CERES Time-Interpolated TOA Fluxes, Clouds and Aerosols (SSF1deg-Month)

The SSF1deg-Month product provides monthly mean CERES-observed top-of-atmosphere (TOA) radiative fluxes and coincident MODIS-derived cloud and aerosol properties based on the SSF Level 2 measurements. First, each parameter is spatially gridded into a 1° nested grid. Second, the parameters are temporally interpolated between the times of the CERES observations to produce a complete 1-hourly time series for the month. The SSF1deg TOA fluxes are temporally interpolated using the assumption of constant meteorological conditions. For longwave fluxes over oceans and snow/ice surfaces, linear interpolation is used, whereas over land, the daytime heating is estimated using a half-sine curve centered on noon. For shortwave fluxes, empirical diurnal albedo models defined as a function of solar zenith angle and based on cloud and surface conditions are used. The cloud properties are linearly interpolated in time for each layer and are weighted by cloud fraction to compute the total cloud properties. Only clear-sky CERES footprints, which have cloud fractions less than 0.1%, are used to compute the clear-sky parameters. If no clear-sky regional footprints are observed over the month, all clear-sky parameters are set to default. Daily means are calculated using the combination of hourly observed and temporally interpolated parameters for days containing at least one CERES observation. Monthly means are calculated using the daily means. Regional parameters are averaged into zonal values, and the zonal parameters are then averaged to compute the global mean.

The SSF1deg-Month product contains these monthly mean parameters at 1°–regional, 1°–zonal and global spatial scales:
- All-sky and clear-sky radiative shortwave (SW), longwave (LW), window-channel (WN) and net fluxes at TOA
- Total and 4-layered cloud properties for day/night (24-hour) and daytime only
- Auxiliary parameters, such as aerosol optical depths, skin temperature, and precipitable water, that are used as input to process the CERES fluxes
- Solar incoming flux

The SSF1deg products are processed separately for each satellite. Although Terra and Aqua have two CERES instruments each, only the instrument in cross-track mode on each satellite is used.

The product data file is written in HDF and is organized by Vgroups containing collections of science parameters written as Scientific Data Sets (SDSs). Each file contains data for one month.

More information about the CERES products can be obtained on the CERES subsetter ordering web page (http://ceres.larc.nasa.gov/order_data.php).

Level: 3
Frequency: 1/Month
Portion of Atmosphere Covered: TOA

Time Interval Covered:
    File: 1 Month
    Record: 1 Month

Portion of Globe Covered:
    File: Entire Globe
    Record: 1.0-Deg Regional, Zonal, or Global

Product Version:
    TRMM: N/A
    Terra: Edition3A, Edition4A
    Aqua: Edition3A, Edition4A
    NPP: Edition1A

SSF1deg-Month Definition

Table 1 summarizes the overall structure of the SSF1deg-Month HDF file. The HDF file contains metadata in the form of file attributes and a Vdata structure, Vgroups of Scientific Data Sets (SDSs), and dimension scales.

Table 1.   SSF1deg-Month HDF structure summary.

Name	Description
CERES Baseline Header Metadata	Table B-1
CERES_metadata Vdata	Table B-2
SSF1deg-Month Product-specific Metadata	Table 2
Main Vgroups of SDSs	Table 5
Dimension Scales	Table 29

SSF1deg-Month Metadata

Metadata for the SSF1deg-Month product is contained in three components of the HDF file: two file attributes named coremetadata and archivemetadata and one Vdata structure named CERES_metadata. The information contained in these three components is listed in Appendix B. Metadata that is specific to the SSF1deg-Month product is listed in Table 2; it may be found within the coremetadata attribute.

Table 2.   SSF1deg-Month product-specific metadata.

Item	Parameter Name	Units	Range	Data Type
1	identifier_product_doi	N/A	N/A	string

SSF1deg-Month Dimensions

Regional (1° latitude x 1° longitude) SDSs are two-dimensional latitude/longitude arrays of monthly means with 180x360 elements; the values of these indices are shown in Table 3. Cloud parameter SDSs have an additional dimension indicating cloud layer and have 5x180x360 elements. Values of the cloud layer index are shown in Table 4. Zonal SDSs are one-dimensional arrays of monthly means for 1° latitude bands and have 180 elements; cloud parameter SDSs are two-dimensional with 5x180 elements. Global SDSs represent the global monthly mean and are one-dimensional arrays having just one element whereas global mean cloud parameters have five elements.

Table 3.   Definitions of the latitude and longitude dimensions for the
CERES equal-angle 1° latitude by 1° longitude grid.

Dimension	Size	Definition
latitude	180	Index #1 is at 89.5°N and #180 is at 89.5°S.
longitude	360	Index #1 is at 179.5°W and #360 is at 179.5°E.

Table 4.   Definition of the cloud_layer dimension.

Cloud_layer index	Cloud Layer	Pressure layer (hPa)
1	High	50-300
2	Upper Mid	300-500
3	Lower Mid	500-700
4	Low	700-Surface
5	Total	50 - Surface

SSF1deg-Month Top-Level Vgroups

The SSF1deg-Month file has three different spatial resolutions of monthly means: 1° latitude by 1° longitude regional, 1° latitude zonal, and global. Parameters in the HDF file are separated into three Vgroups that are based on the spatial resolution. These Vgroups are listed in Table 5.

Table 5.   Top-level Vgroups based on the spatial resolution of the data.

Vgroup Number	Vgroup Name	Description
0	1_Degree_Regional	Table 6
1	1_Degree_Zonal	Table 15
2	Global	Table 22

Monthly Regional Scientific Data Sets

The tables contained in this section list all monthly regional mean parameters in the file. The monthly regional mean Scientific Data Sets (SDS) are divided into Vgroups; these Vgroups and their corresponding tables of SDSs are listed in Table 6. All SDS tables include the SDS index, SDS name, long name, data type, units, data range, and the number of elements for each SDS.

Regional (1° latitude x 1° longitude) SDSs are two-dimensional latitude/longitude arrays of monthly means with 180x360 elements; the values of these indices are shown in Table 3. Cloud parameter SDSs have an additional dimension indicating cloud layer and have 5x180x360 elements. Values of the cloud layer index are shown in Table 4.

Table 6.   Vgroups contained within the 1_Degree_Regional Vgroup

Vgroup Number	Vgroup Name	SDS Table	Number of SDSs
3	Regional_Information	Table 7	3
4	CERES_TOA_Fluxes_Regional	Table 8	11
5	Meteorological_Variables_Regional	Table 9	9
6	CERES_MODIS_Cloud_Layer_Properties_24Hour_Averages_Regional	Table 10	25
7	CERES_MODIS_Cloud_Layer_Properties_Daylight_Only_Averages_Regional	Table 11	25
8	MODIS_Land_Aerosols_Regional	Table 12	2
9	MODIS_Ocean_Aerosols_Regional	Table 13	2
10	Number_of_Observations_Regional	Table 14	4

Table 7.   Regional_Information

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
0	sfc_altitude	Altitude of Surface Above Sea Level	32-bit real	m	-1000 .. 10000	180x360
1	ocean_coverage	Ocean Percent Coverage	32-bit real	%	0 .. 100	180x360
2	snow_ice_coverage	Snow/Ice Percent Coverage	32-bit real	%	0 .. 100	180x360

Table 8.   CERES_TOA_Fluxes_Regional

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
3	clr_toa_sw_reg	CERES Clear-Sky TOA SW Flux - Regional	32-bit real	W m^{-2}	0 .. 1400	180x360
4	clr_toa_lw_reg	CERES Clear-Sky TOA LW Flux - Regional	32-bit real	W m^{-2}	0 .. 500	180x360
5	clr_toa_wn_reg	CERES Clear-Sky TOA WN Flux - Regional	32-bit real	W m^{-2}	0 .. 200	180x360
6	clr_toa_net_reg	CERES Clear-Sky TOA Net Flux - Regional	32-bit real	W m^{-2}	-400 .. 400	180x360
7	clr_toa_alb_reg	CERES Clear-Sky TOA Albedo - Regional	32-bit real	N/A	0 .. 1	180x360
8	all_toa_sw_reg	CERES All-Sky TOA SW Flux - Regional	32-bit real	W m^{-2}	0 .. 1400	180x360
9	all_toa_lw_reg	CERES All-Sky TOA LW Flux - Regional	32-bit real	W m^{-2}	0 .. 500	180x360
10	all_toa_wn_reg	CERES All-Sky TOA WN Flux - Regional	32-bit real	W m^{-2}	0 .. 200	180x360
11	all_toa_net_reg	CERES All-Sky TOA Net Flux - Regional	32-bit real	W m^{-2}	-400 .. 400	180x360
12	all_toa_alb_reg	CERES All-Sky TOA Albedo - Regional	32-bit real	N/A	0 .. 1	180x360
13	toa_sw_insol_reg	TOA SW Insolation - Regional	32-bit real	W m^{-2}	0 .. 1400	180x360

Table 9.   Meteorological_Variables_Regional

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
14	sfc_wind_speed_reg	Surface Wind Speed - Regional	32-bit real	m s^{-1}	0 .. 100	180x360
15	sfc_skin_temp_reg	Surface Skin Temperature - Regional	32-bit real	K	175 .. 375	180x360
16	sfc_press_reg	Surface Pressure - Regional	32-bit real	hPa	0 .. 1100	180x360
17	sfc_750_temp_diff_reg	Surface Minus 750 mb Air Temperature Difference - Regional	32-bit real	K	-200 .. 200	180x360
18	estim_inversion_strength_reg	Estimated Inversion Strength - Regional	32-bit real	K	-200 .. 200	180x360
19	750_sfc_pot_temp_diff_reg	750 mb Minus Surface Air Potential Temperature Difference - Regional	32-bit real	K	-200 .. 200	180x360

Table 9.   Meteorological_Variables_Regional

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
20	pw_reg	Precipitable Water - Regional	32-bit real	cm	0 .. 10	180x360
21	cld_msk_clr_strong_coverage_reg	Cloud-mask Clear-Strong Percent Coverage - Regional	32-bit real	%	0 .. 100	180x360
22	cld_msk_clr_weak_coverage_reg	Cloud-mask Clear-Weak Percent Coverage - Regional	32-bit real	%	0 .. 100	180x360

Table 10.   CERES_MODIS_Cloud_Layer_Properties_24Hour_Averages_Regional

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
23	cld_amount_reg	Cloud Amount - Total - Regional	32-bit real	%	0 .. 100	5x180x360
24	cld_amount_liq_reg	Cloud Amount - Liquid - Regional	32-bit real	%	0 .. 100	5x180x360
25	cld_amount_ice_reg	Cloud Amount - Ice - Regional	32-bit real	%	0 .. 100	5x180x360
26	cld_od_reg	Cloud Visible Optical Depth (from 3.7 µm particle size retrieval) - Regional	32-bit real	N/A	0 .. 400	5x180x360
27	cld_od_linavg_reg	Cloud Visible Optical Depth (linear averaged, from 3.7 µm particle size retrieval) - Regional	32-bit real	N/A	0 .. 400	5x180x360
28	cld_ir_emiss_reg	Cloud Infrared Emissivity - Regional	32-bit real	N/A	0 .. 2	5x180x360
29	cld_lwp_reg	Cloud Liquid Water Path (from 3.7 µm particle size retrieval) - Regional	32-bit real	$g\ m^{-2}$	0 .. 10000	5x180x360
30	cld_iwp_reg	Cloud Ice Water Path (from 3.7 µm particle size retrieval) - Regional	32-bit real	$g\ m^{-2}$	0 .. 10000	5x180x360
31	cld_top_press_reg	Cloud Top Pressure - Regional	32-bit real	hPa	0 .. 1100	5x180x360
32	cld_top_temp_reg	Cloud Top Temperature - Regional	32-bit real	K	100 .. 350	5x180x360
33	cld_top_hgt_reg	Cloud Top Height - Regional	32-bit real	km	0 .. 20	5x180x360
34	cld_eff_press_reg	Cloud Effective Pressure - Regional	32-bit real	hPa	0 .. 1100	5x180x360
35	cld_eff_temp_reg	Cloud Effective Temperature - Regional	32-bit real	K	100 .. 350	5x180x360
36	cld_eff_hgt_reg	Cloud Effective Height - Regional	32-bit real	km	0 .. 20	5x180x360
37	cld_base_press_reg	Cloud Base Pressure - Regional	32-bit real	hPa	0 .. 1100	5x180x360

Table 10.   CERES_MODIS_Cloud_Layer_Properties_24Hour_Averages_Regional

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
38	cld_base_temp_reg	Cloud Base Temperature - Regional	32-bit real	K	100 .. 350	5x180x360
39	cld_liq_radius_37um_reg	Cloud Liquid Particle Radius (from 3.7 µm particle size retrieval) - Regional	32-bit real	µm	0 .. 40	5x180x360
40	cld_ice_radius_37um_reg	Cloud Ice Particle General Effective Radius (from 3.7 µm particle size retrieval) - Regional	32-bit real	µm	0 .. 300	5x180x360
41	cld_phase_37um_reg	Cloud Particle Phase (from 3.7 µm particle size retrieval) - Regional	32-bit real	N/A	1 .. 2	5x180x360
42	cld_liq_radius_12um_reg	Cloud Liquid Particle Radius (from 1.2 µm particle size retrieval) - Regional	32-bit real	µm	0 .. 40	5x180x360
43	cld_ice_radius_12um_reg	Cloud Ice Particle General Effective Radius (from 1.2 µm particle size retrieval) - Regional	32-bit real	µm	0 .. 300	5x180x360
44	cld_od_12um_reg	Cloud Visible Optical Depth (from 1.2 µm particle size retrieval) - Regional	32-bit real	N/A	0 .. 400	5x180x360
45	cld_liq_radius_21um_reg	Cloud Liquid Particle Radius (from 2.1 µm particle size retrieval) - Regional	32-bit real	µm	0 .. 40	5x180x360
46	cld_ice_radius_21um_reg	Cloud Ice Particle General Effective Radius (from 2.1 µm particle size retrieval) - Regional	32-bit real	µm	0 .. 300	5x180x360
47	cld_od_21um_reg	Cloud Visible Optical Depth (from 2.1 µm particle size retrieval) - Regional	32-bit real	N/A	0 .. 400	5x180x360

Table 11.   CERES_MODIS_Cloud_Layer_Properties_Daylight_Only_Averages_Regional

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
48	cld_amount_day_reg	Cloud Amount - Total - Daylight Only - Regional	32-bit real	%	0 .. 100	5x180x360
49	cld_amount_liq_day_reg	Cloud Amount - Liquid - Daylight Only - Regional	32-bit real	%	0 .. 100	5x180x360
50	cld_amount_ice_day_reg	Cloud Amount - Ice - Daylight Only - Regional	32-bit real	%	0 .. 100	5x180x360
51	cld_od_day_reg	Cloud Visible Optical Depth (from 3.7 µm particle size retrieval) - Daylight Only - Regional	32-bit real	N/A	0 .. 400	5x180x360
52	cld_od_linavg_day_reg	Cloud Visible Optical Depth (linear averaged, from 3.7 µm particle size retrieval) - Daylight Only - Regional	32-bit real	N/A	0 .. 400	5x180x360
53	cld_ir_emiss_day_reg	Cloud Infrared Emissivity - Daylight Only - Regional	32-bit real	N/A	0 .. 2	5x180x360

Table 11.   CERES_MODIS_Cloud_Layer_Properties_Daylight_Only_Averages_Regional

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
54	cld_lwp_day_reg	Cloud Liquid Water Path (from 3.7 µm particle size retrieval) - Daylight Only - Regional	32-bit real	g m^{-2}	0 .. 10000	5x180x360
55	cld_iwp_day_reg	Cloud Ice Water Path (from 3.7 µm particle size retrieval) - Daylight Only - Regional	32-bit real	g m^{-2}	0 .. 10000	5x180x360
56	cld_top_press_day_reg	Cloud Top Pressure - Daylight Only - Regional	32-bit real	hPa	0 .. 1100	5x180x360
57	cld_top_temp_day_reg	Cloud Top Temperature - Daylight Only - Regional	32-bit real	K	100 .. 350	5x180x360
58	cld_top_hgt_day_reg	Cloud Top Height - Daylight Only - Regional	32-bit real	km	0 .. 20	5x180x360
59	cld_eff_press_day_reg	Cloud Effective Pressure - Daylight Only - Regional	32-bit real	hPa	0 .. 1100	5x180x360
60	cld_eff_temp_day_reg	Cloud Effective Temperature - Daylight Only - Regional	32-bit real	K	100 .. 350	5x180x360
61	cld_eff_hgt_day_reg	Cloud Effective Height - Daylight Only - Regional	32-bit real	km	0 .. 20	5x180x360
62	cld_base_press_day_reg	Cloud Base Pressure - Daylight Only - Regional	32-bit real	hPa	0 .. 1100	5x180x360
63	cld_base_temp_day_reg	Cloud Base Temperature - Daylight Only - Regional	32-bit real	K	100 .. 350	5x180x360
64	cld_liq_radius_37um_day_reg	Cloud Liquid Particle Radius (from 3.7 µm particle size retrieval) - Daylight Only - Regional	32-bit real	µm	0 .. 40	5x180x360
65	cld_ice_radius_37um_day_reg	Cloud Ice Particle General Effective Radius (from 3.7 µm particle size retrieval) - Daylight Only - Regional	32-bit real	µm	0 .. 300	5x180x360
66	cld_phase_37um_day_reg	Cloud Particle Phase (from 3.7 µm particle size retrieval) - Daylight Only - Regional	32-bit real	N/A	1 .. 2	5x180x360
67	cld_liq_radius_12um_day_reg	Cloud Liquid Particle Radius (from 1.2 µm particle size retrieval) - Daylight Only - Regional	32-bit real	µm	0 .. 40	5x180x360
68	cld_ice_radius_12um_day_reg	Cloud Ice Particle General Effective Radius (from 1.2 µm particle size retrieval) - Daylight Only - Regional	32-bit real	µm	0 .. 300	5x180x360
69	cld_od_12um_day_reg	Cloud Visible Optical Depth (from 1.2 µm particle size retrieval) - Daylight Only - Regional	32-bit real	N/A	0 .. 400	5x180x360
70	cld_liq_radius_21um_day_reg	Cloud Liquid Particle Radius (from 2.1 µm particle size retrieval) - Daylight Only - Regional	32-bit real	µm	0 .. 40	5x180x360

Table 11.   CERES_MODIS_Cloud_Layer_Properties_Daylight_Only_Averages_Regional

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
71	cld_ice_radius_21um_day_reg	Cloud Ice Particle General Effective Radius (from 2.1 μm particle size retrieval) - Daylight Only - Regional	32-bit real	μm	0 .. 300	5x180x360
72	cld_od_21um_day_reg	Cloud Visible Optical Depth (from 2.1 μm particle size retrieval) - Daylight Only - Regional	32-bit real	N/A	0 .. 400	5x180x360

Table 12.   MODIS_Land_Aerosols_Regional

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
73	aod_land_reg	PSF-weighted MOD04 Corrected Optical Depth Land (0.550 μm) - Regional	32-bit real	N/A	0 .. 5	180x360
74	deep_blue_aod_land_reg	PSF-weighted MOD04 Deep Blue Aerosol Optical Depth Land (0.550 μm) - Regional	32-bit real	N/A	0 .. 5	180x360

Table 13.   MODIS_Ocean_Aerosols_Regional

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
75	aod_ocean_reg	PSF-weighted MOD04 Effective Optical Depth Average Ocean (0.550 μm) - Regional	32-bit real	N/A	0 .. 5	180x360
76	aod_small_ocean_reg	PSF-weighted MOD04 Optical Depth Small Average Ocean (0.550 μm) - Regional	32-bit real	N/A	0 .. 5	180x360

Table 14.　Number_of_Observations_Regional

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
77	num_sw_obs_reg	Number of CERES SW Observations - Regional	32-bit integer	N/A	0 .. 744	180x360
78	num_lw_obs_reg	Number of CERES LW Observations - Regional	32-bit integer	N/A	0 .. 744	180x360
79	num_clr_sw_obs_reg	Number of CERES Clear-Sky SW Observations - Regional	32-bit integer	N/A	0 .. 744	180x360
80	num_clr_lw_obs_reg	Number of CERES Clear-Sky LW Observations - Regional	32-bit integer	N/A	0 .. 744	180x360

Monthly Zonal Scientific Data Sets

The tables contained in this section list all monthly zonal mean parameters in the file. The monthly zonal mean Scientific Data Sets (SDS) are divided into Vgroups; these Vgroups and their corresponding tables of SDSs are listed in Table 15. All SDS tables include the SDS index, SDS name, long name, data type, units, data range, and the number of elements for each SDS.

Zonal SDSs are one-dimensional arrays of monthly means for 1° latitude bands and have 180 elements; the values of these indices are shown in Table 3. Cloud parameter SDSs have an additional dimension indicating cloud layer and have 5x180 elements. Values of the cloud layer index are shown in Table 4.

Table 15.   Vgroups contained within the 1_Degree_Zonal Vgroup

Vgroup Number	Vgroup Name	SDS Table	Number of SDSs
10	CERES_TOA_Fluxes_Zonal	Table 16	9
11	Meteorological_Variables_Zonal	Table 17	9
12	CERES_MODIS_Cloud_Layer_Properties_24Hour_Averages_Zonal	Table 18	25
13	CERES_MODIS_Cloud_Layer_Properties_Daylight_Only_Averages_Zonal	Table 19	25
14	MODIS_Land_Aerosols_Zonal	Table 20	2
15	MODIS_Ocean_Aerosols_Zonal	Table 21	2

Table 16.   CERES_TOA_Fluxes_Zonal

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
81	clr_toa_sw_zon	CERES Clear-Sky TOA SW Flux - Zonal	32-bit real	W m^{-2}	0 .. 1400	180
82	clr_toa_lw_zon	CERES Clear-Sky TOA LW Flux - Zonal	32-bit real	W m^{-2}	0 .. 500	180
83	clr_toa_wn_zon	CERES Clear-Sky TOA WN Flux - Zonal	32-bit real	W m^{-2}	0 .. 200	180
84	clr_toa_net_zon	CERES Clear-Sky TOA Net Flux - Zonal	32-bit real	W m^{-2}	-400 .. 400	180
85	clr_toa_alb_zon	CERES Clear-Sky TOA Albedo - Zonal	32-bit real	N/A	0 .. 1	180
86	all_toa_sw_zon	CERES All-Sky TOA SW Flux - Zonal	32-bit real	W m^{-2}	0 .. 1400	180
87	all_toa_lw_zon	CERES All-Sky TOA LW Flux - Zonal	32-bit real	W m^{-2}	0 .. 500	180
88	all_toa_wn_zon	CERES All-Sky TOA WN Flux - Zonal	32-bit real	W m^{-2}	0 .. 200	180

Table 16.   CERES_TOA_Fluxes_Zonal

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
89	all_toa_net_zon	CERES All-Sky TOA Net Flux - Zonal	32-bit real	W m^{-2}	-400 .. 400	180
90	all_toa_alb_zon	CERES All-Sky TOA Albedo - Zonal	32-bit real	N/A	0 .. 1	180
91	toa_sw_insol_zon	TOA SW Insolation - Zonal	32-bit real	W m^{-2}	0 .. 1400	180

Table 17.   Meteorological_Variables_Zonal

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
92	sfc_wind_speed_zon	Surface Wind Speed - Zonal	32-bit real	m s^{-1}	0 .. 100	180
93	sfc_skin_temp_zon	Surface Skin Temperature - Zonal	32-bit real	K	175 .. 375	180
94	sfc_press_zon	Surface Pressure - Zonal	32-bit real	hPa	0 .. 1100	180
95	sfc_750_temp_diff_zon	Surface Minus 750 mb Air Temperature Difference - Zonal	32-bit real	K	-200 .. 200	180
96	estim_inversion_strength_zon	Estimated Inversion Strength - Zonal	32-bit real	K	-200 .. 200	180
97	750_sfc_pot_temp_diff_zon	750 mb Minus Surface Air Potential Temperature Difference - Zonal	32-bit real	K	-200 .. 200	180
98	pw_zon	Precipitable Water - Zonal	32-bit real	cm	0 .. 10	180
99	cld_msk_clr_strong_coverage_zon	Cloud-mask Clear-Strong Percent Coverage - Zonal	32-bit real	%	0 .. 100	180
100	cld_msk_clr_weak_coverage_zon	Cloud-mask Clear-Weak Percent Coverage - Zonal	32-bit real	%	0 .. 100	180

Table 18.   CERES_MODIS_Cloud_Layer_Properties_24Hour_Averages_Zonal

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
101	cld_amount_zon	Cloud Amount - Total - Zonal	32-bit real	%	0 .. 100	5x180
102	cld_amount_liq_zon	Cloud Amount - Liquid - Zonal	32-bit real	%	0 .. 100	5x180
103	cld_amount_ice_zon	Cloud Amount - Ice - Zonal	32-bit real	%	0 .. 100	5x180

Table 18.   CERES_MODIS_Cloud_Layer_Properties_24Hour_Averages_Zonal

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
104	cld_od_zon	Cloud Visible Optical Depth (from 3.7 µm particle size retrieval) - Zonal	32-bit real	N/A	0 .. 400	5x180
105	cld_od_linavg_zon	Cloud Visible Optical Depth (linear averaged, from 3.7 µm particle size retrieval) - Zonal	32-bit real	N/A	0 .. 400	5x180
106	cld_ir_emiss_zon	Cloud Infrared Emissivity - Zonal	32-bit real	N/A	0 .. 2	5x180
107	cld_lwp_zon	Cloud Liquid Water Path (from 3.7 µm particle size retrieval) - Zonal	32-bit real	g m^{-2}	0 .. 10000	5x180
108	cld_iwp_zon	Cloud Ice Water Path (from 3.7 µm particle size retrieval) - Zonal	32-bit real	g m^{-2}	0 .. 10000	5x180
109	cld_top_press_zon	Cloud Top Pressure - Zonal	32-bit real	hPa	0 .. 1100	5x180
110	cld_top_temp_zon	Cloud Top Temperature - Zonal	32-bit real	K	100 .. 350	5x180
111	cld_top_hgt_zon	Cloud Top Height - Zonal	32-bit real	km	0 .. 20	5x180
112	cld_eff_press_zon	Cloud Effective Pressure - Zonal	32-bit real	hPa	0 .. 1100	5x180
113	cld_eff_temp_zon	Cloud Effective Temperature - Zonal	32-bit real	K	100 .. 350	5x180
114	cld_eff_hgt_zon	Cloud Effective Height - Zonal	32-bit real	km	0 .. 20	5x180
115	cld_base_press_zon	Cloud Base Pressure - Zonal	32-bit real	hPa	0 .. 1100	5x180
116	cld_base_temp_zon	Cloud Base Temperature - Zonal	32-bit real	K	100 .. 350	5x180
117	cld_liq_radius_37um_zon	Cloud Liquid Particle Radius (from 3.7 µm particle size retrieval) - Zonal	32-bit real	µm	0 .. 40	5x180
118	cld_ice_radius_37um_zon	Cloud Ice Particle General Effective Radius (from 3.7 µm particle size retrieval) - Zonal	32-bit real	µm	0 .. 300	5x180
119	cld_phase_37um_zon	Cloud Particle Phase (from 3.7 µm particle size retrieval) - Zonal	32-bit real	N/A	1 .. 2	5x180
120	cld_liq_radius_12um_zon	Cloud Liquid Particle Radius (from 1.2 µm particle size retrieval) - Zonal	32-bit real	µm	0 .. 40	5x180
121	cld_ice_radius_12um_zon	Cloud Ice Particle General Effective Radius (from 1.2 µm particle size retrieval) - Zonal	32-bit real	µm	0 .. 300	5x180
122	cld_od_12um_zon	Cloud Visible Optical Depth (from 1.2 µm particle size retrieval) - Zonal	32-bit real	N/A	0 .. 400	5x180
123	cld_liq_radius_21um_zon	Cloud Liquid Particle Radius (from 2.1 µm particle size retrieval) - Zonal	32-bit real	µm	0 .. 40	5x180

Table 18.   CERES_MODIS_Cloud_Layer_Properties_24Hour_Averages_Zonal

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
124	cld_ice_radius_21um_zon	Cloud Ice Particle General Effective Radius (from 2.1 µm particle size retrieval) - Zonal	32-bit real	µm	0 .. 300	5x180
125	cld_od_21um_zon	Cloud Visible Optical Depth (from 2.1 µm particle size retrieval) - Zonal	32-bit real	N/A	0 .. 400	5x180

Table 19.   CERES_MODIS_Cloud_Layer_Properties_Daylight_Only_Averages_Zonal

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
126	cld_amount_day_zon	Cloud Amount - Total - Daylight Only - Zonal	32-bit real	%	0 .. 100	5x180
127	cld_amount_liq_day_zon	Cloud Amount - Liquid - Daylight Only - Zonal	32-bit real	%	0 .. 100	5x180
128	cld_amount_ice_day_zon	Cloud Amount - Ice - Daylight Only - Zonal	32-bit real	%	0 .. 100	5x180
129	cld_od_day_zon	Cloud Visible Optical Depth (from 3.7 µm particle size retrieval) - Daylight Only - Zonal	32-bit real	N/A	0 .. 400	5x180
130	cld_od_linavg_day_zon	Cloud Visible Optical Depth (linear averaged, from 3.7 µm particle size retrieval) - Daylight Only - Zonal	32-bit real	N/A	0 .. 400	5x180
131	cld_ir_emiss_day_zon	Cloud Infrared Emissivity - Daylight Only - Zonal	32-bit real	N/A	0 .. 2	5x180
132	cld_lwp_day_zon	Cloud Liquid Water Path (from 3.7 µm particle size retrieval) - Daylight Only - Zonal	32-bit real	$g\ m^{-2}$	0 .. 10000	5x180
133	cld_iwp_day_zon	Cloud Ice Water Path (from 3.7 µm particle size retrieval) - Daylight Only - Zonal	32-bit real	$g\ m^{-2}$	0 .. 10000	5x180
134	cld_top_press_day_zon	Cloud Top Pressure - Daylight Only - Zonal	32-bit real	hPa	0 .. 1100	5x180
135	cld_top_temp_day_zon	Cloud Top Temperature - Daylight Only - Zonal	32-bit real	K	100 .. 350	5x180
136	cld_top_hgt_day_zon	Cloud Top Height - Daylight Only - Zonal	32-bit real	km	0 .. 20	5x180
137	cld_eff_press_day_zon	Cloud Effective Pressure - Daylight Only - Zonal	32-bit real	hPa	0 .. 1100	5x180
138	cld_eff_temp_day_zon	Cloud Effective Temperature - Daylight Only - Zonal	32-bit real	K	100 .. 350	5x180
139	cld_eff_hgt_day_zon	Cloud Effective Height - Daylight Only - Zonal	32-bit real	km	0 .. 20	5x180

Table 19.   CERES_MODIS_Cloud_Layer_Properties_Daylight_Only_Averages_Zonal

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
140	cld_base_press_day_zon	Cloud Base Pressure - Daylight Only - Zonal	32-bit real	hPa	0 .. 1100	5x180
141	cld_base_temp_day_zon	Cloud Base Temperature - Daylight Only - Zonal	32-bit real	K	100 .. 350	5x180
142	cld_liq_radius_37um_day_zon	Cloud Liquid Particle Radius (from 3.7 µm particle size retrieval) - Daylight Only - Zonal	32-bit real	µm	0 .. 40	5x180
143	cld_ice_radius_37um_day_zon	Cloud Ice Particle General Effective Radius (from 3.7 µm particle size retrieval) - Daylight Only - Zonal	32-bit real	µm	0 .. 300	5x180
144	cld_phase_37um_day_zon	Cloud Particle Phase (from 3.7 µm particle size retrieval) - Daylight Only - Zonal	32-bit real	N/A	1 .. 2	5x180
145	cld_liq_radius_12um_day_zon	Cloud Liquid Particle Radius (from 1.2 µm particle size retrieval) - Daylight Only - Zonal	32-bit real	µm	0 .. 40	5x180
146	cld_ice_radius_12um_day_zon	Cloud Ice Particle General Effective Radius (from 1.2 µm particle size retrieval) - Daylight Only - Zonal	32-bit real	µm	0 .. 300	5x180
147	cld_od_12um_day_zon	Cloud Visible Optical Depth (from 1.2 µm particle size retrieval) - Daylight Only - Zonal	32-bit real	N/A	0 .. 400	5x180
148	cld_liq_radius_21um_day_zon	Cloud Liquid Particle Radius (from 2.1 µm particle size retrieval) - Daylight Only - Zonal	32-bit real	µm	0 .. 40	5x180
149	cld_ice_radius_21um_day_zon	Cloud Ice Particle General Effective Radius (from 2.1 µm particle size retrieval) - Daylight Only - Zonal	32-bit real	µm	0 .. 300	5x180
150	cld_od_21um_day_zon	Cloud Visible Optical Depth (from 2.1 µm particle size retrieval) - Daylight Only - Zonal	32-bit real	N/A	0 .. 400	5x180

Table 20. MODIS_Land_Aerosols_Zonal

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
151	aod_land_zon	PSF-weighted MOD04 Corrected Optical Depth Land (0.550 µm) - Zonal	32-bit real	N/A	0 .. 5	180
152	deep_blue_aod_land_zon	PSF-weighted MOD04 Deep Blue Aerosol Optical Depth Land (0.550 µm) - Zonal	32-bit real	N/A	0 .. 5	180

Table 21. MODIS_Ocean_Aerosols_Zonal

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
153	aod_ocean_zon	PSF-weighted MOD04 Effective Optical Depth Average Ocean (0.550 µm) - Zonal	32-bit real	N/A	0 .. 5	180
154	aod_small_ocean_zon	PSF-weighted MOD04 Optical Depth Small Average Ocean (0.550 µm) - Zonal	32-bit real	N/A	0 .. 5	180

Monthly Global Scientific Data Sets

The tables contained in this section list all monthly global mean parameters in the file. The monthly global mean Scientific Data Sets (SDS) are divided into Vgroups; these Vgroups and their corresponding tables of SDSs are listed in Table 22. All SDS tables include the SDS index, SDS name, long name, data type, units, data range, and the number of elements for each SDS.

Global SDSs are one-dimensional arrays of monthly global means with just one element. Cloud parameter SDSs have an additional dimension indicating cloud layer and have 5 elements. Values of the cloud layer index are shown in Table 4.

Table 22.   Vgroups contained within the Global Vgroup

Vgroup Number	Vgroup Name	SDS Table	Number of SDSs
16	CERES_TOA_Fluxes_Global	Table 23	11
17	Meteorological_Variables_Global	Table 24	9
18	CERES_MODIS_Cloud_Layer_Properties_24Hour_Averages_Global	Table 25	25
19	CERES_MODIS_Cloud_Layer_Properties_Daylight_Only_Averages_Global	Table 26	25
20	MODIS_Land_Aerosols_Global	Table 27	2
21	MODIS_Ocean_Aerosols_Global	Table 28	2

Table 23.   CERES_TOA_Fluxes_Global

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
155	clr_toa_sw_glob	CERES Clear-Sky TOA SW Flux - Global	32-bit real	W m^{-2}	0 .. 1400	1
156	clr_toa_lw_glob	CERES Clear-Sky TOA LW Flux - Global	32-bit real	W m^{-2}	0 .. 500	1
157	clr_toa_wn_glob	CERES Clear-Sky TOA WN Flux - Global	32-bit real	W m^{-2}	0 .. 200	1
158	clr_toa_net_glob	CERES Clear-Sky TOA Net Flux - Global	32-bit real	W m^{-2}	-400 .. 400	1
159	clr_toa_alb_glob	CERES Clear-Sky TOA Albedo - Global	32-bit real	N/A	0 .. 1	1
160	all_toa_sw_glob	CERES All-Sky TOA SW Flux - Global	32-bit real	W m^{-2}	0 .. 1400	1
161	all_toa_lw_glob	CERES All-Sky TOA LW Flux - Global	32-bit real	W m^{-2}	0 .. 500	1
162	all_toa_wn_glob	CERES All-Sky TOA WN Flux - Global	32-bit real	W m^{-2}	0 .. 200	1
163	all_toa_net_glob	CERES All-Sky TOA Net Flux - Global	32-bit real	W m^{-2}	-400 .. 400	1

Table 23. CERES_TOA_Fluxes_Global

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
164	all_toa_alb_glob	CERES All-Sky TOA Albedo - Global	32-bit real	N/A	0 .. 1	1
165	toa_sw_insol_glob	TOA SW Insolation - Global	32-bit real	W m^{-2}	0 .. 1400	1

Table 24. Meteorological_Variables_Global

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
166	sfc_wind_speed_glob	Surface Wind Speed - Global	32-bit real	m s^{-1}	0 .. 100	1
167	sfc_skin_temp_glob	Surface Skin Temperature - Global	32-bit real	K	175 .. 375	1
168	sfc_press_glob	Surface Pressure - Global	32-bit real	hPa	0 .. 1100	1
169	sfc_750_temp_diff_glob	Surface Minus 750 mb Air Temperature Difference - Global	32-bit real	K	-200 .. 200	1
170	estim_inversion_strength_glob	Estimated Inversion Strength - Global	32-bit real	K	-200 .. 200	1
171	750_sfc_pot_temp_diff_glob	750 mb Minus Surface Air Potential Temperature Difference - Global	32-bit real	K	-200 .. 200	1
172	pw_glob	Precipitable Water - Global	32-bit real	cm	0 .. 10	1
173	cld_msk_clr_strong_coverage_glob	Cloud-mask Clear-Strong Percent Coverage - Global	32-bit real	%	0 .. 100	1
174	cld_msk_clr_weak_coverage_glob	Cloud-mask Clear-Weak Percent Coverage - Global	32-bit real	%	0 .. 100	1

Table 25. CERES_MODIS_Cloud_Layer_Properties_24Hour_Averages_Global

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
175	cld_amount_glob	Cloud Amount - Total - Global	32-bit real	%	0 .. 100	5
176	cld_amount_liq_glob	Cloud Amount - Liquid - Global	32-bit real	%	0 .. 100	5
177	cld_amount_ice_glob	Cloud Amount - Ice - Global	32-bit real	%	0 .. 100	5
178	cld_od_glob	Cloud Visible Optical Depth (from 3.7 µm particle size retrieval) - Global	32-bit real	N/A	0 .. 400	5

Table 25.   CERES_MODIS_Cloud_Layer_Properties_24Hour_Averages_Global

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
179	cld_od_linavg_glob	Cloud Visible Optical Depth (linear averaged, from 3.7 μm particle size retrieval) - Global	32-bit real	N/A	0 .. 400	5
180	cld_ir_emiss_glob	Cloud Infrared Emissivity - Global	32-bit real	N/A	0 .. 2	5
181	cld_lwp_glob	Cloud Liquid Water Path (from 3.7 μm particle size retrieval) - Global	32-bit real	g m^{-2}	0 .. 10000	5
182	cld_iwp_glob	Cloud Ice Water Path (from 3.7 μm particle size retrieval) - Global	32-bit real	g m^{-2}	0 .. 10000	5
183	cld_top_press_glob	Cloud Top Pressure - Global	32-bit real	hPa	0 .. 1100	5
184	cld_top_temp_glob	Cloud Top Temperature - Global	32-bit real	K	100 .. 350	5
185	cld_top_hgt_glob	Cloud Top Height - Global	32-bit real	km	0 .. 20	5
186	cld_eff_press_glob	Cloud Effective Pressure - Global	32-bit real	hPa	0 .. 1100	5
187	cld_eff_temp_glob	Cloud Effective Temperature - Global	32-bit real	K	100 .. 350	5
188	cld_eff_hgt_glob	Cloud Effective Height - Global	32-bit real	km	0 .. 20	5
189	cld_base_press_glob	Cloud Base Pressure - Global	32-bit real	hPa	0 .. 1100	5
190	cld_base_temp_glob	Cloud Base Temperature - Global	32-bit real	K	100 .. 350	5
191	cld_liq_radius_37um_glob	Cloud Liquid Particle Radius (from 3.7 μm particle size retrieval) - Global	32-bit real	μm	0 .. 40	5
192	cld_ice_radius_37um_glob	Cloud Ice Particle General Effective Radius (from 3.7 μm particle size retrieval) - Global	32-bit real	μm	0 .. 300	5
193	cld_phase_37um_glob	Cloud Particle Phase (from 3.7 μm particle size retrieval) - Global	32-bit real	N/A	1 .. 2	5
194	cld_liq_radius_12um_glob	Cloud Liquid Particle Radius (from 1.2 μm particle size retrieval) - Global	32-bit real	μm	0 .. 40	5
195	cld_ice_radius_12um_glob	Cloud Ice Particle General Effective Radius (from 1.2 μm particle size retrieval) - Global	32-bit real	μm	0 .. 300	5
196	cld_od_12um_glob	Cloud Visible Optical Depth (from 1.2 μm particle size retrieval) - Global	32-bit real	N/A	0 .. 400	5
197	cld_liq_radius_21um_glob	Cloud Liquid Particle Radius (from 2.1 μm particle size retrieval) - Global	32-bit real	μm	0 .. 40	5

Table 25.   CERES_MODIS_Cloud_Layer_Properties_24Hour_Averages_Global

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
198	cld_ice_radius_21um_glob	Cloud Ice Particle General Effective Radius (from 2.1 µm particle size retrieval) - Global	32-bit real	µm	0 .. 300	5
199	cld_od_21um_glob	Cloud Visible Optical Depth (from 2.1 µm particle size retrieval) - Global	32-bit real	N/A	0 .. 400	5

Table 26.   CERES_MODIS_Cloud_Layer_Properties_Daylight_Only_Averages_Global

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
200	cld_amount_day_glob	Cloud Amount - Total - Daylight Only - Global	32-bit real	%	0 .. 100	5
201	cld_amount_liq_day_glob	Cloud Amount - Liquid - Daylight Only - Global	32-bit real	%	0 .. 100	5
202	cld_amount_ice_day_glob	Cloud Amount - Ice - Daylight Only - Global	32-bit real	%	0 .. 100	5
203	cld_od_day_glob	Cloud Visible Optical Depth (from 3.7 µm particle size retrieval) - Daylight Only - Global	32-bit real	N/A	0 .. 400	5
204	cld_od_linavg_day_glob	Cloud Visible Optical Depth (linear averaged, from 3.7 µm particle size retrieval) - Daylight Only - Global	32-bit real	N/A	0 .. 400	5
205	cld_ir_emiss_day_glob	Cloud Infrared Emissivity - Daylight Only - Global	32-bit real	N/A	0 .. 2	5
206	cld_lwp_day_glob	Cloud Liquid Water Path (from 3.7 µm particle size retrieval) - Daylight Only - Global	32-bit real	g m^{-2}	0 .. 10000	5
207	cld_iwp_day_glob	Cloud Ice Water Path (from 3.7 µm particle size retrieval) - Daylight Only - Global	32-bit real	g m^{-2}	0 .. 10000	5
208	cld_top_press_day_glob	Cloud Top Pressure - Daylight Only - Global	32-bit real	hPa	0 .. 1100	5
209	cld_top_temp_day_glob	Cloud Top Temperature - Daylight Only - Global	32-bit real	K	100 .. 350	5
210	cld_top_hgt_day_glob	Cloud Top Height - Daylight Only - Global	32-bit real	km	0 .. 20	5
211	cld_eff_press_day_glob	Cloud Effective Pressure - Daylight Only - Global	32-bit real	hPa	0 .. 1100	5
212	cld_eff_temp_day_glob	Cloud Effective Temperature - Daylight Only - Global	32-bit real	K	100 .. 350	5
213	cld_eff_hgt_day_glob	Cloud Effective Height - Daylight Only - Global	32-bit real	km	0 .. 20	5

Table 26.   CERES_MODIS_Cloud_Layer_Properties_Daylight_Only_Averages_Global

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
214	cld_base_press_day_glob	Cloud Base Pressure - Daylight Only - Global	32-bit real	hPa	0 .. 1100	5
215	cld_base_temp_day_glob	Cloud Base Temperature - Daylight Only - Global	32-bit real	K	100 .. 350	5
216	cld_liq_radius_37um_day_glob	Cloud Liquid Particle Radius (from 3.7 μm particle size retrieval) - Daylight Only - Global	32-bit real	μm	0 .. 40	5
217	cld_ice_radius_37um_day_glob	Cloud Ice Particle General Effective Radius (from 3.7 μm particle size retrieval) - Daylight Only - Global	32-bit real	μm	0 .. 300	5
218	cld_phase_37um_day_glob	Cloud Particle Phase (from 3.7 μm particle size retrieval) - Daylight Only - Global	32-bit real	N/A	1 .. 2	5
219	cld_liq_radius_12um_day_glob	Cloud Liquid Particle Radius (from 1.2 μm particle size retrieval) - Daylight Only - Global	32-bit real	μm	0 .. 40	5
220	cld_ice_radius_12um_day_glob	Cloud Ice Particle General Effective Radius (from 1.2 μm particle size retrieval) - Daylight Only - Global	32-bit real	μm	0 .. 300	5
221	cld_od_12um_day_glob	Cloud Visible Optical Depth (from 1.2 μm particle size retrieval) - Daylight Only - Global	32-bit real	N/A	0 .. 400	5
222	cld_liq_radius_21um_day_glob	Cloud Liquid Particle Radius (from 2.1 μm particle size retrieval) - Daylight Only - Global	32-bit real	μm	0 .. 40	5
223	cld_ice_radius_21um_day_glob	Cloud Ice Particle General Effective Radius (from 2.1 μm particle size retrieval) - Daylight Only - Global	32-bit real	μm	0 .. 300	5
224	cld_od_21um_day_glob	Cloud Visible Optical Depth (from 2.1 μm particle size retrieval) - Daylight Only - Global	32-bit real	N/A	0 .. 400	5

Table 27.   MODIS_Land_Aerosols_Global

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
225	aod_land_glob	PSF-weighted MOD04 Corrected Optical Depth Land (0.550 µm) - Global	32-bit real	N/A	0 .. 5	1
226	deep_blue_aod_land_glob	PSF-weighted MOD04 Deep Blue Aerosol Optical Depth Land (0.550 µm) - Global	32-bit real	N/A	0 .. 5	1

Table 28.   MODIS_Ocean_Aerosols_Global

SDS Index	SDS Name	Long Name	Data Type	Units	Range	Number of Elements
227	aod_ocean_glob	PSF-weighted MOD04 Effective Optical Depth Average Ocean (0.550 µm) - Global	32-bit real	N/A	0 .. 5	1
228	aod_small_ocean_glob	PSF-weighted MOD04 Optical Depth Small Average Ocean (0.550 µm) - Global	32-bit real	N/A	0 .. 5	1

SSF1deg-Month Dimension Scales

Table 29 lists the dimension scales of the SDS arrays in the HDF file. Each dimension scale variable corresponds to one dimension and has the same name and size as that dimension. The dimension scales store the index values belonging to each dimension and have information like the other SDSs in the file.

Table 29.   Dimension Scale Information

SDS Index	Dimension Name	Long Name	Data Type	Units	Range	Number of Elements
229	longitude	Longitude	32-bit real	degrees _east	N/A	360
230	latitude	Latitude	32-bit real	degrees _north	N/A	180
231	cloud_layer	Index of Cloud Layers Stratified by Pressure	32-bit integer	N/A	N/A	5
232	global_mean	Global Mean Value	32-bit integer	N/A	N/A	1

File Size: ~39 MB
Number of Regional Parameters: 81   Number of Global Parameters: 74
Number of Zonal Parameters: 74

SSF1deg-Month Revision Record

The product Revision Record contains information pertaining to approved section changes. The table lists the date the Software Configuration Change Request (SCCR) was approved, the Release and Version Number, the SCCR number, a short description of the revision, and the revised sections.

SSF1deg-Month Revision Record

SCCR Approval Date	Release/ Version Number	SCCR Number	Description of Revision	Section(s) Affected
09/30/2015 (Ed3) 04/18/2017 (Ed4 & Ed1-NPP)	R5V1	1086(Ed3) 1177(Ed4 & Ed1-NPP)	• Initial version of this document.	All