.0-1000.0	EDFCB8-TBD-10280	Aero shadow Fire threshold
dust_thresh	4	float	-50.0-1000.0	EDFCB8-TBD-10280	Aero shadow Fire threshold
aero_thresh_0	4	float	0.0-1000.0	EDFCB8-TBD-10280	Aero shadow Fire threshold
aero_thresh_1	4	float	0.0-1000.0	EDFCB8-TBD-10280	Aero shadow Fire threshold
shadnir1	4	float	0.0-1000.0	EDFCB8-TBD-10280	Aero shadow Fire threshold
shadnir2	4	float	0.0-1000.0	EDFCB8-TBD-10280	Aero shadow Fire threshold
shadratio	4	float	0.0-1000.0	EDFCB8-TBD-10280	Aero shadow Fire threshold
shad124	4	float	0.0-1000.0	EDFCB8-TBD-10280	

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
shadM71	4	float	0.0-1000.0	EDFCB8-TBD-10280	
shadM72	4	float	0.0-1000.0	EDFCB8-TBD-10280	
LD_I1_thresh	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CD_I1_thresh	4	float	0.0-1000.0	EDFCB8-TBD-10280	
WD_I2_thresh	4	float	0.0-1000.0	EDFCB8-TBD-10280	
DD_I2_thresh	4	float	0.0-1000.0	EDFCB8-TBD-10280	Desert Day BT threshold
LD_BTD_thresh	4	float	-62.0-1000.0	EDFCB8-TBD-10280	Land Day BT threshold
CD_BTD_thresh	4	float	-62.0-1000.0	EDFCB8-TBD-10280	
WD_BTD_thresh	4	float	-58.0-1000.0	EDFCB8-TBD-10280	
DD_BTD_thresh	4	float	-68.0-1000.0	EDFCB8-TBD-10280	

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
LN_BTD_thresh	4	float	0.0-1000.0	EDFCB8-TBD-10280	
WN_BTD_thresh	4	float	0.0-1000.0	EDFCB8-TBD-10280	
SD_BTD_thresh	4	float	0.0-1000.0	EDFCB8-TBD-10280	
SN_BTD_thresh	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CD_M15_M12_Hi	4	float	-60.0-1000.0	EDFCB8-TBD-10280	
CD_M15_M12_Mid	4	float	-62.0-1000.0	EDFCB8-TBD-10280	
CD_M15_M12_Lo	4	float	-64.0-1000.0	EDFCB8-TBD-10280	
CD_M15_M16_Mid	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CD_M5_Hi	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CD_M5_Mid	4	float	0.0-1000.0	EDFCB8-TBD-10280	

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
CD_M5_Lo	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CD_M9_Hi	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CD_M9_Mid	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CD_M9_Lo	4	float	0.0-1000.0	EDFCB8-TBD-10280	
DD_M15_M12_A1	4	float	0.0-1000.0	EDFCB8-TBD-10280	
DD_M15_M12_B1	4	float	-80.0-1000.0	EDFCB8-TBD-10280	
DD_M15_M12_A2	4	float	0.0-1000.0	EDFCB8-TBD-10280	
DD_M15_M12_B2	4	float	-71.0-1000.0	EDFCB8-TBD-10280	
DD_M15_M12_TPIWV_switch	4	float	0.0-1000.0	EDFCB8-TBD-10280	
DD_M15_M16_Mid	4	float	0.0-1000.0	EDFCB8-TBD-10280	

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
DD_M1_Hi	4	float	0.0-1000.0	EDFCB8-TBD-10280	
DD_M1_Mid	4	float	0.0-1000.0	EDFCB8-TBD-10280	
DD_M1_Lo	4	float	0.0-1000.0	EDFCB8-TBD-10280	
DD_M9_TPIWV_cutoff	4	float	0.0-1000.0	EDFCB8-TBD-10280	
DD_M9_Hi	4	float	0.0-1000.0	EDFCB8-TBD-10280	
DD_M9_Mid	4	float	0.0-1000.0	EDFCB8-TBD-10280	Desert Day threshold
DD_M9_Lo	4	float	0.0-1000.0	EDFCB8-TBD-10280	Desert Day threshold
LD_M12_M13_Hi	4	float	0.0-1000.0	EDFCB8-TBD-10280	Land Day threshold
LD_M12_M13_Mid	4	float	0.0-1000.0	EDFCB8-TBD-10280	Land Day threshold
LD_M12_M13_Lo	4	float	0.0-1000.0	EDFCB8-TBD-10280	Land Day threshold

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
LD_M15_M12_Hi	4	float	-66.0-1000.0	EDFCB8-TBD-10280	Land Day threshold
LD_M15_M12_Mid	4	float	-68.0-1000.0	EDFCB8-TBD-10280	Land Day threshold
LD_M15_M12_Lo	4	float	-70.0-1000.0	EDFCB8-TBD-10280	Land Day threshold
LD_M15_M16_Mid	4	float	0.0-1000.0	EDFCB8-TBD-10280	Land Day threshold
LD_M5_GEMI_THRESH	4	float	0.0-1000.0	EDFCB8-TBD-10280	Land Day threshold
VCM_TOA_NDVI_THRESH	4	float	0.0-1000.0	EDFCB8-TBD-10280	VCM toc ndvi threshold
LD_M5_M7_Hi	4	float	0.0-1000.0	EDFCB8-TBD-10280	Land Day threshold
LD_M5_M7_Mid	4	float	0.0-1000.0	EDFCB8-TBD-10280	Land Day threshold
LD_M5_M7_Lo	4	float	0.0-1000.0	EDFCB8-TBD-10280	
LD_M9_Hi	4	float	0.0-1000.0	EDFCB8-TBD-10280	

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
LD_M9_Mid	4	float	0.0-1000.0	EDFCB8-TBD-10280	
LD_M9_Lo	4	float	0.0-1000.0	EDFCB8-TBD-10280	
LN_M12_M16_Hi	4	float	0.0-1000.0	EDFCB8-TBD-10280	
LN_M12_M16_Mid	4	float	0.0-1000.0	EDFCB8-TBD-10280	
LN_M12_M16_Lo	4	float	0.0-1000.0	EDFCB8-TBD-10280	
LN_M15_M12_Hi	4	float	0.0-1000.0	EDFCB8-TBD-10280	
LN_M15_M12_Mid	4	float	0.0-1000.0	EDFCB8-TBD-10280	
LN_M15_M12_Lo	4	float	0.0-1000.0	EDFCB8-TBD-10280	
LN_M15_M16_Mid	4	float	0.0-1000.0	EDFCB8-TBD-10280	
SD_M12_M13_Hi	4	float	0.0-1000.0	EDFCB8-TBD-10280	

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
SD_M12_M13_Mid	4	float	0.0-1000.0	EDFCB8-TBD-10280	
SD_M12_M13_Lo	4	float	0.0-1000.0	EDFCB8-TBD-10280	
SD_M12_M15_Hi	4	float	0.0-1000.0	EDFCB8-TBD-10280	
SD_M12_M15_Mid	4	float	0.0-1000.0	EDFCB8-TBD-10280	
SD_M12_M15_Lo	4	float	0.0-1000.0	EDFCB8-TBD-10280	
SD_M12_M15_HiHiElev	4	float	0.0-1000.0	EDFCB8-TBD-10280	
SD_M12_M15_MidHiElev	4	float	0.0-1000.0	EDFCB8-TBD-10280	
SD_M12_M15_LoHiElev	4	float	0.0-1000.0	EDFCB8-TBD-10280	
SD_M9_Hi	4	float	0.0-1000.0	EDFCB8-TBD-10280	Snow Day threshold
SD_M9_Mid	4	float	0.0-1000.0	EDFCB8-TBD-10280	Snow Day threshold

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
SD_M9_Lo	4	float	0.0-1000.0	EDFCB8-TBD-10280	Snow Day threshold
SN_M12_M16_Hi	4	float	0.0-1000.0	EDFCB8-TBD-10280	
SN_M12_M16_Mid	4	float	0.0-1000.0	EDFCB8-TBD-10280	
SN_M12_M16_Lo	4	float	0.0-1000.0	EDFCB8-TBD-10280	
SN_M15_M12_Hi	4	float	-55.0-1000.0	EDFCB8-TBD-10280	
SN_M15_M12_Mid	4	float	-56.0-1000.0	EDFCB8-TBD-10280	
SN_M15_M12_Lo	4	float	-57.0-1000.0	EDFCB8-TBD-10280	
WD_M12_M13_Hi	4	float	0.0-1000.0	EDFCB8-TBD-10280	
WD_M12_M13_Mid	4	float	0.0-1000.0	EDFCB8-TBD-10280	
WD_M12_M13_Lo	4	float	0.0-1000.0	EDFCB8-TBD-10280	

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
WD_M15_M12_Hi	4	float	-58.0-1000.0	EDFCB8-TBD-10280	
WD_M15_M12_Mid	4	float	-60.0-1000.0	EDFCB8-TBD-10280	
WD_M15_M12_Lo	4	float	-62.0-1000.0	EDFCB8-TBD-10280	
WD_M15_M16_Mid	4	float	0.0-1000.0	EDFCB8-TBD-10280	
WD_M5_M7_Hi1	4	float	0.0-1000.0	EDFCB8-TBD-10280	
WD_M5_M7_Hi2	4	float	0.0-1000.0	EDFCB8-TBD-10280	
WD_M5_M7_Mid1	4	float	0.0-1000.0	EDFCB8-TBD-10280	
WD_M5_M7_Mid2	4	float	0.0-1000.0	EDFCB8-TBD-10280	
WD_M5_M7_Lo1	4	float	0.0-1000.0	EDFCB8-TBD-10280	
WD_M5_M7_Lo2	4	float	0.0-1000.0	EDFCB8-TBD-10280	

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
WD_M7_Hi	4	float	0.0-1000.0	EDFCB8-TBD-10280	
WD_M7_Mid	4	float	0.0-1000.0	EDFCB8-TBD-10280	
WD_M7_Lo	4	float	0.0-1000.0	EDFCB8-TBD-10280	
WD_M9_Hi	4	float	0.0-1000.0	EDFCB8-TBD-10280	
WD_M9_Mid	4	float	0.0-1000.0	EDFCB8-TBD-10280	
WD_M9_Lo	4	float	0.0-1000.0	EDFCB8-TBD-10280	
WN_M15_M12_Hi	4	float	0.0-1000.0	EDFCB8-TBD-10280	
WN_M15_M12_Mid	4	float	0.0-1000.0	EDFCB8-TBD-10280	
WN_M15_M12_Lo	4	float	0.0-1000.0	EDFCB8-TBD-10280	
WN_M15_M16_Mid	4	float	0.0-1000.0	EDFCB8-TBD-10280	

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
sst_thres	4	float	0.0-1000.0	EDFCB8-TBD-10280	
sst_in_water_thres	4	float	0.0-1000.0	EDFCB8-TBD-10280	
lst_thres	4	float	0.0-1000.0	EDFCB8-TBD-10280	
lst_snow_thres	4	float	0.0-1000.0	EDFCB8-TBD-10280	
lst_desert_thres	4	float	0.0-1000.0	EDFCB8-TBD-10280	
snglntM7_Hi	4	float	0.0-1000.0	EDFCB8-TBD-10280	Sun-glint coefficient
snglntM7_Mid	4	float	0.0-1000.0	EDFCB8-TBD-10280	Sun-glint coefficient
snglntM7_Lo	4	float	0.0-1000.0	EDFCB8-TBD-10280	Sun-glint coefficient
snglntRatio_Hi1	4	float	0.0-1000.0	EDFCB8-TBD-10280	
snglntRatio_Hi2	4	float	0.0-1000.0	EDFCB8-TBD-10280	

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
sngIntRatio_Mid1	4	float	0.0-1000.0	EDFCB8-TBD-10280	
sngIntRatio_Mid2	4	float	0.0-1000.0	EDFCB8-TBD-10280	
sngIntRatio_Lo1	4	float	0.0-1000.0	EDFCB8-TBD-10280	
sngIntRatio_Lo2	4	float	0.0-1000.0	EDFCB8-TBD-10280	
BTM12_limit	4	float	0.0-1000.0	EDFCB8-TBD-10280	
LD_M9_thin_cirrus	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CD_M9_thin_cirrus	4	float	0.0-1000.0	EDFCB8-TBD-10280	
DD_M9_thin_cirrus	4	float	0.0-1000.0	EDFCB8-TBD-10280	
SD_M9_thin_cirrus	4	float	0.0-1000.0	EDFCB8-TBD-10280	
WD_M9_thin_cirrus	4	float	0.0-1000.0	EDFCB8-TBD-10280	

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
high_tpw_value	4	float	0.0-1000.0	EDFCB8-TBD-10280	
trispec_coeff1	4	float	0.0-1000.0	EDFCB8-TBD-10280	
trispec_coeff2	4	float	-50.0-1000.0	EDFCB8-TBD-10280	
trispec_coeff3	4	float	0.0-1000.0	EDFCB8-TBD-10280	
trispec_coeff4	4	float	-50.0-1000.0	EDFCB8-TBD-10280	
CP_BAD	4	float	0.0-10049.0	EDFCB8-TBD-10280	
CP_CERTAIN_ICE_BTM15	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CP_MAX_BTM15_WIN_OVER	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CP_MAX_BTM15_NIR_OVER	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CP_MAX_BTM15_NIGHT_OVER	4	float	0.0-1000.0	EDFCB8-TBD-10280	

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
CP_NIR_CIRRUS_THRES_WATER_M12	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CP_NIR_CIRRUS_THRES_LAND_M12	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CP_NIR_CIRRUS_THRES_DESERT_M12	4	float	0.0-1000.0	EDFCB8-TBD-10280	Cloud phase coefficients
CP_MIN_CIRRUS	4	float	0.0-1000.0	EDFCB8-TBD-10280	Cloud phase coefficients
CP_MAX_CIRRUS	4	float	0.0-1000.0	EDFCB8-TBD-10280	Cloud phase coefficients
CP_MIN_M5_OVER	4	float	0.0-1000.0	EDFCB8-TBD-10280	Cloud phase coefficients
CP_MAX_M5_OVER	4	float	0.0-1000.0	EDFCB8-TBD-10280	Cloud phase coefficients
CP_MIN_M1_OVER	4	float	0.0-1000.0	EDFCB8-TBD-10280	Cloud phase coefficients
CP_MIN_M9_OVER_WATER_LOW	4	float	0.0-1000.0	EDFCB8-TBD-10280	Cloud phase coefficients
CP_MIN_M9_OVER_LAND_LOW	4	float	0.0-1000.0	EDFCB8-TBD-10280	

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
CP_MIN_M9_OVER_WATER_HIGH	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CP_MIN_M9_OVER_LAND_HIGH	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CP_MAX_M9_OVER	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CP_M9_WIN_CHECK_THRES_LAND	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CP_M9_WIN_CHECK_THRES_WATER	4	float	0.0-1000.0	EDFCB8-TBD-10280	Cloud phase coefficients
CP_M15_M16_OVERLAP_NIGHT_THRES	4	float	0.0-1000.0	EDFCB8-TBD-10280	Cloud phase coefficients
CP_M12_M15_OVERLAP_NIGHT_THRES	4	float	0.0-1000.0	EDFCB8-TBD-10280	Cloud phase coefficients
CP_MAX_SZA_OVER	4	float	0.0-1000.0	EDFCB8-TBD-10280	Cloud phase coefficients
CP_SNOW_M10_THRES_LOW	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CP_SNOW_M10_THRES_HIGH	4	float	0.0-1000.0	EDFCB8-TBD-10280	

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
CP_M15_M16_N_OVER_L_TROPWATER	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CP_M15_M16_N_OVER_H_TROPWATER	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CP_M12_N_OVER_L_TROPWATER	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CP_M12_N_OVER_H_TROPWATER	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CP_M15_M16_N_OVER_L_MIDWATER	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CP_M15_M16_N_OVER_H_MIDWATER	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CP_M12_N_OVER_L_MIDWATER	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CP_M12_N_OVER_H_MIDWATER	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CP_M15_M16_N_OVER_L_LAND	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CP_M15_M16_N_OVER_H_LAND	4	float	0.0-1000.0	EDFCB8-TBD-10280	

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
CP_M12_N_OVER_L_LAND	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CP_M12_N_OVER_H_LAND	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CP_M12_M15_N_OVER_L	4	float	0.0-1000.0	EDFCB8-TBD-10280	
CP_M12_M15_N_OVER_H	4	float	0.0-1000.0	EDFCB8-TBD-10280	
A_win_over	448	double[8][7]	-335.0-1000.0	EDFCB8-TBD-10280	AVHRR algorithm cloud overlap function coefficients
B_win_over	448	double[8][7]	0.0-1000.0	EDFCB8-TBD-10280	AVHRR algorithm cloud overlap function coefficients
C_win_over	448	double[8][7]	-359.0-1000.0	EDFCB8-TBD-10280	AVHRR algorithm cloud overlap function coefficients
D_win_over	448	double[8][7]	-60.0-1000.0	EDFCB8-TBD-10280	AVHRR algorithm cloud overlap function coefficients
E_win_over	448	double[8][7]	-50.0-1000.0	EDFCB8-TBD-10280	AVHRR algorithm cloud overlap function coefficients
MIN_win_over	448	double[8][7]	0.0-1000.0	EDFCB8-TBD-10280	The minimum 10.7um - 12um BTD allowed for overlap detection

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
A_nir_over_water	144	double[18]	-65.0-1000.0	EDFCB8-TBD-10280	VIIRS algorithm cloud overlap function coefficients for a water surface
B_nir_over_water	144	double[18]	-65.0-1000.0	EDFCB8-TBD-10280	VIIRS algorithm cloud overlap function coefficients for a water surface
C_nir_over_water	144	double[18]	-55.0-1000.0	EDFCB8-TBD-10280	VIIRS algorithm cloud overlap function coefficients for a water surface
D_nir_over_water	144	double[18]	-50.0-1000.0	EDFCB8-TBD-10280	VIIRS algorithm cloud overlap function coefficients for a water surface
E_nir_over_water	144	double[18]	0.0-1000.0	EDFCB8-TBD-10280	VIIRS algorithm cloud overlap function coefficients for a water surface
A_nir_over_land	144	double[18]	-60.0-1000.0	EDFCB8-TBD-10280	VIIRS algorithm cloud overlap function coefficients for a grass surface
B_nir_over_land	144	double[18]	-60.0-1000.0	EDFCB8-TBD-10280	VIIRS algorithm cloud overlap function coefficients for a grass surface
C_nir_over_land	144	double[18]	-50.0-1000.0	EDFCB8-TBD-10280	VIIRS algorithm cloud overlap function coefficients for a grass surface

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
D_nir_over_land	144	double[18]	-50.0-1000.0	EDFCB8-TBD-10280	VIIRS algorithm cloud overlap function coefficients for a grass surface
E_nir_over_land	144	double[18]	0.0-1000.0	EDFCB8-TBD-10280	VIIRS algorithm cloud overlap function coefficients for a grass surface
A_cirrus	56	double[7]	-50.0-1000.0	EDFCB8-TBD-10280	10.7um-12um as a function of 10.7um BT coefficients for cirrus detection
B_cirrus	56	double[7]	0.0-1000.0	EDFCB8-TBD-10280	10.7um-12um as a function of 10.7um BT coefficients for cirrus detection
C_cirrus	56	double[7]	-50.0-1000.0	EDFCB8-TBD-10280	10.7um-12um as a function of 10.7um BT coefficients for cirrus detection
D_cirrus	56	double[7]	0.0-1000.0	EDFCB8-TBD-10280	10.7um-12um as a function of 10.7um BT coefficients for cirrus detection
E_cirrus	56	double[7]	-5145.07	EDFCB8-TBD-10280	10.7um-12um as a function of 10.7um BT coefficients for cirrus detection
A_M14_M15	56	double[7]	0.0-1000.0	EDFCB8-TBD-10280	8.6um-10.7um as a function of 10.7um BT coefficients for cloud typing

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
B_M14_M15	56	double[7]	-50.0-1000.0	EDFCB8-TBD-10280	8.6um-10.7um as a function of 10.7um BT coefficients for cloud typing
C_M14_M15	56	double[7]	0.0-1000.0	EDFCB8-TBD-10280	8.6um-10.7um as a function of 10.7um BT coefficients for cloud typing
D_M14_M15	56	double[7]	-0.0-1000.0	EDFCB8-TBD-10280	8.6um-10.7um as a function of 10.7um BT coefficients for cloud typing
E_M14_M15	56	double[7]	0.0-1000.0	EDFCB8-TBD-10280	8.6um-10.7um as a function of 10.7um BT coefficients for cloud typing
vis2_ref_arr	6156	float[9][9][19]	0.0-1000.0	EDFCB8-TBD-10280	Start of structure from IBand
sol_arr	36	float[9]	0.0-1000.0	EDFCB8-TBD-10280	
sat_arr	36	float[9]	0.0-1000.0	EDFCB8-TBD-10280	
azi_arr	76	float[19]	0.0-1000.0	EDFCB8-TBD-10280	

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
M5_ndvi_coef	480	float[3][10][4]	-72.0-1000.0	EDFCB8-TBD-10280	Start of structure Tunable coefficients for variable NDVI based M1 and M5 reflectance thresholds
M1_ndvi_coef	144	float[3][3][4]	-50.0-1000.0	EDFCB8-TBD-10280	Start of structure Tunable coefficients for variable NDVI based M1 and M5 reflectance thresholds

3.2.2.5.8 VIIRS COP Tunable Parameters

Table 3.2.2.5.8-1, VIIRS COP Tunable Parameters

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
sza_threshold	4	32-bit floating point	Minfloat - Maxfloat	radians	Solar Zenith Angle Threshold
water_increment	4	32-bit floating point	Minfloat - Maxfloat	unitless	Together with the hi_water_ctt and low_water_ctt defined the maximum iterations for the solution of the IR equation
lo_water_ctt	4	32-bit floating point	Minfloat - Maxfloat	Kelivn	The minimum water cloud top temperature
hi_water_ctt	4	32-bit floating point	Minfloat - Maxfloat	Kelvin	The maximum water cloud top temperature
lo_water_re	4	32-bit floating point	Minfloat - Maxfloat	Micrometer	The minimum water cloud particle radius
hi_water_re	4	32-bit floating point	Minfloat - Maxfloat	Micrometer	The maximum water cloud particle radius
ice_increment	4	32-bit floating point	Minfloat - Maxfloat	unitless	Together with the hi_ice_ctt and lo_ice_ctt defined the maximum iterations for the solution of the IR equation

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
lo_ice_ctt	4	32-bit floating point	Minfloat - Maxfloat	Kelvin	The minimum ice cloud top temperature
hi_ice_ctt	4	32-bit floating point	Minfloat - Maxfloat	Kelvin	The maximum ice cloud top temperature
ice_thresh_btM15	4	32-bit floating point	Minfloat - Maxfloat	unitless	Threshold for determining which CTT alg to use
min_day_cot_ice	4	32-bit floating point	Minfloat - Maxfloat	unitless	The minimum daytime ice cloud optical thickness boundary value for quality flag
max_day_cot_ice	4	32-bit floating point	Minfloat - Maxfloat	unitless	The maximum daytime ice cloud optical thickness boundary value for quality flag
min_night_cot_ice	4	32-bit floating point	Minfloat - Maxfloat	unitless	The minimum night ice cloud optical thickness boundary value for quality flag
max_night_cot_ice	4	32-bit floating point	Minfloat - Maxfloat	unitless	The maximum night ice cloud optical thickness boundary value for quality flag
min_day_cot_water	4	32-bit floating point	Minfloat - Maxfloat	unitless	The minimum daytime water cloud optical thickness boundary value for quality flag

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
max_day_cot_water	4	32-bit floating point	Minfloat - Maxfloat	unitless	The maximum daytime water cloud optical thickness boundary value for quality flag
min_night_cot_water	4	32-bit floating point	Minfloat - Maxfloat	unitless	The minimum night water cloud optical thickness boundary value for quality flag
max_night_cot_water	4	32-bit floating point	Minfloat - Maxfloat	unitless	The maximum night water cloud optical thickness boundary value for quality flag
min_eps_ice	4	32-bit floating point	Minfloat - Maxfloat	Micrometer	The minimum ice effective particle size boundary value for quality flag
max_eps_ice	4	32-bit floating point	Minfloat - Maxfloat	Micrometer	The maximum ice effective particle size boundary value for quality flag
min_eps_water	4	32-bit floating point	Minfloat - Maxfloat	Micrometer	The minimum water effective particle size boundary value for quality flag
max_eps_water	4	32-bit floating point	Minfloat - Maxfloat	Micrometer	The maximum water effective particle size boundary value for quality flag
min_ctt_ice	4	32-bit floating point	Minfloat - Maxfloat	Kelvin	The minimum ice cloud top temperature boundary value for quality flag

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
max_ctt_ice	4	32-bit floating point	Minfloat - Maxfloat	Kelvin	The maximum ice cloud top temperature boundary value for quality flag
min_ctt_water	4	32-bit floating point	Minfloat - Maxfloat	Kelvin	The minimum water cloud top temperature boundary value for quality flag
max_ctt_water	4	32-bit floating point	Minfloat - Maxfloat	Kelvin	The maximum water cloud top temperature boundary value for quality flag
night_ice_cot_convergence_thin	4	32-bit floating point	Minfloat - Maxfloat	unitless	
night_ice_cot_convergence_thick	4	32-bit floating point	Minfloat - Maxfloat	unitless	
night_ice_eps_convergence_thin	4	32-bit floating point	Minfloat - Maxfloat	micrometer	
night_ice_eps_convergence_thick	4	32-bit floating point	Minfloat - Maxfloat	micrometer	
night_ice_ctt_convergence_thin	4	32-bit floating point	Minfloat - Maxfloat	Kelvin	
night_ice_ctt_convergence_thick	4	32-bit floating point	Minfloat - Maxfloat	Kelvin	

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
night_water_cot_convergence_thin	4	32-bit floating point	Minfloat - Maxfloat	unitless	
night_water_cot_convergence_thick	4	32-bit floating point	Minfloat - Maxfloat	unitless	
night_water_eps_convergence_thin	4	32-bit floating point	Minfloat - Maxfloat	micrometer	
night_water_eps_convergence_thick	4	32-bit floating point	Minfloat - Maxfloat	micrometer	
night_water_ctt_convergence_thin	4	32-bit floating point	Minfloat - Maxfloat	Kelvin	
night_water_ctt_convergence_thick	4	32-bit floating point	Minfloat - Maxfloat	Kelvin	
day_ice_cot_convergence_thin	4	32-bit floating point	Minfloat - Maxfloat	unitless	
day_ice_cot_convergence_thick	4	32-bit floating point	Minfloat - Maxfloat	unitless	
day_ice_eps_convergence_thin	4	32-bit floating point	Minfloat - Maxfloat	micrometer	
day_ice_eps_convergence_thick	4	32-bit floating point	Minfloat - Maxfloat	micrometer	

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
day_ice_ctt_convergence_thin	4	32-bit floating point	Minfloat - Maxfloat	Kelvin	
day_ice_ctt_convergence_thick	4	32-bit floating point	Minfloat - Maxfloat	Kelvin	
day_water_cot_convergence_thin	4	32-bit floating point	Minfloat - Maxfloat	unitless	
day_water_cot_convergence_thick	4	32-bit floating point	Minfloat - Maxfloat	unitless	
day_water_eps_convergence_thin	4	32-bit floating point	Minfloat - Maxfloat	micrometer	
day_water_eps_convergence_thick	4	32-bit floating point	Minfloat - Maxfloat	micrometer	
day_water_ctt_convergence_thin	4	32-bit floating point	Minfloat - Maxfloat	Kelvin	
day_water_ctt_convergence_thick	4	32-bit floating point	Minfloat - Maxfloat	Kelvin	
m12_conversion_factor	8	64-bit floating point	Minfloat - Maxfloat	micrometer/ (1000 * cm^-1)	Conversion factor for M12 to convert from SDR radiance units W/m^2/um/sr to the radiance needed by the algorithm mW/m^2/sr/cm^-1

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
m12_center_microns	8	64-bit floating point	Minfloat - Maxfloat	micrometers	Center value of M12
m12_bwidth_microns	8	64-bit floating point	Minfloat - Maxfloat	micrometers	Bandwidth value of M12
m12_lowlimit_wavenum	4	32-bit floating point	0.0-2820.0	cm^-1	Lower wave number limit of M12
m12_upplimit_wavenum	4	32-bit floating point	0.0-2688.52	cm^-1	Upper wave number limit of M12
m15_conversion_factor	8	64-bit floating point	Minfloat - Maxfloat	micrometer/ (1000 * cm^-1)	Conversion factor for M15 to convert from SDR radiance units W/m^2/um/sr to the radiance needed by the algorithm mW/m^2/sr/cm^-1
m15_center_microns	8	64-bit floating point	Minfloat - Maxfloat	micrometer	Center value of M15 in microns
m_coeffs	16	32-bit floating point	Minfloat - Maxfloat	unitless	Coefficients used to calculate scaling factor in nighttime IR Water Cloud Retrieval 1 Dimensional Array: Size of Dimension(s): 4
m15_center_wavenum	4	32-bit floating point	Minfloat - Maxfloat	cm^-1	Center value of M15 in wave number

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
equation57_alpha	4	32-bit floating point	-50.0-1000.0	unitless	Empirical constant used in Nighttime IR Cirrus Cloud Retrieval
equation57_beta	4	32-bit floating point	Minfloat - Maxfloat	unitless	Empirical constant used in Nighttime IR Cirrus Cloud Retrieval
k2	4	32-bit floating point	Minfloat - Maxfloat	unitless	Extinction coefficient for M15
init_mean_de_coeffs	16	32-bit floating point	Minfloat - Maxfloat	unitless	Coeffiicents to determine initial temperature (averaged EPS) from equation 52 1 Dimensional Array: Size of Dimension(s): 4
de_coeffs	12	32-bit floating point	Minfloat - Maxfloat	unitless	Coefficents De of equation 49 in the ATBD 1 Dimensional Array: Size of Dimension(s): 3
d_coeffs	96	64-bit floating point	-365.-1000.0	unitless	Coefficents Dn of Equation 50 in the ATBD 2 Dimensional Array: Size of Dimension(s): 3 x 4
m15_emiss_min_ice	4	32-bit floating point	Minfloat - Maxfloat	unitless	Minimum emissivity for ice cloud
m15_emiss_max_ice	4	32-bit floating point	Minfloat - Maxfloat	unitless	Maximum emissivity ice cloud

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
m15_emiss_min_water	4	32-bit floating point	Minfloat - Maxfloat	unitless	Minimum emissivity for water cloud
m15_emiss_max_water	4	32-bit floating point	Minfloat - Maxfloat	unitless	Maximum emissivity water cloud
init_cot_min	4	32-bit floating point	Minfloat - Maxfloat	unitless	Minimum initial cloud optical thickness
init_cot_max	4	32-bit floating point	Minfloat - Maxfloat	unitless	Maximum initial cloud optical thickness
k_ratio_min	4	32-bit floating point	Minfloat - Maxfloat	unitless	Minimum value for K ratio
k_ratio_max	4	32-bit floating point	Minfloat - Maxfloat	unitless	Maximum value for K ratio
de_min	4	32-bit floating point	Minfloat - Maxfloat	Micrometers	Minimum value for Mean Effective Size (De)
de_max	4	32-bit floating point	Minfloat - Maxfloat	Micrometers	Maximum value for Mean Effective Size (De)
init_mean_de_min	4	32-bit floating point	Minfloat - Maxfloat	Micrometers	Minimum value for the initial mean temperature
init_mean_de_max	4	32-bit floating point	Minfloat - Maxfloat	Micrometers	Maximum value for the initial mean temperature

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
mean_iwc_min	4	32-bit floating point	Minfloat - Maxfloat	g/m3	Minimum value for the mean ice water content
mean_iwc_max	4	32-bit floating point	Minfloat - Maxfloat	g/m3	Maximum value for the mean ice water content
ctt_min_water	4	32-bit floating point	Minfloat - Maxfloat	Kelvin	Minimum value for water cloud top temperature
ctt_max_water	4	32-bit floating point	Minfloat - Maxfloat	Kelvin	Maximum value for water cloud top temperature
ctt_min_ice	4	32-bit floating point	Minfloat - Maxfloat	Kelvin	Minimum value for ice cloud top temperature
ctt_max_ice	4	32-bit floating point	Minfloat - Maxfloat	Kelvin	Maximum value for ice cloud top temperature
diff_threshold	4	32-bit floating point	Minfloat - Maxfloat	Kelvin	Difference threshold for refinement of ice ctt
diff_max	4	32-bit floating point	Minfloat - Maxfloat	Kelvin	Maximum difference for refinement of ice ctt
weight_of_De_of_k	4	32-bit floating point	Minfloat - Maxfloat	unitless	Weight of De_of_k in final determination of De
m14_center_microns	8	64-bit floating point	Minfloat - Maxfloat	Micrometer	Center value of M14 in microns

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
m16_center_microns	8	64-bit floating point	Minfloat - Maxfloat	Micrometer	Center value of M16 in microns
m14_conversion_factor	8	64-bit floating point	Minfloat - Maxfloat	micrometer/ (1000 * cm^-1)	Conversion factor for M14 to convert from SDR radiance units W/m^2/um/sr to the radiance needed by the algorithm mW/m^2/sr/cm^-1
m16_conversion_factor	8	64-bit floating point	Minfloat - Maxfloat	micrometer/ (1000 * cm^-1)	Conversion factor for M16 to convert from SDR radiance units W/m^2/um/sr to the radiance needed by the algorithm mW/m^2/sr/cm^-1
min_night_cot_water_init	4	32-bit floating point	Minfloat - Maxfloat	unitless	
max_night_cot_water_init	4	32-bit floating point	Minfloat - Maxfloat	unitless	
k_ratio_inbound_min	4	32-bit floating point	Minfloat - Maxfloat	unitless	
night_alpha_min	4	32-bit floating point	Minfloat - Maxfloat	unitless	
night_alpha_max	4	32-bit floating point	Minfloat - Maxfloat	unitless	

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
hi_water_ctt_conv	4	32-bit floating point	Minfloat - Maxfloat	Kelvin	The maximum water cloud top temperature

3.2.2.5.9 VIIRS GCE Tunable Parameters

Table 3.2.2.5.9-1, VIIRS GCE Tunable Parameters

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
qf_cot_sza_threshold	4	float	(75*pi)/180	Radians	Cloud Optical Thickness solar zenith angle
c1	4	float	0.002644	Unitless	Height_conversion constant
c2	4	float	0.0089	Unitless	Height_conversion constant
c3	4	float	6245	Unitless	Height_conversion constant

3.2.2.5.10 VIIRS Sea Ice Age Tunable Parameters

Table 3.2.2.5.10-1, VIIRS Sea Ice Age Tunable Parameters

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
h00	4	32-bit floating point	>0.0 Initial Value = 30.0	cm	Young/First Year ice thickness threshold
min_conc	4	32-bit floating point	0.0 ≤ min_conc ≤ 1.0 Initial Value = 0.10	unitless	Minimum ice concentration for ice age processing
min_twgt	4	32-bit floating point	0.0 ≤ min_twgt ≤ 1.0 Initial Value = 0.05	unitless	Minimum temperature weight for processing.
max_thick_dev	4	32-bit floating point	> 0.0 Initial Value = 5.0	cm	Maximum allowed difference between I1 and I2 thickness.
q0	4	32-bit floating point	> 0.0 Initial Value = 1368	W/m^2	Solar irradiance
atmo_const	8	32-bit floating point]	> 0.0 Initial Values = [0.65, 0.055]	unitless	Atmospheric constants (empirical) used to compute long wave heat flux as a function of humidity and temperature. 1 Dimensional Array: NUM_ATM_CONST Size of Dimension(s): 2

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
ct	4	32-bit floating point	> 0.0 Initial Value = 0.0017	unitless	Coefficient of turbulent heat exchange (sensible heat).
ce	4	32-bit floating point	> 0.0 Initial Value = 0.0017	unitless	Coefficient of turbulent heat exchange (latent heat).
specific_heat	4	32-bit floating point	> 0.0 Initial Value = 1005	J/kg/K	Specific heat
latent_heat	4	32-bit floating point	> 0.0 Initial Value = 2.456e6	J/kg	Latent heat of evaporation
latent_heat_fus	4	32-bit floating point	> 0.0 Initial Value = 3.0e5	J/kg	Latent heat of fusion
sb_const	4	32-bit floating point	5.6704E-8 Initial Value = 5.6704E-8	W/m^2/K^4	Stephan-Boltzmann constant
emiss	4	32-bit floating point	0 <= emiss <= 1.0 Initial Value = 1.0	unitless	Surface emissivity.
ice_conduct	4	32-bit floating point	> 0.0 Initial Value = 2.093	W/m/K	Ice conductivity

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
snow_conduct	4	32-bit floating point	> 0.0 Initial Value = 0.279	W/m/K	Snow conductivity
t_freeze	4	32-bit floating point	Initial Value = 271.4	Kelvin	Freezing point of sea water
sza_thre_r	4	32-bit floating point	0< sza_thre_r < 90 Initial Value = 80.0	degree	Red/Yellow SZA threshold (degrees) for energy balance.
sza_thre_y	4	32-bit floating point	0< sza_thre_y < 90 Initial Value = 85.0	degree	Yellow/Green SZA threshold (degrees) for energy balance
trans_thre_r	4	32-bit floating point	0< trans_thre_r < 90 Initial Value = 76.0	degree	Red/Yellow SZA threshold (degrees) for transmittance
arctic_haze_aot_thresh	4	32-bit floating point	> 0.0 Initial Value = 0.1	unitless	Arctic haze aerosol optical thickness threshold
iceAirDeltaT	4	32-bit floating point	-999.0 Initial Value = -999.0	degree	Temperature difference threshold for Ice-Surface Air Temperature Note: Setting the threshold to -999.0 effectively disables a branch to classify ice age First Year using a temperature difference threshold. This will allow the algorithm to fully utilize the energy balance equation

3.2.2.5.11 VIIRS IST EDR Tunable Parameters

Table 3.2.2.5.11-1, VIIRS IST EDR Tunable Parameters

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
min_Bt_M15	4	float	Initially set to: 180	K	Min Brightness Temp for M15
max_Bt_M15	4	float	Initially set to 350	K	Max Brightness Temp for M15
min_Bt_M16	4	float	Initially set to 180	K	Min Brightness Temp for M16
max_Bt_M16	4	float	Initially set to 350	K	Max Brightness Temp for M16
Ice_Threshold	4	float	Initially set to 0.9999	unitless	Ice fraction threshold for "ICE"
max_SolZen_Lim	4	float	Initially set to 1.48353	radians	Max solar zenith angle defining day/night
Ice_Primary_Threshold	4	float	Initially set to 0.95	unitless	Ice fraction threshold for "PRIMARILY ICE"
Ice_No_Threshold	4	float	Initially set to 0.0	unitless	Ice fraction threshold for "NOT ICE"
min_Aot_Lim	4	float	Initially set to 0.0	unitless	Min AOT Value
max_Aot_Lim	4	float	Initially set to 1.0	unitless	Max AOT Value
ist_Min_Rept_Range	4	float	Initially set to 213	K	Minimum Reportable IST
ist_Max_Rept_Range	4	float	Initially set to 275	K	Maximum Reportable IST

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
min_Ice_Cov_N_Lat	4	float	Initially set to: 36^o * DEG2RAD	radians	Southern extent of Ice Cov Zone in Northern Hemisphere
max_Ice_Cov_S_Lat	4	float	Initially set to: -50^o * DEG2RAD	radians	Northern extent of Ice Cov Zone in Southern Hemisphere

3.2.2.5.12 VIIRS LST EDR Tunable Parameters

Table 3.2.2.5.12-1, VIIRS LST EDR Tunable Parameters

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
min_Bt_M12_M13	4	float	Initially set to 180	Kelvin	Min Brightness Temp for M12 and M13
max_Bt_M12_M13	4	float	Initially set to 350	Kelvin	Max Brightness Temp for M12 and M13
min_Bt_M15	4	float	Initially set to 180	Kelvin	Min Brightness Temp for M15
max_Bt_M15	4	float	Initially set to 350	Kelvin	Max Brightness Temp for M15
min_Bt_M16	4	float	Initially set to 180	Kelvin	Min Brightness Temp for M16
max_Bt_M16	4	float	Initially set to 350	Kelvin	Max Brightness Temp for M16
day_Sol_Zen_Ang_Lim	4	float	Initially set to 1.4835	radians	Solar Zenith Angle defining Day/Night Boundary
min_Sens_Zen_Lim	4	float	Initially set to 0.0	radians	Sensor Zenith Angle at Nadir
max_Sens_Zen_Lim	4	float	Initially set to 0.8779	radians	Sensor Zenith Angle at Edge of Scan

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
min_Term_Lim	4	float	Initially set to 1.4835	radians	Min Solar Zenith Angle Defines Terminator
max_Term_Lim	4	float	Initially set to 1.7453	radians	Max Solar Zenith Angle Defines Terminator
lst_Min_Rept_Range	4	float	Initially set to 213	K	Minimum Land Surface Temperature Threshold
lst_Max_Rept_Range	4	float	Initially set to 343	K	Maximum Land Surface Temperature Threshold
max_Sens_Zen_Lim	4	float	Initially set to 0.6981	radians	Sensor Zenith Degradation Limit

3.2.2.5.13 VIIRS NCC EDR Tunable Parameters

Table 3.2.2.5.13-1, VIIRS NCC EDR Tunable Parameters

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
solar_Irradiance	4	32-bit floating point	0.01695	W/(cm^2 sr)	Solar Radiance Note: this is not, strictly speaking, an irradiance, since it contains sr in the denominator of the units. It is defined here as the radiance that would be observed from a 100% albedo surface where the solar zenith angle is zero. To convert to irradiance this value would need to be multiplied by pi
lza_Threshold	4	32-bit floating point	105	degrees	lunar zenith angle threshold
sza_Threshold	4	32-bit floating point	105	degrees	solar zenith angle threshold
max_lunar_arf	4	32-bit floating point	1.5	unitless	maximum lunar anisotropic reflectance factor
min_lunar_arf	4	32-bit floating point	0.5	unitless	minimum lunar anisotropic reflectance factor
max_solar_arf	4	32-bit floating point	1.5	unitless	maximum solar anisotropic reflectance factor

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
min_solar_arf	4	32-bit floating point	0.5	unitless	minimum solar anisotropic reflectance factor
min_ncc_radiance	4	32-bit floating point	4e-09	W/(cm^2 sr)	minimum near constant contrast radiance

3.2.2.5.14 VIIRS Net Heat Flux Tunable Parameters

Table 3.2.2.5.14-1, VIIRS Net Heat Flux Tunable Parameters

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
minClear	4	float	0.8	unitless	Threshold for determining a clear pixel(fraction)
minIceWater	4	float	0.1	unitless	Threshold for determining water or ice pixels(fraction)
boundaryLayer	4	float	400	meters	Boundary layer threshold
minSSTp	2	integer	5	unitless	Minimum input data points needed
minISTp	2	integer	5	unitless	Minimum input data points needed for ice skin temperature
minODp	2	integer	1	unitless	Minimum input data points needed for aerosol optical depth(aot 550 nm) data
minSMp	2	integer	1	unitless	Minimum input data points needed for suspended matter index data
minCHLp	2	integer	5	unitless	Minimum input data points needed for chlorophyll data
minIAp	2	integer	5	unitless	Minimum input data points needed for ice age index data
minALBp		integer	1		Minimum for albedo data
defaultIA	2	integer	0	unitless	Data source flag(1 = default, 0 = retrieve if available) for ice age
defaultCHL	2	integer	0	unitless	Data source flag for chlorophyll
defaultSM	2	integer	0	unitless	Data source flag for Suspended matter

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
iaBase	2	integer	2	unitless	Default index to ice age model for ice roughness length
chloro	4	float	0.1	mg/m^3	Default value for chlorophyll concentration(mg/m3)
smBase	4	integer	1	unitless	Default index to suspended matter model for optical depth distribution
aotBase	4	float	0.1	unitless	Default base aerosol optical depth at .550 microns
nAotModels	2	integer	6	unitless	Number of AOT models as defined in the RRTM SW
bmAOT	4	float	0.05	unitless	Default value of base maritime optical depth
bbsAOT	4	float	0.004	unitless	Default value of bse stratospheric optical depth
newIce	4	float	0.0001	m	Default value of roughness length over new ice(m)
firstyr	4	float	0.0005	m	Default value of roughness length over first year ice(m)
multiyr	4	float	0.001	m	Default value of roughness length over multi year ice(m)
co2mmr	4	float	0.000538301	kg/kg	Default value of gaseous species CO2(kg/kg)
ch4mr	4	float	9.10876e-07	kg/kg	Default value for gaseous species CH4(kg/kg)

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
n20mmr	4	float	4.65468e-07	kg/kg	Default value for gaseous species N2O(kg/kg)
cfc11mmr	4	float	1.28052e-09	kg/kg	Default value for gaseous species CFC-11(kg/kg)
cfc12mmr	4	float	2.00379e-09	kg/kg	Default value for gaseous species CFC-12(kg/kg)
emislwW	4	float	0.95	unitless	Default value for LW emissivity over water
emislwI	4	float	0.99	unitless	Default value for LW emissivity over ice
levels	104	float[26]	[10, 20, 30, 50, 70, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 850, 900, 925, 950, 975, 1000]	hPa	Atmospheric Pressure levels in hPa 1 Dimensional Array Size of Dimension(s): 26
surfaceD	56	float[14]	[0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.0]	unitless	Default values of surface albedo over water(diffuse) 1 Dimensional Array Size of Dimension(s): 14

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
surfaceP	56	float[14]	[0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.05, 0.0]	unitless	Default values of surface albedo over water(parallel) 1 Dimensional Array Size of Dimension(s): 14
surfaceIceD	56	float[14]	[0.07, 0.07, 0.07, 0.07, 0.07, 0.07, 0.07, 0.07, 0.07, 0.07, 0.07, 0.07, 0.07,0.0]	unitless	Default values of surface albedo over ice(diffuse) 1 Dimensional Array Size of Dimension(s): 14
surfaceIceP	56	float[14]	[0.07, 0.07, 0.07, 0.07, 0.07, 0.07, 0.07, 0.07, 0.07, 0.07, 0.07, 0.07, 0.07,0.0]	unitless	Default values of surface albedo over ice(parallel) 1 Dimensional Array Size of Dimension(s): 14
bands	64	float[16]	[3.846, 3.077, 2.5, 2.15, 1.942, 1.626, 1.299, 1.242, 0.7782, 0.625, 0.4415, 0.3448, 0.2632, 0.2, 12.195, 3.846]	micrometers	Array of spectral channels for RRTM SW(in microns) 1 Dimensional Array Size of Dimension(s): 16

3.2.2.5.15 VIIRS ACO/OCC Tunable Parameters

Table 3.2.2.5.15-1, VIIRS ACO/OCC Tunable Parameters

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
band1	4	32-bit floating point	1	unitless	M1 (412nm)
band2	4	32-bit floating point	2	unitless	M2 (445nm)
band3	4	32-bit floating point	3	unitless	M3 (488nm)
band4	4	32-bit floating point	4	unitless	M4 (555nm)
lam	20	32-bit floating point [5]	[412, 443, 490, 555, 670]	nm	Wavelengths used in algorithm
bb_denom	4	32-bit floating point	0	unitless	For bb_denom = 0: backscatter coefficients are added to absorption coeffs to obtain 675nm abs coeff. For bb_demon = 1: Only absorption coeffs are used
d1	4	32-bit floating point	2.5	unitless	Threshold for determining “packaged” vs ‘unpackaged” bio-optical domains using the r12 vs r25 comparison
d2	4	32-bit floating point	0.95	unitless	Regression line Coefficient for r12 vs r25 comparison
d3	4	32-bit floating point	0.16	unitless	Regression line Coefficient (exponent) for r12 vs r25 comparison
delta	4	32-bit floating point	0.03	unitless	Difference used in determination phytoplankton packaging type

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
s	4	32-bit floating point	0.0225	nm^-1	Empirically determined coefficient used in calculation of absorption due to detritus and gelbstoff (CDOM)
bbw	20	32-bit floating point[5]	[0.003341, 0.002406, 0.001563, 0.000929, 0.000388]	m^-1	Backscatter coefficients for water for the 5 wavelengths specified in the “lam” field.
aw	20	32-bit floating point[5]	[0.0048, 0.00742, 0.01632, 0.0591, 0.43538]	m^-1	Absorption coefficients for water for the 5 wavelengths specified in the “lam” field.
ga0	20	32-bit floating point[5]	[1.82, 3.05, 1.94, 0.39, 1.0]	unitles s	Global a0 coeffiecients for total absorption (hyperbolic tangent function) for the 5 wavelengths specified in the “lam” field
ga1	20	32-bit floating point[5]	[0.59, 0.69, 0.54, -0.18, 0.0]	unitles s	Global a1 coeffiecients for total absorption (hyperbolic tangent function) for the 5 wavelengths specified in the “lam” field.
ga2	20	32-bit floating point[5]	[-0.48, -0.48, -0.48, -0.48, -0.48]	unitles s	Global a2 coeffiecients for total absorption (hyperbolic tangent function) for the 5 wavelengths specified in the “lam” field.
ga3	20	32-bit floating point[5]	[0.014, 0.014, 0.014, 0.014, 0.014]	m^-1	Global a3 coeffiecients for total absorption (hyperbolic tangent function) for the 5 wavelengths specified in the “lam” field.
x0	4	32-bit floating point[5]	-0.00182	m^-1	Empirical coefficient (MODIS derived) used to derive magnitude of particle backscattering (X)
x1	4	32-bit floating point	2.058	sr m^-1	Empirical coefficient (MODIS derived) used to derive magnitude of particle backscattering (X)

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
y_0	4	32-bit floating point	-1.13	m^-1	Empirical coefficient (MODIS derived) used to derive Spectral Shape particle backscattering (Y)
y_1	4	32-bit floating point	2.57	m^-1	Empirical coefficient (MODIS derived) used to derive Spectral Shape particle backscattering (Y)
aph_lo	4	32-bit floating point	0.0001	m^-1	Min value used to obtain the root (bisection method) for the 675nm absorption coefficient
aph_hi	4	32-bit floating point	0.03	m^-1	Max value used to obtain the root (bisection method) for the 675nm absorption coefficient
gc0	4	32-bit floating point	0.354824	log10(mg/m^ 3)	Model Dependent Coefficients for Chlorophyll-a Concentration calculations (these values are used to calculate $\log_{10}$(chl a))
gc1	4	32-bit floating point	-2.64124	log10(mg/m^ 3)	
gc2	4	32-bit floating point	1.13884	log10(mg/m^ 3)	
gc3	4	32-bit floating point	-1.62316	log10(mg/m^ 3)	
gp0	4	32-bit floating point	1.7454	log10(mg/m^ 3)	Empirical (default) Dependent Coefficients for Chlorophyll-a Concentration calculations (these values are used to calculate $\log_{10}$(chl a))
gp1	4	32-bit floating point	1.0	log10(mg/m^ 3)	
gp2	4	32-bit floating point	0.0	log10(mg/m^ 3)	
low_412_thresh	4	32-bit floating point	0.0008	unitles s	(Not currently used)
low_555_thresh	4	32-bit floating point	0.001	unitles s	(Not currently used)

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
chl_inconsistent_thresh	4	32-bit floating point	0.4	unitless	Threshold used to check the value of the calculated modeled Cholorphyll a output
upa0	20	32-bit floating point[5]	[2.2, 3.59, 2.27, 0.42, 1.0]	unitless	Unpackaged a0 coeffiecients for total absorption (hyperbolic tangent function) for the 5 wavelengths specified in the “lam” field
upa3	20	32-bit floating point[5]	[0.0112, 0.0112, 0.0112, 0.0112, 0.0112]	m^-1	Unpackaged a3 coeffiecients for total absorption (hyperbolic tangent function) for the 5 wavelengths specified in the “lam” field
pa0	20	32-bit floating point[5]	[1.46778, 2.53786, 1.62954, 0.35552, 1.0]	unitless	Packaged a0 coeffiecients for total absorption (hyperbolic tangent function) for the 5 wavelengths specified in the “lam” field
pa3	20	32-bit floating point[5]	[0.017276, 0.017276, 0.017276, 0.017276, 0.017276]	m^-1	Packaged a3 coeffiecients for total absorption (hyperbolic tangent function) for the 5 wavelengths specified in the “lam” field
upc0	4	32-bit floating point	0.2818	log10(mg/m^3)	Unpackaged c0 empirical coefficient for calculation of log_{10}(chl a)
upc1	4	32-bit floating point	-2.783	log10(mg/m^3)	Unpackaged c1 empirical coefficient for calculation of log_{10}(chl a)
upc2	4	32-bit floating point	1.863	log10(mg/m^3)	Unpackaged c2 empirical coefficient for calculation of log_{10}(chl a)
upc3	4	32-bit floating point	-2.387	log10(mg/m^3)	Unpackaged c3 empirical coefficient for calculation of log_{10}(chl a)
pc0	4	32-bit floating point	0.423284	log10(mg/m^3)	Packaged c0 empirical coefficient for calculation of log_{10}(chl a)
pc1	4	32-bit floating point	-2.50834	log10(mg/m^3)	Packaged c1 empirical coefficient for calculation of log_{10}(chl a)

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
pc2	4	32-bit floating point	0.45994	log10(mg/m^ 3)	Packaged c2 empirical coefficient for calculation of log_{10}(chl a)
pc3	4	32-bit floating point	-0.90706	log10(mg/m^ 3)	Packaged c3 empirical coefficient for calculation of log_{10}(chl a)
upp0	4	32-bit floating point	1.715	log10(mg/m^ 3)	Unpackaged p0 modeled coefficient for calculation of log_{10}(chl a)
upp1	4	32-bit floating point	1.0	log10(mg/m^ 3)	Unpackaged p1 modeled coefficient for calculation of log_{10}(chl a)
upp2	4	32-bit floating point	0.0	log10(mg/m^ 3)	Unpackaged p2 modeled coefficient for calculation of log_{10}(chl a)
pp0	4	32-bit floating point	1.7739	log10(mg/m^ 3)	Packaged p0 modeled coefficient for calculation of log_{10}(chl a)
pp1	4	32-bit floating point	1.0	log10(mg/m^ 3)	Packaged p1 modeled coefficient for calculation of log_{10}(chl a)
pp2	4	32-bit floating point	0.0	log10(mg/m^ 3)	Packaged p2 modeled coefficient for calculation of log_{10}(chl a)
hpa0	20	32-bit floating point[5]	[1.019, 1.893, 1.237, 0.316, 1.0]	unitles s	Fully Packaged a0 modeled coefficients for for Phytoplankton Absorption Function aph
hpa1	20	32-bit floating point[5]	[0.26, 0.45, 0.42, - 0.08, 0.0]	unitles s	Fully Packaged a1 modeled coefficients for for Phytoplankton Absorption Function aph
hpa2	20	32-bit floating point[5]	[-0.45, -0.45, -0.45, - 0.45, -0.45]	unitles s	Fully Packaged a2 modeled coefficients for for Phytoplankton Absorption Function aph
hpa3	20	32-bit floating point[5]	[0.021, 0.021, 0.021, 0.021, 0.021]	m^-1	Fully Packaged a3 modeled coefficients for for Phytoplankton Absorption Function aph

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
hpc0	4	32-bit floating point	0.51	log10(mg/m^3)	Fully Packaged c0 empirical coefficient for calculation of $\log_{10}$(chl a)
hpc1	4	32-bit floating point	-2.34	log10(mg/m^3)	Fully Packaged c1 empirical coefficient for calculation of $\log_{10}$(chl a)
hpc2	4	32-bit floating point	0.4	log10(mg/m^3)	Fully Packaged c2 empirical coefficient for calculation of $\log_{10}$(chl a)
hpc3	4	32-bit floating point	0.0	log10(mg/m^3)	Fully Packaged c3 empirical coefficient for calculation of $\log_{10}$(chl a)
hpp0	4	32-bit floating point	1.9	log10(mg/m^3)	Fully Packaged p0 modeled coefficient for calculation of $\log_{10}$(chl a)
hpp1	4	32-bit floating point	1.0	log10(mg/m^3)	Fully Packaged p1 modeled coefficient for calculation of $\log_{10}$(chl a)
hpp2	4	32-bit floating point	0.0	log10(mg/m^3)	Fully Packaged p2 modeled coefficient for calculation of $\log_{10}$(chl a)
lambda0bb	4	32-bit floating point	555	nm	Reference wavelength for backscattering (related to absorption coefficient due to phytoplankton)
lambda0dom	4	32-bit floating point	400	nm	Reference wavelength for backscattering (related to absorption coefficient due to gelbstoff/DOM)
noretr	4	32-bit floating point	-1.0	unitless	(Not currently used)

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
esol	20	32-bit floating point[5]	[0.0017996, 0.0016502, 0.0015859, 0.0016603, 0.0020292]	W/(m2 micro n)	Solar constant per band
bathy_thresh	4	32-bit floating point	-50.0	meter	Bathymetry threshold for identification of shallow water conditions
rsr_thresh	4	32-bit floating point	0.32	sr^-1	Remote sensing reflectance threshold used to indicate no retrieval
rsr_min	4	32-bit floating point	1e-08	sr^-1	Remote sensing reflectance minimum used to indicate out of bounds
turbid_water_thresh	4	32-bit floating point	0.0012	sr^-1	Turbid water threshold (M5 RSR value) used to set exclusion condition
Max_nLw	4	32-bit floating point	40.0	W/(m2 um sr)	Max nLw value used to set Poor quality/Out of range flag
Min_nLw	4	32-bit floating point	1.0	W/(m2 um sr)	Min nLw value used to set Poor quality/out of range flag
Max_chlo	4	32-bit floating point	50	mg/m^3	Max Chlorophyll a value used to set Poor quality/Out of range flag
Min_chlo	4	32-bit floating point	0.05	mg/m^3	Min Chlorophyll a value used to set Poor quality/out of range flag
Chlo_1	4	32-bit floating point	1.0	mg/m^3	Chlorophyll a values used to set the “Range of Chlorophyll Concentration” flag*
Chlo_10	4	32-bit floating point	10.0	mg/m^3	
Max_iopa	4	32-bit floating point	10.0	m^-1	IOP-a/IOP-s values used to set the quality flags

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
Max_iops	4	32-bit floating point	50.0	m^-1	
Min_iopa	4	32-bit floating point	0.01	m^-1	
Min_iops	4	32-bit floating point	0.01	m^-1	
NLW_M2_THRESH	4	32-bit floating point	1.1	W/(m^2 µm sr)	nLw values used to set good/poor quality flag for each (M1-M5) band
NLW_M4_THRESH	4	32-bit floating point	0.81	W/(m^2 µm sr)	
M2_M4_RATIO_MIN	4	32-bit floating point	0.6	unitless	
M2_M4_RATIO_MAX	4	32-bit floating point	1.1	unitless	

3.2.2.5.16 VIIRS Snow Cover/Depth EDR Tunable Parameters

Table 3.2.2.5.16-1, VIIRS Snow Cover/Depth EDR Tunable Parameters

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
cot_switch	4	int	0 or 1	unitless	Switch to flag the availability of the Cloud Optical Thickness IP 0 = COT Not Available (Use VCM mode) 1 = COT Available (Use COT mode) Initially set to zero

3.2.2.5.17 DELETED

3.2.2.5.18 VIIRS Surface Reflectance IP Tunable Parameters

Table 3.2.2.5.18-1, VIIRS Surface Reflectance IP Tunable Parameters

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
min_SR	4	32-bit floating point	0.0	unitless	Minimum value for surface reflectance
max_SR	4	32-bit floating point	1.5	unitless	Maximum value for surface reflectance
min_AOT	4	32-bit floating point	0.0	unitless (tau)	Min value for AOT
max_AOT	4	32-bit floating point	2.0	unitless (tau)	Max value for AOT
min_ANC	4	32-bit floating point	0.0	unitless	Min value for ANC
max_SDR	4	32-bit floating point	1.0	unitless	Max value for SDR data
min_AMDL	4	unsigned 8-bit char	0	unitless	Minimum value for AMDL data
max_AMDL	4	unsigned 8-bit char	5	unitless	Maximum value for AMDL data

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
heavy_AOT	4	float	1.0	unitless	Threshold value to determine heavy aerosol

3.2.2.5.19 VIIRS SST EDR PCs

Table 3.2.2.5.19-1, VIIRS SST EDR Tunable Parameters

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
btDThresh	4	32-bit floating point	0.8	kelvin	Moisture stratification threshold
dBtDThresh	4	32-bit floating point	0.2	kelvin	Moisture stratification threshold overlap
aotDegThresh	4	32-bit floating point	0.6	unitless	AOT degraded threshold
aotExclThresh	4	32-bit floating point	1.0	unitless	AOT exclusion threshold
szaDegThresh	4	32-bit floating point	40.0 * pi/180	radians	Sensor zenith angle unfavorable threshold
szaExclThresh	4	32-bit floating point	53.0 * pi/180	radians	Sensor zenith angle exclusion threshold
sstLowThresh	4	32-bit floating point	271.0	kelvin	SST low threshold
sstHighThresh	4	32-bit floating point	313.0	kelvin	SST low threshold
sstDegThresh	4	32-bit floating point	308.0	kelvin	SST degraded threshold

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
iceConcThresh	4	32-bit floating point	0.1	unitless	Ice Concentration Threshold

3.2.2.5.20 VIIRS Surface Type EDR Tunable Parameters

Table 3.2.2.5.20-1, VIIRS Surface Type EDR Tunable Parameters

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
Vegetation_Threshold	4	32-bit floating point	0.05	unitless	Threshold test for vegetation update
Snow_Fraction_Threshold	4	32-bit floating point	0.5	unitless	Threshold test for snow cover update
Veg_Fraction_Scale	4	32-bit integer	100	unitless	Veg_Fraction_Scale Value
Solar_Zenith_Angle_Threshold	4	32-bit floating point	1.22173	radians	Solar Zenith Angle Threshold Value
Solar_Zenith_Angle_Snow_Ice_Threshold	4	32-bit floating point	1.48353	radians	Solar Zenith Angle Snow/Ice Threshold Value

3.2.2.5.21 VIIRS Vegetation Index EDR Tunable Parameters

Table 3.2.2.5.21-1, VIIRS Vegetation Index EDR Tunable Parameters

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments	Initial Value(s)
EVI_C	4	32-bit floating point	1.0	unitless	Constant used to adjust for the soil background, in the EVI calculation	1.0
EVI_I1	4	32-bit floating point	6.0	unitless	constant used in EVI calculation - derived from minimizing feedback and errors from soil and atmospheric effects	6.0
EVI_M3	4	32-bit floating point	7.5	unitless	Constant used in EVI calculation - derived from minimizing feedback and errors from soil and atmospheric effects	7.5
SZA_LOW	4	32-bit floating point	1.2217304763	radians	Solar Zenith Angle threshold (70 degrees) used to set the low/high QF	1.2217304763
SZA_HI	4	32-bit floating point	1.4835298641	radians	Solar Zenith Angle threshold (85 degrees) used to set the SZA Exclusion flag	1.4835298641
NDVI_MIN	4	32-bit floating point	-1.0	unitless	Min allowable value for NDVI. Values less than this are set to FILL	-1.0

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments	Initial Value(s)
NDVI_MAX	4	32-bit floating point	1.0	unitless	Max allowable value for NDVI. Values greater than this are set to FILL	1.0
EVI_MIN	4	32-bit floating point	-1.0	unitless	Min allowable value for EVI. Values less than this are set to FILL	-1.0
EVI_MAX	4	32-bit floating point	4.0	unitless	Max allowable value for EVI. Values greater than this are set to FILL	4.0
VI_SCALE_FACTOR	4	32-bit integer	10000	unitless	Not currently used in code – scaling is performed outside of VI algorithm	10000

3.2.2.5.22 VIIRS Bright Pixel Tunable Parameters

Table 3.2.2.5.22-1, VIIRS Bright Pixel Tunable Parameters

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments	Initial Value(s)
mode	21	8-bit unsigned char	0 – 255	unitless	Mode 1 Dimensional Array: MODES Size of Dimension(s): 21	All 21 entries initially assigned to = 1

3.2.2.5.23 VIIRS CTP Tunable Parameters

Table 3.2.2.5.23-1, VIIRS CTP Tunable Parameters

Field Name	Length (Bytes)	Data Type	Values (Initial)	Units	Comments
dayThresh	4	32-bit float	1.39626	radians	Day/Night solar zenith angle threshold
pw0	4	32-bit float	0.067	unitless	Precipitable Water regression coefficient
pw1	4	32-bit float	-0.002	unitless	Precipitable Water regression coefficient
pw2	4	32-bit float	0.22	unitless	Precipitable Water regression coefficient
pw3	4	32-bit float	0.105	unitless	Precipitable Water regression coefficient
maxCth	4	32-bit float	20	Kilometers	Maximum height for CTH
minCth	4	32-bit float	0	Kilometers	Minimum height for CTH
maxCtp	4	32-bit float	1050	hPa	Maximum pressure for CTP
minCtp	4	32-bit float	50	hPa	Minimum pressure for CTP
maxCtt	4	32-bit float	310	K	Maximum temperature for CTT
minCtt	4	32-bit float	180	K	Minimum temperature for CTT
numAggAt	4	32-bit int	8	unitless	Number of pixels along track in analysis block
numAggXt	4	32-bit int	8	unitless	Number of pixels along scan in analysis block

Field Name	Length (Bytes)	Data Type	Values (Initial)	Units	Comments
maxIterRt	4	32-bit int	10	unitless	Maximum number of allowed iteration of daywater CTP retreival
chiSqFit	4	32-bit float	1	unitless	Chi-square requirement for convergence
blkCloudCot	4	32-bit float	200	unitless	Default COT for black clouds in WindowIR retrieval
blkCloudEps	4	32-bit float	10	unitless	Default EPS for black clouds in WindowIR retrieval
thkCot1	4	32-bit float	1	unitless	COT threshold for cloud thickness table
thkCot2	4	32-bit float	3	unitless	COT threshold for cloud thickness table
thkCtp1	4	32-bit float	600	hPa	CTP threshold for cloud thickness table
thkCtp2	4	32-bit float	800	hPa	CTP threshold for cloud thickness table
cldThick	36	32-bit float	[0][0] = 200 [0][1] = 100 [0][2] = 50 [1][0] = 150 [1][1] = 75 [1][2] = 38 [2][0] = 100 [2][1] = 50 [2][2] = 25	unitless	Cloud thickness as a function of COT and CTP as specified by thkCot1, thkCot2, thkCtp1, and thkCtp2 2 Dimensional Array: Size of Dimension(s): 3 x 3
maxVertTemp	4	32-bit float	325	K	Maximum vertical temperature

Field Name	Length (Bytes)	Data Type	Values (Initial)	Units	Comments
minVertTemp	4	32-bit float	180	K	Minimum vertical temperature
maxVertWaterVap	4	32-bit float	10	g/kg	Maximum vertical water vapor
minVertWaterVap	4	32-bit float	1e-09	g/kg	Minimum vertical water vapor
minTempProf	4	32-bit float	100	K	Minimum valid temperature profile value

3.2.2.5.24 VIIRS Gran to Grid Snow Ice Cover PCs

Table 3.2.2.5.24-1, VIIRS Gran to Grid Snow Ice Cover Tunable Parameters

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
iceFractionThreshold	4	32-bit floating point	0.5	unitless	Ice concentration threshold
concWeightThreshold	4	32-bit floating point	0.04	unitless	Concentration weight threshold
forceUpdateDayThreshold	4	32-bit integer	10	Days	Force Update Day Threshold - maximum time before the GIP must be updated

3.2.2.5.25 VIIRS GridToGrid LSA Tunable Parameters

Table 3.2.2.5.25-1, VIIRS GridToGrid LSA Tunable Parameters

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
fullInversionMinCount	4	32-bit integer	7	unitless	Full Inversion Minimum Count
magInversionMinCount	4	32-bit integer	3	unitless	Magnitude Inversion Minimum Count
thresholdRMSELow	4	32-bit floating point	0.1	unitless	Threshold RMSE Low
thresholdRMSEHi	4	32-bit floating point	0.3	unitless	Threshold RMSE Hi
thresholdVarianceLow	4	32-bit floating point	0.75	unitless	Threshold Variance Low
thresholdVarianceHi	4	32-bit floating point	1.25	unitless	Threshold Variance Hi
thresholdMaxAlbedoVarianceLow	4	32-bit floating point	1.5	unitless	Threshold Maximum Albedo Variance Low
thresholdMaxAlbedoVarianceHi	4	32-bit floating point	2.5	unitless	Threshold Maximum Albedo Variance Hi
ndviThreshold	4	32-bit floating point	0.15	unitless	NDVI Threshold

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
hkThetaSInterval	4	32-bit floating point	0.00872665	unitless	Solar Zenith Angle increment in each of the LUT files
hkThetaSMax	4	32-bit floating point	1.4748	unitless	Maximum Solar Zenith Angle value in the LUT files
crownRelHeightParamLISparse	8	64-bit floating point	2.0	unitless	
crownRelShapeParamLISparse	8	64-bit floating point	1.0	unitless	
crownRelHeightParamLIDense	8	64-bit floating point	2.0	unitless	
crownRelShapeParamLIDense	8	64-bit floating point	1.0	unitless	
crownRelShapeParamRoujean	8	64-bit floating point	1.0	unitless	

3.2.2.5.26 VIIRS Solar Diffuser Aggregation History PCs

Table 3.2.2.5.26-1, VIIRS Solar Diffuser Aggregation History Tunable Parameters

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
weights	448	64-bit floating point	Minfloat – Maxfloat	unitless	Weighting factors 2 Dimensional Array NUM_REFLECTIVE_THERMISTORS x NUM_THERM_WEIGHTS Size of Dimension(s): 14 x 4
spaceViewThreshold	8	64-bit floating point	Minfloat – Maxfloat	unitless	Statistical covariance filter threshold
SDThreshold	8	64-bit floating point	Minfloat – Maxfloat	unitless	Statistical covariance filter threshold
maxSpaceViewIntensity_DN	4	unsigned 32-bit integer	MinInt – MaxInt	unitless	Maximum allowable space view intensity in detector counts for the SWIR band
nOrbitHistory	4	32-bit integer	MinInt – MaxInt	unitless	Number of orbits to store in history
nOrbitAgg	4	32-bit integer	MinInt – MaxInt	unitless	Number of orbits to aggregate
aggType	4	32-bit integer	MinInt – MaxInt	unitless	Type of aggregation (none, average, linear fit)
outlierThreshold	8	64-bit floating point	Minfloat – Maxfloat	unitless	Outlier removal (Nsigma on Fscan) Nsigma filter threshold
moonAngleThreshold	8	64-bit floating point	Minfloat – Maxfloat	radians	Moon angle filter threshold

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
dcr_C	48	64-bit floating point	Minfloat – Maxfloat	unitless	dc-restore conversion coefficients 1 Dimensional Array Size of Dimension(s): 6
Tsd_i	72	64-bit floating point	Minfloat – Maxfloat	unitless	Instrument to SolarDiffuser transformation matrix 2 Dimensional Array Size of Dimension(s): 3 x 3
numUnusedGranualCount	4	32-bit integer	MinInt – MaxInt	unitless	Count of granules before processing SD data
minScanCount	4	32-bit integer	MinInt – MaxInt	unitless	Min count of scans before creating new SD data
sdsmCount	4	32-bit integer	MinInt – MaxInt	unitless	Max SDSM count

3.2.2.5.27 VIIRS Surface Albedo PCs

Table 3.2.2.5.27-1, VIIRS Surface Albedo Tunable Parameters

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
SnowThreshold	4	32-bit floating point	0.5	unitless	Snow Fraction Threshold
NDVI_Threshold	4	32-bit floating point	0.15	unitless	NDVI Threshold
NumBins_SolarZenith	8	long	86	unitless	Number of Solar Zenith Angle Values/Bins
BinSize_SolarZenith	4	32-bit floating point	1.0	degrees	Solar Zenith Angle Bin Size, angular increment
NumBins_KernelBlackSkyAlbedo	8	long	170	unitless	Number of Black Sky Albedo Bins in the LUTs
BinSize_KernelBlackSkyAlbedo	4	32-bit floating point	0.5	unitless	Bin size for each Kernel Black Sky Albedo
NumBins_AOT	8	long	101	unitless	Number of AOT Bins
BinSize_AOT	4	32-bit floating point	0.02	unitless	
NumKernels	8	long	8	unitless	Number of Surface Albedo LUTs
Num_Kernel_Lut	8	long	8	unitless	Number of Kernel Model LUTs

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
Max_Lut_Dim	8	long	3	unitless	Maximum LUT Dimensions (Represents the 3 Geometry Parameters: Solar Zenith, View Zenith, and Relative Azimuth)
Bpsa_Num_Bins_Solar_Zenith	8	long	12	unitless	Number of Solar Zenith Angles LUT bins
Bpsa_Num_Bins_View_Zenith	8	long	17	unitless	Number of View Zenith Angle LUT bins
Bpsa_Num_Bins_Rel_Azimuth	8	long	11	unitless	Number of Relative Azimuth Angle LUT bins
BinCoord_SeaIce_SolarZenith	60	float	{0, 53.5, 57.5, 61, 63.5, 66, 68.25, 70.25, 72.25, 74.25, 76, 78, 79.5, 81, 83}	unitless	Grid coordinates for BPSA SEA ICE LUTs 1 Dimensional Array Size of Dimension(s): 15
BinCoord_SolarZenith	48	32-bit floating point	{5.0,15.0, 25.0,35.0, 45.0,52.5, 57.5,62.5, 67.5,72.5, 77.5,80.0}	unitless	Grid Coordinates for BPSA LUT for Solar Zenith Angles 1 Dimensional Array Size of Dimension(s): 12

Field Name	Length (Bytes)	Data Type	Range of Values	Units	Comments
BinCoord_ViewZenith	68	32-bit floating point	{2.5,7.5, 12.5,17.5, 22.5,27.5, 32.5,37.5, 42.5,47.5, 52.5,57.5, 62.5,67.5, 72.5,77.5, 82.5}	unitless	Grid Coordinates for BPSA LUT for View Zenith Angles 1 Dimensional Array Size of Dimension(s): 17
BinCoord_RelAzimuth	44	32-bit floating point	{2.5,7.5, 20.0,45.0, 75.0,105.0, 135.0,160.0, 172.5,177.5, 180.0}	unitless	Grid Coordinates for BPSA LUT for Relative Azimuth Angles 1 Dimensional Array Size of Dimension(s): 11
Lut_Size_Bpsa	8	long	Size = BPSA_NUM_BINS_SOLAR_ZENITH * BPSA_NUM_BINS_VIEW_ZENITH * BPSA_NUM_BINS_REL_AZIMUTH	unitless	Size of LUT for BPSA
Lut_Size_Bpsa_Sea_Ice			12*15	unitless	Size of LUT for BPSA for Sea Ice Pixels
Bpsa_Map_AeroModel	56	long	{ 1, 2, 3, 4, 5 }	unitless	Aerosol Model map used for interpolation 1 Dimensional Array Size of Dimension(s): 5

3.2.2.5.28 DELETED

3.2.2.5.29 DELETED

3.2.2.5.30 DELETED

3.2.2.5.31 DELETED

3.2.2.5.32 VIIRS NHF Aggregation PC

Data Mnemonic	NP_NU-LM0234-007
Description/ Purpose	The NHF Aggregation PC This file is used by the VIIRS NHF EDR algorithm to aggregate moderate resolution pixels into NHF horizontal cells.
File-Naming Construct	See the File-Naming Convention for Auxiliary Data Formats, CDFCB-X Volume I, D34862-01, Section 3.4. The Collection Short Name used in the filename is based on the table – see the CDFCB-X Volume I, D34862-01, for the applicable Collection Short Names.
File Size	930,352 bytes
File Format Type	Binary
Production Frequency	As needed
Data Content and Data Format	This LUT format is identical to the format for the VIIRS CCL Cloud Aggregation PC. (Note that the field names and data types will be identical, the values stored in the table will be different.) For format details see Table 3.2.1.4.4-1, VIIRS CCL Cloud Aggregation PC Data Format.

3.2.2.5.33 DELETED

APPENDIX A: DATA MNEMONIC TO INTERFACE MAPPING

Table A-1, Data Mnemonic to Interface Mapping

Description	Data	File Type	Document	Interface Mnemonic
CrIMSS Channel Selection Look Up Table	NP_NU-LM0030-000			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
CrIMSS Infra-Red Optimal Spectral Sampling Coefficients Look Up Table	NP_NU-LM0030-001			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
CrIMSS Microwave Absorption Coefficients Look Up Table	NP_NU-LM0030-002			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
CrIMSS Microwave Optimal Spectral Sampling Coefficients Look Up Table	NP_NU-LM0030-004			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
CrIMSS Surface Emissivity Look Up Table	NP_NU-LM0030-005			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110

Description	Data	File Type	Document	Interface Mnemonic
CrIMSS Infra-Red Absorption Coefficients Look Up Table	NP_NU-LM0030-006			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Aerosol Optical Thickness Look Up Table	NP_NU-LM0040-000			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Top of Atmosphere Ice Reflectance Look Up Table	NP_NU-LM0040-009			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Ocean Color/Chlorophyll Aerosol Coefficients Look Up Table	NP_NU-LM0040-010			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Ocean Color/Chlorophyll Aerosol Optical Properties Look Up Table	NP_NU-LM0040-011			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Ocean Color/Chlorophyll Diffuse Transmittance Look Up Table	NP_NU-LM0040-012			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Ocean Color/Chlorophyll Rayleigh Scattering Look Up Table	NP_NU-LM0040-013			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110

Description	Data	File Type	Document	Interface Mnemonic
VIIRS Surface Albedo Fraction of Diffuse Skylight Look Up Table	NP_NU-LM0040-014			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Surface Albedo Fraction of Diffuse Skylight Regression Coefficients Look Up Table	NP_NU-LM0040-015			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Surface Albedo Coefficients Look Up Table	NP_NU-LM0040-016			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS COP Transmittance PC	NP_NU-LM0040-017			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Aerosol Optical Thickness Sunglint Look Up Table	NP_NU-LM0040-001			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Cloud Optical Properties Ice Cloud Look Up Table	NP_NU-LM0040-002			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110

Description	Data	File Type	Document	Interface Mnemonic
VIIRS Cloud Optical Properties Water Cloud Look Up Table	NP_NU-LM0040-003			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Cloud Top Parameters Look Up Table	NP_NU-LM0040-004			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Cloud Top Parameters Multiple Scattering Correction Look Up Table	NP_NU-LM0040-005			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Optimal Spectral Sampling OD Look Up Table	NP_NU-LM0040-006			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Optimal Spectral Sampling SEL Look Up Table	NP_NU-LM0040-007			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Broadband Atmospheric Transmittance Look Up Table	NP_NU-LM0040-008			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
CrIS Correction Matrix Processing Coefficients	NP_NU-LM0130-000			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
CrIMSS Daytime Local Angle Adjustment Processing Coefficients	NP_NU-LM0230-000			

Description	Data	File Type	Document	Interface Mnemonic
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
CrIMSS Daytime Local Angle Adjustment EOF Processing Coefficients	NP_NU-LM0230-001			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
CrIMSS Infra-Red Channel Atmospheric Noise Processing Coefficients	NP_NU-LM0230-002			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
CrIMSS Infra-Red Channel Noise Equivalent delta Noise Processing Coefficients	NP_NU-LM0230-003			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
CrIMSS Microwave Atmospheric Noise Processing Coefficients	NP_NU-LM0230-004			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
CrIMSS Microwave Frequency Polarization Processing Coefficients	NP_NU-LM0230-005			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
CrIMSS Microwave Noise Amplification Processing Coefficients	NP_NU-LM0230-006			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
CrIMSS Microwave Noise Processing Coefficients	NP_NU-LM0230-007			

Description	Data	File Type	Document	Interface Mnemonic
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
CrIMSS Nighttime Local Angle Adjustment Processing Coefficients	NP_NU-LM0230-008			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
CrIMSS Nighttime Local Angle Adjustment EOF Processing Coefficients	NP_NU-LM0230-009			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
CrIMSS Numerical Weather Prediction Temperature Processing Coefficients	NP_NU-LM0230-010			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
CrIMSS Numerical Weather Prediction Water Vapor Processing Coefficients	NP_NU-LM0230-011			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
CrIMSS Solar Irradiance and Infra-Red Frequency Processing Coefficients	NP_NU-LM0230-012			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
CrIMSS Trace Gas Reference Profiles Processing Coefficients	NP_NU-LM0230-013			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110

Description	Data	File Type	Document	Interface Mnemonic
CrIMSS Tropopause Reference Profiles Processing Coefficients	NP_NU-LM0230-014			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
CrIMSS Climatological Processing Coefficients	NP_NU-LM0230-015			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
ATMS Footprint Matching Kernels Processing Coefficients	NP_NU-LM0231-000			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Cloud Base Height Liquid Water Concentration Processing Coefficients	NP_NU-LM0233-001			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Cloud Type Processing Coefficients	NP_NU-LM0233-002			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Cloud Optical Properties Surface Albedo and Emissivity Processing Coefficients	NP_NU-LM0233-003			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Cloud Cover/Layers Cloud Aggregation Processing Coefficients	NP_NU-LM0233-005			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Ice Thickness Processing Coefficients	NP_NU-LM0233-006			

Description	Data	File Type	Document	Interface Mnemonic
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Snow Depth LUT	NP_NU-LM0233-007			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Ice Concentration Processing Coefficients	NP_NU-LM0233-008			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Surface Temperature Processing Coefficients	NP_NU-LM0233-009			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Ice Quality Processing Coefficients	NP_NU-LM0233-010			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Ice Surface Temperature Processing Coefficients	NP_NU-LM0233-0011			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Land Surface Temperature Processing Coefficients	NP_NU-LM0233-012			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Gain Value Versus Scene Lunar Elevation Processing Coefficients	NP_NU-LM0233-013			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110

Description	Data	File Type	Document	Interface Mnemonic
VIIRS Gain Value Versus Scene Solar Elevation Processing Coefficients	NP_NU-LM0233-014			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Lunar Bidirectional Reflectance Distribution Function Processing Coefficients	NP_NU-LM0233-015			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Lunar Phase Processing Coefficients	NP_NU-LM0233-016			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Solar Bidirectional Reflectance Distribution Function Processing Coefficients	NP_NU-LM0233-017			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Sea Surface Temperature Processing Coefficients	NP_NU-LM0233-018			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Surface Albedo Kernel black-sky and white-sky albedo LUT	NP_NU-LM0233-019			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Blackbody Themistor Processing Coefficients	NP_NU-LM0233-021			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110

Description	Data	File Type	Document	Interface Mnemonic
VIIRS Detector Response (Coefficient A) Processing Coefficients	NP_NU-LM0233-022			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Electronic Response (Ceofficient B) Processing Coefficients	NP_NU-LM0233-023			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Delta C Temperature Processing Coefficients	NP_NU-LM0233-024			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Day/Night Band C Processing Coefficients	NP_NU-LM0233-025			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Day/Night Band Digital Count 0 Processing Coefficients	NP_NU-LM0233-026			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Day/Night Band Frame to Zone Processing Coefficients	NP_NU-LM0233-027			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Day/Night Band Response Versus Angle Processing Coefficients	NP_NU-LM0233-028			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110

Description	Data	File Type	Document	Interface Mnemonic
VIIRS Equivalent Black Body Temperature Processing Coefficients	NP_NU-LM0233-029			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Emissivity Processing Coefficients	NP_NU-LM0233-030			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS F Table Processing Coefficients	NP_NU-LM0233-031			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Gain Table Processing Coefficients	NP_NU-LM0233-032			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Half Angle Mirror Processing Coefficients	NP_NU-LM0233-036			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS OBC Emitted Radiance Processing Coefficients	NP_NU-LM0233-037			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS OBC Reflected Radiance Processing Coefficients	NP_NU-LM0233-038			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS OBS to Pixel Processing Coefficients	NP_NU-LM0233-039			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110

Description	Data	File Type	Document	Interface Mnemonic
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Quality Assurance Processing Coefficients	NP_NU-LM0233-040			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Radiometric Parameters Processing Coefficients	NP_NU-LM0233-041			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Reflective Values Processing Coefficients	NP_NU-LM0233-042			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Relative Spectral Response Processing Coefficients	NP_NU-LM0233-043			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Rotating Telescope Assembly Processing Coefficients	NP_NU-LM0233-044			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Response Versus Frame Processing Coefficients	NP_NU-LM0233-045			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Solar Irradiances Processing Coefficients	NP_NU-LM0233-047			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Telemetry Processing Coefficients	NP_NU-LM0233-048			

Description	Data	File Type	Document	Interface Mnemonic
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Solar Diffuser A Processing Coefficients	NP_NU-LM0233-049			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Solar Diffuser B Processing Coefficients	NP_NU-LM0233-050			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Solar Diffuser Delta C Processing Coefficients	NP_NU-LM0233-051			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Solar Diffuser Gain Processing Coefficients	NP_NU-LM0233-052			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Solar Diffuser Lambda Processing Coefficients	NP_NU-LM0233-053			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Solar Diffuser Phi Processing Coefficients	NP_NU-LM0233-054			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Solar Diffuser Processing Coefficients	NP_NU-LM0233-055			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Solar Diffuser Reflectance Processing Coefficients	NP_NU-LM0233-056			

Description	Data	File Type	Document	Interface Mnemonic
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS South Atlantic Anomaly Processing Coefficients	NP_NU-LM0233-061			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Solar Diffuser RVS Processing Coefficients	NP_NU-LM0233-057			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Solar Diffuser Thermal Processing Coefficients	NP_NU-LM0233-058			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Solar Diffuser Aggregation PC	NP_NU-LM0233-059			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS NHF COART LUT	NP_NU-LM0234-000			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS NHF RTM LUT	NP_NU-LM0234-001			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110

Description	Data	File Type	Document	Interface Mnemonic
VIIRS NHF RTM LUT	NP_NU-LM0234-002			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS NHF Ice Albedo LUT	NP_NU-LM0234-003			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS NHF RRTM-SW LUT	NP_NU-LM0234-004			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS NHF RRTM-LW LUT	NP_NU-LM0234-005			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS NHF RRTM Aerosol Models LUT	NP_NU-LM0234-006			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110

Description	Data	File Type	Document	Interface Mnemonic
VIIRS NHF Aggregation PC	NP_NU-LM0234-007			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Bright Pixel Sub Radiance LUT	NP_NU-LM0235-001			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Bright Pixel Flag Threshold LUT	NP_NU-LM0235-002			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Bright Pixel PSF MOD LUT	NP_NU-LM0235-003			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
VIIRS Surface Temperature IP PC	NP_NU-LM0236-001			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
OMPS Darks PC	NP_NU-LM0240-000			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110

Description	Data	File Type	Document	Interface Mnemonic
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
OMPS SAA Darks PC	NP_NU-LM0240-001			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
OMPS Bias PC	NP_NU-LM0240-002			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
OMPS Flat Fields History PC	NP_NU-LM0240-003			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
OMPS WAVMON PC	NP_NU-LM0240-004			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
OMPS CF Solar PC	NP_NU-LM0240-005			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
OMPS Flux PC	NP_NU-LM0240-006			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110

Description	Data	File Type	Document	Interface Mnemonic
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
OMPS Raw Flux PC	NP_NU-LM0240-007			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
OMPS Calibration Constants PC	NP_NU-LM0240-008			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
OMPS TC Field Angles Map PC	NP_NU-LM0240-009			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
OMPS TC Predicted Solar PC	NP_NU-LM0240-011			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
OMPS TC Solar Irradiance PC	NP_NU-LM0240-012			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
OMPS TC Spec Rcn	NP_NU-LM0240-013			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110

Description	Data	File Type	Document	Interface Mnemonic
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
OMPS TC Wave Fitting Parameters	NP_NU-LM0240-014			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
OMPS TC Solar Irradiance Calibration Constants	NP_NU-LM0240-015			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
OMPS TC BRDF Grids	NP_NU-LM0240-017			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
OMPS Line Shifts	NP_NU-LM0240-018			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
OMPS TC Spectral Registration Pixel Map	NP_NU-LM0240-019			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
OMPS TC Timing Pattern	NP_NU-LM0240-020			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110

Description	Data	File Type	Document	Interface Mnemonic
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
OMPS TC Linearity	NP_NU-LM0240-021			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
OMPS TC Earth View Sample Table	NP_NU-LM0240-022			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
OMPS TC Macropixel Table	NP_NU-LM0240-023			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
OMPS TC LED Sample Table	NP_NU-LM0240-024			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
OMPS TC Solar Sample Table	NP_NU-LM0240-025			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
OMPS TC Wavelengths Table	NP_NU-LM0240-026			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110

Description	Data	File Type	Document	Interface Mnemonic
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110
OMPS TC CF_Earth Table	NP_NU-LM0240-027			
			D31413: NPOESS to NOAA ICD	X_NP_AD-LN0110
			D37032: NPOESS Integrated Support Facility ICD	T_AU_DP-L00110