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Harold

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July 13, 1993

Reply to Attn of: E. Masuoka/920.2

TO: MODIS Science Team Member
FROM: MODIS Science Data Support Team/E. Masuoka
SUBJECT: Request for Updating information about MODIS Standard Products

The MODIS Team Leader has asked the MODIS Science Data Support Team to provide Dr. Michael King with the updated information about Standard Products which he has requested in the attached letter. In order to deliver a single package to Mike's by his deadline of July 30, I would appreciate receiving any updates on your products by July 28. My FAX number is (301)286-9200 and my e-mail address is emasuoka@ltpsun.gsfc.nasa.gov.

I've reviewed the list of approved products which appear in the listing entitled MODIS Products. Under the new scheme for listing and tracking products, what were products are now called parameters and related parameters are grouped into products. I've summarized the changes to your list of standard products in the 7 pages with a July 13 date in the lower right hand corner. The biggest changes to the product list are the addition of four new parameters and the de-listing of 20 parameters. If you need to produce a de-listed product as an intermediate step to producing a selected product, you will want to modify the Mflops of the selected product to reflect the additional processing. No change in storage will be required, since the de-listed product will not be archived in the ESDIS. Blank forms are included for requesting additional products and parameters. The justifications for new products or parameters will reviewed by M. King and G. Asrar, who will accept or reject the request for additional products or parameters.

I recognize that this request for additional information about data products comes at a time when you are busy preparing Algorithm Theoretical Basis Documents (ATBDs). Please contact me via phone or e-mail if the SDST can be of any assistance to you in this exercise.

Ed Masuoka
Head, MODIS SDST

List of products V.V.S. presented at IWG now modified to show the new MODIS product and parameter numbers and which product were added or dropped from the list of selected products.
E. Masuoka

MODIS Level 1A and 1B Data Products

Parameter #	Product Name	Investigator(s)	Status	MODIS Product #
~~1001~~ 3708	Level-1A Radiance	Salomonson	A	1
2338	Level-1B Radiance	Salomonson	A	2
3660	Classification Masks, Clouds/Snow/Land/Water	Salomonson, Barker (with Hall)	A	18

When a parameter number has been changed, it is shown as a strike-thru with the new number underneath

MODIS Level 2 Data Products (Land Group)

Parameter #	Product Name	Investigator(s)	Status	MODIS Product #
2404	Land_sfc Radiance-Correction, Topographic	Muller	A	not listed
2484	Land_sfc Temperature	Wan	A	10
3020	Snow Cover	Salomonson, Hall	A	9
2015	Spectral Reflectance/Surface Leaving Radiance	Kaufman, Tanre, Justice	A	8
2749	Vegetation Indices	Justice, Huete	A	12
~~2424~~ 3669	Albedo, Spectral	Muller, Strahler, Tanre	A	8
~~2424~~ 3665	Bidirectional Reflectance	Muller, Strahler, Tanre	A	8
3323	Land_sfc Emissivity	Wan	P	not listed
3670	Land_sfc Roughness	Muller	P	not listed
2047	Soil Index	Huete	P	not listed
2471	Thermal Anomalies (Fire size and Temperature)	Kaufman, Justice	A	13

When a parameter number has been changed, it is shown as a strike-thru with the new number underneath

MODIS Level 2 Data Products (Ocean Group)

Parameter #	Product Name	Investigator(s)	Status	MODIS Product #
2569	Case II Waters Chlorophyll_a Conc	Carder	A	22
2575	Chlorophyll Fluorescence Line Height	Abbott, Evans	A	21
2571	Chlorophyll_a Pigment Conc	Clark	A	22
2416	Level-2 Radiance, Water-leaving	Gordon et al	A	20
2580	Organic Matter Conc, Dissolved	Gordon, Parslow	A	25
2266	PAR,Sfc (IPAR) and Incident (IPAR)	Carder	A	23
3153	Sea_Ice Max Extent	Salomonson, Hall	A	30
2527	Sea_sfc Temperature (SST)	Brown, Barton	A	29
2602	Ocean Productivity, Primary, Near_sfc (via Fluorescence)	Abbott, Esaias	P	28
2581	Organic Matter Conc, Dissolved	Carder, Hoge	A	not listed
3211	Chlorophyll Fluorescence Efficiency	Abbott	P	21
2566	Chlorophyll_a Conc (via Fluorescence)	Abbott	P	not listed
2577	Coccolith Conc, Detached	Gordon, Clark	P	26
2254	Glint Field	Gordon	P	not listed
2608	Organic Matter Conc, Particulate	Clark	P	25
2330	PAR	Esaias	P	23
3320	Phycoerythrin Pigment	Hoge	P	33
2555	Phytoplankton Backscatter Coef	Gordon, Clark	P	not listed
2593	Pigment Conc (via Spectral Curv)	Hoge, Esaias	P	not listed
1688	Wind Velocity, Sea_sfc Glint-Pattern	Gordon	P	not listed
2295	Aerosol Angstrom Exponent	Gordon	A	38
2344	~~Aerosol Radiance~~ Aerosol Optical Depth (@865nm)	Gordon	A	37
~~A~~ 3303	Calibration Data	Evans	A	34
2573	Chlorophyll Fluorescence Line Curv	Hoge	A	21
~~4002~~ 3707	Clear Water Epsilon	Carder	A	40
4001	Normalized Clear Water	Carder	A	not listed
2031	Ocean Water Attenuation Coef, PAR	Clark, Gordon	A	not listed
3199	Ocean Water Attenuation Coef@490nm	Gordon, Clark	A	27
3206	Ocean Water Attenuation Coef@520nm, Beam	Clark, Gordon	A	27
2559	Ocean Water Backscatter Coef, Total	Gordon, Parslow	A	35
3662	Organic Matter Degradation_Product Absorption Coef@415nm (DOM+Detritus)	Carder, Hoge	A	not listed

3216	Particulate Backscatter Coef	Gordon, Parslow	A	not listed
2591	Pigment Conc	Gordon, Clark	A	19
3085	Suspended-Solids Conc, Ocean Water	Clark	A	24
3724	**Absorption Coef, Total**	**Carder**	**A**	**36**

When a parameter number has been changed, it is shown as a strike-thru with the new number underneath

New products are shown in bold text

MODIS Level 2 Data Products (Atmosphere Group)

Parameter #	Product Name	Investigator(s)	Status	MODIS Product #
2293	Aerosol Optical Depth, Spectral	Kaufman, Tanre	A	3
1022	Aerosol Size-Distribution (Radius-Dispersion)	Tanre, King	A	3
~~3641~~ 2081	Cloud Cover	King, Kaufman	A	5
1764	Cloud Drop Phase	King, Menzel	A	5
1780	Cloud Drop Size (Effective Radius)	King	A	5
2311	Cloud Optical Depth	King	A	5
2467	Cloud Top Properties	Menzel	A	5
1017	Aerosol Mass Loading	Kaufman	P	not listed
2003	Single Scattering Albedo, Aerosol	Tanre, Kaufman	P	not listed
1333	O_3 Total Burden	Menzel	A	6
1874	Precipitable Water	Kaufman, Tanre, Menzel	A	4
1559	Stability (Lifted Index), Atmospheric	Menzel	A	7
3726	**Temperature Profile**	**TBD**	**A**	**31**
3727	**Water Vapor Profile**	**TBD**	**A**	**32**
3725	**Water Vapor, Atmospheric**	**TBD**	**A**	**39**

When a parameter number is changed it is shown as a strike-thru with the new number underneath
New products are shown in bold text

MODIS Level 3 Data Products

Parameter #	Product Name	Investigator(s)	Status	MODIS Product #
2606	Ocean Productivity, Primary	Abbott, Esaias	A	28
2068	Cloud Field Area	Kaufman	P	not listed
2094	Cloud JPDF	King, Menzel	P	not listed
3696	Land_sfc BRDF, AM-PM Asymmetry	Vanderbilt	P	not listed
2337	Vegetation Index, Polarization	Vanderbilt	P	not listed
2669	Land_Cover Type	Strahler, Huete	A	11
2671	Land_Cover Type-Change	Strahler, Huete	A	not listed

MODIS Level 4 Data Products

Parameter #	Product Name	Investigator(s)	Status	MODIS Product #
~~2683~~ 3722	Evapotranspiration	Running	A	15
~~2682~~ 2703	Net Primary Production	Running	A	16
~~2681~~ 3716	Photosynthesis-Respiration	Running	A	17
2680	Vegatation Index, Leaf Area, (LAI)	Running	A	14

When a parameter number has been changed, it is shown as a strike-thru with the new number underneath

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Reply to Attn of: 900

June 23, 1993

Dr. Vincent V. Salomonson
NASA/Goddard Space Flight Center
Code 900
Greenbelt, MD 20771

Dear Vince:

We are writing you to address the issue of sizing EOSDIS to handle data product generation, processing, and storage, as was discussed during the IWG meeting at the end of March.

Since the IWG, we have been working with a small team of support contractors, EOSDIS and Global Change Data Center personnel to consolidate the desired data products list for each instrument and the recommended high-priority products from the Atmosphere, Ocean, Land-Biosphere, and Solid Earth Panels. The outgrowth of this process is a data products list that is larger than that proposed at the outset of the IWG.

In the process of examining all the available inputs, we have first verified that changes requested at or as a result of the IWG process have been incorporated into the list of total data products. That list is enclosed as Attachment 1, along with a description of the various fields found in that list (Attachment 2). We performed an analysis of the data products list to determine why it had grown as a result of the IWG deliberations. In so doing, we found that three teams have addressed data products up to Level 3 (L3), while others have not addressed this at all. Certainly, some L3 products will be highly requested and highly utilized in the near-term, but many L3 products must be considered as post-launch products, given the time required to integrate all required input parameters.

We believe this list is accurate and representative of your request based on your input at the IWG meeting. If you are requesting any additional products to this list you must provide a clear and concise justification. We will review your request and inform you of our decision and the justification for accepting/rejecting your request.

Most instruments have not specifically identified their Level 1A (L1A) prod-

1527
6-28-93

ucts, and these are not included on the enclosed product lists, although estimates for their storage and processing requirements have been made by the Earth Science Data and Information System (ESDIS) Project for sizing analysis of EOSDIS. Please provide information on L1A products if they are to be archived.

Please note from Attachment 1 that we are drawing a distinction between Data Products and Geophysical Parameters. This is done because in many cases related parameters are naturally calculated and used as a group. Such grouped sets of parameters are designated Data Products. This distinction is more easily seen in Attachment 3, showing the numbers of data products and parameters, yet even here there is some redundancy, as not every listed parameter corresponds to a unique geophysical parameter (see, for example, the entry for CERES). Reduction in total parameters will result from careful definition of parameters as unique entries.

Grouping of geophysical parameters into data products has been proposed by a few instrument teams (e.g., CERES, MISR). In other cases, it has been assumed that each data product contains only one parameter and its name is the same as the parameter name. A blank form is supplied to allow you to redefine data products as collections of parameters if the data product information is known. The blank form also can be used to describe missing data products. Please enter the appropriate information on the blank form if any of your data products are missing.

In addition to addressing your data product requirements to result in unique geophysical parameters, we are asking that you (and your team) provide us with realistic estimates of processing requirements (as MFLOPS) and data storage (as Gbytes per day), assuming a phased approach for data product generation for each parameter as indicated on Attachment 1 (see the column labeled "Time Frame"). We would also like you:

- to update accuracy estimates for each parameter and product, where possible,

- to validate the parameters assigned to each product. To help you in this activity, we are also including team-specific items, i.e., a detailed table of parameters and products. We recognize that in some cases it may not be possible to provide this information for specific parameters, but it should be possible for corresponding products.

- to provide a detailed description of the assumptions and the methodology used in deriving the estimates on a separate sheet. If your estimates are based on an existing data system, please provide specific information on the type and computing capacity of your hardware and its operational environment.

Please note that the MFLOPS estimates we use in the tables are those needed for producing the data products at "keep up" rates with computers running 24 hours per day every day. Therefore, if you have given us estimates based on benchmarks running 8 hours per day and 5 days per week, for example, they will be divided by 4.2 before being entered in the table. Also, if you have made assumptions on specific types of computers, please let us know. The numbers in our tables will not be manufacturer rated MFLOPS, but the raw MFLOPS needed to perform the calculations. These numbers will then be multiplied by the appropriate factors to provide capacity for integration/ testing and reprocessing, and to account for maintenance down times, compiler inefficiencies, etc. before determining the "manufacturer rated MFLOPS" to be acquired.

It is also very important for us to understand your input requirements, particularly ancillary data that are required to generate your data products:

- please list all the required input data, including those from your own instrument and non-EOS data, in the column labeled "Data Dependency."

In order to design the network that meets your needs, we need to understand your network communications requirements for data validation and quality checks:

- please describe the anticipated data volume, frequency and timeliness of data transmission between your SCF and DAACs in the "Comments" column.

It is imperative that we have this updated information from you by July 30. Responses are to be sent to Michael King for further action. We will acknowledge receipt of your input with a follow-up letter confirming that your information has been received and incorporated in the ESDIS Project for proper sizing of EOSDIS.

This list will also serve as the first step toward developing a science plan for the program with your help and input. As we described at the IWG, each team should provide a detailed assessment of how a given product will be used to address a scientific question/issue. In this process the specific spatial and spectral resolution, signal-to-noise ratio, etc. requirements should be discussed. It is very important to provide as much information as possible on the impact of improvement/degradation of these requirements on the scientific goals/ objectives to be accomplished. This will assure that your science requirements are met in terms of hardware and data/information deliverables, while avoiding numerous calls and meetings to resolve the many questions that may arise between now and the launch of the EOS satellites. Although the science plan will be a living document subject to revision and refinements as we improve our understanding and knowledge in all areas, we believe there must be a baseline document from which we can

start. The project science office has agreed to serve as the integrator of your input, and we will iterate this document at least 2-3 times until we all feel comfortable with its content before publishing the first version. Our goal is to have this first draft finished by the end of calendar year 1993. We hope we can count on your support and active involvement in this very important process. We believe the data products will serve as:

- a common thread in bringing the observations, science, and data/information system components of this complex project together,

- a basis for deliverables and commitments by the program and project offices and the investigators, and,

- a measure of our long-term success.

Thank you for your help and cooperation. Based on your input, we will be able to provide the ESDIS Project with the information they need to provide a robust data and information system to support all of our endeavors.

Sincerely,

Michael D. King
EOS Senior Project Scientist
Earth Sciences Directorate
Goddard Space Flight Center

Ghassem Asrar
EOS Program Scientist
Office of Mission to Planet Earth/YS
NASA Headquarters

Enclosures

cc: Mr. John Dalton/505
Dr. Robert Price/170
Dr. Dixon Butler/HQ/YD
IDS Principal Investigators

List of Data Products

GSFC/SPSO(6/04/93)

Listed by Instrument

Prod #	*Product Name*	*# of Parm*	*Instrument*	*Platform*	*DAAC*	*Time frame*	*Product Level*	*Product Type*	*Production Mode*	*Sotware Flag*	*Volume (GB/day)*	*Processing Load (Mflops)*
ACR01	Irradiance, Solar, Total	1	ACRIM	CHEM	LaRC	AL	1B	Std	Routine		0.046	0.004
AIR01	*Level-1B Radiance, AIRS*	1	AIRS	PM	GSFC	AL	1B	Std	Routine		12.870	7.301
AIR02	*CH4 Total Burden*	1	AIRS	PM	GSFC	PL	2	Std	Routine		0.001	0.000
AIR03	*Cloud Cover*	1	AIRS	PM	GSFC	AL	2	Std	Routine		0.001	0.007
AIR04	*Cloud Emissivity, IR Spectral (3-14um)*	1	AIRS	PM	GSFC	AL	2	Std	Routine		0.007	0.021
AIR05	*Cloud Height, Top*	1	AIRS	PM	GSFC	AL	2	Std	Routine		0.001	0.007
AIR06	*Cloud Ice Index*	1	AIRS	PM	GSFC	PL	2	Std	Routine		0.001	0.001
AIR07	*Cloud Liq_water Content*	1	AIRS	PM	GSFC	PL	2	Std	Routine		0.001	0.001
AIR08	*Cloud Temperature, Top*	1	AIRS	PM	GSFC	AL	2	Std	Routine		0.001	0.007
AIR09	*CO Total Burden*	1	AIRS	PM	GSFC	PL	2	Std	Routine		0.001	0.000
AIR10	*Humidity Profile*	1	AIRS	PM	GSFC	AL	2	Std	Routine		0.026	4.511
AIR11	*Ice_Sheet Cover Index*	1	AIRS	PM	GSFC	PL	2	Std	Routine		0.001	0.000
AIR12	*Land_sfc Emissivity, IR/MW Spectral*	1	AIRS	PM	GSFC	AL	2	Std	Routine		0.005	0.004
AIR13	*Land_sfc Temperature, Skin*	1	AIRS	PM	GSFC	AL	2	Std	Routine		0.000	0.004
AIR14	Land_sfc Temperature-Difference, Day-I	1	AIRS	PM	GSFC	AL	2	Std	Routine	S	0.005	0.000
AIR15	*O3 Conc*	1	AIRS	PM	GSFC	AL	2	Std	Routine		0.004	0.000
AIR16	O3 Total Burden	1	AIRS	PM	GSFC	AL	2	Std	Routine	S	0.003	0.001
AIR17	Precipitable Water	1	AIRS	PM	GSFC	AL	2	Std	Routine	S	0.005	0.001
AIR18	*Precipitation Index*	1	AIRS	PM	GSFC	PL	2	Std	Routine		0.001	0.003
AIR19	Radiance, Cloud Cleared, Level-2	1	AIRS	PM	GSFC	AL	2	Std	Routine	S	0.005	0.001
AIR20	*Radiative Flux, LW Spectral, Sfc*	1	AIRS	PM	GSFC	PL	2	Std	Routine		1.430	0.057
AIR21	Radiative Flux, LW Spectral, TOA	1	AIRS	PM	GSFC	PL	2	Std	Routine	S	0.007	0.025
AIR22	*Radiative Flux, LW, Net Global Sfc*	1	AIRS	PM	GSFC	PL	2	Std	Routine		0.001	0.025
AIR23	*Radiative Flux, SW, Net Global Sfc*	1	AIRS	PM	GSFC	PL	2	Std	Routine		0.001	0.024
AIR24	*Sea_Ice Cover*	1	AIRS	PM	GSFC	PL	2	Std	Routine		0.001	0.000
AIR25	*Sea_sfc Temperature (SST), Skin*	1	AIRS	PM	GSFC	AL	2	Std	Routine		0.001	0.010
AIR26	*Snow Cover Index*	1	AIRS	PM	GSFC	PL	2	Std	Routine		0.001	0.000
AIR27	*Temperature Profile*	1	AIRS	PM	GSFC	AL	2	Std	Routine		0.052	4.521
AIR28	*Wind Speed, Sea_sfc*	1	AIRS	PM	GSFC	PL	2	Std	Routine		0.001	0.029
AMS01	*Level-1B Radiance, AMSU*	1	AMSU-A	PM	GSFC	AL	1B	Std	Routine		0.013	0.014
MHS01	*Level-1B Radiance, MHS*	1	MHS	PM	GSFC	AL	1B	Std	Routine		0.029	0.041
AST01	Level-1A Data, ASTER, Decommutated	1	ASTER	AM1	EDC	AL	1A	Std	Routine			
AST02	Auxillary Data Product	3	ASTER	AM1	EDC	AL	1B	Std	On Request			
AST03	Level-1B Radiance, ASTER	1	ASTER	AM1	EDC	AL	1B	Std	Routine		131.472	10.116
AST04	Level-1B Radiance, ASTER, Registered	1	ASTER	AM1	EDC	AL	1B	Std	On Request			0.345
AST05	Cloud Product	14	ASTER	AM1	EDC	AL	2	Std	On Request			
AST06	Surface Emissivity	1	ASTER	AM1	EDC	AL	2	Std	On Request			0.461
AST07	Relative Spectral Emissivity - Browse Pr	1	ASTER	AM1	EDC	AL	2	Std	Routine			0.138
AST08	Surface Reflectance	1	ASTER	AM1	EDC	AL	2	Std	On Request			2.071
AST09	Relative Spectral Reflectance - Browse P	1	ASTER	AM1	EDC	AL	2	Std	Routine			0.621
AST10	Surface Kinetic Temperature	1	ASTER	AM1	EDC	AL	2	Std	On Request			
AST11	Surface Radiance	2	ASTER	AM1	EDC	AL	2	Std	On Request		0.025	1.262
AST12	Scene Classification	1	ASTER	AM1	EDC	AL	2	Std	On Request			
AST13	Sea Ice Albedo	1	ASTER	AM1	EDC	PL	2	Std	On Request			
AST14	Digital Elevation	1	ASTER	AM1	EDC	AL	3	Std	On Request			0.018
AST15	Glacier Extent, Temperature	1	ASTER	AM1	EDC	PL	3	Std	On Request			
AST16	Glacier Velocity, Polar Outflow	1	ASTER	AM1	EDC	PL	3	Std	On Request			
CER01	*Bi-Directional Scan (BDS) Product*	5	CERES	TRMM,AM,PM	LaRC	AL	1B	Std	Routine		0.246	CERES Total (2.4 Gflops)
CER02	*ES-8 ERBE-Like Product*	1	CERES	TRMM,AM,PM	LaRC	AL	3	Std	Routine			CERES Total (2.4 Gflops)
CER03	*ES-9 ERBE-Like Product*	10	CERES	TRMM,AM,PM	LaRC	AL	3	Std	Routine		0.018	CERES Total (2.4 Gflops)

Note: Data products, of which storage and/or processing requirements are updated based on recent information from instrument teams, are Italicized. Foreign products are bold-faced.

ATTACHMENT 1

List of Data Products

GSFC/SPSO(6/04/93)

Listed by Instrument

Prod #	*Product Name*	*# of Parm*	*Instrument*	*Platform*	*DAAC*	*Time frame*	*Product Level*	*Product Type*	*Production Mode*	*Sotware Flag*	*Volume (GB/day)*	*Processing Load (Mflops)*
CER04	*Single Satellite Cloud-Radiantion Pixel I*	30	CERES	TRMM,AM,PM	LaRC	PL	2	Std	Routine		9.860	CERES Total (2.4 Gflops)
CER05	*Hourly Single-satellite Flux Product (FS*	31	CERES	TRMM,AM,PM	LaRC	PL	3	Std	Routine		0.930	CERES Total (2.4 Gflops)
CER06	*Monthly & Regional Flux Data Product (*	9	CERES	TRMM,AM,PM	LaRC	PL	3	Std	Routine		0.001	CERES Total (2.4 Gflops)
CER07	*Synoptic Cloud-Radiation Data Product*	32	CERES	TRMM,AM,PM	LaRC	PL	3	Std	Routine		0.350	CERES Total (2.4 Gflops)
CER08	*Regional, Monthly Average Data Produc*	27	CERES	TRMM,AM,PM	LaRC	PL	3	Std	Routine		0.014	CERES Total (2.4 Gflops)
EOS01	Level-1B Polarization	1	EOSP	AM2	LaRC	AL	1B	Std	Routine		0.697	0.200
EOS02	Level-1B Radiance	1	EOSP	AM2	LaRC	AL	1B	Std	Routine		0.697	0.200
EOS03	Aerosol Optical Thickness	1	EOSP	AM2	LaRC	AL	2	Std	Routine		0.004	0.843
EOS04	Aerosol Product (Research)	3	EOSP	AM2	LaRC	PL	2	Spc	On Request			
EOS05	Cloud Product	4	EOSP	AM2	LaRC	AL	2	Std	Routine		0.010	1.956
EOS06	Clear Sky Radiance	1	EOSP	AM2	LaRC	PL	2	Std	On Request		0.016	4.215
EOS07	Surface Type	1	EOSP	AM2	LaRC	PL	2	Spc	On Request			
EOS08	Radiance Product	1	EOSP	AM2	LaRC	PL	4	Spc	On Request			
GLA01	Level-1B Product	1	GLAS	ALT	GSFC	AL	1B	Std	Routine		6.336	6.100
GLA02	Aerosol Vertical Structure	2	GLAS	ALT	GSFC	AL	2	Std	Routine		0.000	0.001
GLA03	Cloud Height For Multiple Layers	1	GLAS	ALT	GSFC	AL	2	Std	Routine		0.005	0.014
GLA04	Ice Sheet Elevation	1	GLAS	ALT	NSIDC	AL	2	Std	Routine		0.015	0.044
GLA05	Ice_Sheet Roughness (R)	1	GLAS	ALT	NSIDC	AL	2	Std	Routine		0.005	0.015
GLA06	Thin Cloud/Aerosol Optical Depth	1	GLAS	ALT	GSFC	AL	2	Std	Routine		0.002	0.007
GLA07	Land Topography	1	GLAS	ALT	EDC	AL	2	Std	Routine		0.001	0.004
GLA08	Vegetation Canopy Height	1	GLAS	ALT	EDC	PL	2	Std	On Request			
HIR01	Level-1B Product	3	HIRDLS	CHEM	GSFC	AL	1B	Std	Routine		0.634	12.731
HIR02	Aerosol Extinction Coef	1	HIRDLS	CHEM	GSFC	AL	2	Std	Routine		0.002	0.451
HIR03	CFC-11(CFCl3) Conc	1	HIRDLS	CHEM	GSFC	AL	2	Std	Routine		0.002	0.451
HIR04	CFC-12(CF2Cl2) Conc	1	HIRDLS	CHEM	GSFC	AL	2	Std	Routine		0.002	0.451
HIR05	CH4 Conc	1	HIRDLS	CHEM	GSFC	AL	2	Std	Routine		0.002	0.451
HIR06	ClONO2	1	HIRDLS	CHEM	GSFC	AL	2	Std	Routine			
HIR07	Cloud Top Properties	3	HIRDLS	CHEM	GSFC	AL	2	Std	Routine		0.000	0.045
HIR08	Geopotential Height-Gradient	1	HIRDLS	CHEM	GSFC	AL	2	Std	Routine		0.002	0.406
HIR09	H2O Conc	1	HIRDLS	CHEM	GSFC	AL	2	Std	Routine		0.002	0.451
HIR10	HNO3 Conc	1	HIRDLS	CHEM	GSFC	AL	2	Std	Routine		0.002	0.451
HIR11	N2O Conc	1	HIRDLS	CHEM	GSFC	AL	2	Std	Routine		0.002	0.451
HIR12	N2O5 Conc	1	HIRDLS	CHEM	GSFC	AL	2	Std	Routine		0.002	0.451
HIR13	NO2 Conc	1	HIRDLS	CHEM	GSFC	AL	2	Std	Routine		0.002	0.451
HIR14	O3 Conc	1	HIRDLS	CHEM	GSFC	AL	2	Std	Routine		0.002	0.451
HIR15	Temperature Profile	1	HIRDLS	CHEM	GSFC	AL	2	Std	Routine		0.002	0.451
HIR16	Pressure	1	HIRDLS	CHEM	GSFC	AL	2	Std	Routine		0.002	0.451
HIR17	CFC-11(CFCl3) Conc	1	HIRDLS	CHEM	GSFC	PL	3	Std	Routine		0.002	0.090
HIR18	CFC-12(CF2Cl2) Conc	1	HIRDLS	CHEM	GSFC	PL	3	Std	Routine		0.002	0.090
HIR19	CH4 Conc	1	HIRDLS	CHEM	GSFC	PL	3	Std	Routine		0.002	0.090
HIR20	ClONO2	1	HIRDLS	CHEM	GSFC	PL	3	Std	Routine		0.002	0.090
HIR21	H2O Conc	1	HIRDLS	CHEM	GSFC	PL	3	Std	Routine		0.002	0.090
HIR22	HNO3 Conc	1	HIRDLS	CHEM	GSFC	PL	3	Std	Routine		0.002	0.090
HIR23	N2O Conc	1	HIRDLS	CHEM	GSFC	PL	3	Std	Routine		0.002	0.090
HIR24	N2O5 Conc	1	HIRDLS	CHEM	GSFC	PL	3	Std	Routine		0.002	0.090
HIR25	NO2 Conc	1	HIRDLS	CHEM	GSFC	PL	3	Std	Routine		0.002	0.090
HIR26	O3 Conc	1	HIRDLS	CHEM	GSFC	PL	3	Std	Routine		0.002	0.090
HIR27	Wind Velocity, Balanced/Geostrophic	1	HIRDLS	CHEM	GSFC	PL	4	Std	Routine		0.002	0.542
LIS01	*Level-1A Product*	1	LIS	TRMM	MSFC	AL	1A	Std	Routine		LIS Total (28 GB/yr)	
LIS02	*Level-1 Lighting Product*	1	LIS	TRMM	MSFC	AL	1B	Std	Routine		LIS Total (28 GB/yr)	

Note: Data products, of which storage and/or processing requirements are updated based on recent information from instrument teams, are Italicized. Foreign products are bold-faced.

List of Data Products

GSFC/SPSO(6/04/93)

Listed by Instrument

Prod #	*Product Name*	*# of Parm*	*Instrument*	*Platform*	*DAAC*	*Time frame*	*Product Level*	*Product Type*	*Production Mode*	*Sotware Flag*	*Volume (GB/day)*	*Processing Load (Mflops)*
LIS03	*Level-2 Lighting Product*	1	LIS	TRMM	MSFC	AL	2	Std	Routine		LIS Total (28 GB/yr)	
LIS04	*Level-3 Lighting Product*	1	LIS	TRMM	MSFC	PL	3	Std	Routine		LIS Total (28 GB/yr)	
MIM01	*Level-1b TB*	1	MIMR	PM	MSFC	AL	1B	Std	Routine		5.100	0.093
MIM02	*Precipitation*	2	MIMR	PM	MSFC	AL	2	Std	Routine		0.012	
MIM03	*Oceanic Cloud Water*	1	MIMR	PM	MSFC	AL	2	Std	Routine		0.005	0.000
MIM04	*Oceanic Water Vapor*	1	MIMR	PM	MSFC	AL	2	Std	Routine		0.005	0.000
MIM05	*Oceanic Surface Wind Speed*	1	MIMR	PM	MSFC	AL	2	Std	Routine		0.009	0.000
MIM06	*Sea Surface Temperature*	1	MIMR	PM	MSFC	AL	2	Std	Routine		0.002	0.000
MIM07	*Snow Depth*	1	MIMR	PM	NSIDC	PL	2	Std	Routine		0.005	
MIM08	*Snow Water Content*	1	MIMR	PM	NSIDC	PL	2	Std	Routine		0.005	
MIM09	*Land Surface Class*	1	MIMR	PM	MSFC	PL	2	Std	Routine		0.003	
MIM10	*Soil Moisture*	1	MIMR	PM	MSFC	PL	2	Std	Routine		0.002	0.000
MIM11	*Sea Ice Concentration*	1	MIMR	PM	NSIDC	AL	2	Std	Routine		0.009	0.000
MIM12	*Sea Ice Type*	1	MIMR	PM	NSIDC	AL	2	Std	Routine		0.009	0.000
MIM13	*Gridded Precipitation*	2	MIMR	PM	MSFC	AL	3	Std	Routine		0.000	
MIM14	*Gridded Oceanic Cloud Water*	1	MIMR	PM	MSFC	PL	3	Std	Routine		0.000	
MIM15	*Gridded Oceanic Water Vapor*	1	MIMR	PM	MSFC	PL	3	Std	Routine		0.000	
MIM16	*Gridded Oceanic Surface Wind Speed*	1	MIMR	PM	MSFC	PL	3	Std	Routine		0.000	
MIM17	*Gridded Sea Surface Temperature*	1	MIMR	PM	MSFC	PL	3	Std	Routine		0.000	
MIM18	*Gridded Snow Depth*	1	MIMR	PM	NSIDC	PL	3	Std	Routine		0.000	
MIM19	*Gridded Snow Water Content*	1	MIMR	PM	NSIDC	PL	3	Std	Routine		0.000	
MIM20	*Gridded Land Surface Class*	1	MIMR	PM	MSFC	PL	3	Std	Routine		0.000	
MIM21	*Gridded Soil Moisture*	1	MIMR	PM	MSFC	PL	3	Std	Routine		0.000	
MIM22	*Gridded Sea Ice Concentration*	1	MIMR	PM	NSIDC	PL	3	Std	Routine		0.000	
MIM23	*Gridded Sea Ice Type*	1	MIMR	PM	NSIDC	PL	3	Std	Routine		0.000	
MIS01	*Level-1A Product*	1	MISR	AM	LaRC	AL	1A	Std	Routine		53.717	3.674
MIS02	*Level-1B1 Product*	1	MISR	AM	LaRC	AL	1B	Std	Routine		53.717	8.478
MIS03	*Level-1B2 Product*	1	MISR	AM	LaRC	AL	1B	Std	Routine		53.717	10.457
MIS04	TOA and Cloud Product	9	MISR	AM	LaRC	AL	2	Std	Routine			
MIS05	*Aerosol Product*	4	MISR	AM	LaRC	AL	2	Std	Routine		0.015	31.667
MIS06	*Surface Product*	5	MISR	AM	LaRC	PL	2	Std	Routine		0.523	1.056
MIS07	Gridded TOA and Cloud Product	9	MISR	AM	LaRC	PL	3	Std	Routine			
MIS08	*Gridded Aerosol Product*	4	MISR	AM	LaRC	PL	3	Std	Routine		0.007	0.095
MIS09	*Gridded Surface Product*	5	MISR	AM	LaRC	PL	3	Std	Routine		0.056	0.739
MLS01	Level-1B Radiance, MLS	1	MLS	CHEM	GSFC	AL	1B	Std	Routine		14.256	2.000
MLS02	O3 Conc	1	MLS	CHEM	GSFC	AL	2	Std	Routine		0.001	0.049
MLS03	ClO Conc	1	MLS	CHEM	GSFC	AL	2	Std	Routine		0.001	0.049
MLS04	BrO Conc	1	MLS	CHEM	GSFC	AL	2	Std	Routine		0.000	0.000
MLS05	HCl Conc	1	MLS	CHEM	GSFC	AL	2	Std	Routine		0.001	0.049
MLS06	HOCl Conc	1	MLS	CHEM	GSFC	AL	2	Std	Routine		0.000	0.025
MLS07	OH Conc	1	MLS	CHEM	GSFC	PL	2	Std	Routine			
MLS08	HO2 Conc	1	MLS	CHEM	GSFC	AL	2	Std	Routine		0.001	0.049
MLS09	H2O Conc	1	MLS	CHEM	GSFC	AL	2	Std	Routine		0.001	0.049
MLS10	NO Conc	1	MLS	CHEM	GSFC	AL	2	Std	Routine		0.001	0.049
MLS11	HNO3 Conc	1	MLS	CHEM	GSFC	PL	2	Std	Routine		0.001	0.049
MLS12	N2O Conc	1	MLS	CHEM	GSFC	PL	2	Std	Routine		0.001	0.049
MLS13	CO Conc	1	MLS	CHEM	GSFC	PL	2	Std	Routine		0.001	0.049
MLS14	SO2 Conc	1	MLS	CHEM	GSFC	AL	2	Std	Routine		0.001	0.049
MLS15	Temperature Profile	1	MLS	CHEM	GSFC	AL	2	Std	Routine		0.001	0.049
MLS16	Pressure	1	MLS	CHEM	GSFC	AL	2	Std	Routine		0.001	0.049

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List of Data Products

GSFC/SPSO(6/04/93)

Listed by Instrument

Prod #	*Product Name*	*# of Parm*	*Instrument*	*Platform*	*DAAC*	*Time frame*	*Product Level*	*Product Type*	*Production Mode*	*Sotware Flag*	*Volume (GB/day)*	*Processing Load (Mflops)*
MLS17	Geopotential Height	1	MLS	CHEM	GSFC	AL	2	Std	Routine			
MOD01	*Level-1A Radiance, MODIS*	1	MODIS	AM,PM	GSFC	AL	1A	Std	Routine		115.233	150.000
MOD02	*Level-1B Radiance, Calibrated*	1	MODIS	AM,PM	GSFC	AL	1A	Std	Routine		180.260	68.129
MOD03	*Aerosol Product*	2	MODIS	AM,PM	GSFC	AL	2	Std	Routine		0.003	0.064
MOD04	*Precipitable Water*	1	MODIS	AM,PM	GSFC	AL	2	Std	Routine		0.919	0.007
MOD05	Cloud Product	5	MODIS	AM,PM	GSFC	AL	2	Std	Routine		43.549	5.118
MOD06	*O3 Total Burden*	1	MODIS	AM,PM	GSFC	AL	2	Std	On request		0.190	0.031
MOD07	*Stability (Lifted Index), Atmospheric*	1	MODIS	AM,PM	GSFC	AL	2	Std	On request		0.158	0.060
MOD08	Surface Reflectance	3	MODIS	AM,PM	EDC	AL	2	Std	Routine		0.528	2.942
MOD09	*Snow Cover*	1	MODIS	AM,PM	NSIDC	AL	2	Std	Routine		0.119	0.001
MOD10	*Land_sfc Temperature*	1	MODIS	AM,PM	EDC	AL	2	Std	Routine		0.238	40.000
MOD11	Land_Cover Type	1	MODIS	AM,PM	EDC	AL	2	Std	Routine		0.003	200.000
MOD12	*Vegetation Indices*	1	MODIS	AM,PM	EDC	AL	2	Std	Routine	S	0.238	0.000
MOD13	*Thermal Anomalies (Fire Size &*	1	MODIS	AM,PM	EDC	AL	2	Std	Routine		0.356	0.025
MOD14	*Leaf Area (LAI) & FPAR*	1	MODIS	AM,PM	EDC	PL	2	Std	Routine		0.238	0.030
MOD15	Evapotranspiration	1	MODIS	AM,PM	EDC	PL	2	Std	Routine			
MOD16	Vegetation Production, Net Primary	1	MODIS	AM,PM	EDC	PL	2	Std	Routine		0.245	0.014
MOD17	Photosynthesis-Respiration	1	MODIS	AM,PM	EDC	PL	2	Std	Routine			
MOD18	Classification Masks,	1	MODIS	AM,PM	GSFC	AL	2	Std	Routine			
MOD19	*Pigment Conc, "CZCS"*	1	MODIS/SeaWiFS	AM,PM/COLOR	GSFC	AL	2	Std	Routine		0.554	MODIS Ocean Total (300 Mflops)
MOD20	*Level-2 Radiance, Water-leaving*	1	MODIS	AM,PM	GSFC	AL	2	Std	Routine		4.989	MODIS Ocean Total (300 Mflops)
MOD21	*Chlorophyll Fluorescence*	3	MODIS	AM,PM	GSFC	AL	2	Std	Routine		1.662	MODIS Ocean Total (300 Mflops)
MOD22	*Chlorophyll_a Pigment Concentration*	2	MODIS/SeaWiFS	AM,PM/COLOR	GSFC	AL	2	Std	Routine		1.108	MODIS Ocean Total (300 Mflops)
MOD23	*PAR*	2	MODIS	AM,PM	GSFC	AL	2	Std	Routine		1.108	MODIS Ocean Total (300 Mflops)
MOD24	*Suspended-Solids Conc, Ocean Water*	1	MODIS	AM,PM	GSFC	AL	2	Std	Routine		0.554	MODIS Ocean Total (300 Mflops)
MOD25	*Organic Matter Concentration*	3	MODIS	AM,PM	GSFC	AL	2	Std	Routine		1.662	MODIS Ocean Total (300 Mflops)
MOD26	*Coccolith Conc, Detached*	1	MODIS	AM,PM	GSFC	AL	2	Std	Routine		0.554	MODIS Ocean Total (300 Mflops)
MOD27	*Ocean Water Attenuation Coefficient*	2	MODIS	AM,PM	GSFC	AL	2	Std	Routine		1.108	MODIS Ocean Total (300 Mflops)
MOD28	*Ocean Productivity*	1	MODIS	AM,PM	GSFC	AL	2	Std	Routine		1.108	MODIS Ocean Total (300 Mflops)
MOD29	*Sea_sfc Temperature (SST)*	1	MODIS	AM,PM	GSFC	AL	2	Std	Routine		1.109	MODIS Ocean Total (300 Mflops)
MOD30	*Sea_Ice Max Extent*	1	MODIS	AM,PM	NSIDC	AL	2	Std	Routine		0.554	MODIS Ocean Total (300 Mflops)
MOD31	Temperature Profile	1	MODIS	AM,PM	GSFC	AL	2	Std	Routine			
MOD32	Water Vapor Profile	1	MODIS	AM,PM	GSFC	AL	2	Std	Routine			
MOD33	*Phycoerythrin Conc.*	1	MODIS	AM,PM	GSFC	AL	2	Std	Routine		0.554	MODIS Ocean Total (300 Mflops)
MOD34	*Calibration Data, MODIS*	1	MODIS	AM,PM	GSFC	AL	2	Std	Routine		0.554	MODIS Ocean Total (300 Mflops)
MOP01	*Level-1B Radiance (+ Ancillary Data inc*	1	MOPITT	AM	LaRC	AL	1B	Std	Routine		0.004	0.117
MOP02	*CH4 Column (Total Burden)*	1	MOPITT	AM	LaRC	AL	2	Std	Routine		0.001	0.000
MOP03	*CO Profiles*	1	MOPITT	AM	LaRC	AL	2	Std	Routine		0.004	0.439
MOP04	*CO Column (Total Burden)*	1	MOPITT	AM	LaRC	AL	2	Std	Routine		0.001	0.030
MOP05	*CH4 Column (Total Burden) Gridded Pr*	1	MOPITT	AM	LaRC	AL	3	Std	Routine		0.000	0.000
MOP06	*CO Profiles Gridded Product (Fourier C*	1	MOPITT	AM	LaRC	AL	3	Std	Routine		0.001	0.017
MOP07	*CO Column (Total Burden) Gridded Pro.*	1	MOPITT	AM	LaRC	AL	3	Std	Routine		0.000	0.022
NSC01	Level-1B Backscatter Power	1	NSCAT-II	ADEOS-2	JPL	AL	1B	Std	Routine		0.082	0.082
NSC02	*Global Backscatter Cross Section (Sigma*	1	NSCAT-II	ADEOS-2	JPL	AL	2	Std	Routine		0.200	
NSC03	*Near Surface Vector Winds in Measurem*	1	NSCAT-II	ADEOS-2	JPL	AL	2	Std	Routine		0.080	0.004
SAG01	Level-1B Transmission Profiles (65 wave	1	SAGE-III	AERO,CHEM	LaRC	AL	1B	Std	Routine		0.223	0.162
SAG02	Aerosol Extinction Profiles (at 7 waveler	1	SAGE-III	AERO,CHEM	LaRC	AL	2	Std	Routine		0.063	0.013
SAG03	Cloud Height, Top	1	SAGE-III	AERO,CHEM	LaRC	AL	2	Std	Routine		0.006	0.001
SAG04	H2O Conc & Mixing Ratio	2	SAGE-III	AERO,CHEM	LaRC	AL	2	Std	Routine		0.063	0.013
SAG05	NO2 Conc & Mixing Ratio	2	SAGE-III	AERO,CHEM	LaRC	AL	2	Std	Routine		0.063	0.013

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List of Data Products

GSFC/SPSO(6/04/93)

Listed by Instrument

Prod #	*Product Name*	*# of Parm*	*Instrument*	*Platform*	*DAAC*	*Time frame*	*Product Level*	*Product Type*	*Production Mode*	*Sotware Flag*	*Volume (GB/day)*	*Processing Load (Mflops)*
SAG06	NO3 Conc and mixing ratio, Lunar	1	SAGE-III	AERO,CHEM	LaRC	AL	2	Std	Routine		0.063	0.013
SAG07	O3 Conc & Mixing Ratio, Lunar	2	SAGE-III	AERO,CHEM	LaRC	AL	2	Std	Routine		0.009	0.002
SAG08	OClO Conc and mixing ratio, Lunar	1	SAGE-III	AERO,CHEM	LaRC	AL	2	Std	Routine		0.063	0.013
SAG09	Pressure	2	SAGE-III	AERO,CHEM	LaRC	AL	2	Std	Routine		0.063	0.013
SAG10	Temperature Profile	2	SAGE-III	AERO,CHEM	LaRC	AL	2	Std	Routine		0.063	0.013
SOL01	Level-1B Irradiance, SOLSTICE	1	SOLSTICE-II	CHEM	GSFC	AL	1B	Std	Routine		0.079	0.100
SOL02	Solar UV Irradiance, [1 nm res.]	1	SOLSTICE-II	CHEM	GSFC	AL	1B	Std	Routine		0.002	0.037
SOL03	Solar UV Irradiance, [0.001 nm res.]	1	SOLSTICE-II	CHEM	GSFC	PL	1B	TBD	Routine		0.006	0.037
SOL04	UV Stellar Spectra	1	SOLSTICE-II	CHEM	GSFC	PL	1B	TBD	Routine		0.000	0.037
SSA01	Level-1B Backscatter	1	SSALT	ALT	JPL	AL	1B	Std	Routine		1.346	0.000
SSA02	Along-track Radar Backscatter Coef (Si	1	SSALT	ALT	JPL	AL	2	Std	Routine			
SSA03	Along-track Ocean Wave Height	1	SSALT	ALT	JPL	AL	2	Std	Routine		0.000	0.001
SSA04	Along-track Sea_Level Height	1	SSALT	ALT	JPL	AL	2	Std	Routine		0.000	0.001
SSA05	Along-track Wind Speed	1	SSALT	ALT	JPL	AL	2	Std	Routine		0.000	0.001
SSA06	Sea_sfc Topography Map	1	SSALT	ALT	JPL	AL	3	Std	Routine		0.000	0.001
SSA07	Ice_Sheet Elevation Map	1	SSALT	ALT	JPL	PL	3	Std	Routine		0.000	0.000
SSA08	Ocean Tide Model	1	SSALT	ALT	JPL	PL	4	Std	Routine		0.000	0.000
TES01	*Level-1B Radiance, TES [IR spectra in s*	1	TES	AM2	LaRC	AL	1B	Std	Routine		6.431	TES Total (51Gflops)
TES02	*Transient and Local Event Infrared Spec*	1	TES	AM2	LaRC	AL	1B	Spc	On Request			TES Total (51Gflops)
TES03	*CH4 Mixing Ratio*	1	TES	AM2	LaRC	AL	2	Std	Routine		0.000	TES Total (51Gflops)
TES04	*CO Mixing Ratio*	1	TES	AM2	LaRC	AL	2	Std	Routine		0.003	TES Total (51Gflops)
TES05	*HNO3 Mixing Ratio*	1	TES	AM2	LaRC	AL	2	Std	Routine		0.000	TES Total (51Gflops)
TES06	*N2O Mixing Ratio*	1	TES	AM2	LaRC	AL	2	Std	Routine		0.000	TES Total (51Gflops)
TES07	*NO Mixing Ratio*	1	TES	AM2	LaRC	AL	2	Std	Routine		0.000	TES Total (51Gflops)
TES08	*NO2 Mixing Ratio*	1	TES	AM2	LaRC	AL	2	Std	Routine		0.000	TES Total (51Gflops)
TES09	*O3 Mixing Ratio*	1	TES	AM2	LaRC	AL	2	Std	Routine		0.003	TES Total (51Gflops)
TES10	*Temperature Profile*	1	TES	AM2	LaRC	AL	2	Std	Routine			TES Total (51Gflops)
TES11	*H2O/HDO Mixing Ratio*	1	TES	AM2	LaRC	AL	2	Std	Routine			TES Total (51Gflops)
TES12	*Land_sfc Brightness Temperature*	1	TES	AM2	LaRC	AL	2	Std	Routine			
TES13	*Level 2 Detection Flags*	1	TES	AM2	LaRC	AL	2	Std	Routine			TES Total (51Gflops)
TES14	*CH4 Maps*	1	TES	AM2	LaRC	PL	3	Std	Routine			TES Total (51Gflops)
TES15	*CO Maps*	1	TES	AM2	LaRC	PL	3	Std	Routine			TES Total (51Gflops)
TES16	*HNO3 Maps*	1	TES	AM2	LaRC	PL	3	Std	Routine			TES Total (51Gflops)
TES17	*N2O Maps*	1	TES	AM2	LaRC	PL	3	Std	Routine			TES Total (51Gflops)
TES18	*NO Maps*	1	TES	AM2	LaRC	PL	3	Std	Routine			TES Total (51Gflops)
TES19	*NO2 Maps*	1	TES	AM2	LaRC	PL	3	Std	Routine			TES Total (51Gflops)
TES20	*O3 Maps*	1	TES	AM2	LaRC	PL	3	Std	Routine			TES Total (51Gflops)
TES21	*H2O/HDO Maps*	1	TES	AM2	LaRC	PL	3	Std	Routine			TES Total (51Gflops)
TES22	*Physical/Chemical Tropospheric Models*	1	TES	AM2	LaRC	PL	4	Spc	On Request			TES Total (51Gflops)

No of Products: 239
No of Parameters: 453

Note: Data products, of which storage and/or processing requirements are updated based on recent information from instrument teams, are Italicized. Foreign products are bold-faced.

Field Descriptions and Instructions

Product Number	Reference number assigned to data product
Product Name	Name of the proposed data product containing a group of parameter(s). A data product is defined as a collection of (one or more) related parameters packaged with associated ancillary and labeling data. Typically a data product contains uniformly processed and formatted data which have similar temporal and spatial resolution. For example, a CERES data product, called FSW, contains a number of hourly averaged atmospheric parameters (cloud cover, cloud drop phase, cloud liquid content, longwave radiative fluxes, etc.) at 1.25°x 1.25° grid. At present, data product information is available only for two instruments, CERES and MISR. For the remaining instruments it has been assumed that each data product contains only one parameter and its name is the same as the parameter name. A blank form is supplied to allow investigators to define data products as collections of data parameters if the product information is known.
Parameter Name [2]	Name of parameter to be retrieved from a given EOS instrument. A parameter is defined as a measurable or derived variable (e.g., count, radiance, air temperature, snow depth, precipitable water, etc.).
Parameter Number [2]	Reference number assigned to parameter. Four digit number is used to identify Level 2 parameter. When a same parameter is also produced as Level 3 data product, the parameter number for Level 3 product is followed by a letter "A". For example, Parameter Number **1433** represents MISR Level 2 cloud top height and Parameter Number **1433A** represents MISR Level 3 cloud top height. Refer to Appendix A for a complete list of data parameters.
Number of Parameters [1]	Number of parameters included in a data product
Instrument [1]	Name of the instrument from which a data product is to be generated
Platform [1]	Name of a platform on which an instrument is to fly
DAAC [1]	Name of the DAAC where a data product will be generated and archived
Investigator [2]	Name(s) of scientist(s) responsible for retrieval of parameter.
Time Frame	Time expected to start generation of data product.: e.g., **AL** for at-launch , **NT** for near-term (within 3 years of first launch), and **LT** for long-term (more than 3 years after first launch). *On the data product list, both the NT and LT products are called the Post-Launch (PL) data product.*
Product Level	Level of data processing (e.g., **L1A** for Level 1A, **L1B** for Level 1B, **L2** for Level 2, **L3** for Level 3, & **L4** for Level 4). Refer to Table 1 for definitions of data product levels.
Product Type	Type of data product (e.g., **Std** for standard product, **Spc** for special product, and **Int** for interim data product). Refer to Table 1 for definition of data product types.

Note: 1. This field applicable to the product list only
2. This field applicable to the data product survey form for individual instrument only

Field Descriptions and Instructions (Cont'd)

Production Mode	Mode of desired data production . Enter "**routine**" for the data product which will be routinely generated and archived at a DAAC or "**on-request**" for the data product which will be generated only upon user request and does not require permanent archival. Most of ASTER Level 2 data products will be available as on-request products.
Software Flag [1]	Flag (character "S") to indicate a data product that is not retrieved directly from satellite measurement, but which can be derived from other retrieved geophysical parameters (e.g., land surface temperature difference).
Source & Date [2]	Source of information for updates or modifications and the date of the latest changes
Volume	Estimated daily data volume in GB/day. For on-request data products, assume that all data products will be produced. If volume for each of parameters included in a given data product cannot be estimated, please enter a total for the data product.
Processing Load	Estimate of processing requirement necessary to retrieve a particular parameter in millions of floating point operations per second (MFLOPS), including input and output processing for data ingest, format conversion, etc.. For example, an entry of 1 MFLOPS indicates that the algorithm must execute 86.4 billion floating point operations to process one day's input to a data parameter or product. For each parameter, provide an estimate for total processing requirement needed to generate the parameter. If processing requirement for each of parameters included in a given data product cannot be estimated, please enter a total for the data product.
Basis of Estimates [2]	Method used to estimate processing load. Enter **1** if processing requirement is estimated, based upon existing scientific algorithm developed for past mission (e.g., ERBE, CZCS, etc.) and the known throughput of a computer or workstation on which the algorithm is currently residing. Enter **2** if processing requirement is estimated, using the number of data element (i.e. pixel) and number of operations per element. Enter **3** if other method is used (please describe the method in a separate sheet)
Units [2]	Scientific units of the parameter (in ISU): e.g., °K, $W/m^2/sr/\mu m$, etc.
Accuracy [2]	The anticipated absolute (Abs) accuracy of the data product and the relative (Rel) accuracy (or precision).
Temporal Resolution [2]	Time period of measurement (measurement cycle time, or time to complete one global sample), or for resampled data products, the time period between successive values at a given location or the averaging-time used to compute data product means: e.g., 12 hours, daily, weekly, seasonal, annual, etc.
Horizontal Resolution [2]	Horizontal spatial resolution of parameter to be retrieved: e.g., 10 km x 10 km, 1° x 1° (latitude and longitude), 5° zonal mean, etc.
Horizontal Coverage [2]	The horizontal region over which a parameter is to be retrieved: e.g., global, polar, ocean. Refer to Table 2 for the horizontal coverage keyword definitions.

Note: 1. This field applicable to the product list only
2. This field applicable to the data product survey form for individual instrument only

Field Descriptions and Instructions (Cont'd)

Vertical Resolution [2]

Vertical spatial resolution of parameter to be retrieved: e.g., 1 km, 100mb, column (for vertically integrated quantities), N/A if not-applicable (surface properties).

Vertical Coverage [2]

Vertical region or zone over which a parameter is to be retrieved: e.g. surface, surface to 10 km, stratosphere. Refer to Table 3 for the vertical coverage keyword definitions.

Data Dependency [2]

List of parameter(s) to be used as ancillary data. Ancillary data is the data needed for generation of data product, not for validation of data product. Only parameter numbers are listed (refer to Appendix A for a complete list of data parameters). Also, list any internal data dependencies. (e.g., if parameters a, b, c are produced, and if c requires a and b for production, identify those as input dependencies using the Parameter Numbers.).

Comments [2]

Column for comments relevant to description of a parameter or any other relevant information not covered in other columns. Please also enter the network communication requirements between the Science Computing Facility and the DAACs in terms of volume and frequency of data transmission required for the purpose of data validation and quality checking.

Note: 2. This field applicable to the data product survey form for individual instrument only.

Table 1. Product Type and Processing Level Definitions

	Product and Level	Description
Product Type	**Standard Data Product**	A data product produced at a DAAC by a community consensus algorithm. It is typically produced for a wide scientific user community. Standard product may be produced routinely or on-request. If produced routinely, it is produced over most or all of the available independent variable space. If produced on-request, it is produced only on request from users for particular research needs typically over a limited range of independent variable space.
	Special Data Product (or Research Data Product)	A data product produced at a SCF by a research status algorithm. Special data product may migrate to a community consensus algorithm at a later time. If there is adequate community interest, it may be archived and distributed by a DAAC.
	Interim Data Product	An intermediate data product needed to generate higher level of standard or special data products. Typically an interim data product is produced as an intermediate step before a final data product is generated. Interim products may not be distributed by a DAAC, but may be stored for up to a year.
Product Level	**Level 0**	Raw instrument data at original resolution, time ordered, with duplicate packets removed
	Level 1A	Reconstructed unprocessed instrument data at full resolution, time referenced, and annotated with ancillary information, including radiometric and geometric calibration coefficients and georeferencing parameters (i.e., platform ephemeris) computed and appended, but not applied to Level 0 data
	Level 1B	Radiometrically corrected and geolocated Level 1A data that have been processed to sensor units
	Level 2	Derived geophysical parameters at the same resolution and location as the Level 1 data
	Level 3	Geophysical parameters that have been spatially and/or temporally re-sampled (i.e., derived from Level 1 or Level 2 data)
	Level 4	Model output or results from analysis of lower level data that are not directly derived by the instruments.

Table 2. Horizontal Coverage Keywords

Horizontal Coverage Keyword	Description
Canada/R	Regional Canadian sites
Cryos	Cryosphere
Global	Global surface
Land	Global land surface
Land/Cryo	Land ice and snow regions
Land/L	Local land sites
Land/R	Regional land sites
Limb	Limb sounding
Local	Local sites
Ocean	Global ocean surface
Ocean/Cryo	Regions with sea-ice
Ocean/I	Ocean with Case I sediments
Ocean/II	Ocean with Case II sediments
Ocean/L	Local oceanic sites
Ocean/R	Regional oceanic areas
Ocean/S	Southern ocean
Ocean/SA	Southern & Eastern North Atlantic
Polar	Latitudes > 60°N & S
Regional	Regional areas
Tropic	Zonal Band 35°N to 35°S
Wetlands	Global wet lands

Table 3. Vertical Coverage Keywords

Vertical Coverage Keyword	Descriptions	Vertical Coverage Approx Range
Atmos	Troposphere + stratosphere	Sfc to 30 km
Ex	Exosphere	700 km
Mid_atmos	Upper troposphere to mesopause	10 to 120 km
Near_sfc	Near surface layer (within boundary layer)	Sfc to 1 km
Plume_col	Vertical extent of volcanic eruption plume	
Plume_top	Top of volcanic eruption plume	
Sfc	Surface of ocean or land, regardless of topography	
Strat	Stratosphere	10 to 30 km
Sub_sfc	Layers immediately beneath land surface	
TOA	Top of atmosphere	
TOO	Top of ocean (oceanic mixed layer)	
Trop	troposphere	0 to 10 km

Number of Data Products

Instrument Name	At-Launch Products				Post-Launch Products				Grand Total (AL & PL)
	Routine	On request	Software *	AL Total	Routine	On request	Software *	PL Total	
ACRIM	1			1					1
AIRS/AMSU/MHS	13		4	17	12		1	13	30
ASTER	4	9		13		3		3	16
CERES	3			3	5			5	8
EOSP	4			4		4		4	8
GLAS	7			7		1		1	8
HIRDLS	16			16	11			11	27
LIS	3			3	1			1	4
MIMR	9			9	6		8	14	23
MISR	5			5	4			4	9
MLS	13			13	4			4	17
MODIS	27	2	1	30	4			4	34
MOPITT	7			7					7
NSCAT	3			3					3
SAGE III	10			10					10
SOLSTICE	2			2	2			2	4
SSALT/TMR/DORIS	6			6	2			2	8
TES	12	1		13	8	1		9	22
Total	145	12	5	162	59	9	9	77	239

* *This category includes data products not retrievable directly from satellite measurements, but which can be derived from other retrieved geophysical parameters (e.g., land surface temperature differences).*
Pleae note that the post-launch software category for MIMR includes 8 data products to be produced by foreign partners.

Number of Parameters

Instrument Name	At-Launch Products				Post-Launch Products				Grand Total (AL & PL)
	Routine	On request	Software *	AL Total	Routine	On request	Software *	PL Total	
ACRIM	1			1					1
AIRS/AMSU/MHS	13		4	17	12		1	13	30
ASTER	4	25		29		3		3	32
CERES	16			16	129			129	145
EOSP	7			7		6		6	13
GLAS	8			8		1		1	9
HIRDLS	20			20	11			11	31
LIS	3			3	1			1	4
MIMR	11			11	6		8	14	25
MISR	16			16	23			23	39
MLS	13			13	4			4	17
MODIS	41	2	1	44	4			4	48
MOPITT	7			7					7
NSCAT	3			3					3
SAGE III	15			15					15
SOLSTICE	2			2	2			2	4
SSALT/TMR/DORIS	6			6	2			2	8
TES	12	1		13	8	1		9	22
Total	198	28	5	231	202	11	9	222	453

* *This category includes data products not retrievable directly from satellite measurements, but which can be derived from other retrieved geophysical parameters (e.g., land surface temperature differences).*
Pleae note that the post-launch software category for MIMR includes 8 parameters to be produced by foreign partners.

6/4/93

GSFC/SPSO

ATTACHMENT 3

Blank Form

(Please use this form to add new/missing data products or define data products)

Instrument Name :

Date:

Prod #	Product Name	Parameter Name	Parm #	Investigator	Time frame	Product Level	Product Type	Production Mode	Source & Date	Volume (GB/day)	Processing (MFlops)	Basis of Estimates
		Product Total										

Blank Form

(Please use this form to add new/missing data products or define data products)

Instrument Name : **Date:**

Prod #	*Product Name*	*Parameter Name*	*Parm #*	*Units*	*Accuracy Abs :: Rel*	*Temporal Resolution*	*Horizontal Resol. :: Cover.*	*Vertical Resol. :: Cover.*
		Product Total						

Blank Form

(Please use this form to add new/missing data products or define data products)

Instrument Name : **Date:**

Prod #	*Product Name*	*Parameter Name*	*Parm #*	*Data Dependency*	*Comments*
		Product Total			

APPENDIX A Output Parameters Sorted by Parameter Number

GSFC/SPSO (6/4/93)

Parm #	Parameter Name	Prod #	Instrument	Investigator	Units	Accuracy Abs :: Rel	Temporal Resolution	Horizontal Resol. :: Cover.	Vertical Resol. :: Cover.
1012	Aerosol Extinction Profiles (at 7 wavelengths)	SAG02	SAGE-III	McCormick	/km	5% :: 5%	1/(2 min), 30/day	<2 x <1 dg :: G	1 km :: 0-40 km
1014	Boundary Layer Height	GLA02	GLAS	Spinhirne et al	m	150 m ::	1/(2-16 day)	2-100 km :: G	N/A :: Atmos
1022	Aerosol Size-distribution (Radius-Dispersion)	MOD03	MODIS	Tanre, Kaufman	um, dimensionless	30-50% :: 30-50%	1/day,1/mo	0.5 dg :: G,R	N/A :: Atmos
1030	BrO Conc	MLS04	MLS	Waters	mixing ratio	<5% :: 5x10-12 (z.m.)	2/day [d,n]	1.3 x 2.5 dg :: 82N-82S	2 km :: 25-40 km
1047	CFC-12(CF2Cl2) Conc	HIR04	HIRDLS	Barnett, Gille	mixing ratio	5-10% :: 1-10%	2/day [d,n]	400 x 400 km :: G	1 km :: 7-30 km
1047A	CFC-12(CF2Cl2) Conc	HIR18	HIRDLS	Barnett, Gille	mixing ratio	5-10% :: 1-10%	2/day [d,n]	4 x 4 dg :: G	1 km :: 7-30 km
1055	CFC-11(CFCl3) Conc	HIR03	HIRDLS	Barnett, Gille	mixing ratio	5-10% :: 1-10%	2/day [d,n]	400 x 400 km :: G	1 km :: 7-30 km
1055A	CFC-11(CFCl3) Conc	HIR17	HIRDLS	Barnett, Gille	mixing ratio	5-10% :: 1-10%	2/day [d,n]	4 x 4 dg :: G	1 km :: 7-30 km
1085	CH4 Conc	HIR05	HIRDLS	Barnett, Gille	mixing ratio	5-10% :: 1-10%	2/day [d,n]	400 x 400 km :: G	1 km :: 7-65 km
1085A	CH4 Conc	HIR19	HIRDLS	Barnett, Gille	mixing ratio	5-10% :: 1-10%	2/day [d,n]	4 x 4 dg :: G	1 km :: 7-65 km
1089	CH4 Mixing Ratio	TES03	TES	Beer	ppbv	:: 14-40 ppbv	1/(16 day)	53 x 169 km :: G	2-6 km :: 0-33 km
1089A	CH4 Mixing Ratio	TES14	TES	Beer	ppbv	:: 14-40 ppbv	32 day	500 x 500 km :: G,R	Selected altitude/pressure surfaces :: 0-33 km
1095	CH4 Total Burden	AIR02	AIRS	Chedin, Revercomb, Strow	ppb	175 ppb :: 150 ppb	2/day [d,n]	250 km :: G	N/A :: Atmos
1096	CH4 Column (Total Burden)	MOP02	MOPITT	Drummond	ppbv	1% :: 1%	1 view/0.4 s	25 km X 25 km :: G [d]	Column :: Atmos
1096A	CH4 Column (Total Burden) Gridded Product (Fourier Coef Form)	MOP05	MOPITT	Drummond			4/day	Std lat/long :: G	Std pressure lvls :: 0-15 km
1107	ClO Conc	MLS03	MLS	Waters	mixing ratio	<5% :: 1x10-10 - 5x10-10	2/day [d,n]	1.3 x 2.5 dg :: 82N-82S	2 km :: TPSE-60 km
1124	CO Conc	MLS13	MLS	Waters	mixing ratio	<5% :: 1x10-8 - 1x10-6	?/day [d,n]	1.3 x 2.5 dg :: 82N-82S	2 km :: TPSE-80 km
1126	CO Profiles	MOP03	MOPITT	Drummond	ppbv	10% :: 10%	1 view/0.4 s	25 km X 25 km :: G	4 km :: 0-15 km
1126A	CO Profiles Gridded Product (Fourier Coef Form)	MOP06	MOPITT	Drummond			4/day	Std lat/long :: G	Std pressure lvls :: 0-15 km
1129	CO Mixing Ratio	TES04	TES	Beer	ppbv	:: 3-15 ppbv	1/(16 day)	53 x 169 km :: G	2-6 km :: 0-33 km
1129A	CO Mixing Ratio	TES15	TES	Beer	ppbv	:: 3-15 ppbv	32 day	500 x 500 km :: G,R	Selected altitude/pressure surfaces :: 0-33 km
1136	CO Total Burden	AIR09	AIRS	Revercomb, Strow	ppb	20 :: 15	2/day [d,n]	250 x 250 km :: G	N/A :: Atmos
1137	CO Column (Total Burden)	MOP04	MOPITT	Drummond	ppbv	10% :: 10%	1 view/0.4 s	25 km X 25 km :: G [d]	Column :: Atmos
1137A	CO Column (Total Burden) Gridded Product (Fourier Coef Form)	MOP07	MOPITT	Drummond			4/day	Std lat/long :: G	Std pressure lvls :: 0-15 km
1189	HCl Conc	MLS05	MLS	Waters	mixing ratio	<5% :: 1x10-10 - 1x10-9	2/day [d,n]	1.3 x 2.5 dg :: 82N-82S	2 km :: TPSE-80 km
1202	HNO3 Conc	HIR10	HIRDLS	Barnett, Gille	mixing ratio	5-10% :: 1-10%	2/day [d,n]	400 x 400 km :: G	1 km :: 10-40 km
1202A	HNO3 Conc	HIR22	HIRDLS	Barnett, Gille	mixing ratio	5-10% :: 1-10%	2/day [d,n]	4 x 4 dg :: G	1 km :: 10-40 km
1203	HNO3 Conc	MLS11	MLS	Waters	mixing ratio	<5% :: 1x10-10 - 5x10-10	2/day [d,n]	1.3 x 2.5 dg :: 82N-82S	2 km :: TPSE-45 km
1206	HNO3 Mixing Ratio	TES05	TES	Beer	pptv	:: 3 pptv	1/(16 day)	53 x 169 km :: G	2-3 km :: 0-33 km
1206A	HNO3 Mixing Ratio	TES16	TES	Beer	pptv	:: 3 pptv	32 day	500 x 500 km :: G,R	Selected altitude/pressure surfaces :: 0-33 km
1216	HO2 Conc	MLS08	MLS	Waters	mixing ratio	<5% :: 5x10-11 (z.m.)	?/day [d,n]	1.3 x 2.5 dg :: 82N-82S	2 km :: 28-80 km
1222	HOCl Conc	MLS06	MLS	Waters	mixing ratio	<5% :: 5x10-11 (z.m.)	?/day	1.3 x 2.5 dg :: 82N-82S	2 km :: 23-40 km
1239	N2O Conc	HIR11	HIRDLS	Barnett, Gille	mixing ratio	5-10% :: 1-10%	2/day [d,n]	400 x 400 km :: G	1 km :: 7-60 km
1239A	N2O Conc	HIR23	HIRDLS	Barnett, Gille	mixing ratio	5-10% :: 1-10%	2/day [d,n]	4 x 4 dg :: G	1 km :: 7-60 km
1240	N2O Conc	MLS12	MLS	Waters	mixing ratio	<5% :: 1x10-9 - 1x10-8	2/day [d,n]	1.3 x 2.5 dg :: 82N-82S	2 km :: TPSE-50 km
1243	N2O Mixing Ratio	TES06	TES	Beer	ppbv	:: 0.01-20 ppbv	1/(16 day)	53 x 169 km :: G	2-6 km :: 0-33 km
1243A	N2O Mixing Ratio	TES17	TES		ppbv	:: 0.01-20 ppbv	32 day	500 x 500 km :: G,R	Selected altitude/pressure surfaces :: 0-33 km
1254	N2O5 Conc	HIR12	HIRDLS	Barnett, Gille	mixing ratio	5-10% :: 1-10%	2/day [d,n]	400 x 400 km :: G	1 km :: 15-45 km

Note: This table includes the parameters for 8 interim products (6 for MODIS and 2 for CERES) and SeaWiFS products which are not listed in the product list.

APPENDIX A Output Parameters Sorted by Parameter Number

GSFC/SPSO (6/4/93)

Parm #	Parameter Name	Prod #	Instrument	Investigator	Units	Accuracy Abs :: Rel	Temporal Resolution	Horizontal Resol. :: Cover.	Vertical Resol. :: Cover.
1254A	N2O5 Conc	HIR24	HIRDLS	Barnett, Gille	mixing ratio	5-10% :: 1-10%	2/day [d,n]	4 x 4 dg :: G	1 km :: 15-45 km
1266	NO Conc	MLS10	MLS	Waters	mixing ratio	<5% :: 5x10-9 - 1x10-7 (z.m.)	?/day [d,n]	1.3 x 2.5 dg :: 82N-82S	2 km :: 20-80 km
1268	NO Mixing Ratio	TES07	TES	Beer	pptv	:: 15-25 pptv	1/(16 day)	53 x 169 km :: G	2-3 km :: 0-33 km
1268A	NO Mixing Ratio	TES18	TES	Beer	pptv	:: 15-25 pptv	32 day	500 x 500 km :: G,R	Selected altitude/pressure surfaces :: 0-33 km
1273	NO2 Conc	HIR13	HIRDLS	Barnett, Gille	mixing ratio	5-10% :: 3-10%	2/day [d,n]	400 x 400 km :: G	1 km :: 10-55 km
1273A	NO2 Conc	HIR25	HIRDLS	Barnett, Gille	mixing ratio	5-10% :: 3-10%	2/day [d,n]	4 x 4 dg :: G	1 km :: 10-55 km
1277	NO2 Conc & Mixing Ratio, Solar	SAG05	SAGE-III	McCormick	Molecule/cc & ppbv	10% :: 15%	1/(2 min), 30/day	<2 x <1 dg :: G	1 km :: 10-50 km
1278	NO2 Mixing Ratio	TES08	TES	Beer	pptv	:: 500 pptv	1/(16 day)	53 x 169 km :: G	2-3 km :: 0-33 km
1278A	NO2 Mixing Ratio	TES19	TES	Beer	pptv	:: 500 pptv	32 day	500 x 500 km :: G,R	Selected altitude/pressure surfaces :: 0-33 km
1282	NO3 Conc and mixing ratio, Lunar	SAG06	SAGE-III	McCormick	Molecule/cc &ppbv	10% :: 10%	1/(2 min), 30/day [n]	<2 x <1 dg :: G	1 km :: 20-55 km
1302	Pressure (O2 Conc.), Solar	SAG09	SAGE-III	McCormick	kPa	2% :: 2%	1/(2 min), 30/day (Sol.)	<2 x <1 dg :: G	1 km :: 6-70 km
1318	O3 Conc	HIR14	HIRDLS	Barnett, Gille	mixing ratio	5-10% :: 1-10%	2/day [d,n]	400 x 400 km :: G	1 km :: 7-80 km
1318A	O3 Conc	HIR26	HIRDLS	Barnett, Gille	mixing ratio	5-10% :: 1-10%	2/day [d,n]	4 x 4 dg :: G	1 km :: 7-80 km
1319	O3 Conc	MLS02	MLS	Waters	mixing ratio	<5% :: 1x10-11 - 1x10-7	2/day [d,n]	1.3 x 2.5 dg :: 82N-82S	2 km :: TPSE-80 km
1321	O3 Conc & Mixing Ratio, Solar	SAG07	SAGE-III	McCormick	Molecule/cc & pptmv	6% :: 5 %	1/(2 min), 30/day	<2 x <1 dg :: G	1 km :: 6-85 km
1325	O3 Mixing Ratio	TES09	TES	Beer	ppbv	:: 3-20 ppbv	1/(16 day)	53 x 169 km :: G	2-6 km :: 0-33 km
1325A	O3 Mixing Ratio	TES20	TES	Beer	ppbv	:: 3-20 ppbv	32 day	500 x 500 km :: G,R	Selected altitude/pressure surfaces :: 0-33 km
1332	O3 Total Burden	AIR16	AIRS	Chedin, Revercomb, Smith, Strow, Susskind	Dobson unit	15% :: 10%	2/day [d,n]	50 x 50 km :: G	N/A :: Atmos
1333	O3 Total Burden	MOD06	MODIS	Menzel	DU	30DU :: 20DU	2/day, 1/day	5 km :: G	Column :: Atmos
1353	OClO Conc and mixing ratio, Lunar	SAG08	SAGE-III	McCormick	Molecule/cc & ppbv	20% :: 20%	1/(2 min), 30/day [n]	<2 x <1 dg :: G	3 km :: 15-25 km
1369	SO2 Conc	MLS14	MLS	Waters	mixing ratio	<5% :: 1x10-9 - 5x10-9	2/day [d,n]	1.3 x 2.5 dg :: 82N-82S	2 km :: TPSE-50 km
1391	Cloud Height, Base	AST05	ASTER	Welch	m	300 m :: 300 m	1/(16 day)	90 m :: L	N/A :: Cloud
1400	Cloud Height (for multi-layers)	GLA03	GLAS	Spinhirne	m	75 m ::	1/(2-16 day)	0.2-10 km :: G	N/A :: Cloud
1408	Cloud Height, PSC	HIR07	HIRDLS	Barnett, Gille	km	0.4 km :: 0.4 km	2/day [d,n]	400 x 400 km :: G	0.4 km :: Strat
1409	Cloud Structure, 3-D	AST05	ASTER	Welch		TBD :: TBD	1/(16 day)	15-90 m :: L	:: Cloud
1423	Cloud Height, Top	AIR05	AIRS	Chahine, Rizzi, Smith	km	0.5 km :: 0.25 km	2/day [d,n]	50 x 50 km :: G	N/A :: Cloud
1427	Cloud Height, Top	AST05	ASTER	Welch	m	300 m :: 300 m	1/(16 day)	90 m :: L	N/A :: Cloud
1433	Cloud Height, Top	MIS04	MISR	Muller	m	200 m ::	1/(2-9 day) [d]	2.2 km :: G	N/A :: Trop
1433A	Cloud Height, Top	MIS07	MISR	Muller	m	200 m ::	1/(9 days, 16 days, month, season, & year)	2.2 km :: G	N/A :: Trop
1437	Cloud Height, Top	SAG03	SAGE-III	McCormick	km	0.2 km :: 5%	1/(2 min), 30/day	<2 x <1 dg :: G	0.5 km :: Strat/Trop
1500	Geopotential Height-Gradient	HIR08	HIRDLS	Barnett, Gille	m/km	0.04m/km :: 0.04m/km	2/day [d,n]	400 x 400 km :: G	1 km :: 15-80 km
1524	Pressure	HIR15	HIRDLS	Barnett, Gille	mb	0.1%:0.1%	2/day [d,n]	400 x 400 km :: G	0.2 km :: 7-80 km
1525	Pressure	MLS16	MLS	Waters	mb	3% :: 1-5%	2/day [d,n]	1.3 x 2.5 dg :: 82N-82S	2 km :: 5-80 km
1528	Cloud Properties, Top	MOD05	MODIS	Menzel	mb	50 mb :: 25 mb	2/day	5 km :: G	N/A :: Cloud
1530	Cloud Pressure, Top	EOS05	EOSP	Travis	mb	30 mb :: 30 mb	1/day [d]	40 km :: G	30 mb :: Cloud_top
1531	Cloud Height, Top	HIR07	HIRDLS	Barnett, Gille	km	0.4 km :: 0.4 km	2/day [d,n]	400 x 400 km :: G	0.4 km :: Trop
1554	Ice_Sheet Roughness	GLA05	GLAS	Bentley	%	10% R ::	1/mo	50 km :: Cryo	N/A :: Cryo
1559	Stability (Lifted Index), Atmospheric	MOD07	MODIS	Menzel	C	2 C :: 1 C	2/day	5 km :: G	N/A :: Atmos
1588	Temperature Profile	AIR27	AIRS	Chedin, Fleming, Rosenkranz, Smith, Susskind	K	1.0 K :: 0.4 K	2/day [d,n]	50 x 50 km :: G	1 km :: Atmos
1608	Temperature Profile	HIR15	HIRDLS	Barnett, Gille	K	1K;2K>50km :: 0.3K;1K>50km	2/day [d,n]	400 x 400 km :: G	1 km :: 7-80 km

Note: This table includes the parameters for 8 interim products (6 for MODIS and 2 for CERES) and SeaWiFS products which are not listed in the product list.

APPENDIX A Output Parameters Sorted by Parameter Number

GSFC/SPSO (6/4/93)

Parm #	Parameter Name	Prod #	Instrument	Investigator	Units	Accuracy Abs :: Rel	Temporal Resolution	Horizontal Resol. :: Cover.	Vertical Resol. :: Cover.
1609	Temperature Profile	MLS15	MLS	Waters	K	<5K :: 1-3K	2/day [d,n]	1.3 x 2.5 dg :: 82N-82S	2 km :: 5-80 km
1611	Temperature Profile (O2 Conc.), Solar	SAG10	SAGE-III	McCormick	K	2 K :: 2K	1/(2 min), 30/day	<2 x <1 dg :: G	1 km :: 6-70 km
1616	Temperature Profile	TES10	TES	Beer	K	2 K:: 0.2 K	1/(16 day)	53 x 169 km :: G	4-6 km :: 0-33 km
1680	Wind Velocity, Near_Sfc	NSC03	NSCAT-II	Freilich	m/s,dg	<1 m/s or 12% (speed); 20 dg (direction) ::	1/(2 day) repeat coverage	~50 km :: Ocean (within swath width of 1400 km, comprising two bands 500 km wide on either side of S/C track)	N/A :: Near_Sfc
1687	Wind Velocity, Balanced/Geostrophic	HIR27	HIRDLS	Barnett, Gille	m/s	3 m/s :: 3 m/s	2/day [d,n]	4 x 4 dg :: G	1 km :: 7-80 km
1718	Wind Speed, Sea_sfc	AIR28	AIRS	Aumann	m/s		2/day	50 x 50 km :: Ocean	N/A :: Sfc
1735	Wind Speed, Along-track	SSA05	SSALT	Fu	m/s	2 m/s ::		7 km :: Ocean	N/A :: Sfc
1763	Cloud Drop Phase	AST05	ASTER	Welch	dimensionless	water/ice ::	1/(16 day)	90 m :: L	N/A :: Cloud
1764	Cloud Drop Phase	MOD05	MODIS	King, Menzel	water/ice	90% Conf :: 90% Conf	1/day	5 km :: G	N/A :: Cloud
1770	Cloud Particle Phase	EOS05	EOSP	Travis	water/ice	:: 95% Corr	1/day [d]	100 km :: G	N/A :: Cloud_top
1774	Cloud Particle Size	EOS05	EOSP	Travis	um	25% :: 25%	1/day [d]	100 km :: G	N/A :: Cloud_top
1779	Cloud Drop Size (Effective Radius)	AST05	ASTER	Welch	um	10 um ::	1/(16 day)	90 m :: L	N/A :: Cloud
1780	Cloud Drop Size(Effective Radius)	MOD05	MODIS	King	um	20% :: 5%	1/day	5 km :: G	N/A :: Cloud
1828	Humidity Profile	AIR10	AIRS	Chedin, Fleming, Rosenkranz, Smith, Susskind	g/kg	10% (goal) :: 5%	2/day [d,n]	50 x 50 km :: G	2 km :: Atmos
1837	H2O Conc	HIR09	HIRDLS	Barnett, Gille	mixing ratio	5-10% :: 1-10%	2/day [d,n]	400 x 400 km :: G	1 km :: 7-80 km
1837A	H2O Conc	HIR21	HIRDLS	Barnett, Gille	mixing ratio	5-10% :: 1-10%	2/day [d,n]	4 x 4 dg :: G	1 km :: 7-80 km
1838	H2O Conc	MLS09	MLS	Waters	mixing ratio	<5% :: 1-10%	2/day [d,n]	1.3 x 2.5 dg :: 82N-82S	2 km :: 5-80 km
1841	H2O Conc & Mixing Ratio, Solar	SAG04	SAGE-III	McCormick	Molecule/cc & ppmv	10% :: 15%	1/(2 min), 30/day	<2 x <1 dg :: G	1 km :: 3-50 km
1842	H2O/HDO Mixing Ratio	TES11	TES	Beer	ppmv	:: 0.5-50 ppmv	1/(16 day)	53 x 169 km :: G	2-6 km :: 0-33 km
1842A	H2O/HDO Mixing Ratio	TES21	TES	Beer	ppmv	:: 0.5-50 ppmv	32 day	500 x 500 km :: G,R	Selected altitude/pressure surfaces :: 0-33 km
1869	Precipitable Water	AIR17	AIRS	Chedin, Fleming, Rosenkranz, Smith, Susskind	mm	5% :: 3%	2/day [d,n]	50 x 50 km :: G	N/A :: Atmos
1874	Precipitable Water	MOD04	MODIS	Kaufman, Tanre, Menzel	dimensionless ?	10-20% :: 6% (NIR; double for LWIR)	1/day, 2/day?	5 km :: G? (old Land)	N/A :: Atmos
1893	Cloud Ice Index	AIR06	AIRS	Staelin	dimensionless	TBD :: TBD	2/day [d,n]	50 x 50 km :: G	N/A :: Cloud
1908	Cloud Liq_water Content	AIR07	AIRS	Rosenkranz	mm	0.1 :: 0.1	2/day [d,n]	50 x 50 km :: G	N/A :: Cloud
1969	Precipitation Index	AIR18	AIRS	Staelin, Susskind	mm	2mm/day :: 1mm/day	2/day [d,n]	50 x 50 km :: G	N/A :: Trop
1992	Aerosol Extinction Coef	HIR02	HIRDLS	Barnett, Gille	/km	5-10% :: 1-10%	2/day [d,n]	400 x 400 km :: G	1 km :: 7-30 km
1993	Aerosol Size-distribution Parameters, Effective	MIS05	MISR	Martonchik, Gordon, Ackerman	dimensionless	30% ::	1/(2-9 day) [d]	17.6 km (L), 2.2 km (O) :: G	Column :: Atmos
1993A	Aerosol Size-distribution Parameters, Effective	MIS08	MISR	Martonchik, Gordon, Ackerman	dimensionless	30% ::	1/(9 days, 16 days, month, season, & year)	17.6 km (L), 2.2 km (O) :: G	Column :: Atmos
2010	Albedo (fine), TOA	MIS04	MISR	Davies	dimensionless	0.03 ::	1/(2-9 day) [d]	2.2 km :: G	N/A :: TOA
2010A	Albedo (fine), TOA	MIS07	MISR	Davies	dimensionless	0.03 ::	1/(9 days, 16 days, month, season, & year)	2.2 km :: G	N/A :: TOA
2011	Albedo (coarse), TOA	MIS04	MISR	Davies	dimensionless	0.03 ::	1/(2-9 day) [d]	35.2 km :: G	N/A :: TOA
2011A	Albedo (coarse), TOA	MIS07	MISR	Davies	dimensionless	0.03 ::	1/(9 days, 16 days, month, season, & year)	35.2 km :: G	N/A :: TOA
2015	Spectral Reflectance/Surface Leaving Radiance	MOD08	MODIS	Kaufman, Tanre, Justice	dimensionless; W/m^2/sr/um	10% ::	1/day	TBD :: Land	N/A :: Sfc
2062	Cloud Cover	AIR03	AIRS	Chahine, Rizzi, Smith	dimensionless	0.05 :: 0.025	2/day [d,n]	50 x 50 km :: G	N/A :: Cloud
2080	Cloud Cover (Fractional Area)	AST05	ASTER	Welch	dimensionless	3% :: 3%	1/(16 day)	15-30 m :: L	N/A :: Cloud

Note: This table includes the parameters for 8 interim products (6 for MODIS and 2 for CERES) and SeaWiFS products which are not listed in the product list.

APPENDIX A Output Parameters Sorted by Parameter Number

GSFC/SPSO (6/4/93)

Parm #	*Parameter Name*	*Prod #*	*Instrument*	*Investigator*	*Units*	*Accuracy Abs :: Rel*	*Temporal Resolution*	*Horizontal Resol. :: Cover.*	*Vertical Resol. :: Cover.*
2081	Cloud Cover	MOD05	MODIS	Menzel, King	%	5% :: 3%	2/day [d,n], 1/mo	5 km :: G	N/A :: Cloud
2093	Cloud Field Size-distribution	AST05	ASTER	Welch	dimensionless	TBD :: TBD	1/(16 day)	15-90 m :: L	N/A :: Cloud
2104	Level-1B Backscatter Coef, GLAS	GLA01	GLAS	Spinhirne	/m	10% ::	1/(2-16 day)	1-100 km :: G	75 m ::
2108	Level-1B Backscatter Power	NSC01	NSCAT-II	Freilich				25 km :: G	N/A :: Sfc
2113	Land_sfc Emissivity, IR/MW Spectral	AIR12	AIRS	Chedin, Fleming, Revercomb, Rosenkranz, Susskind	dimensionless	0.05 :: 0.025	2/day [d,n]	50 x 50 km :: Land	N/A :: Sfc
2115	Cloud Emissivity	AST05	ASTER	Welch	dimensionless	5% ::	1/(16 day)	90 m :: L	N/A :: Cloud
2124	Land_sfc Emissivity	AST06	ASTER	Kahle, Gillespie	dimensionless	0.05-0.1 :: 0.005	1/(0.5-16 day)	90 m :: L	N/A :: Sfc
2128	Cloud Emissivity, IR Spectral (3-14um)	AIR04	AIRS	Chahine, Smith	dimensionless	0.05 :: 0.025	2/day [d,n]	50 x 50 km :: G	N/A :: Cloud
2129	Land_sfc Emissivity, Relative Spectral (by Decorrelation Stretch) - Browse Product	AST07	ASTER	Kahle	dimensionless	:: 0.02	1/(0.5-16 day)	90 m :: Land/R,L	N/A :: Sfc
2176	Radiative Flux, LW, Net Global Sfc	AIR22	AIRS	Gautier, Revercomb, Susskind	W/m^2	<15 :: TBD	2/day	50 x 50 km :: G	N/A :: Sfc
2209	Radiative Flux, LW Spectral, TOA	AIR21	AIRS	Gautier, Susskind	W/m^2	TBD :: TBD	2/day	50 x 50 km :: G	N/A :: TOA
2210	Radiative Flux, LW Spectral, Sfc	AIR20	AIRS	Gautier	W/m^2	TBD :: TBD	2/day [d,n]	50 x 50 km :: G	N/A :: Sfc
2232	Radiative Flux, SW, Net Global Sfc	AIR23	AIRS	Gautier	W/m^2	<15 :: <5	1/day	50 x 50 km :: G	N/A :: Sfc
2266	PAR, Sfc (IPAR) and Incident (IPAR)	MOD23	MODIS	Carder, Tanre	quanta/m^2/s	5% ::	1/day [d]	1 km :: Ocean	N/A :: Sfc
2274	Irradiance, Solar, Total	ACR01	ACRIM	Willson	W/m^2	0.1% :: 0.0005%	1/(2 min)	N/A :: N/A	N/A :: TOA
2277	Irradiance, UV Solar [0.001 nm res.]	SOL03	SOLSTICE	Rottman	W/m^3	3-5% :: 1%	1/hr	N/A :: N/A	N/A :: NA
2278	Irradiance, UV Solar [1 nm res.]	SOL02	SOLSTICE	Rottman	W/m^3	3-5% :: 1%	1/hr	N/A :: N/A	N/A :: NA
2291	Thin Cloud/Aerosol Optical Depth	GLA06	GLAS		dimensionless	20% ::	1/(2-16 day)	2-100 km :: G	N/A :: Atmos
2293	Aerosol Optical Depth, Spectral	MOD03	MODIS	Kaufman, Tanre	dimensionless	0.05 :: 0.02 (Ocean) 0.1 :: 0.04 (Land)	1/day, 1/mo	0.5 dg :: Land	N/A :: Atmos
2295	Aerosol Angstrom Exponent	MOD38	MODIS	Gordon	dimensionless	15% ::	1/day, 1/wk, 1/mo	1 km :: Ocean/R,L	N/A :: Atmos
2297	Aerosol Optical Thickness	EOS03	EOSP	Travis	dimensionless	0.05 :: 10%	1/day [d]	40 km :: G	Column :: Atmos
2299	Aerosol Optical Depth	MIS05	MISR	Martonchik, Gordon	dimensionless	0.05 (t≤0.5)/10% (t>0.5) ::	1/(2-9 day) [d]	17.6 km (L), 2.2 km (O) :: G	Column :: Atmos
2299A	Aerosol Optical Depth	MIS08	MISR	Martonchik, Gordon	dimensionless	0.05 (t≤0.5)/10% (t>0.5) ::	1/(9 days, 16 days, month, season, & year)	17.6 km (L), 2.2 km (O) :: G	Column :: Atmos
2308	Aerosol Vertical Structure (Profile)	GLA02	GLAS	Spinhirne et al	/(km-sr)	20% ::	1/(2-16 day)	2-100 km :: G	150 m :: Atmos
2310	Cloud Optical Thickness	AST05	ASTER	Welch	dimensionless	3% :: 3%	1/(16 day)	15-30 m :: L	N/A :: Cloud
2311	Cloud Optical Depth	MOD05	MODIS	King	dimensionless	10% :: 5%	1/day [d]	5 km :: G	N/A :: Cloud
2313	Cloud Optical Thickness	EOS05	EOSP	Travis	dimensionless	20% :: 10%	1/day [d]	40 km :: G	Column :: Cloud
2330	PAR, Daily	MOD23	MODIS	Esaias	W/m^2/day	10% ::	1/day	N/A :: G	N/A :: Atmos
2334	Aerosol Single-Scattering Albedo, Effective	MIS05	MISR	Martonchik, Gordon	dimensionless	0.05 ::	1/(2-9 day) [d]	17.6 km (L), 2.2 km (O) :: G	N/A :: Trop
2334A	Aerosol Single-Scattering Albedo, Effective	MIS08	MISR	Martonchik, Gordon	dimensionless	0.05 ::	1/(9 days, 16 days, month, season, & year)	17.6 km (L), 2.2 km (O) :: G	N/A :: Trop
2335	Aerosol Phase Function, Effective	MIS05	MISR	Martonchik, Gordon, Ackerman	dimensionless	20% (values>1.0), 2X (values≤1.0) ::	1/(2-9 day) [d]	17.6 km (L), 2.2 km (O) :: G	N/A :: Trop
2335A	Aerosol Phase Function, Effective	MIS08	MISR	Martonchik, Gordon, Ackerman	dimensionless	20% (values>1.0), 2X (values≤1.0) ::	1/(9 days, 16 days, month, season, & year)	17.6 km (L), 2.2 km (O) :: G	N/A :: Trop
2336	Level-1B Polarization, EOSP	EOS01	EOSP	Travis	dimensionless	0.2% :: 0.1%	1/day [d]	10-70 km :: G	N/A :: N/A
2338	Level-1B Radiance, Calibrated Geolocated, MODIS	MOD02	MODIS	Salomonson, Barker	W/m^2/sr/um	5%(1Σ) :: RMS<NEAL	1/day	0.25 km, 0.5 km, 1 km :: G	N/A :: N/A
2344	Aerosol Optical Depth (@865 nm)	MOD37	MODIS	Gordon	dimensionless	>20% or 0.05 ::	1/day, 1/wk, 1/mo	1 km :: Ocean/G,R,L	N/A :: Atmos
2347	Level-1B Radiance, AIRS	AIR01	AIRS	Chahine	W/m^2/sr/um	0.2dg NEdT :: 0.2dg NEdT	2/day [d,n]	15 x 15 km :: G	N/A :: N/A

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GSFC/SPSO (6/4/93)

Parm #	*Parameter Name*	*Prod #*	*Instrument*	*Investigator*	*Units*	*Accuracy Abs :: Rel*	*Temporal Resolution*	*Horizontal Resol. :: Cover.*	*Vertical Resol. :: Cover.*
2350	Level-1B Radiance, AMSU-A	AIR29	AIRS	Chahine	K	0.2dg NEdT :: 0.2dg NEdT	2/day [d,n]	40 x 40 km :: G	N/A :: N/A
2352	Level-1B Radiance, MHS	AIR30	AIRS	Chahine	K	0.2dg NEdT :: 0.2dg NEdT	2/day [d,n]	15 x 15 km :: G	N/A :: N/A
2353	Level-2 Radiance, Clear_sky Atmos_corrected, EOSP	EOS06	EOSP	Travis	W/m^2/sr/um	25% :: 15%	1/day [d]	40 km :: G	N/A :: N/A
2362	Level-1B Radiance, EOSP	EOS02	EOSP	Travis	W/m^2/sr/µm	5% :: 2%	1/day [d]	10-70 km :: G	N/A :: N/A
2369	Level-1B Radiance	HIR01	HIRDLS	Barnett, Gille	W/m^2/sr/um				
2375	Level-1B Radiance, ASTER	AST03	ASTER	Japan (Slater, Kahle, Kieffer)	W/m^2/sr/um	2-4% :: 1%	1/16 day	15,30,90m :: G	N/A :: at sensor
2378	Level-2 Radiance—VNIR/SWIR, Land_leaving	AST11	ASTER	Slater, Kahle	W/m^2/sr/um	TBD :: TBD	1/(2-16 day)	15,30 m :: Land/R,L	N/A :: Sfc
2384	Level-1A Data (Pulse Information + Navigation Data), LIS	LIS01	LIS	Christian				3.5 km (IFOV):: Tropics	
2387	Level-1B1 Annotated Radiance, MISR	MIS02	MISR	Diner	W/m^2/sr/um	3% (@ equivalent reflectance of 1.0), 6% (@ 0.05) ::	1/(2-9 day) [d]	275, 550 m; 1.1, 2.2 km :: G	N/A :: TOA
2388	Level-1B Radiance, MLS	MLS01	MLS	Waters	K	<3% :: <3%	2/day [d,n]	1.3 x 2.5 dg :: 82N-82S	2 km :: 0-80 km
2394	Level-1B Radiance (+ Ancillary Data including CR Pressure)	MOP01	MOPITT	Drummond	W/m^2/sr/um		1 view/0.4 s	22 km X 22 km :: G	:: Atmos
2398	Level-1B Irradiance, SOLSTICE	SOL01	SOLSTICE	Rottman	W/m^3	10% :: N/A	4/day	2 dg :: G	1 km :: 0-100 km
2402	Level-1B Radiance, TES [IR spectra in selected bands 2.3-15.4µm]	TES01	TES	Beer			1/(16 day)	53 x 169 km :: G	
2416	Level-2 Radiance, Water-leaving	MOD20	MODIS	Gordon et al	mW/cm^2/sr/um	0.0015 ::	1/day, 1/wk, 1/mo	1 km :: Ocean/R,L	N/A :: Sfc
2433	Land_sfc Reflectance, Directional	AST08	ASTER	Kahle, Slater	dimensionless	4% :: 1%	1/mo	15, 30 m :: Land/R,L	N/A :: Sfc
2435	Land_sfc Reflectance, Relative Spectral (by Decorrelation Stretch) - Browse	AST09	ASTER	Kahle	dimensionless	4% :: 0.5-1.3%	1/(2-16 day)	15-30 m :: Land/R,L	N/A :: Sfc
2452	Level-1B Radiance, ASTER, Registered at Sensor (Between and within Telescopes)	AST04	ASTER	Japan (Kieffer, Kahle)	W/m^2/sr/um	TBD :: TBD	1/(2-16 day)	15,30,90 m :: G	N/A :: at sensor
2455	Land_sfc Brightness Temperature	TES12	TES	Beer	K	1 K :: 0.1 K	1/(16 day)	53 x 169 km :: G	N/A :: Sfc
2463	Cloud Temperature, Top	AIR08	AIRS	Chahine, Rizzi, Smith	K	1 K :: 0.5 K	2/day [d,n]	50 x 50 km :: G	N/A :: Cloud
2465	Cloud Temperature, Top	AST05	ASTER	Welch	K	2 K :: 2 K	1/(16 day)	90 m :: L	N/A :: Cloud
2471	Thermal Anomalies (Fire Size & Temperature)	MOD13	MODIS	Kaufman, Justice	K	2-10 K ::	1/day, 1/wk	1 km :: Land/R	N/A :: Sfc
2481	Land_sfc Temperature, Skin	AIR13	AIRS	Chedin, Fleming, Revercomb, Smith, Susskind	K	1.0 K :: 0.5 K	2/day [d,n]	50 x 50 km :: Land	N/A :: Sfc
2484	Land_sfc Temperature	MOD10	MODIS	Wan	C	1-4 C ::	1/day, 1/wk	1 km :: Land/R	N/A :: Sfc
2523	Sea_sfc Temperature (SST), Skin	AIR25	AIRS	Chedin, Fleming, Revercomb, Smith, Susskind	K	0.5 K :: 0.4 K	2/day [d,n]	50 x 50 km :: Ocean	N/A :: Sfc
2527	Sea_sfc Temperature (SST)	MOD29	MODIS	Brown, Barton	K	0.3-0.5 K ::	1/day, 1/wk, 1/mo	1 km :: Ocean/L	N/A :: Sfc
2539	Land_sfc Temperature-Difference, Day-Night	AIR14	AIRS	Chedin, Fleming, Revercomb, Smith, Susskind	K	0.5 K :: 0.25 K	1/day [d,n]	50 x 50 km :: G	N/A :: Sfc
2543	Level-1B Transmission Profiles, Solar	SAG01	SAGE-III	McCormick	dimensionless	0.05% :: 0.05%	1/(2 min), 30/day	200 x 2.5 km :: G	1 km :: 0-100 km
2559	Ocean Water Backscatter Coef, Total	MOD35	MODIS	Gordon, Parslow	/m	0.005 or 20% ::	1/day, 1/wk, 1/mo	1 km :: Ocean/R	N/A ::
2569	Chlorophyll_a Pigment Conc, Case II	MOD22	MODIS	Carder	mg/m^3	50%(0.05<[Chl]<1 ::	1/day, 1/wk, 1/mo	1 km :: Ocean-II/ R	N/A ::
2571	Chlorophyll_a Pigment Conc, Case I	MOD22	MODIS	Clark	mg/m^3	30%(0.1< [Chl]<1); 60%(1<[Chl]<10); TBD([Chl]>10) ::	1/day, 1/wk, 1/mo	1 km :: Ocean-I/ L	N/A ::

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APPENDIX A Output Parameters Sorted by Parameter Number

GSFC/SPSO (6/4/93)

Parm #	*Parameter Name*	*Prod #*	*Instrument*	*Investigator*	*Units*	*Accuracy Abs :: Rel*	*Temporal Resolution*	*Horizontal Resol. :: Cover.*	*Vertical Resol. :: Cover.*
2573	Chlorophyll Fluorescence Line Curv	MOD21	MODIS	Hoge	mW/cm^2/sr/µm	25% ::	1/day, 1/wk	1 km, 20 km? :: Ocean/R,G	N/A ::
2575	Chlorophyll Fluorescence Line Height	MOD21	MODIS	Abbott, Evans	mW/cm^2/sr/µm	.004 W/m^2/sr ::	1/day, 1/wk	4 km, 1 km? :: Ocean/G,R,L?	N/A ::
2577	Coccolith Conc, Detached	MOD26	MODIS	Gordon	mg-CaCO3/cm^3	25000/ml ::	1/day, 1/wk, 1/mo	20 km, 1 km? :: Ocean/G,R,L?	N/A ::
2580	Organic Matter Conc, Dissolved	MOD25	MODIS	Carder, Parslow	g/m^3	40%(open ocean best case); 100%(coastal for [Chl]<1) ::	1/day, 1/wk, 1/mo	20 km, 1 km? :: Ocean/R	N/A ::
2591	Pigment Conc, "CZCS"	MOD19	MODIS	Gordon, Clark	mg/m^3	100% (Global); 35% (Case I, Clear Atmos) :: TBD	1/day, 1/wk, 1/mo	20 km, 1 km? :: Ocean/G,R,L?	N/A ::
2602	Ocean Productivity, Primary, Daily	MOD28	MODIS	Abbott, Esaias	mg-C/m^2/day	35% (Goal) ::	1/day, 1/wk	1 km :: Ocean-I/R,L	N/A ::
2606	Ocean Productivity, Primary, Global Annual	MOD28	MODIS	Esaias, Abbott	GT-C/yr	35% (Goal) ::	1/yr	20 km :: Ocean/G,R	N/A ::
2608	Organic Matter Conc, Particulate	MOD25	MODIS	Clark	mg/m^3	TBD ::	1/day, 1/wk	20 km :: Ocean	N/A ::
2631	Land_sfc Reflectance Factor, Bidirectional	MIS06	MISR	Martonchik, Gerstl	dimensionless	10% ::	1/(2-9 day) [d]	1.1 km :: Land	N/A :: Sfc
2631A	Land_sfc Reflectance Factor, Bidirectional	MIS09	MISR	Martonchik, Gerstl	dimensionless	10% ::	1/(9 days, 16 days, month, season, & year)	1.1 km :: Land	N/A :: Sfc
2669	Land_Cover Type	MOD11	MODIS	Strahler, Huete	categorical fraction	10% ::	1/mo, 1/seas	1 km :: Land	N/A :: Sfc
2680	Leaf Area (LAI) & FPAR	MOD14	MODIS	Running	dimensionless	20% (LAI); 15% (FPAR) ::	1/day, 1/wk	pixel_size :: Land/G,R,L	N/A :: N/A
2703	Vegetation Production, Net Primary (NPP)	MOD16	MODIS	Running	Mg/km^2/yr	20% ::	1/wk, 1/mo, 1/yr	1 km :: Land/G,R	N/A :: N/A
2749	Vegetation Indices	MOD12	MODIS	Justice, Huete	dimensionless	0.05 ::	1/day, 1/wk, 1/mo	10 km?,1.0 km?,0.5 km? :: Land/G,R?,L?	N/A :: Sfc
2828	Elevation, Land_sfc [DEM]	AST14	ASTER	EDC	m	<50 m :: <30 m	1/mission	15 m :: Land/R,L	30 m :: Sfc
2858	Topographic Elevation, Land_sfc	GLA07	GLAS	Spinhirne et al	m	1-5 m (single measurement) ::	1/yr	175 m (AT) x 15 km (CT) :: Land	N/A :: Sfc
2911	Ice_Sheet Elevation Map	SSA07	SSALT	Zwally	m	0.5-5m ::	1/yr	15 km :: Land/Cryo	N/A :: Sfc
2912	Ice_Sheet Elevation	GLA04	GLAS	Bentley	mm	200 mm (single measurement up to 3° surface slope) ::	1/yr	175 m (AT) x 5 km (CT) :: Land/Cryo	N/A :: Cryo
2921	Ice_Sheet Cover Index	AIR11	AIRS	Staelin	dimensionless	TBD :: TBD	2/day [d,n]	50 x 50 km :: Land/Cryo	N/A :: Sfc
2931	Glacier Extent, Temperate	AST15	ASTER	Kieffer		TBD :: TBD	1/yr	100 m :: Cryo	N/A :: Sfc
2932	Glacier Velocity, Polar Outflow	AST16	ASTER	Kieffer	m/s	10^-6 :: variable	1/yr	100 m :: Cryo	N/A :: Sfc
3018	Snow Cover Index	AIR26	AIRS	Staelin	dimensionless	TBD :: TBD	2/day [d,n]	50 x 50 km :: Land	N/A :: Sfc
3020	Snow Cover	MOD09	MODIS	Salomonson, Hall	km^2	10% ::	1/day, 1/wk	10 km, 1 km? :: Land/G,R?	N/A :: Sfc
3085	Suspended-Solids Conc, Ocean Water	MOD24	MODIS	Clark	g/m^3	50% ::	1/day, 1/wk, 1/mo	20 km, 1 km? :: Ocean/G,R?,L?	N/A ::
3108	Topography Map, Sea_sfc	SSA06	SSALT	Fu	cm	>5 cm or 10% ::	1/(16 day)	25 km :: Ocean	N/A :: Sfc
3112	Sea_Level Height, Along-track	SSA04	SSALT	Fu	cm	10 cm ::		7 km :: Ocean	N/A :: Sfc
3121	Ocean Tide Model	SSA08	SSALT	Sanchez	cm	2 cm ::	1/mission	100 km :: Ocean	N/A :: Sfc
3129	Ocean Wave Height, Along-track	SSA03	SSALT	Fu	cm	>0.5 m or 10% ::		7 km :: Ocean	N/A :: Sfc
3151	Sea_Ice Cover	AIR24	AIRS	Staelin	fraction	0.1 :: 0.1	2/day [d,n]	50 x 50 km :: Ocean/Cryo	N/A :: Sfc
3153	Sea_Ice Max Extent	MOD30	MODIS	Salomonson, Hall	km^2	TBD ::	1/day, 1/wk, 1/mo	10 km, 1 km? :: Ocean/Cryo,R?	N/A :: Sfc
3199	Ocean Water Attenuation Coef@490nm	MOD27	MODIS	Clark, Gordon	/m	25% ::	1/day, 1/wk, 1/mo	20 km, 1 km? :: Ocean-I/R,L	N/A ::
3206	Ocean Water Attenuation Coef@520nm	MOD27	MODIS	Clark, Gordon	/m	35% ::	1/day, 1/wk	1 km :: Ocean	N/A ::
3211	Chlorophyll Fluorescence Efficiency	MOD21	MODIS	Abbott	mW/cm^2/sr/um/mg-Chl/m^3	TBD ::	1/day, 1/wk	1 km :: Ocean/R,L	N/A ::

Note: This table includes the parameters for 8 interim products (6 for MODIS and 2 for CERES) and SeaWiFS products which are not listed in the product list.

APPENDIX A Output Parameters Sorted by Parameter Number

GSFC/SPSO (6/4/93)

Parm #	*Parameter Name*	*Prod #*	*Instrument*	*Investigator*	*Units*	*Accuracy Abs :: Rel*	*Temporal Resolution*	*Horizontal Resol. :: Cover.*	*Vertical Resol. :: Cover.*
3303	Calibration Data, MODIS	MOD34	MODIS	Evans	variable		1/day, 1/wk, 1/mo	N/A :: Ocean/G,R,L	N/A :: Sfc
3320	Phycoerythrin Conc.	MOD33	MODIS	hoge	mg/m^3	50% :: 15%	1/day, 1/wk, 1/mo	1 km :: Ocean /RL	N/A :: TOO
3464	Level-1B Backscatter	SSA01	SSALT	Fu	dB				
3594	Wind Speed, Sea_sfc	MIM05	MIMR	Wentz	m/s	1.5 m/s* ::		12 km :: Ocean	N/A :: Sfc
3594A	Wind Speed, Sea_sfc	MIM16	MIMR	Wentz	m/s	<0.5 m/s* ::	1/mo	2.5 deg ::	N/A :: Sfc
3596	Precipitable Water	MIM04	MIMR	Wentz	g/cm^2	0.2 g/cm^2 ::		23 km :: Ocean	Column :: Trop
3596A	Precipitable Water	MIM15	MIMR	Wentz	g/cm^2	<0.1 g/cm^2 ::	1/mo	2.5 deg ::	Column :: Trop
3598	Cloud Liquid_Water Total Column	MIM03	MIMR	Wentz	mg/cm^2	3 mg/cm^2		23 km :: Ocean	N/A :: Trop
3598A	Cloud Liquid_Water Total Column	MIM14	MIMR	Wentz	mg/cm^2	1 mg/cm^2	1/mo	2.5 deg ::	N/A :: Trop
3602	Level-1B Radiance (Brightness Temperature), MIMR	MIM01	MIMR	ESA	K	0.2-0.7 K ::		6-60 km :: Global	N/A ::
3603	Sea Surface Temperature (SST)	MIM06	MIMR	Wentz	K	0.5 K* ::		60 km :: Ocean	N/A :: Sfc
3603A	Sea Surface Temperature (SST)	MIM17	MIMR	Wentz	K	<0.2 K* ::	1/mo	2.5 deg ::	N/A :: Sfc
3605	Soil Moisture	MIM10	MIMR	TBD		50% ? ::		60 km :: Land	N/A :: Sfc
3605A	Soil Moisture	MIM21	MIMR	TBD		20% ? ::	1/mo	1.0 deg ::	N/A :: Sfc
3609	Sea_Ice Type	MIM12	MIMR	Cavalieri, Comiso		11% ::		12 km :: Ocean/Cryo	:: Sfc
3609A	Sea_Ice Type	MIM23	MIMR	Cavalieri, Comiso		3% ::	1/mo	12 km ::	:: Sfc
3611	Sea_Ice Conc	MIM11	MIMR	Cavalieri, Comiso		7% ::		12 km :: Ocean/Cryo	N/A :: Sfc
3611A	Sea_Ice Conc	MIM22	MIMR	Cavalieri, Comiso		2% ::	1/mo	12 km ::	N/A :: Sfc
3624	Sea_Ice Albedo	AST13	ASTER	Welch				90 m :: Ocean/Cryo	N/A :: Sfc
3625	Cloud Thickness	AST05	ASTER	Welch	m	315 m :: 315 m	1/(16 day)	90 m :: L	N/A :: Cloud
3626	Cloud Liquid_Water Content	AST05	ASTER	Welch	mm		1/(16 day)	90 m :: L	N/A :: Cloud
3628	Cloud Field Scales_of_Organization	AST05	ASTER	Welch		TBD :: TBD	1/(16 day)	90 m :: L	N/A :: Cloud
3640	Spectra, UV Stellar Comparison [1 nm res. ?]	SOL04	SOLSTICE	Rottman	W/m^3	3-5% :: 1%	32/day	N/A :: N/A	N/A :: NA
3642	Lightning Pulse Characteristics (Radiance, Location, Time)	LIS02	LIS	Christian	W/m^2/sr/um			.07 dg :: Tropics	N/A :: Atmos
3643	Lightning Flash Characteristics (Pulses Grouped as Flashes: Lightning Rate, Radiant Energy)	LIS03	LIS	Christian			orbit, day/night mo, seas	.07 dg :: Tropics	N/A :: Atmos
3660	Classification Masks, Clouds/Land/Water/Snow, MODIS Level-2	MOD18	MODIS	Salomonson, Barker (with Hall)					
3665	Albedo, Spectral, Land_sfc	MOD08	MODIS	Muller, Strahler, Tanre	fraction	10% ::	1/day	1 km :: Land/R	N/A :: Sfc
3669	Bidirectional Reflectance	MOD08	MODIS	Muller, Strahler, Tanre	fraction	15% ::	1/day	1 km :: Land/R	N/A :: Sfc
3683	Radiance, Cloud Cleared, Level-2	AIR19	AIRS	Chahine, Smith, Susskind	K	0.2 K :: 0.1 K	2/day [d,n]	15 x 15 km :: G	N/A :: Atmos
3690	O3 Conc	AIR15	AIRS	Revercomb, Strow, Susskind	Dobson unit	20% :: 15%	2/day [d,n]	50 x 50 km :: G	4 levels :: Atmos
3705	Level-1A Annotated Raw Data, MISR	MIS01	MISR	Diner		3% :: 1%	1/(2-9 day) [d]	275, 550 m; 1.1, 2.2 km :: G	N/A :: TOA
3707	Clear Water Epsilon	MOD40	MODIS	Carder		2% (0.9 to 1.4) ::	TBD :: TBD	TBD :: TBD	
3708	Level-1A Radiance, MODIS	MOD01	MODIS	Salomonson				0.25 km, 0.5 km, 1 km :: G	
3709	Precipitation (Land)	MIM02	MIMR	Adler, Alishouse, Spencer		40% ::		12 km :: Land	N/A :: Sfc
3709A	Precipitation (Land)	MIM13	MIMR	Adler, Alishouse, Spencer		20% ::	1/mo	2.5 deg ::	N/A :: Sfc
3710	Level_2 Detection Flags [Set for SO2, NH3, C2H6, H2O2, PAN, HO2NO2, HCOH, HCOOH, (CH3)2S, HCl, HF, Clouds & Aerosols]	TES13	TES		none			53 x 169 km :: G	

Note: This table includes the parameters for 8 interim products (6 for MODIS and 2 for CERES) and SeaWiFS products which are not listed in the product list.

GSFC/SPSO (6/4/93)

Parm #	Parameter Name	Prod #	Instrument	Investigator	Units	Accuracy Abs :: Rel	Temporal Resolution	Horizontal Resol. :: Cover.	Vertical Resol. :: Cover.
3711	Precipitation (Ocean)	MIM02	MIMR	Wilheit, Adler, Spencer		20% ::		38 km :: Ocean	N/A :: Sfc
3711A	Precipitation (Ocean)	MIM13	MIMR	Wilheit, Adler, Spencer		10% ::	1/mo	2.5 deg ::	N/A :: Sfc
3713	Snow Depth	MIM07	MIMR	TBD				23 km :: Land	N/A :: Sfc
3713A	Snow Depth	MIM18	MIMR	TBD			1/mo	2.5 deg ::	N/A :: Sfc
3715	Snow Water Content (Liquid Water Equivalent)	MIM08	MIMR	TBD				23 km :: Land	N/A :: Sfc
3715A	Snow Water Content (Liquid Water Equivalent)	MIM19	MIMR	TBD			1/mo	2.5 deg ::	N/A :: Sfc
3716	Photosynthesis-Respiration	MOD17	MODIS	Running		40% ::			N/A :: N/A
3717	Land Surface Class	MIM09	MIMR	TBD				38 km :: Land	N/A :: Sfc
3717A	Land Surface Class	MIM20	MIMR	TBD			1/mo	1.0 deg ::	N/A :: Sfc
3720	Gridded Lightning Characteristics	LIS04	LIS	Christian			orbit, mo, seas	500 x 500 km TRMM grid, 2.5 x 2.5 dg :: Tropics	N/A :: Atmos
3721	Backscatter Cross Section (Sigma-0), Global	NSC02	NSCAT-II	Freilich	dB	:: 0.25 dB		~50 km :: G	N/A :: Sfc
3722	Evapotranspiration	MOD15	MODIS	Running		20% ::			N/A :: N/A
3723	ClONO2	HIR06	HIRDLS	Barnett, Gille	mixing ratio	5-10% :: 3-10%	2/day [d,n]	400 x 400 km :: G	1 km :: 7-80 km
3723A	ClONO2	HIR20	HIRDLS	Barnett, Gille	mixing ratio	5-10% :: 3-10%	2/day [d,n]	4 x 4 dg :: G	1 km :: 7-80 km
3724	Absorption Coef, Total	MOD36	MODIS	Carder	/m	25% ::			
3725	Water Vapor, Atmospheric	MOD39	MODIS	TBD		>20% or 5 mm ::			
3726	Temperature Profile	MOD31	MODIS	TBD	K	TBD :: TBD		TBD :: G	Few lyrs :: Atmos
3727	Water Vapor Profile	MOD32	MODIS	TBD		TBD :: TBD		TBD :: G	Few lyrs :: Atmos
3728	Level-1B2 Annotated Radiance, MISR	MIS03	MISR	Diner	W/m^2/sr/um	3% (@ equivalent reflectance of 1.0), 6% (@ 0.05) ::	1/(2-9 day) [d]	275, 550 m; 1.1, 2.2 km :: G	N/A :: TOA
3729	Reflectance Factor, Bidirectional, TOA	MIS04	MISR	Bruegge	dimensionless	3% (value of 1.0), 6% (value of 0.05) ::	1/(2-9 day) [d]	2.2 km :: G	N/A :: TOA
3729A	Reflectance Factor, Bidirectional, TOA	MIS07	MISR	Bruegge	dimensionless	3% (value of 1.0), 6% (value of 0.05) ::	1/(9 days, 16 days, month, season, & year)	2.2 km :: G	N/A :: TOA
3730	Reflectance Histogram, Sub-Pixel	MIS04	MISR	Davies	dimensionless	N/A ::	1/(2-9 day) [d]	2.2 km :: G	N/A :: Trop
3730A	Reflectance Histogram, Sub-Pixel	MIS07	MISR	Davies	dimensionless	N/A ::	1/(9 days, 16 days, month, season, & year)	2.2 km :: G	N/A :: Trop
3731	Cloud Presence Identifier	MIS04	MISR	Ackerman, Davies, Muller	dimensionless	TBD ::	1/(2-9 day) [d]	2.2 km :: G	N/A :: Trop
3731A	Cloud Presence Identifier	MIS07	MISR	Ackerman, Davies, Muller	dimensionless	TBD ::	1/(9 days, 16 days, month, season, & year)	2.2 km :: G	N/A :: Trop
3732	Cloud Fraction, Mid and Low	MIS04	MISR	Ackerman, Davies, Muller	dimensionless	0.05 ::	1/(2-9 day) [d]	17.6 km :: G	N/A :: Trop
3732A	Cloud Fraction, Mid and Low	MIS07	MISR	Ackerman, Davies, Muller	dimensionless	0.05 ::	1/(9 days, 16 days, month, season, & year)	17.6 km :: G	N/A :: Trop
3733	Cloud Fraction, High	MIS04	MISR	Davies	dimensionless	0.05 ::	1/(2-9 day) [d]	17.6 km :: G	N/A :: Trop
3733A	Cloud Fraction, High	MIS07	MISR	Davies	dimensionless	0.05 ::	1/(9 days, 16 days, month, season, & year)	17.6 km :: G	N/A :: Trop
3734	Land_sfc Reflectance Factor, Hemispheric Directional	MIS06	MISR	Martonchik, Gerstl	dimensionless	10% ::	1/(2-9 day) [d]	1.1 km :: Land	N/A :: Sfc
3734A	Land_sfc Reflectance Factor, Hemispheric Directional	MIS09	MISR	Martonchik, Gerstl	dimensionless	10% ::	1/(9 days, 16 days, month, season, & year)	1.1 km :: Land	N/A :: Sfc
3735	Land_sfc Reflectance, Directional Hemispheric	MIS06	MISR	Martonchik, Gerstl	dimensionless	0.03 ::	1/(2-9 day) [d]	1.1 km :: Land	N/A :: Sfc
3735A	Land_sfc Reflectance, Directional Hemispheric	MIS09	MISR	Martonchik, Gerstl	dimensionless	0.03 ::	1/(9 days, 16 days, month, season, & year)	1.1 km :: Land	N/A :: Sfc

Note: This table includes the parameters for 8 interim products (6 for MODIS and 2 for CERES) and SeaWiFS products which are not listed in the product list.

GSFC/SPSO (6/4/93)

Parm #	*Parameter Name*	*Prod #*	*Instrument*	*Investigator*	*Units*	*Accuracy Abs :: Rel*	*Temporal Resolution*	*Horizontal Resol. :: Cover.*	*Vertical Resol. :: Cover.*
3736	Land_sfc Reflectance, Bihemispheric	MIS06	MISR	Martonchik, Gerstl	dimensionless	0.03 ::	1/(2-9 day) [d]	1.1 km :: Land	N/A :: Sfc
3736A	Land_sfc Reflectance, Bihemispheric	MIS09	MISR	Martonchik, Gerstl	dimensionless	0.03 ::	1/(9 days, 16 days, month, season, & year)	1.1 km :: Land	N/A :: Sfc
3737	Irradiance, Scaled Downward	MIS06	MISR	Martonchik	dimensionless	5% ::	1/(2-9 day) [d]	1.1 km :: Land	N/A :: Sfc
3737A	Irradiance, Scaled Downward	MIS09	MISR	Martonchik	dimensionless	5% ::	1/(9 days, 16 days, month, season, & year)	1.1 km :: Land	N/A :: Sfc
3739	Albedo, Reflecting Layer	MIS04	MISR		dimensionless		1/(2-9 day) [d]	17.6 km :: G	N/A :: Trop
3739A	Albedo, Reflecting Layer	MIS07	MISR		dimensionless		1/(2-9 day) [d]	17.6 km :: G	N/A :: Trop
3740	Aerosol Particle Size	EOS04	EOSP	Travis	µm			:: G	N/A :: Aerosol_lyr
3741	Aerosol Refraction Index	EOS04	EOSP	Travis	dimensionless			:: G	N/A :: Aerosol_lyr
3742	Aerosol Profile	EOS04	EOSP	Travis				:: G	:: Atmos
3743	Vegetation/Land Classification (via Polarization)	EOS07	EOSP	Travis				:: Land	N/A :: Sfc
3744	Improved Methods for Treating Radiative Effects of Clouds and Aerosols in Climate Models	EOS08	EOSP	Travis	N/A			N/A :: N/A	N/A :: Atmos
3746	Vegetation Canopy Height	GLA08	GLAS		m	1-5 m (single measurement) ::	1/yr	175 m (AT) x 15 km (CT) :: Land	N/A :: Sfc
3756	Backscatter Coef (Sigma-0), Along-track Radar	SSA02	SSALT	Fu	dB	0.25 db ::		7 km :: Ocean	N/A :: Sfc
3757	Level-1B Radiance, TES [IR spectra in selected bands 2.3-15.4µm]	TES02	TES	Beer				5 x 50 km, 0.5 x 5 km :: R,L	2-6 km :: 0-33 km
3763	TBD	TES22	TES	Beer					
3764	OH Conc	MLS07	MLS	Waters	mixing ratio	<5% :: 1x10-13 - 1x10-10	2/day [d,n]	1.3 x 2.5 dg :: 82N-82S	2 km :: 15-80 km
3765	Geopotential Height	MLS17	MLS	Waters	m	TBD	2/day [d,n]	1.3 x 2.5 dg :: 82N-82S	2 km :: 5-80 km
3773	Cloud Pressure, Top	HIR07	HIRDLS	Barnett, Gille	mb	5-10% :: 5-10%	2/day [d,n]	400 x 400 km :: G	0.4 km :: Trop
3801	Level-1A Data, ASTER, Decommutated & Reformatted	AST01	ASTER	Japan (Kahle)	counts			15,30,90m::G	
3803	Land_sfc Temperature, Kinetic	AST10	ASTER	Gillespie, Kahle	K	TBD :: TBD			
3804	Scene Classification	AST12	ASTER	Gillespie, Christensen	N/A				
3814	Calibration, Geometric	AST02	ASTER	Kieffer				15,30,90m::G	
3815	Spectral Library	AST02	ASTER	Salisbury, Kieffer, Gillespie, Kahle					N/A :: Sfc
3816	Calibration, Radiometric Ground	AST02	ASTER	Slater	W/m^2/sr/µm				
3817	Level-2 Radiance—TIR, Land_leaving	AST11	ASTER	Palluconi, Kahle	W/m^2/sr/um	TBD :: TBD	1/(2-16 day)	90 m :: Land/R,L	N/A :: Sfc
3818	Cloud Mask, Polar	AST05	ASTER	Welch	dimensionless			15-30 m :: Polar/L	N/A :: Cloud
4000	Level 1B Earth Locations & Viewing Geometry, CERES	CER01	CERES	Barkstrom	deg(lat,lon)	1 - 2% :: 0.005	1/6.6 sec	25 km::G	N/A :: TOA
4001	Level 1B Housekeeping Measurements, CERES	CER01	CERES	Barkstrom	dimensionless, etc	1 - 2% :: 0.005	1/6.6 sec	25 km::G	N/A :: TOA
4002	Level 1B Radiance, SW_filtered, CERES	CER01	CERES	Barkstrom	W/m^2/sr/um	2% :: 0.005	1/6.6 sec	25 km::G	N/A :: TOA
4003	Level 1B Radiance, Total_filtered, CERES	CER01	CERES	Barkstrom	W/m^2/sr/um	1 - 2% :: 0.005	1/6.6 sec	25 km::G	N/A :: TOA
4004	Level 1B Radiance, Window_filtered, CERES	CER01	CERES	Barkstrom	W/m^2/sr/um	1 - 2% :: 0.005	1/6.6 sec	25 km::G	N/A :: TOA
4005	Level 1B Earth Locations & Viewing Geometry, CERES	CER09	CERES	Barkstrom	deg(lat,lon)	1 - 2% :: 0.005	1/3.3 sec	25 km::G	N/A :: TOA
4006	Level 1B Radiance, SW_filtered, CERES	CER09	CERES	Barkstrom	W/m^2/sr/um	2% :: 0.005	1/3.3 sec	25 km::G	N/A :: TOA
4007	Level 1B Radiance, Total_filtered, CERES	CER09	CERES	Barkstrom	W/m^2/sr/um	1 - 2% :: 0.005	1/3.3 sec	25 km::G	N/A :: TOA

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APPENDIX A Output Parameters Sorted by Parameter Number

GSFC/SPSO (6/4/93)

Parm #	*Parameter Name*	*Prod #*	*Instrument*	*Investigator*	*Units*	*Accuracy Abs :: Rel*	*Temporal Resolution*	*Horizontal Resol. :: Cover.*	*Vertical Resol. :: Cover.*
4008	Level 1B Radiance, Window_filtered, CERES	CER09	CERES	Barkstrom	W/m^2/sr/um	1 - 2% :: 0.005	1/3.3 sec	25 km::G	N/A :: TOA
4030	Albedo	CER03	CERES	Barkstrom	fraction	5% :: 1%	1 & 24/mo[Avg]	2.5 x 2.5 dg :: R,G	N/A :: TOA
4031	Albedo, Clear _sky	CER03	CERES	Barkstrom	fraction	5% :: 1%	1 & 24/mo[Avg]	2.5 x 2.5 dg :: R,G	N/A :: TOA
4032	Radiative Flux, LW, Clear_sky, Statistics	CER03	CERES	Barkstrom	W/m^2	12 W/m^2 :: 2 W/m^2	1 & 24/mo[Avg]	2.5 x 2.5 dg :: R,G	N/A :: TOA
4033	Radiative Flux, LW, Statistics	CER03	CERES	Barkstrom	W/m^2	12 W/m^2 :: 2 W/m^2	1 & 24/mo[Avg]	2.5 x 2.5 dg :: R,G	N/A :: TOA
4034	Radiative Flux, Net	CER03	CERES	Barkstrom	W/m^2	12 W/m^2 :: 2 W/m^2	1 & 24/mo[Avg]	2.5 x 2.5 dg :: R,G	N/A :: TOA
4035	Radiative Flux, Net, Clear_sky	CER03	CERES	Barkstrom	W/m^2	12 W/m^2 :: 2 W/m^2	1 & 24/mo[Avg]	2.5 x 2.5 dg :: R,G	N/A :: TOA
4036	Radiative Flux, SW, Clear_sky, Statistics	CER03	CERES	Barkstrom	W/m^2	12 W/m^2 :: 2 W/m^2	1 & 24/mo[Avg]	2.5 x 2.5 dg :: R,G	N/A :: TOA
4037	Radiative Flux, SW, Statistics	CER03	CERES	Barkstrom	W/m^2	12 W/m^2 :: 2 W/m^2	1 & 24/mo[Avg]	2.5 x 2.5 dg :: R,G	N/A :: TOA
4038	Solar Incidence	CER03	CERES	Barkstrom	W/m^2	12 W/m^2 :: 2 W/m^2	1 & 24/mo[Avg]	2.5 x 2.5 dg :: R,G	N/A :: TOA
4039	Solar Incidence, Clear_sky	CER03	CERES	Barkstrom	W/m^2	12 W/m^2 :: 2 W/m^2	1 & 24/mo[Avg]	2.5 x 2.5 dg :: R,G	N/A :: TOA
4088	Cloud Cover	CER04	CERES	Barkstrom	dimensionless	10% :: 5%	1/3.3 sec	25 km::G	lyr :: Cloud
4089	Cloud Drop Phase	CER04	CERES	Barkstrom	water/ice	10% :: 5%	1/3.3 sec	25 km::G	lyr :: Cloud
4090	Cloud Drop Size (Radius)	CER04	CERES	Barkstrom	um	10% :: 5%	1/3.3 sec	25 km::G	lyr :: Cloud
4091	Cloud Emissivity, Window	CER04	CERES	Barkstrom	fraction	5% :: 1%	1/3.3 sec	25 km::G	lyr :: Cloud
4092	Cloud Layers, Number	CER04	CERES	Barkstrom	dimensionless	10% :: 5%	1/3.3 sec	25 km::G	lyr :: Cloud
4093	Cloud Liq_water Content, Total Column	CER04	CERES	Barkstrom	kg/m^2	25% :: 10%	1/3.3 sec	25 km::G	lyr :: Cloud
4094	Cloud Optical Depth, SW	CER04	CERES	Barkstrom	dimensionless	25% :: 10%	1/3.3 sec	25 km::G	lyr :: Cloud
4095	Cloud Pressure, Base	CER04	CERES	Barkstrom	mb	10% :: 5%	1/3.3 sec	25 km::G	lyr :: Cloud
4096	Cloud Pressure, Top	CER04	CERES	Barkstrom	mb	10% :: 5%	1/3.3 sec	25 km::G	lyr :: Cloud
4097	Direct/Diffuse Ratio, Broadband SW Downwelling	CER04	CERES	Barkstrom	dimensionless	10% :: 5%	1/3.3 sec	25 km::G	N/A :: Sfc
4098	Precipible Water, Adjusted	CER04	CERES	Barkstrom	mm	10% :: 5%	1/3.3 sec	25 km::G	N/A :: Atmos
4099	Radiance, LW, TOA	CER04	CERES	Barkstrom	W/m^2/sr/um	7 W/m^2 :: 2 W/m^2	1/3.3 sec	25 km::G	N/A :: TOA
4100	Radiance, Photosynthesis	CER04	CERES	Barkstrom	W/m^2/sr/um	10% :: 5%	1/3.3 sec	25 km::G	N/A :: Sfc
4101	Radiance, SW, TOA	CER04	CERES	Barkstrom	W/m^2/sr/um	15 W/m^2 :: 2 W/m^2	1/3.3 sec	25 km::G	N/A :: TOA
4102	Radiance, Window, TOA	CER04	CERES	Barkstrom	W/m^2/sr/um	2% :: 0.5%	1/3.3 sec	25 km::G	N/A :: TOA
4103	Radiative Flux, LW, Down	CER04	CERES	Barkstrom	W/m^2	10% :: 5%	1/3.3 sec	25 km::G	32 levels :: Atmos
4104	Radiative Flux, LW, Down, Cloud Base	CER04	CERES	Barkstrom	W/m^2	10% :: 5%	1/3.3 sec	25 km::G	N/A :: Cloud
4105	Radiative Flux, LW, Down, Cloud Top	CER04	CERES	Barkstrom	W/m^2	10% :: 5%	1/3.3 sec	25 km::G	N/A :: Cloud
4106	Radiative Flux, LW, TOA	CER04	CERES	Barkstrom	W/m^2	5 W/m^2 :: 2 W/m^2	1/3.3 sec	25 km::G	N/A :: TOA
4107	Radiative Flux, LW, Up	CER04	CERES	Barkstrom	W/m^2	10% :: 5%	1/3.3 sec	25 km::G	32 levels :: Atmos
4108	Radiative Flux, LW, Up, Cloud Base	CER04	CERES	Barkstrom	W/m^2	10% :: 5%	1/3.3 sec	25 km::G	N/A :: Cloud
4109	Radiative Flux, LW, Up, Cloud Top	CER04	CERES	Barkstrom	W/m^2	10% :: 5%	1/3.3 sec	25 km::G	N/A :: Cloud
4110	Radiative Flux, SW, Down	CER04	CERES	Barkstrom	W/m^2	10% :: 5%	1/3.3 sec	25 km::G	32 levels :: Atmos
4111	Radiative Flux, SW, Down, Cloud Base	CER04	CERES	Barkstrom	W/m^2	10% :: 5%	1/3.3 sec	25 km::G	N/A :: Cloud
4112	Radiative Flux, SW, Down, Cloud Top	CER04	CERES	Barkstrom	W/m^2	10% :: 5%	1/3.3 sec	25 km::G	N/A :: Cloud
4113	Radiative Flux, SW, TOA	CER04	CERES	Barkstrom	W/m^2	12 W/m^2 :: 2 W/m^2	1/3.3 sec	25 km::G	N/A :: TOA
4114	Radiative Flux, SW, Up	CER04	CERES	Barkstrom	W/m^2	10% :: 5%	1/3.3 sec	25 km::G	32 levels :: Atmos
4115	Radiative Flux, SW, Up, Cloud Base	CER04	CERES	Barkstrom	W/m^2	10% :: 5%	1/3.3 sec	25 km::G	N/A :: Cloud
4116	Radiative Flux, SW, Up, Cloud Top	CER04	CERES	Barkstrom	W/m^2	10% :: 5%	1/3.3 sec	25 km::G	N/A :: Cloud
4117	Radiative Flux, Window, TOA	CER04	CERES	Barkstrom	W/m^2	10W/m^2 :: 2 W/m^2	1/3.3 sec	25 km::G	N/A :: TOA
4118	Cloud Cover	CER05	CERES	Barkstrom	dimensionless	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4119	Cloud Drop Phase	CER05	CERES	Barkstrom	water/ice	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4120	Cloud Drop Size (Radius)	CER05	CERES	Barkstrom	um	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4121	Cloud Emissivity, Window	CER05	CERES	Barkstrom	fraction	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4122	Cloud Layers, Number	CER05	CERES	Barkstrom	dimensionless	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud

Note: This table includes the parameters for 8 interim products (6 for MODIS and 2 for CERES) and SeaWiFS products which are not listed in the product list.

GSFC/SPSO (6/4/93)

Parm #	*Parameter Name*	*Prod #*	*Instrument*	*Investigator*	*Units*	*Accuracy Abs :: Rel*	*Temporal Resolution*	*Horizontal Resol. :: Cover.*	*Vertical Resol. :: Cover.*
4123	Cloud Liq_water Content, Total Column	CER05	CERES	Barkstrom	kg/m^2	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4124	Cloud Optical Depth, Visible	CER05	CERES	Barkstrom	dimensionless	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4125	Cloud Pressure, Base	CER05	CERES	Barkstrom	mb	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4126	Cloud Pressure, Top	CER05	CERES	Barkstrom	mb	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4127	Direct/Diffuse Ratio, Broadband SW Downwelling	CER05	CERES	Barkstrom	dimensionless	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	N/A :: Sfc
4128	Precipible Water, Adjusted	CER05	CERES	Barkstrom	mm	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	N/A :: Atmos
4129	Radiance, Photosynthesis	CER05	CERES	Barkstrom	W/m^2/sr/um	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	N/A :: Sfc
4130	Radiance, Window, Statistics, TOA	CER05	CERES	Barkstrom	W/m^2/sr/um	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	N/A :: TOA
4131	Radiative Flux, LW, Down	CER05	CERES	Barkstrom	W/m^2	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	32 levels :: Atmos
4132	Radiative Flux, LW, Down, Cloud Base	CER05	CERES	Barkstrom	W/m^2	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	N/A :: Cloud
4133	Radiative Flux, LW, Down, Cloud Top	CER05	CERES	Barkstrom	W/m^2	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	N/A :: Cloud
4134	Radiative Flux, LW, Down, TOA, Clear_sky	CER05	CERES	Barkstrom	W/m^2	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	N/A :: TOA
4135	Radiative Flux, LW, Statistics, TOA	CER05	CERES	Barkstrom	W/m^2,dimensionless	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	N/A :: TOA
4136	Radiative Flux, LW, Up	CER05	CERES	Barkstrom	W/m^2	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	32 levels :: Atmos
4137	Radiative Flux, LW, Up, Cloud Base	CER05	CERES	Barkstrom	W/m^2	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	N/A :: Cloud
4138	Radiative Flux, LW, Up, Cloud Top	CER05	CERES	Barkstrom	W/m^2	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	N/A :: Cloud
4139	Radiative Flux, LW, Up, TOA, Clear_sky	CER05	CERES	Barkstrom	W/m^2	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	N/A :: TOA
4140	Radiative Flux, SW, Down	CER05	CERES	Barkstrom	W/m^2	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	32 levels :: Atmos
4141	Radiative Flux, SW, Down, Cloud Base	CER05	CERES	Barkstrom	W/m^2	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	N/A :: Cloud
4142	Radiative Flux, SW, Down, Cloud Top	CER05	CERES	Barkstrom	W/m^2	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	N/A :: Cloud
4143	Radiative Flux, SW, Down, TOA, Clear_sky	CER05	CERES	Barkstrom	W/m^2	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	N/A :: TOA
4144	Radiative Flux, SW, Statistics, TOA	CER05	CERES	Barkstrom	W/m^2,dimensionless	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	N/A :: TOA
4145	Radiative Flux, SW, Up	CER05	CERES	Barkstrom	W/m^2	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	32 levels :: Atmos
4146	Radiative Flux, SW, Up, Cloud Base	CER05	CERES	Barkstrom	W/m^2	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	N/A :: Cloud
4147	Radiative Flux, SW, Up, Cloud Top	CER05	CERES	Barkstrom	W/m^2	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	N/A :: Cloud
4148	Radiative Flux, SW, Up, TOA, Clear_sky	CER05	CERES	Barkstrom	W/m^2	5% :: 2%	1/hr[Avg]	1.25 x 1.25 dg :: G	N/A :: TOA
4150	Cloud Cover (Clear Sky Percent)	CER10	CERES	Barkstrom	fraction	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	N/A :: Clear
4151	Cloud Cover, Class & Statistics	CER10	CERES	Barkstrom	fraction	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4152	Cloud Drop Phase, Ice, Class & Statistics	CER10	CERES	Barkstrom	fraction	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4153	Cloud Drop Size (Radius), Class & Statistics	CER10	CERES	Barkstrom	um	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4154	Cloud Emissivity, Window, Class & Statistics	CER10	CERES	Barkstrom	fraction	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4155	Cloud Layers, Number	CER10	CERES	Barkstrom	dimensionless	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4156	Cloud Liq_water Content, Class & Statistics	CER10	CERES	Barkstrom	kg/m^2	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4157	Cloud Optical Depth, SW, Class & Statistics	CER10	CERES	Barkstrom	dimensionless	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4158	Cloud Overlap Statistics	CER10	CERES	Barkstrom	dimensionless	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4159	Cloud Pressure, Base, Class & Statistics	CER10	CERES	Barkstrom	mb	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4160	Cloud Pressure, Top, Class & Statistics	CER10	CERES	Barkstrom	mb	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4161	Cloud Temperature, Base, Class & Statistics	CER10	CERES	Barkstrom	deg K	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4162	Cloud Temperature, Top, Class & Statistics	CER10	CERES	Barkstrom	deg K	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4163	Radiance, Window, TOA	CER10	CERES	Barkstrom	W/m^2/sr/um	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	N/A :: TOA
4164	Radiative Flux, LW, TOA	CER10	CERES	Barkstrom	W/m^2	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	N/A :: TOA

Note: This table includes the parameters for 8 interim products (6 for MODIS and 2 for CERES) and SeaWiFS products which are not listed in the product list.

GSFC/SPSO (6/4/93)

Parm #	*Parameter Name*	*Prod #*	*Instrument*	*Investigator*	*Units*	*Accuracy Abs :: Rel*	*Temporal Resolution*	*Horizontal Resol. :: Cover.*	*Vertical Resol. :: Cover.*
4165	Radiative Flux, LW, TOA, Clear_sky	CER10	CERES	Barkstrom	W/m^2	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	N/A :: TOA
4166	Radiative Flux, SW, TOA	CER10	CERES	Barkstrom	W/m^2	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	N/A :: TOA
4167	Radiative Flux, SW, TOA, Clear_sky	CER10	CERES	Barkstrom	W/m^2	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	N/A :: TOA
4168	Cloud Cover, Class & Statistics	CER07	CERES	Barkstrom	fraction	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4169	Cloud Drop Phase, Ice, Class & Statistics	CER07	CERES	Barkstrom	fraction	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4170	Cloud Drop Size (Radius), Class & Statistics	CER07	CERES	Barkstrom	um	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4171	Cloud Emissivity, Window, Class & Statistics	CER07	CERES	Barkstrom	fraction	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4172	Cloud Layers, Number	CER07	CERES	Barkstrom	dimensionless	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4173	Cloud Liq_water Content, Class & Statistics	CER07	CERES	Barkstrom	kg/m^2	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4174	Cloud Optical Depth, SW, Class & Statistics	CER07	CERES	Barkstrom	dimensionless	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4175	Cloud Overlap Statistics(4 fields)	CER07	CERES	Barkstrom	dimensionless	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4176	Cloud Pressure, Base, Class & Statistics	CER07	CERES	Barkstrom	mb	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4177	Cloud Pressure, Top, Class & Statistics	CER07	CERES	Barkstrom	mb	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	lyr :: Cloud
4178	Direct/Diffuse Ratio, Broadband SW Downwelling	CER07	CERES	Barkstrom	dimensionless	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	N/A :: Sfc
4179	Precipible Water, Adjusted	CER07	CERES	Barkstrom	mm	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	N/A :: Atmos
4180	Radiance, Photosynthesis	CER07	CERES	Barkstrom	W/m^2/sr/um	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	N/A :: Sfc
4181	Radiance, Window, Statistics, TOA	CER07	CERES	Barkstrom	W/m^2/sr/um	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	N/A :: TOA
4182	Radiative Flux, LW, Down	CER07	CERES	Barkstrom	W/m^2	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	15 levels :: Atmos
4183	Radiative Flux, LW, Down, Cloud Base	CER07	CERES	Barkstrom	W/m^2	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	N/A :: Cloud
4184	Radiative Flux, LW, Down, Cloud Top	CER07	CERES	Barkstrom	W/m^2	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	N/A :: Cloud
4185	Radiative Flux, LW, Down, TOA, Clear_sky	CER07	CERES	Barkstrom	W/m^2	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	N/A :: TOA
4186	Radiative Flux, LW, Statistics, TOA	CER07	CERES	Barkstrom	W/m^2,dimensionless	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	N/A :: TOA
4187	Radiative Flux, LW, Up	CER07	CERES	Barkstrom	W/m^2	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	15 levels :: Atmos
4188	Radiative Flux, LW, Up, Cloud Base	CER07	CERES	Barkstrom	W/m^2	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	N/A :: Cloud
4189	Radiative Flux, LW, Up, Cloud Top	CER07	CERES	Barkstrom	W/m^2	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	N/A :: Cloud
4190	Radiative Flux, LW, Up, TOA, Clear_sky	CER07	CERES	Barkstrom	W/m^2	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	N/A :: TOA
4191	Radiative Flux, SW, Down	CER07	CERES	Barkstrom	W/m^2	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	15 levels :: Atmos
4192	Radiative Flux, SW, Down, Cloud Base	CER07	CERES	Barkstrom	W/m^2	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	N/A :: Cloud
4193	Radiative Flux, SW, Down, Cloud Top	CER07	CERES	Barkstrom	W/m^2	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	N/A :: Cloud
4194	Radiative Flux, SW, Down, TOA, Clear_sky	CER07	CERES	Barkstrom	W/m^2	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	N/A :: TOA
4195	Radiative Flux, SW, Statistics, TOA	CER07	CERES	Barkstrom	W/m^2,dimensionless	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	N/A :: TOA
4196	Radiative Flux, SW, Up	CER07	CERES	Barkstrom	W/m^2	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	15 levels :: Atmos
4197	Radiative Flux, SW, Up, Cloud Base	CER07	CERES	Barkstrom	W/m^2	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	N/A :: Cloud
4198	Radiative Flux, SW, Up, Cloud Top	CER07	CERES	Barkstrom	W/m^2	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	N/A :: Cloud
4199	Radiative Flux, SW, Up, TOA, Clear_sky	CER07	CERES	Barkstrom	W/m^2	2-5% :: 1-3%	1/3hr[Avg]	1.25 x 1.25 dg :: G	N/A :: TOA
4200	Cloud Cover, Statistics	CER08	CERES	Barkstrom	fraction	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	15 levels :: Cloud
4201	Cloud Drop Phase, Ice, Statistics	CER08	CERES	Barkstrom	fraction	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	15 levels :: Cloud
4202	Cloud Drop Radius, Statistics	CER08	CERES	Barkstrom	um	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	15 levels :: Cloud
4203	Cloud Emissivity, Window, Statistics	CER08	CERES	Barkstrom	fraction	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	15 levels :: Cloud
4204	Cloud Liq_water Content, Statistics	CER08	CERES	Barkstrom	kg/m^2	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	15 levels :: Cloud
4205	Cloud Optical Depth, SW, Statistics	CER08	CERES	Barkstrom	dimensionless	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	15 levels :: Cloud
4206	Cloud Pressure, Base, Statistics	CER08	CERES	Barkstrom	mb	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	15 levels :: Cloud

Note: This table includes the parameters for 8 interim products (6 for MODIS and 2 for CERES) and SeaWiFS products which are not listed in the product list.

APPENDIX A Output Parameters Sorted by Parameter Number

GSFC/SPSO (6/4/93)

Parm #	Parameter Name	Prod #	Instrument	Investigator	Units	Accuracy Abs :: Rel	Temporal Resolution	Horizontal Resol. :: Cover.	Vertical Resol. :: Cover.
4207	Cloud Pressure, Top, Statistics	CER08	CERES	Barkstrom	mb	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	15 levels :: Cloud
4208	Radiance, Window, Statistics, TOA	CER08	CERES	Barkstrom	W/m^2/sr/um	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	N/A :: TOA
4209	Radiative Flux, LW, Down, Statistics	CER08	CERES	Barkstrom	W/m^2	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	15 levels :: Atmos
4210	Radiative Flux, LW, Down, Statistics, Clear_sky	CER08	CERES	Barkstrom	W/m^2	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	15 levels :: Atmos
4211	Radiative Flux, LW, Down, Statistics, TOA, Clear_sky	CER08	CERES	Barkstrom	W/m^2	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	N/A :: TOA
4212	Radiative Flux, LW, Statistics, Surface	CER08	CERES	Barkstrom	W/m^2	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	N/A :: Sfc
4213	Radiative Flux, LW, Statistics, TOA	CER08	CERES	Barkstrom	W/m^2,dimensionless	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	N/A :: TOA
4214	Radiative Flux, LW, Surface, Statistics, Clear_sky	CER08	CERES	Barkstrom	W/m^2	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	N/A :: Sfc
4215	Radiative Flux, LW, Up, Statistics	CER08	CERES	Barkstrom	W/m^2	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	15 levels :: Atmos
4216	Radiative Flux, LW, Up, Statistics, Clear_sky	CER08	CERES	Barkstrom	W/m^2	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	15 levels :: Atmos
4217	Radiative Flux, LW, Up, Statistics, TOA, Clear_sky	CER08	CERES	Barkstrom	W/m^2	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	N/A :: TOA
4218	Radiative Flux, SW, Down, Statistics	CER08	CERES	Barkstrom	W/m^2	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	15 levels :: Atmos
4219	Radiative Flux, SW, Down, Statistics, Clear_sky	CER08	CERES	Barkstrom	W/m^2	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	15 levels :: Atmos
4220	Radiative Flux, SW, Down, Statistics, TOA, Clear_sky	CER08	CERES	Barkstrom	W/m^2	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	N/A :: TOA
4221	Radiative Flux, SW, Statistics, Surface	CER08	CERES	Barkstrom	W/m^2	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	N/A :: Sfc
4222	Radiative Flux, SW, Statistics, TOA	CER08	CERES	Barkstrom	W/m^2,dimensionless	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	N/A :: TOA
4223	Radiative Flux, SW, Surface, Statistics, Clear_sky	CER08	CERES	Barkstrom	W/m^2	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	N/A :: Sfc
4224	Radiative Flux, SW, Up, Statistics	CER08	CERES	Barkstrom	W/m^2	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	15 levels :: Atmos
4225	Radiative Flux, SW, Up, Statistics, Clear_sky	CER08	CERES	Barkstrom	W/m^2	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	15 levels :: Atmos
4226	Radiative Flux, SW, Up, Statistics, TOA, Clear_sky	CER08	CERES	Barkstrom	W/m^2	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	N/A :: TOA
4252	Radiance, Window, Statistics, TOA	CER06	CERES	Barkstrom	W/m^2/sr/um	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	N/A :: TOA
4253	Radiative Flux, LW, Statistics, Surface	CER06	CERES	Barkstrom	W/m^2	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	N/A :: Sfc
4254	Radiative Flux, LW, Statistics, Surface, Clear_sky	CER06	CERES	Barkstrom	W/m^2	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	N/A :: Sfc
4255	Radiative Flux, LW, Statistics, TOA	CER06	CERES	Barkstrom	W/m^2,dimensionless	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	N/A :: TOA
4256	Radiative Flux, LW, Statistics, TOA, Clear_sky	CER06	CERES	Barkstrom	W/m^2	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	N/A :: TOA
4257	Radiative Flux, SW, Statistics, Surface	CER06	CERES	Barkstrom	W/m^2	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	N/A :: Sfc
4258	Radiative Flux, SW, Statistics, TOA	CER06	CERES	Barkstrom	W/m^2,dimensionless	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	N/A :: TOA
4259	Radiative Flux, SW, Statistics, TOA, Clear_sky	CER06	CERES	Barkstrom	W/m^2	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	N/A :: TOA
4260	Radiative Flux, SW, Surface, Statistics, Clear_sky	CER06	CERES	Barkstrom	W/m^2	1-5% :: 0.5-3%	1 & 24/mo[Avg]	1.25 x 1.25 dg ::R,G	N/A :: Sfc
5001	Radiance, GAC Recorded	SEA01	SeaWiFS-II	Esaias				4 km :: Ocean	N/A :: Sfc
5001	Radiance, GAC Recorded, Browse	SEA09	SeaWiFS-II	Esaias				1 deg - 2.5 deg :: G	N/A :: Sfc
5002	Radiance, LAC Recorded	SEA01	SeaWiFS-II	Esaias				1.1 km :: Ocean/L	N/A :: Sfc
5002	Radiance, LAC Recorded, Browse	SEA09	SeaWiFS-II	Esaias				1 deg - 2.5 deg :: Ocean/L	N/A :: Sfc
5003	Radiance, HRPT	SEA01	SeaWiFS-II	Esaias				1.1 km :: Ocean/L	N/A :: Sfc
5003	Radiance, HRPT, Browse	SEA09	SeaWiFS-II	Esaias				1 deg - 2.5 deg :: Ocean/L	N/A :: Sfc
5004	Aerosol Radiances (3)	SEA02	SeaWiFS-II	Esaias				4 km :: Ocean	N/A :: Sfc

Note: This table includes the parameters for 8 interim products (6 for MODIS and 2 for CERES) and SeaWiFS products which are not listed in the product list.

APPENDIX A Output Parameters Sorted by Parameter Number

GSFC/SPSO (6/4/93)

Parm #	*Parameter Name*	*Prod #*	*Instrument*	*Investigator*	*Units*	*Accuracy Abs :: Rel*	*Temporal Resolution*	*Horizontal Resol. :: Cover.*	*Vertical Resol. :: Cover.*
5004A	Aerosol Radiances (3)	SEA03	SeaWiFS-II	Esaias			1/(day, 8 days, mo, yr)	10-20 km :: Ocean	N/A :: Sfc
5004A	Aerosol Radiance	SEA07	SeaWiFS-II	Esaias			1/(day, 8 days, mo, yr)	10-20 km :: Ocean	N/A :: Sfc
5004A	Aerosol Radiance	SEA13	SeaWiFS-II	Esaias			1/(day, 8 days, mo, yr)	1 deg - 2.5 deg :: Ocean	N/A :: Sfc
5005	Chlorophyll-A Conc	SEA02	SeaWiFS-II	Esaias				4 km :: Ocean	N/A :: Sfc
5005A	Chlorophyll-A Conc	SEA03	SeaWiFS-II	Esaias			1/(day, 8 days, mo, yr)	10-20 km :: Ocean	N/A :: Sfc
5005A	Chlorophyll-A Conc	SEA04	SeaWiFS-II	Esaias			1/(day, 8 days, mo, yr)	10-20 km :: Ocean	N/A :: Sfc
5005A	Chlorophyll-A Conc	SEA10	SeaWiFS-II	Esaias			1/(day, 8 days, mo, yr)	1 deg - 2.5 deg :: Ocean	N/A :: Sfc
5006	Diffuse Attentuation Coefficient @ 490 nm	SEA02	SeaWiFS-II	Esaias				4 km :: Ocean	N/A :: Sfc
5006A	Diffuse Attentuation Coefficient @ 490 nm	SEA03	SeaWiFS-II	Esaias			1/(day, 8 days, mo, yr)	10-20 km :: Ocean	N/A :: Sfc
5006A	Diffuse Attenuation Coefficient @ 490 nm	SEA05	SeaWiFS-II	Esaias			1/(day, 8 days, mo, yr)	10-20 km :: Ocean	N/A :: Sfc
5006A	Diffuse Attenuation Coefficient @ 490 nm	SEA11	SeaWiFS-II	Esaias			1/(day, 8 days, mo, yr)	1 deg - 2.5 deg :: Ocean	N/A :: Sfc
5007	Pigment Conc	SEA02	SeaWiFS-II	Esaias				4 km :: Ocean	N/A :: Sfc
5007A	Pigment Conc	SEA03	SeaWiFS-II	Esaias			1/(day, 8 days, mo, yr)	10-20 km :: Ocean	N/A :: Sfc
5008	Water Leaving Radiances (5)	SEA02	SeaWiFS-II	Esaias				4 km :: Ocean	N/A :: Sfc
5008A	Water Leaving Radiances (5)	SEA03	SeaWiFS-II	Esaias			1/(day, 8 days, mo, yr)	10-20 km :: Ocean	N/A :: Sfc
5008A	Water Leaving Radiance	SEA06	SeaWiFS-II	Esaias			1/(day, 8 days, mo, yr)	10-20 km :: Ocean	N/A :: Sfc
5008A	Water Leaving Radiance	SEA12	SeaWiFS-II	Esaias			1/(day, 8 days, mo, yr)	1 deg - 2.5 deg :: Ocean	N/A :: Sfc
5009	Pressure, Sfc	SEA08	SeaWiFS-II	Esaias			4/day	1 - 2.5 dg :: G	N/A :: Sfc
5010	Wind Speed, Sfc	SEA08	SeaWiFS-II	Esaias			4/day	1 - 2.5 dg :: G	N/A :: Sfc
5020	Ozone	SEA08	SeaWiFS-II	Esaias			4/day	1 - 2.5 dg :: G	N/A :: Atmos
7001	H2O Conc & Mixing Ratio, Lunar	SAG04	SAGE-III	McCormick	Molecule/cc & ppmv	10% :: 15%	1/(2 min), 30/day	<2 x <1 dg :: G	1 km :: 3-50 km
7002	NO2 Conc & Mixing Ratio, Lunar	SAG05	SAGE-III	McCormick	Molecule/cc & ppbv	10% :: 15%	1/(2 min), 30/day	<2 x <1 dg :: G	1 km :: 10-50 km
7003	O3 Conc & Mixing Ratio, Lunar	SAG07	SAGE-III	McCormick	Molecule/cc & ppmv	6% :: 5 %	1/(2 min), 30/day	<2 x <1 dg :: G	1 km :: 6-85 km
7004	Pressure (O2 Conc.), Lunar	SAG09	SAGE-III	McCormick	kPa	2% :: 2%	1/(2 min), 30/day (Sol.)	<2 x <1 dg :: G	1 km :: 6-70 km
7005	Temperature Profile (O2 Conc.), Lunar	SAG10	SAGE-III	McCormick	K	2 K :: 2K	1/(2 min), 30/day	<2 x <1 dg :: G	1 km :: 6-70 km
7201	Level-1B Housekeeping Measurements	HIR01	HIRDLS	Barnett, Gille	Volts, Etc				
7202	Level-1B Location & Time	HIR01	HIRDLS	Barnett, Gille	lat, lon, & sec				
N/A	Parameters information not available at this time	CER02	CERES	Barkstrom					

Note: This table includes the parameters for 8 interim products (6 for MODIS and 2 for CERES) and SeaWiFS products which are not listed in the product list.

MODIS Products

GSFC/SPSO (5/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	Product Name	Parameter Name	Parm #	Investigator	Time frame	Product Level	Product Type	Production Mode	Source & Date	Volume (GB/day)	Processing (MFlops)	Basis of Estimates
MOD01	Level-1A Radiance, MODIS	Level-1A Radiance, MODIS	3708	Salomonson					IWG (3/93)			2
		Product Total			AL	1A	Std	Routine		115.233	150.000	
MOD02	Level-1B Radiance, Calibrated Geolocated, MODIS	Level-1B Radiance, Calibrated Geolocated, MODIS	2338	Salomonson, Barker					SDST Report (12/92)			2
		Product Total			AL	1A	Std	Routine		180.260	68.129	
MOD03	Aerosol Optical Depth, Spectral	Aerosol Optical Depth, Spectral	2293	Kaufman, Tanre					SDST Report (12/92)	0.001	0.063	
		Aerosol Size-distribution (Radius-Dispersion)	1022	Tanre, Kaufman					SDST Report (12/92)	0.002	0.001	
		Product Total			AL	2	Std	Routine		0.003	0.064	
MOD04	Precipitable Water	Precipitable Water	1874	Kaufman, Tanre, Menzel					IWG (3/93)			
		Product Total			AL	2	Std	Routine		0.919	0.007	
MOD05	Cloud Cover	Cloud Cover	2081	Menzel, King					SDST Report (12/92)	0.312	0.207	
		Cloud Drop Phase	1764	King, Menzel					SDST Report (12/92)	0.095	1.568	
		Cloud Drop Size(Effective Radius)	1780	King					SDST Report (12/92)	0.154	1.568	
		Cloud Optical Depth	2311	King					SDST Report (12/92)	42.766	1.568	
		Cloud Properties, Top	1528	Menzel					SDST Report (12/92)	0.222	0.207	

Note: Data Product information is updated, based upon TL's IWG presentation (3/93). Volume and processing requirements are based on MODIS SDST's estimates.

MODIS Products

GSFC/SPSO (5/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	Product Name	Parameter Name	Parm #	Units	Accuracy Abs :: Rel	Temporal Resolution	Horizontal Resol. :: Cover.	Vertical Resol. :: Cover.
MOD01	Level-1A Radiance, MODIS	Level-1A Radiance, MODIS	3708				0.25 km, 0.5 km, 1 km :: G	
		Product Total						
MOD02	Level-1B Radiance, Calibrated Geolocated, MODIS	Level-1B Radiance, Calibrated Geolocated, MODIS	2338	W/m^2/sr/um	5%(1Σ) :: RMS<NEΔL	1/day	0.25 km, 0.5 km, 1 km :: G	N/A :: N/A
		Product Total						
MOD03	Aerosol Optical Depth, Spectral	Aerosol Optical Depth, Spectral	2293	dimensionless	0.05 :: 0.02 (Ocean) 0.1 :: 0.04 (Land)	1/day, 1/mo	0.5 dg :: Land	N/A :: Atmos
		Aerosol Size-distribution (Radius-Dispersion)	1022	um, dimensionless	30-50% :: 30-50%	1/day,1/mo	0.5 dg :: G,R	N/A :: Atmos
		Product Total						
MOD04	Precipitable Water	Precipitable Water	1874	dimensionless ?	10-20% :: 6% (NIR; double for LWIR)	1/day, 2/day?	5 km :: G? (old Land)	N/A :: Atmos
		Product Total						
MOD05	Cloud Cover	Cloud Cover	2081	%	5% :: 3%	2/day [d,n], 1/mo	5 km :: G	N/A :: Cloud
		Cloud Drop Phase	1764	water/ice	90% Conf :: 90% Conf	1/day	5 km :: G	N/A :: Cloud
		Cloud Drop Size(Effective Radius)	1780	um	20% :: 5%	1/day	5 km :: G	N/A :: Cloud
		Cloud Optical Depth	2311	dimensionless	10% :: 5%	1/day [d]	5 km :: G	N/A :: Cloud
		Cloud Properties, Top	1528	mb	50 mb :: 25 mb	2/day	5 km :: G	N/A :: Cloud

Note: Data Product information is updated, based upon TL's IWG presentation (3/93). Volume and processing requirements are based on MODIS SDST's estimates.

MODIS Products

GSFC/SPSO (5/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	Product Name	Parameter Name	Parm #	Data Dependency	Comments
MOD01	Level-1A Radiance, MODIS	Level-1A Radiance, MODIS	3708	L0 data	Volume estimate based upon the SDST Report dated 12/15/92. Processing requirement does not include any QC, testing, or data characterization.
		Product Total			
MOD02	Level-1B Radiance, Calibrated Geolocated, MODIS	Level-1B Radiance, Calibrated Geolocated, MODIS	2338	3708	Volume estimate based upon the SDST Report dated 12/15/92. Processing requirement does not include any QC, testing, or data characterization.
		Product Total			
MOD03	Aerosol Optical Depth, Spectral	Aerosol Optical Depth, Spectral	2293	2338, 3660	
		Aerosol Size-distribution (Radius-Dispersion)	1022	2338, 3660	
		Product Total			
MOD04	Precipitable Water	Precipitable Water	1874	2338, 3660	
		Product Total			
MOD05	Cloud Cover	Cloud Cover	2081	2338, 3660	
		Cloud Drop Phase	1764	2338, 3660	
		Cloud Drop Size(Effective Radius)	1780	2338, 3660	
		Cloud Optical Depth	2311	2338, 3660	
		Cloud Properties, Top	1528	2338, 3660	

Note: Data Product information is updated, based upon TL's IWG presentation (3/93). Volume and processing requirements are based on MODIS SDST's estimates.

MODIS Products

GSFC/SPSO (5/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	Product Name	Parameter Name	Parm #	Investigator	Time frame	Product Level	Product Type	Production Mode	Source & Date	Volume (GB/day)	Processing (MFlops)	Basis of Estimates
MOD05	Cloud Cover	Product Total			AL	2	Std	Routine		43.549	5.118	
MOD06	O3 Total Burden	O3 Total Burden	1333	Menzel					IWG (3/93)	0.190	0.031	
		Product Total			AL	2	Std	On request		0.190	0.031	
MOD07	Stability (Lifted Index), Atmospheric	Stability (Lifted Index), Atmospheric	1559	Menzel					IWG (3/93)	0.158	0.060	
		Product Total			AL	2	Std	On request		0.158	0.060	
MOD08	Spectral Reflectance/Surface Leaving Radiance	Spectral Reflectance/Surface Leaving Radiance	2015	Kaufman, Tanre, Justice					SDST Report (12/92)	0.238	0.971	
		Bidirectional Reflectance	3669	Muller, Strahler, Tanre					SDST Report (12/92)		1.000	
		Albedo, Spectral, Land_sfc	3665	Muller, Strahler, Tanre					SDST Report (12/92)	0.290	0.971	
		Product Total			AL	2	Std	Routine		0.528	2.942	
MOD09	Snow Cover	Snow Cover	3020	Salomonson, Hall					SDST Report (12/92)	0.119	0.001	
		Product Total			AL	2	Std	Routine		0.119	0.001	
MOD10	Land_sfc Temperature	Land_sfc Temperature	2484	Wan					SDST Report (12/92)	0.238	0.304	
		Product Total			AL	2	Std	Routine		0.238	0.304	
MOD11	Land_Cover Type	Land_Cover Type	2669	Strahler, Huete					IWG (3/93)	0.003	200.000	

Note: Data Product information is updated, based upon TL's IWG presentation (3/93). Volume and processing requirements are based on MODIS SDST's estimates.

MODIS Products

GSFC/SPSO (5/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	Product Name	Parameter Name	Parm #	Units	Accuracy Abs :: Rel	Temporal Resolution	Horizontal Resol. :: Cover.	Vertical Resol. :: Cover.
MOD05	Cloud Cover	*Product Total*						
MOD06	O3 Total Burden	O3 Total Burden	1333	DU	30DU :: 20DU	2/day, 1/day	5 km :: G	Column :: Atmos
		Product Total						
MOD07	Stability (Lifted Index), Atmospheric	Stability (Lifted Index), Atmospheric	1559	C	2 C :: 1 C	2/day	5 km :: G	N/A :: Atmos
		Product Total						
MOD08	Spectral Reflectance/Surface Leaving Radiance	Spectral Reflectance/Surface Leaving Radiance	2015	dimensionless; W/m^2/sr/um	10% ::	1/day	TBD :: Land	N/A :: Sfc
		Bidirectional Reflectance	3669	fraction	15% ::	1/day	1 km :: Land/R	N/A :: Sfc
		Albedo, Spectral, Land_sfc	3665	fraction	10% ::	1/day	1 km :: Land/R	N/A :: Sfc
		Product Total						
MOD09	Snow Cover	Snow Cover	3020	km^2	10% ::	1/day, 1/wk	10 km, 1 km? :: Land/G,R?	N/A :: Sfc
		Product Total						
MOD10	Land_sfc Temperature	Land_sfc Temperature	2484	C	1-4 C ::	1/day, 1/wk	1 km :: Land/R	N/A :: Sfc
		Product Total						
MOD11	Land_Cover Type	Land_Cover Type	2669	categorical fraction	10% ::	1/mo, 1/seas	1 km :: Land	N/A :: Sfc

Note: Data Product information is updated, based upon TL's IWG presentation (3/93). Volume and processing requirements are based on MODIS SDST's estimates.

MODIS Products

GSFC/SPSO (5/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	Product Name	Parameter Name	Parm #	Data Dependency	Comments
MOD05	Cloud Cover	Product Total			
MOD06	O3 Total Burden	O3 Total Burden	1333	2338, 3660	Archive at launch uncertain
		Product Total			
MOD07	Stability (Lifted Index), Atmospheric	Stability (Lifted Index), Atmospheric	1559	2338, 3660	
		Product Total			
MOD08	Spectral Reflectance/Surface Leaving Radiance	Spectral Reflectance/Surface Leaving Radiance	2015	2338, 3660, 3721	
		Bidirectional Reflectance	3669	2338, 3660, 3721	
		Albedo, Spectral, Land_sfc	3665	2338, 3660, 3721	
		Product Total			
MOD09	Snow Cover	Snow Cover	3020	2338, 3660, 3721	
		Product Total			
MOD10	Land_sfc Temperature	Land_sfc Temperature	2484	2338, 3660, 3721	
		Product Total			
MOD11	Land_Cover Type	Land_Cover Type	2669	2338, 3660, 3721	

Note: Data Product information is updated, based upon TL's IWG presentation (3/93). Volume and processing requirements are based on MODIS SDST's estimates.

MODIS Products

GSFC/SPSO (5/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	Product Name	Parameter Name	Parm #	Investigator	Time frame	Product Level	Product Type	Production Mode	Source & Date	Volume (GB/day)	Processing (MFlops)	Basis of Estimates
		Product Total			AL	2	Std	Routine		0.003	200.000	
MOD12	Vegetation Indices	Vegetation Indices	2749	Justice, Huete					IWG (3/93)	0.238	0.000	
		Product Total			AL	2	Std	Routine		0.238	0.000	
MOD13	Thermal Anomalies (Fire Size & Temperature)	Thermal Anomalies (Fire Size & Temperature)	2471	Kaufman, Justice					IWG (3/93)	0.356	0.025	
		Product Total			AL	2	Std	Routine		0.356	0.025	
MOD14	Leaf Area (LAI) & FPAR	Leaf Area (LAI) & FPAR	2680	Running					IWG (3/93)	0.238	0.030	
		Product Total			AL	2	Std	Routine		0.238	0.030	
MOD15	Evapotranspiration	Evapotranspiration	3722	Running					IWG (3/93)			
		Product Total			AL	2	Std	Routine		0.000	0.000	
MOD16	Vegetation Production, Net Primary (NPP)	Vegetation Production, Net Primary (NPP)	2703	Running					IWG (3/93)	0.245	0.014	
		Product Total			AL	2	Std	Routine		0.245	0.014	
MOD17	Photosynthesis-Respiration	Photosynthesis-Respiration	3716	Running					IWG (3/93)			
		Product Total			AL	2	Std	Routine				
MOD18	Classification Masks, Clouds/Land/Water/Snow, MODIS Level-2	Classification Masks, Clouds/Land/Water/Snow, MODIS Level-2	3660	Salomonson, Barker (with Hall)					IWG (3/93)			

Note: Data Product information is updated, based upon TL's IWG presentation (3/93). Volume and processing requirements are based on MODIS SDST's estimates.

MODIS Products

GSFC/SPSO (5/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	Product Name	Parameter Name	Parm #	Units	Accuracy Abs :: Rel	Temporal Resolution	Horizontal Resol. :: Cover.	Vertical Resol. :: Cover.
		Product Total						
MOD12	Vegetation Indices	Vegetation Indices	2749	dimensionless	0.05 ::	1/day, 1/wk, 1/mo	10 km?,1.0 km?,0.5 km? :: Land/G,R?,L?	N/A :: Sfc
		Product Total						
MOD13	Thermal Anomalies (Fire Size & Temperature)	Thermal Anomalies (Fire Size & Temperature)	2471	K	2-10 K ::	1/day, 1/wk	1 km :: Land/R	N/A :: Sfc
		Product Total						
MOD14	Leaf Area (LAI) & FPAR	Leaf Area (LAI) & FPAR	2680	dimensionless	20% (LAI); 15% (FPAR) ::	1/day, 1/wk	pixel_size :: Land/G,R,L	N/A :: N/A
		Product Total						
MOD15	Evapotranspiration	Evapotranspiration	3722		20% ::			N/A :: N/A
		Product Total						
MOD16	Vegetation Production, Net Primary (NPP)	Vegetation Production, Net Primary (NPP)	2703	Mg/km^2/yr	20% ::	1/wk, 1/mo, 1/yr	1 km :: Land/G,R	N/A :: N/A
		Product Total						
MOD17	Photosynthesis-Respiration	Photosynthesis-Respiration	3716		40% ::			N/A :: N/A
		Product Total						
MOD18	Classification Masks, Clouds/Land/Water/Snow, MODIS Level-2	Classification Masks, Clouds/Land/Water/Snow, MODIS Level-2	3660					

Note: Data Product information is updated, based upon TL's IWG presentation (3/93). Volume and processing requirements are based on MODIS SDST's estimates.

MODIS Products

GSFC/SPSO (5/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	Product Name	Parameter Name	Parm #	Data Dependency	Comments
		Product Total			
MOD12	Vegetation Indices	Vegetation Indices	2749	2338, 3660, 3721	
		Product Total			
MOD13	Thermal Anomalies (Fire Size & Temperature)	Thermal Anomalies (Fire Size & Temperature)	2471	2338, 3660, 3721	
		Product Total			
MOD14	Leaf Area (LAI) & FPAR	Leaf Area (LAI) & FPAR	2680	2338, 3660, 3721	
		Product Total			
MOD15	Evapotranspiration	Evapotranspiration	3722	2338, 3660, 3721	
		Product Total			
MOD16	Vegetation Production, Net Primary (NPP)	Vegetation Production, Net Primary (NPP)	2703	2338, 3660, 3721	
		Product Total			
MOD17	Photosynthesis-Respiration	Photosynthesis-Respiration	3716	2338, 3660, 3721	
		Product Total			
MOD18	Classification Masks, Clouds/Land/Water/Snow, MODIS Level-2	Classification Masks, Clouds/Land/Water/Snow, MODIS Level-2	3660	2338	1. one for SST, one for VIS; 2. cirrus flag

Note: Data Product information is updated, based upon TL's IWG presentation (3/93). Volume and processing requirements are based on MODIS SDST's estimates.

MODIS Products

GSFC/SPSO (5/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	Product Name	Parameter Name	Parm #	Investigator	Time frame	Product Level	Product Type	Production Mode	Source & Date	Volume (GB/day)	Processing (MFlops)	Basis of Estimates
		Product Total			AL	2	Std	Routine				
MOD19	Pigment Conc, "CZCS"	Pigment Conc, "CZCS"	2591	Gordon, Clark					IWG (3/93)	0.554		
		Product Total			AL	2	Std	Routine			Ocean total (300 Mflops)	
MOD20	Level-2 Radiance, Water-leaving	Level-2 Radiance, Water-leaving	2416	Gordon et al					SDST Report (12/92)	4.989		
		Product Total			AL	2	Std	Routine			Ocean total (300 Mflops)	
MOD21	Chlorophyll Fluorescence	Chlorophyll Fluorescence Line Height	2575	Abbott, Evans					SDST Report (12/92)	0.554		
		Chlorophyll Fluorescence Line Curv	2573	Hoge					IWG (3/93)	0.554		
		Chlorophyll Fluorescence Efficiency	3211	Abbott					IWG (3/93)	0.554		
		Product Total			AL	2	Std	Routine		1.662	Ocean total (300 Mflops)	
MOD22	Chlorophyll_a Pigment Concentration	Chlorophyll_a Pigment Conc, Case I	2571	Clark					SDST Report (12/92)	0.554		
		Chlorophyll_a Pigment Conc, Case II	2569	Carder					SDST Report (12/92)	0.554		
		Product Total			AL	2	Std	Routine		1.108	Ocean total (300 Mflops)	
MOD23	PAR	PAR, Sfc (IPAR) and Incident (IPAR)	2266	Carder, Tanre					SDST Report (12/92)	0.554		
		PAR, Daily	2330	Esaias					IWG (3/93)	0.554		

Note: Data Product information is updated, based upon TL's IWG presentation (3/93). Volume and processing requirements are based on MODIS SDST's estimates.

MODIS Products

GSFC/SPSO (5/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	Product Name	Parameter Name	Parm #	Units	Accuracy Abs :: Rel	Temporal Resolution	Horizontal Resol. :: Cover.	Vertical Resol. :: Cover.
		Product Total						
MOD19	Pigment Conc, "CZCS"	Pigment Conc, "CZCS"	2591	mg/m^3	100% (Global); 35% (Case I, Clear Atmos) :: TBD	1/day, 1/wk, 1/mo	20 km, 1 km? :: Ocean/G,R,L?	N/A ::
		Product Total						
MOD20	Level-2 Radiance, Water-leaving	Level-2 Radiance, Water-leaving	2416	mW/cm^2/sr/um	0.0015 ::	1/day, 1/wk, 1/mo	1 km :: Ocean/R,L	N/A :: Sfc
		Product Total						
MOD21	Chlorophyll Fluorescence	Chlorophyll Fluorescence Line Height	2575	mW/cm^2/sr/μm	.004 W/m^2/sr ::	1/day, 1/wk	4 km, 1 km? :: Ocean/G,R,L?	N/A ::
		Chlorophyll Fluorescence Line Curv	2573	mW/cm^2/sr/μm	25% ::	1/day, 1/wk	1 km, 20 km? :: Ocean/R,G	N/A ::
		Chlorophyll Fluorescence Efficiency	3211	mW/cm^2/sr/um/mg-Chl/m^3	TBD ::	1/day, 1/wk	1 km :: Ocean/R,L	N/A ::
		Product Total						
MOD22	Chlorophyll_a Pigment Concentration	Chlorophyll_a Pigment Conc, Case I	2571	mg/m^3	30%(0.1< [Chl]<1); 60%(1<[Chl]<10); TBD([Chl]>10) ::	1/day, 1/wk, 1/mo	1 km :: Ocean-I/ L	N/A ::
		Chlorophyll_a Pigment Conc, Case II	2569	mg/m^3	50%(0.05<[Chl]<1 ::	1/day, 1/wk, 1/mo	1 km :: Ocean-II/ R	N/A ::
		Product Total						
MOD23	PAR	PAR, Sfc (IPAR) and Incident (IPAR)	2266	quanta/m^2/s	5% ::	1/day [d]	1 km :: Ocean	N/A :: Sfc
		PAR, Daily	2330	W/m^2/day	10% ::	1/day	N/A :: G	N/A :: Atmos

Note: Data Product information is updated, based upon TL's IWG presentation (3/93). Volume and processing requirements are based on MODIS SDST's estimates.

MODIS Products

GSFC/SPSO (5/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	*Product Name*	*Parameter Name*	*Parm #*	*Data Dependency*	*Comments*
		Product Total			
MOD19	Pigment Conc, "CZCS"	Pigment Conc, "CZCS"	2591	3708, 3660	Pixel RMSE compared to depth weighted in situ obs (SeaWIFS Protocols)
		Product Total			
MOD20	Level-2 Radiance, Water-leaving	Level-2 Radiance, Water-leaving	2416	3303, 3660, 3708, 3721	In addition to sensor calibration errors; for 440<wl<550 nm; theta-0<70dg; scan±45dg; glint<1-2NEdl; tau-a<4; where accurate O3, wind, P exists; Pixel RMSE from ship/buoy optical data betweeen calibration adjustments (SeaWIFS Protocols)
		Product Total			
MOD21	Chlorophyll Fluorescence	Chlorophyll Fluorescence Line Height	2575	2416	[Chl]>1 mg/cm^3; RMSE over several pixels, compared to depth weighted in situ obs. (SeaWIFS Protocols). Subject to sensor calibration
		Chlorophyll Fluorescence Line Curv	2573	2416	[Chl]>1, RMSE
		Chlorophyll Fluorescence Efficiency	3211	2416	TBD
		Product Total			
MOD22	Chlorophyll_a Pigment Concentration	Chlorophyll_a Pigment Conc, Case I	2571	2416	RMS vs. depth weighted ave. (SeaWIFS Protocols); in areas of efforts; in known bio-optical provinces
		Chlorophyll_a Pigment Conc, Case II	2569	2416	Regionally iff: a) a_g440/a_phi440<2, b)a_rho440/a_phi440<1, c) b_bp<0.1m-1, d) Lub/Lw<0.05; RMSE vs depth weighted obs. (SeaWIFS Protocols)
		Product Total			
MOD23	PAR	PAR, Sfc (IPAR) and Incident (IPAR)	2266	2416	conditions as #2344; >20km from clouds: Pixel RMSE to data sets
		PAR, Daily	2330	2416	ISCCP, RMSE vs. ship and shore stations; 350-700nm; W/m^2/ day

Note: Data Product information is updated, based upon TL's IWG presentation (3/93). Volume and processing requirements are based on MODIS SDST's estimates.

MODIS Products

GSFC/SPSO (5/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	Product Name	Parameter Name	Parm #	Investigator	Time frame	Product Level	Product Type	Production Mode	Source & Date	Volume (GB/day)	Processing (MFlops)	Basis of Estimates
		Product Total			AL	2	Std	Routine		1.108	Ocean total (300 Mflops)	
MOD24	Suspended-Solids Conc, Ocean Water	Suspended-Solids Conc, Ocean Water	3085	Clark					IWG (3/93)	0.554		
		Product Total			AL	2	Std	Routine		0.554	Ocean total (300 Mflops)	
MOD25	Organic Matter Concentration	Organic Matter Conc, Particulate	2608	Clark					IWG (3/93)	0.554		
		Organic Matter Conc, Dissolved	2580	Carder, Parslow					SDST Report (12/92)	0.554		
		Product Total			AL	2	Std	Routine		1.108	Ocean total (300 Mflops)	
MOD26	Coccolith Conc, Detached	Coccolith Conc, Detached	2577	Gordon					SDST Report (12/92)	0.554		
		Product Total			AL	2	Std	Routine		0.554	Ocean total (300 Mflops)	
MOD27	Ocean Water Attenuation Coefficient	Ocean Water Attenuation Coef@490nm	3199	Clark, Gordon					IWG (3/93)	0.554		
		Ocean Water Attenuation Coef@520nm	3206	Clark, Gordon					IWG (3/93)	0.554		
		Product Total			AL	2	Std	Routine		1.108	Ocean total (300 Mflops)	
MOD28	Ocean Productivity, Primary, Global Annual	Ocean Productivity, Primary, Global Annual	2606	Esaias, Abbott					SDST Report (12/92)	0.554		
		Ocean Productivity, Primary, Daily	2602	Abbott, Esaias					SDST Report (12/92)	0.554		
		Product Total			AL	2	Std	Routine		1.108	Ocean total (300 Mflops)	

Note: Data Product information is updated, based upon TL's IWG presentation (3/93). Volume and processing requirements are based on MODIS SDST's estimates.

MODIS Products

GSFC/SPSO (5/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	Product Name	Parameter Name	Parm #	Units	Accuracy Abs :: Rel	Temporal Resolution	Horizontal Resol. :: Cover.	Vertical Resol. :: Cover.
		Product Total						
MOD24	Suspended-Solids Conc, Ocean Water	Suspended-Solids Conc, Ocean Water	3085	g/m^3	50% ::	1/day, 1/wk, 1/mo	20 km, 1 km? :: Ocean/G,R?,L?	N/A ::
		Product Total						
MOD25	Organic Matter Concentration	Organic Matter Conc, Particulate	2608	mg/m^3	TBD ::	1/day, 1/wk	20 km :: Ocean	N/A ::
		Organic Matter Conc, Dissolved	2580	g/m^3	40%(open ocean best case); 100%(coastal for {Chl}<1) ::	1/day, 1/wk, 1/mo	20 km, 1 km? :: Ocean/R	N/A ::
		Product Total						
MOD26	Coccolith Conc, Detached	Coccolith Conc, Detached	2577	mg-CaCO3/cm^3	25000/ml ::	1/day, 1/wk, 1/mo	20 km, 1 km? :: Ocean/G,R,L?	N/A ::
		Product Total						
MOD27	Ocean Water Attenuation Coefficient	Ocean Water Attenuation Coef@490nm	3199	/m	25% ::	1/day, 1/wk, 1/mo	20 km, 1 km? :: Ocean-I/R,L	N/A ::
		Ocean Water Attenuation Coef@520nm	3206	/m	35% ::	1/day, 1/wk	1 km :: Ocean	N/A ::
		Product Total						
MOD28	Ocean Productivity, Primary, Global Annual	Ocean Productivity, Primary, Global Annual	2606	GT-C/yr	35% (Goal) ::	1/yr	20 km :: Ocean/G,R	N/A ::
		Ocean Productivity, Primary, Daily	2602	mg-C/m^2/day	35% (Goal) ::	1/day, 1/wk	1 km :: Ocean-I/R,L	N/A ::
		Product Total						

Note: Data Product information is updated, based upon TL's IWG presentation (3/93). Volume and processing requirements are based on MODIS SDST's estimates.

MODIS Products

GSFC/SPSO (5/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	Product Name	Parameter Name	Parm #	Data Dependency	Comments
		Product Total			
MOD24	Suspended-Solids Conc, Ocean Water	Suspended-Solids Conc, Ocean Water	3085	2416	Conditions as #2571 and #2569.
		Product Total			
MOD25	Organic Matter Concentration	Organic Matter Conc, Particulate	2608	2416	Subset of #3085
		Organic Matter Conc, Dissolved	2580	2416	Regionally - terrigenous fraction, hulmic/fulvic ratio
		Product Total			
MOD26	Coccolith Conc, Detached	Coccolith Conc, Detached	2577	2416	Optically weighted concentration; E. Huxleyi
		Product Total			
MOD27	Ocean Water Attenuation Coefficient	Ocean Water Attenuation Coef@490nm	3199	2416	Chl 1 caveats; Pixel RMSE compared with K490 SeaWIFS Protocols
		Ocean Water Attenuation Coef@520nm	3206	2416	Chl 1 caveats; Pixel, SeaWIFS Protocols
		Product Total			
MOD28	Ocean Productivity, Primary, Global Annual	Ocean Productivity, Primary, Global Annual	2606	2416	GT Carbon/yr; -60dg<lat<60dg; RMS vs. selected regional time series; clean 14C techniques/JGOFS Protocols (Iverson, 1993)
		Ocean Productivity, Primary, Daily	2602	2416	Regional profiles; UML Model; P_b, alpha, Prim.Prod.,, Chl-a, K_lambda, phi, I_0; RMSE to regional data sets in situ; Prim. Prod. wrt JGOFS Protocols
		Product Total			

Note: Data Product information is updated, based upon TL's IWG presentation (3/93). Volume and processing requirements are based on MODIS SDST's estimates.

MODIS Products

GSFC/SPSO (5/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	Product Name	Parameter Name	Parm #	Investigator	Time frame	Product Level	Product Type	Production Mode	Source & Date	Volume (GB/day)	Processing (MFlops)	Basis of Estimates
MOD29	Sea_sfc Temperature (SST)	Sea_sfc Temperature (SST)	2527	Brown, Barton					SDST Report (12/92)	1.109		
		Product Total			AL	2	Std	Routine			Ocean total (300 Mflops)	
MOD30	Sea_Ice Max Extent	Sea_Ice Max Extent	3153	Salomonson, Hall					SDST Report (12/92)	0.554		
		Product Total			AL	2	Std	Routine			Ocean total (300 Mflops)	
MOD31	Temperature Profile	Temperature Profile	3726	TBD					IWG (3/93)			
		Product Total			TBD	2	Std	Routine				
MOD32	Water Vapor Profile	Water Vapor Profile	3727	TBD					IWG (3/93)			
		Product Total			TBD	2	Std	Routine				
MOD33	Phycoerythrin Conc.	Phycoerythrin Conc.	3320	hoge					IWG (3/93)	0.554		
		Product Total			TBD	2	Std	Routine		0.554	Ocean total (300 Mflops)	
MOD34	Calibration Data, MODIS	Calibration Data, MODIS	3303	Evans					IWG (3/93)	0.554		
		Product Total			AL	2	Int	Routine		0.554	Ocean total (300 Mflops)	
MOD35	Ocean Water Backscatter Coef, Total	Ocean Water Backscatter Coef, Total	2559	Gordon, Parslow					IWG (3/93)	0.554		
		Product Total			AL	2	Int	Routine		0.554	Ocean total (300 Mflops)	

Note: Data Product information is updated, based upon TL's IWG presentation (3/93). Volume and processing requirements are based on MODIS SDST's estimates.

MODIS Products

GSFC/SPSO (5/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	Product Name	Parameter Name	Parm #	Units	Accuracy Abs :: Rel	Temporal Resolution	Horizontal Resol. :: Cover.	Vertical Resol. :: Cover.
MOD29	Sea_sfc Temperature (SST)	Sea_sfc Temperature (SST)	2527	K	0.3-0.5 K ::	1/day, 1/wk, 1/mo	1 km :: Ocean/L	N/A :: Sfc
		Product Total						
MOD30	Sea_Ice Max Extent	Sea_Ice Max Extent	3153	km^2	TBD ::	1/day, 1/wk, 1/mo	10 km, 1 km? :: Ocean/Cryo,R?	N/A :: Sfc
		Product Total						
MOD31	Temperature Profile	Temperature Profile	3726	K	TBD :: TBD		TBD :: G	Few lyrs :: Atmos
		Product Total						
MOD32	Water Vapor Profile	Water Vapor Profile	3727		TBD :: TBD		TBD :: G	Few lyrs :: Atmos
		Product Total						
MOD33	Phycoerythrin Conc.	Phycoerythrin Conc.	3320	mg/m^3	50% :: 15%	1/day, 1/wk, 1/mo	1 km :: Ocean /RL	N/A :: TOO
		Product Total						
MOD34	Calibration Data, MODIS	Calibration Data, MODIS	3303	variable		1/day, 1/wk, 1/mo	N/A :: Ocean/G,R,L	N/A :: Sfc
		Product Total						
MOD35	Ocean Water Backscatter Coef, Total	Ocean Water Backscatter Coef, Total	2559	/m	0.005 or 20% ::	1/day, 1/wk, 1/mo	1 km :: Ocean/R	N/A ::
		Product Total						

Note: Data Product information is updated, based upon TL's IWG presentation (3/93). Volume and processing requirements are based on MODIS SDST's estimates.

MODIS Products

GSFC/SPSO (5/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	Product Name	Parameter Name	Parm #	Data Dependency	Comments
MOD29	Sea_sfc Temperature (SST)	Sea_sfc Temperature (SST)	2527	3660, 3708, 3721	RMSE per pixel vs. sfc. radiometric obs. ships & a/c; if uncertainty in Abs. Acc. in BB, ≤0.10 for 20,22,23,31,32 and NEΔT≤0.05 for 20,22,23,31,32 (limited by quantization in bands 31,32 on 3/24/93)
		Product Total			
MOD30	Sea_Ice Max Extent	Sea_Ice Max Extent	3153	3708, 3660	TBD
		Product Total			
MOD31	Temperature Profile	Temperature Profile	3726	2338	Following M. King's recommendation during IWG Atmospheric Panel meeting
		Product Total			
MOD32	Water Vapor Profile	Water Vapor Profile	3727	2338	Following M. King's recommendation during IWG Atmospheric Panel meeting
		Product Total			
MOD33	Phycoerythrin Conc.	Phycoerythrin Conc.	3320	2416	Ocean panel recommendation at IWG meeting
		Product Total			
MOD34	Calibration Data, MODIS	Calibration Data, MODIS	3303		ships, buoys; include nLw's, [Chl-a], optical properties, bio-optical properties, Lsky; IR brightness obs.; (see vol.5 SeaWIFS Protocols)
		Product Total			
MOD35	Ocean Water Backscatter Coef, Total	Ocean Water Backscatter Coef, Total	2559	2416	Range=0.002-0.05; Pixel RMSE compared to depth weighted in situ obs. (SeaWIFS Protocols)
		Product Total			

Note: Data Product information is updated, based upon TL's IWG presentation (3/93). Volume and processing requirements are based on MODIS SDST's estimates.

MODIS Products

GSFC/SPSO (5/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	*Product Name*	*Parameter Name*	*Parm #*	*Investigator*	*Time frame*	*Product Level*	*Product Type*	*Production Mode*	*Source & Date*	*Volume (GB/day)*	*Processing (MFlops)*	*Basis of Estimates*
MOD36	Absorption Coef, Total	Absorption Coef, Total	3724	Carder					IWG (3/93)	0.554		
		Product Total			AL	2	Int	Routine		0.554		
MOD37	Aerosol Optical Depth (@865 nm)	Aerosol Optical Depth (@865 nm)	2344	Gordon					SDST Report (12/92)	0.554		
		Product Total			AL	2	Int	Routine		0.554		
MOD38	Aerosol Angstrom Exponent	Aerosol Angstrom Exponent	2295	Gordon					SDST Report (12/92)	0.554		
		Product Total			AL	2	Int	Routine		0.554	Ocean total (300 Mflops)	
MOD39	Water Vapor, Atmospheric	Water Vapor, Atmospheric	3725	TBD					IWG (3/93)			
		Product Total			AL	2	Int	Routine				
MOD40	Clear Water Epsilon	Clear Water Epsilon	3707	Carder					IWG (3/93)	0.554		
		Product Total			AL	2	Int	Routine		0.554		

Note: Data Product information is updated, based upon TL's IWG presentation (3/93). Volume and processing requirements are based on MODIS SDST's estimates.

MODIS Products

GSFC/SPSO (5/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	Product Name	Parameter Name	Parm #	Units	Accuracy Abs :: Rel	Temporal Resolution	Horizontal Resol. :: Cover.	Vertical Resol. :: Cover.
MOD36	Absorption Coef, Total	Absorption Coef, Total	3724	/m	25% ::			
		Product Total						
MOD37	Aerosol Optical Depth (@865 nm)	Aerosol Optical Depth (@865 nm)	2344	dimensionless	>20% or 0.05 ::	1/day, 1/wk, 1/mo	1 km :: Ocean/G,R,L	N/A :: Atmos
		Product Total						
MOD38	Aerosol Angstrom Exponent	Aerosol Angstrom Exponent	2295	dimensionless	15% ::	1/day, 1/wk, 1/mo	1 km :: Ocean/R,L	N/A :: Atmos
		Product Total						
MOD39	Water Vapor, Atmospheric	Water Vapor, Atmospheric	3725		>20% or 5 mm ::			
		Product Total						
MOD40	Clear Water Epsilon	Clear Water Epsilon	3707		2% (0.9 to 1.4) ::	TBD :: TBD	TBD :: TBD	
		Product Total						

Note: Data Product information is updated, based upon TL's IWG presentation (3/93). Volume and processing requirements are based on MODIS SDST's estimates.

MODIS Products

GSFC/SPSO (5/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	*Product Name*	*Parameter Name*	*Parm #*	*Data Dependency*	*Comments*
MOD36	Absorption Coef, Total	Absorption Coef, Total	3724	2416	Range=412-555nm; Pixel RMS to data sets; Δrho>0.002; 2569 Pixel RMSE compared to depth weighted in situ obs. (SeaWIFS Protocols)
		Product Total			
MOD37	Aerosol Optical Depth (@865 nm)	Aerosol Optical Depth (@865 nm)	2344	2416	Pixel; RMSE to sun photometer data sets
		Product Total			
MOD38	Aerosol Angstrom Exponent	Aerosol Angstrom Exponent	2295	2416	RMS over several pixels; Subject to sensor calibration
		Product Total			
MOD39	Water Vapor, Atmospheric	Water Vapor, Atmospheric	3725	2416	RMS over several pixels; Subject to sensor calibration
		Product Total			
MOD40	Clear Water Epsilon	Clear Water Epsilon	3707	2416	Subject to cal accuracy; values estimated over 530-665 nm; validated by internal consistency with water leaving radiance (2416)
		Product Total			

Note: Data Product information is updated, based upon TL's IWG presentation (3/93). Volume and processing requirements are based on MODIS SDST's estimates.

Color SeaWiFS II Products

GSFC/SPSO (4/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	Product Name	Parameter Name	Parm #	Investigator	Time frame	Product Level	Product Type	Production Mode	Source & Date	Volume (GB/day)	Processing (MFlops)	Basis of Estimates
SEA01	GAC Radiance Product	Radiance, GAC Recorded	5001	Esaias					SeaWiFS Project (4/93)			
		Radiance, LAC Recorded	5002	Esaias					SeaWiFS Project (4/93)			
		Radiance, HRPT	5003	Esaias					SeaWiFS Project (4/93)			
		Product Total			AL	1B	Std	Routine		0.694		
SEA02	GAC Derived Product	Aerosol Radiances (3)	5004	Esaias					SeaWiFS Project (4/93)			
		Chlorophyll-A Conc	5005	Esaias					SeaWiFS Project (4/93)			
		Diffuse Attentuation Coefficient @ 490 nm	5006	Esaias					SeaWiFS Project (4/93)			
		Pigment Conc	5007	Esaias					SeaWiFS Project (4/93)			
		Water Leaving Radiances (5)	5008	Esaias					SeaWiFS Project (4/93)			
		Product Total			AL	2	Std	Routine		0.461		
SEA03	Binned (Compressed) Data	Aerosol Radiances (3)	5004A	Esaias					SeaWiFS Project (4/93)			
		Chlorophyll-A Conc	5005A	Esaias					SeaWiFS Project (4/93)			
		Diffuse Attentuation Coefficient @ 490 nm	5006A	Esaias					SeaWiFS Project (4/93)			
		Pigment Conc	5007A	Esaias					SeaWiFS Project (4/93)			

Note: Data product and volume information is based upon the materials provided by SeaWiFS Project (12/92).

Color SeaWiFS II Products

GSFC/SPSO (4/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	Product Name	Parameter Name	Parm #	Units	Accuracy Abs :: Rel	Temporal Resolution	Horizontal Resol. :: Cover.	Vertical Resol. :: Cover.
SEA01	GAC Radiance Product	Radiance, GAC Recorded	5001				4 km :: Ocean	N/A :: Sfc
		Radiance, LAC Recorded	5002				1.1 km :: Ocean/L	N/A :: Sfc
		Radiance, HRPT	5003				1.1 km :: Ocean/L	N/A :: Sfc
		Product Total						
SEA02	GAC Derived Product	Aerosol Radiances (3)	5004				4 km :: Ocean	N/A :: Sfc
		Chlorophyll-A Conc	5005				4 km :: Ocean	N/A :: Sfc
		Diffuse Attentuation Coefficient @ 490 nm	5006				4 km :: Ocean	N/A :: Sfc
		Pigment Conc	5007				4 km :: Ocean	N/A :: Sfc
		Water Leaving Radiances (5)	5008				4 km :: Ocean	N/A :: Sfc
		Product Total						
SEA03	Binned (Compressed) Data	Aerosol Radiances (3)	5004A			1/(day, 8 days, mo, yr)	10-20 km :: Ocean	N/A :: Sfc
		Chlorophyll-A Conc	5005A			1/(day, 8 days, mo, yr)	10-20 km :: Ocean	N/A :: Sfc
		Diffuse Attentuation Coefficient @ 490 nm	5006A			1/(day, 8 days, mo, yr)	10-20 km :: Ocean	N/A :: Sfc
		Pigment Conc	5007A			1/(day, 8 days, mo, yr)	10-20 km :: Ocean	N/A :: Sfc

Note: Data product and volume information is based upon the materials provided by SeaWiFS Project (12/92).

Color SeaWiFS II Products

GSFC/SPSO (4/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	*Product Name*	*Parameter Name*	*Parm #*	*Data Dependency*	*Comments*
SEA01	GAC Radiance Product	Radiance, GAC Recorded	5001		1.1 km FOV, subsampled every 4th pixel/scan for 40 min per orbit
		Radiance, LAC Recorded	5002		1.1 km FOV, every pixel/scan for 10 min per day
		Radiance, HRPT	5003		1.1 km FOV, every pixel/scan - direct transmission for 30 min per day
		Product Total			
SEA02	GAC Derived Product	Aerosol Radiances (3)	5004		
		Chlorophyll-A Conc	5005		
		Diffuse Attentuation Coefficient @ 490 nm	5006		
		Pigment Conc	5007		
		Water Leaving Radiances (5)	5008		
		Product Total			
SEA03	Binned (Compressed) Data	Aerosol Radiances (3)	5004A		
		Chlorophyll-A Conc	5005A		
		Diffuse Attentuation Coefficient @ 490 nm	5006A		
		Pigment Conc	5007A		

Note: Data product and volume information is based upon the materials provided by SeaWiFS Project (12/92).

Color SeaWiFS II Products

GSFC/SPSO (4/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	Product Name	Parameter Name	Parm #	Investigator	Time frame	Product Level	Product Type	Production Mode	Source & Date	Volume (GB/day)	Processing (MFlops)	Basis of Estimates
SEA03	Binned (Compressed) Data	Water Leaving Radiances (5)	5008A	Esaias					SeaWiFS Project (4/93)			
		Product Total			AL	3	Std	Routine		0.387		
SEA04	Mapped Chlorophyll-A Product	Chlorophyll-A Conc	5005A	Esaias					SeaWiFS Project (4/93)			
		Product Total			AL	3	Std	Routine		0.037		
SEA05	Mapped K 490 Product	Diffuse Attenuation Coefficient @ 490 nm	5006A	Esaias					SeaWiFS Project (4/93)			
		Product Total			AL	3	Std	Routine		0.037		
SEA06	Mapped Water Leaving Radiances	Water Leaving Radiance	5008A	Esaias					SeaWiFS Project (4/93)			
		Product Total			AL	3	Std	Routine		0.037		
SEA07	Mapped Aerosol Radiances	Aerosol Radiance	5004A	Esaias					SeaWiFS Project (4/93)			
		Product Total			AL	3	Std	Routine		0.037		
SEA08	Ancillary Data	Pressure, Sfc	5009	Esaias					SeaWiFS Project (4/93)	0.000		
		Wind Speed, Sfc	5010	Esaias					SeaWiFS Project (4/93)	0.000		
		Ozone	5020	Esaias					SeaWiFS Project (4/93)	0.000		
		Product Total			AL	3	N/A	N/A		0.000		

Note: Data product and volume information is based upon the materials provided by SeaWiFS Project (12/92).

Color SeaWiFS II Products

GSFC/SPSO (4/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	Product Name	Parameter Name	Parm #	Units	Accuracy Abs :: Rel	Temporal Resolution	Horizontal Resol. :: Cover.	Vertical Resol. :: Cover.
SEA03	Binned (Compressed) Data	Water Leaving Radiances (5)	5008A			1/(day, 8 days, mo, yr)	10-20 km :: Ocean	N/A :: Sfc
		Product Total						
SEA04	Mapped Chlorophyll-A Product	Chlorophyll-A Conc	5005A			1/(day, 8 days, mo, yr)	10-20 km :: Ocean	N/A :: Sfc
		Product Total						
SEA05	Mapped K 490 Product	Diffuse Attenuation Coefficient @ 490 nm	5006A			1/(day, 8 days, mo, yr)	10-20 km :: Ocean	N/A :: Sfc
		Product Total						
SEA06	Mapped Water Leaving Radiances	Water Leaving Radiance	5008A			1/(day, 8 days, mo, yr)	10-20 km :: Ocean	N/A :: Sfc
		Product Total						
SEA07	Mapped Aerosol Radiances	Aerosol Radiance	5004A			1/(day, 8 days, mo, yr)	10-20 km :: Ocean	N/A :: Sfc
		Product Total						
SEA08	Ancillary Data	Pressure, Sfc	5009			4/day	1 - 2.5 dg :: G	N/A :: Sfc
		Wind Speed, Sfc	5010			4/day	1 - 2.5 dg :: G	N/A :: Sfc
		Ozone	5020			4/day	1 - 2.5 dg :: G	N/A :: Atmos
		Product Total						

Note: Data product and volume information is based upon the materials provided by SeaWiFS Project (12/92).

Color SeaWiFS II Products

GSFC/SPSO (4/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	Product Name	Parameter Name	Parm #	Data Dependency	Comments
SEA03	Binned (Compressed) Data	Water Leaving Radiances (5)	5008A		
		Product Total			
SEA04	Mapped Chlorophyll-A Product	Chlorophyll-A Conc	5005A		
		Product Total			
SEA05	Mapped K 490 Product	Diffuse Attenuation Coefficient @ 490 *nm*	5006A		
		Product Total			
SEA06	Mapped Water Leaving Radiances	Water Leaving Radiance	5008A		
		Product Total			
SEA07	Mapped Aerosol Radiances	Aerosol Radiance	5004A		
		Product Total			
SEA08	Ancillary Data	Pressure, Sfc	5009		NMC analysis field
		Wind Speed, Sfc	5010		NMC analysis field
		Ozone	5020		TOMS ozone data
		Product Total			

Note: Data product and volume information is based upon the materials provided by SeaWiFS Project (12/92).

Color SeaWiFS II Products

GSFC/SPSO (4/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	Product Name	Parameter Name	Parm #	Investigator	Time frame	Product Level	Product Type	Production Mode	Source & Date	Volume (GB/day)	Processing (MFlops)	Basis of Estimates
SEA09	Level 1B Radiance Browse Product	Radiance, GAC Recorded, Browse	5001	Esaias					SeaWiFS Project (4/93)			
		Radiance, LAC Recorded, Browse	5002	Esaias					SeaWiFS Project (4/93)			
		Radiance, HRPT, Browse	5003	Esaias					SeaWiFS Project (4/93)			
		Product Total			AL	1B	Std (Browse)	Routine		0.009		
SEA10	Mapped Chlorophyll-A Browse Product	Chlorophyll-A Conc	5005A	Esaias					SeaWiFS Project (4/93)			
		Product Total			AL	3	Std (Browse)	Routine		0.000		
SEA11	Mapped K 490 Browse Product	Diffuse Attenuation Coefficient @ 490 nm	5006A	Esaias					SeaWiFS Project (4/93)			
		Product Total			AL	3	Std (Browse)	Routine		0.000		
SEA12	Mapped Water Leaving Radiance Browse Product	Water Leaving Radiance	5008A	Esaias					SeaWiFS Project (4/93)			
		Product Total			AL	3	Std (Browse)	Routine		0.000		
SEA13	Mapped Aerosol Radiance Browse Product	Aerosol Radiance	5004A	Esaias					SeaWiFS Project (4/93)			
		Product Total			AL	3	Std (Browse)	Routine		0.000		

Note: Data product and volume information is based upon the materials provided by SeaWiFS Project (12/92).

Color SeaWiFS II Products

GSFC/SPSO (4/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	Product Name	Parameter Name	Parm #	Units	Accuracy Abs :: Rel	Temporal Resolution	Horizontal Resol. :: Cover.	Vertical Resol. :: Cover.
SEA09	Level 1B Radiance Browse Product	Radiance, GAC Recorded, Browse	5001				1 deg - 2.5 deg :: G	N/A :: Sfc
		Radiance, LAC Recorded, Browse	5002				1 deg - 2.5 deg :: Ocean/L	N/A :: Sfc
		Radiance, HRPT, Browse	5003				1 deg - 2.5 deg :: Ocean/L	N/A :: Sfc
		Product Total						
SEA10	Mapped Chlorophyll-A Browse Product	Chlorophyll-A Conc	5005A			1/(day, 8 days, mo, yr)	1 deg - 2.5 deg :: Ocean	N/A :: Sfc
		Product Total						
SEA11	Mapped K 490 Browse Product	Diffuse Attenuation Coefficient @ 490 nm	5006A			1/(day, 8 days, mo, yr)	1 deg - 2.5 deg :: Ocean	N/A :: Sfc
		Product Total						
SEA12	Mapped Water Leaving Radiance Browse Product	Water Leaving Radiance	5008A			1/(day, 8 days, mo, yr)	1 deg - 2.5 deg :: Ocean	N/A :: Sfc
		Product Total						
SEA13	Mapped Aerosol Radiance Browse Product	Aerosol Radiance	5004A			1/(day, 8 days, mo, yr)	1 deg - 2.5 deg :: Ocean	N/A :: Sfc
		Product Total						

Note: Data product and volume information is based upon the materials provided by SeaWiFS Project (12/92).

Color SeaWiFS II Products

GSFC/SPSO (4/93)

(All information to be validated by EOS Project Scientist and Investigators)

Prod #	Product Name	Parameter Name	Parm #	Data Dependency	Comments
SEA09	Level 1B Radiance Browse Product	Radiance, GAC Recorded, Browse	5001		Online Browse Data
		Radiance, LAC Recorded, Browse	5002		Online Browse Data
		Radiance, HRPT, Browse	5003		Online Browse Data
		Product Total			
SEA10	Mapped Chlorophyll-A Browse Product	Chlorophyll-A Conc	5005A		Online Browse Data
		Product Total			
SEA11	Mapped K 490 Browse Product	Diffuse Attenuation Coefficient @ 490 nm	5006A		Online Browse Data
		Product Total			
SEA12	Mapped Water Leaving Radiance Browse Product	Water Leaving Radiance	5008A		Online Browse Data
		Product Total			
SEA13	Mapped Aerosol Radiance Browse Product	Aerosol Radiance	5004A		Online Browse Data
		Product Total			

Note: Data product and volume information is based upon the materials provided by SeaWiFS Project (12/92).