# Earth Observing System

# Output Data Products and Input Requirements

Version 2.0

## Volume I : Instrument Data Product Characteristics



## Science Processing Support Office (SPSO)

## Goddard Space Flight Center

August 1992

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This document was prepared by the SPSO Team of Hughes STX under the direction of Yun-Chi Lu, EOS System Development Office, GSFC. The SPSO Team Members contributed to this report include: Hyo Duck Chang, Brian Krupp, Ravindra Kumar and Anand Swaroop. Publishing support was provided by Sara Spivey and Ron Bretemps of Hughes STX.

# PREFACE

This document presents information on EOS output data products and input data requirements that has been compiled by the Science Processing Support Office (SPSO) at GSFC. Since Version 1.0 of the SPSO Report was released in August 1991, there have been significant changes in the EOS program. In anticipation of a likely budget cut for the EOS Project, NASA HQ restructured the EOS program. An initial program consisting of two large platforms was replaced by plans for multiple, smaller platforms, and some EOS instruments were either deselected or descoped. This report, superseding the August 1991 version of the SPSO Report, contains updated payload information reflecting the restructured EOS program.

This report has been expanded to cover information on non-EOS data products, and consists of three volumes (Volumes I, II, and III). Volume I provides information on instrument outputs and input requirements. Volume II is devoted to Interdisciplinary Science (IDS) outputs and input requirements, including the "best" and "alternative" match analysis. Volume III of this report provides information about retrieval algorithms, non-EOS input requirements of instrument teams and IDS investigators, and availability of non-EOS data products at seven primary Distributed Active Archive Centers (DAACs).

Much of the information presented in this document is also available from *an interactive, user-friendly, on-line database system* developed by the SPSO. The on-line system, known as the Science Processing DataBase (SPDB), offers not only information on data products but also other related information such as retrieval algorithms, investigators, instruments, and platforms. In addition, it provides information on the current and future data holdings of the original seven DAACs, including those from the Earth Probes and the Pathfinder Activities. The Quick Reference Guide for the SPDB is sent to you for your information, along with this report.

The SPSO wishes to emphasize that this document is evolutionary and will be continually updated as new information becomes available. The SPSO would appreciate any suggestions for improvements to this report. If you have comments on this document or need additional information on the on-line system, please contact:

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Since the Science Processing Support Office (SPSO) Report entitled "EOS Output Data Products and Input Requirements - Version 1.0" was released in August 1991, new information has become available and some important updates have been made, the most significant change being the addition of Volume III. The new Volume III provides information on non-EOS input requirements, availability of data holdings of the original seven DAACs, and retrieval algorithms (output/input product relationships). Other important updates in this release of the SPSO Report include the following:

## A. PLATFORM INFORMATION

The originally planned configuration of instruments for the EOS platforms has been radically changed by NASA HQ. The initial emphasis on launching two large platforms (EOS - A and B) has been replaced by plans to launch a number of small platforms, each flying a significantly reduced payload and some of instruments being deselected. The revised platform information has been incorporated.

## B. OUTPUT DATA PRODUCTS

### • AIRS

Revised and expanded data product information has been provided to the SPSO by Barbara Weymann of AIRS Data Processing and Instrument Operations (DPIO) Team. According to the updated information, the final algorithms for some of at-launch standard products (e. g., temperature and humidity profiles) and post-launch research products (e. g., land emissivity, total ozone burden, etc.) have not been decided and algorithm development is proceeding along parallel tracks by different teams using different concepts (the final algorithms will be selected by the AIRS Team Leader in the future). For instance, five different retrieval algorithms are being developed for temperature and moisture profiles, the core AIRS science products. Characteristics of output data products, such as accuracy and spatial resolution, are also dependent upon algorithms. For these reasons, ranges of the attributes (e. g., accuracy and spatial resolution) are given for the AIRS data products for which multiple algorithms are being developed (see Appendices C and E).

### • ASTER

Information on ASTER products has been revised based on updated output product lists released by the instrument team in August and December 1991. Several ASTER products listed in Version 1.0 of this report no longer appear in the lists presented by the instrument team, and have been deleted, based upon the information provided by the ASTER Team. These are:

| | |
|---|---|
| 2036 | Land_sfc Reflectance, Bi-directional (BRDF) |
| 2257 | Radiative Flux, LW, Up |
| 2258 | Radiative Flux, SW, Up |
| 2376, 2377 | Level-2 Radiance, Land_leaving |
| 3177 | Sea_Ice Conc, GCM. |

In addition, a number of ASTER sea ice-related products, to be produced by team member Welch, are specifically identified in a recent ASTER algorithm report (January 1992). Since these products involve different physical parameters, they have been added as separate products and are listed in the Appendix C (product numbers 3616-3624). Similarly, four additional Welch cloud products have been incorporated (product numbers 3625-3628). Also, eight level-4 products to be produced by Japanese team members appear in the December 1991 ASTER product list. These have also been included (product numbers 3629-3636).

- **CERES**

Corrections and revisions to the CERES output product information presented in Verson 1.0 have been provided to the SPSO. All these have been incorporated into the SPSO databases and into the appendices of this release.

- **MISR**

The MISR Team has provided revised information on at-launch standard products and post-launch research data products.

- **MODIS**

Twelve members of the MODIS Science Team reviewed their data products and retrieval algorithms and provided updated information. Team Members who provided the information are: Abbott, Barton, Brown, Carder, Clark, Gordon, Hoge, Huete, Kaufman, King, Muller, and Vanderbilt. The updated MODIS data product and algorithm information was incorporated in Appendices C, E, and F of Volume I and and Appendix P of Volume III, respectively.

- **All Instruments**

The EOS Program Level 1 Requirements Document (December 1991) lists "essential" products which have been identified by the instrument teams as being most vital to meeting the scientific goals of the EOS Project. The "essential" data products are distinguished in Appendix E (Instrument Output Products) by *italicised* product names. In addition, several products identified as "essential" in the Level 1 Requirements Document were not contained in Version 1.0 of the SPSO report. These include $CO_2$, HCl, and HFl concentrations from TES (3637-3639), UV Stellar Comparison Spectra from SOLSTICE (3640), Cloud Cover at 250m resolution from MODIS (3641), Lightning Occurrence and Radiant Energy from LIS (3642-3643), and BRDF from EOSP (3644).

- **GLRS-R, GOS, IPEI, LAWS, MODIS-T, SAR, SWIRLS and XIE**

Appendices C, E, and F do not include the data products proposed for the following instruments: GLRS-R, GOS, IPEI, LAWS, MODIS-T, SAR, SWIRLS, and XIE. The data products for these instruments have been dropped from the Master Data Product List,

because, at this time, they are not being considered for flight on any EOS platform. These products are listed separately in Appendix H of this report. Although funding for LAWS instrument development has not been provided by the EOS project, negotiations are underway with other federal agencies and potential foreign partners in an effort to develop a laser wind sounder for the EOS era.

## C. INPUT REQUIREMENTS

- **CERES**

CERES input requirements have been updated by the instrument team. More detailed information was provided to the SPSO and has been incorporated into the relevant databases. The revised input requirements are presented in Appendix G of Volume I and supercede the information in the previous release.

- **All Instruments and IDS Investigators**

A list of non-EOS input requirements (Appendix R of Volume III) was greatly expanded to cover most of the non-EOS data required by all instrument teams and IDS investigators.

- **IDS Investigators**

Analysis of the best and alternative match products was revised to incorporate the restructuring of the EOS platforms and the updated data product information provided by various instrument teams.

## D. RETRIEVAL ALGORITHMS

The algorithm database, complementary to the EOS Master Product Database, was developed by the SPSO. The database was designed to provide an overview of retrieval algorithms, output data products and associated input data. In this report, the algorithm database was used to generate algorithm summary tables, showing the relationships between input and output data products for EOS instruments and IDS investigators (Appendices P and Q of Volume III).

## E. SIZING ANALYSIS

Volume estimates for 22 EOS instruments were revised to incorporate the latest data product information. The results of the various requirements sizing analyses presented in Appendix I are based on the revised volume estimates. In addition, analysis of IDS investigators' input requirements was further extended to provide information on availability of input data for two time periods, pre- and post-2001 (Appendices N and O).

## F. NON-EOS DATA PRODUCTS

This report was expanded to cover information on pre-EOS data products. This new information is presented in Volume III and includes the current and future data holdings of the original seven DAACs and data products expected from Earth Probe Missions and Pathfinder Activities.

# Table of Contents

## Volume I

## Table of Contents (Cont'd)

### Volume II



### Volume III

# List of Appendices

## Volume I



## Volume II



## Volume III

# List of Tables

## Volume I



## Volume II



## Volume III

# 1.0 INTRODUCTION

The Earth Observing System (EOS) is a key element of the Global Change Research Program to study the Earth as a system and to improve our knowledge of global changes resulting from both natural and anthropogenic causes (Ramapriyan 1990). EOS will support interdisciplinary "Earth System Science" (NASA 1988) by establishing long-term, reliable remote sensing measurements of geophysical and biological variables, in order to document global, regional, and local changes over a time period from the present to 15 years after launch . The geophysical and biological data products to be archived and distributed by EOS will extend the usefulness of remote sensing data to a broader range of the scientific community, who will no longer need to possess detailed knowledge of instrument characteristics and electromagnetic interactions at the surface (Dozier 1990).

The EOS Data and Information System (EOSDIS) will provide the ground system for the collection, production, analysis, and distribution of data from EOS, and will support Earth system science by providing easy and rapid access to usable, understandable, and timely data, and by fostering cross-fertilization of scientific disciplines. An analysis of the science data processing requirements is an essential element for the planning, design, and implementation of EOSDIS. The goal of this analysis is to estimate the baseline computational requirements needed to support the generation, archiving, and distribution of science data products. Starting in March 1989, the Science Processing Support Office (SPSO) at the Goddard Space Flight Center (GSFC) has been compiling and synthesizing science user requirements in order to estimate the baseline computational requirements. Characteristics of input and output data products and methodology for requirements analysis were described in Version 1.0 of the SPSO Report, released in August 1991.

The initial EOS program, originally planned as two series of polar-orbiting platforms (EOS - A and -B), has been significantly modified over the past year. In anticipation of a likely reduction in the EOS budget for the decade ending in 2000, NASA has restructured the EOS program. The goal of this restructuring is to develop a resilient program that, despite budget induced cutbacks within the EOS Project, can still make significant contributions to the U. S. Global Change Research Program (GCRP). The restructuring was based mainly on the recommendations of the Payload Advisory Panel for EOS and involves the descoping/deselection of some EOS instruments and launching a larger number of smaller platforms. The recommended EOS instruments and platform configurations were chosen to ensure continutity of the long-term time series of climate measurements, to address high priority science and policy issues identified by the Intergovernmental Panel on Climate Change (IPCC), and to be consistent with technical, budgetary and scheduling constraints.

The purpose of this report is to provide the EOS science community with updated data product information, reflecting the restructured EOS program. This report has been expanded to incorporate new and updated data product information which has become available since August 1991 and consists of three volumes. Volume I contains input/output data products sorted by product number; output data products sorted by instrument,

investigator and product name; and instrument team input requirements. Volume II is devoted to the SPSO analyses of IDS investigators' input requirements, including the information on the best and alternative match EOS data products. It also provides information on IDS investigators' input requirements which cannot be met by EOS instruments for each of the time periods before and after the year 2001. Volume III includes a comprehensive list of non-EOS input data required by all EOS instrument teams and IDS investigators. Also included are the current (FY91) and future (FY94) data holdings of the original seven DAACs, and the data products to be generated from the future missions/projects such as Earth Probes and Pathfinder activities. In addition, Volume III includes two new appendices, algorithm summary tables for EOS instruments and IDS investigators. The algorithm summary tables provide information on investigators, required instruments, and associated input and output data products.

Most of the information in this report is also available from an interactive on-line database system developed by the SPSO. The on-line system, known as the Science Processing DataBase (SPDB), is based on an easy-to-use, menu-driven user interface and offers user-friendly query forms and on-line help. It provides not only data product information but also other related information such as retrieval algorithms, investigators, instruments, and recent platform information. In addition, the on-line system provides information on availability of non-EOS data sets in the Version 0 timeframe. All database files of the on-line system are dynamically linked so that users can access related information at any time without having to go back to previous screens. The SPDB can be accessed easily from computer networks or by direct dial-up. Users who need additional information or would like to have a copy of the SPDB User's Guide should contact Yun-Chi Lu at the address given in the Preface.

## 2.0 EOS INSTRUMENTS

The platform instrument payloads and launch schedules, based on the restructured EOS program, are summarized in Table 2-1 and a brief description of each instrument is presented in Section 2.1. EOS instrument data products identified as "essential" products in the EOS Level 1 Requirements Document (December 1991) are also listed in Table 2-1. The "essential" data products are those which have been identified by the instrument teams as being most vital to meeting the scientific goals of the EOS Project and the U. S. Global Change Research Program (GCRP). Table 2-1 does not include two instruments, MLS and SAFIRE, which were descoped beyond 2001 and for which essential data products were not identified in the Level 1 Requirements Document.

## Table 2-1 Instrument Payload

| Platform | Launch Date | Instrument | Essential Products |
|---|---|---|---|
| **AM** (Morning Satellite) | June 1998 | CERES | • Global distribution of reflected solar and emitted radiant fluxes |
| | | MODIS | • Surface temperature<br>• Ocean color data, including chlorophyll a concentration and chlorophyll fluorescence<br>• Vegetation indices, types, and productivities<br>• Cloud cover and cloud radiative properties<br>• Aerosol properties<br>• Fire occurence, size, and temperature |
| | | MISR | • Multi-angle bidirectional reflectances at the surface and for clouds<br>• Spectral hemispherical albedo at the top of the atmosphere and at the surface<br>• Aerosol opacities and scattering properties<br>• Global surface topographic and regional cloud elevations |
| | | ASTER [1] | • Reflected sunlight images of the Earth in the visible and shortwave infrared<br>• High resolution thermal; infrared multispectral images<br>• Cloud height and local surface digital elevation model |
| | | MOPITT [1] | • CO concentration and column abundance<br>• $CH_4$ column abundance |
| | | HIRIS [2] | • High resolution spectral imagery of selected targets |
| | | EOSP [2] | • Spectral bidirectional reflectance distribution function and polarization in 8 spectral bands (410-950 nm) and 4 bands (1250-2250 nm)<br>• Cloud particle phase, particle size and total optical phase |
| **AERO** (Aerosol Satellite) | June 2000 | SAGE III | • Atmospheric temperature, pressure, and composition for aerosols, ozone, and other minor gases |
| **PM** (Afternoon Satellite) | December 2000 | CERES | • Global Distribution of reflected solar and emitted radiant fluxes |
| | | MODIS | • Surface temperature<br>• Ocean color data, including chlorophyll a concentration and chlorophyll fluorescence<br>• Vegetation indices, types, and productivities<br>• Cloud cover and cloud radiative properties<br>• Aerosol properties<br>• Fire occurence, size, and temperature |

*1. Recommended for flight on AM-1 only.*
*2. Recommended for flight on AM-2 and -3 (replacing ASTER and MOPITT on AM-1).*

## Table 2-1 Instrument Payload (Cont'd)

| Platform | Launch Date | Instrument | Essential Products |
|---|---|---|---|
| **PM** (Afternoon Satellite) | December 2000 | AIRS | • Atmospheric temperature profile<br>• Surface temperature and emissivities<br>• Land and ocean day/night spectral longwave surface radiant flux<br>• Distribution of minor gas total burdens |
| | | AMSU-A | • Cloud cover, cloud top temperature and pressure<br>• Snow and ice cover |
| | | MHS | • Global water vapor distribution |
| | | MIMR | • Precipitation index<br>• Sea surface temperature, water vapor and cloud water burden over oceans<br>• Snow cover and sea ice parameters<br>• Ocean surface wind stress<br>• Soil moisture index |
| **ALT** (Altemetry Satellite) | June 2002 | ALT | • Ocean ice sheet topography maps<br>• Along-track sea surface height<br>• Sea surface topography maps |
| | | GGI | • Accurate spacecraft orbital path<br>• Atmospheric temperature sounding<br>• Three-dimensional ionosphere electron tomography |
| | | GLRS-A | • Ice sheet topography profiles and changes<br>• Land surface or vegetation canopy topography profiles and changes<br>• Multiple cloud top and base heights and optical densities |
| **CHEM** (Chemistry Satellite) | June 2002 | HIRDLS | • Gridded profiles of minor gases<br>• Cloud top height, including stratospheric polar clouds |
| | | TES | • Atmospheric composition for $O_3$, CO, $CH_4$, $H_2O$ and $NO_y$<br>• Local atmospheric concentration distributions of infrared-active species, including $CO_2$, $SO_2$, HCl, and HFI |
| | | SAGE III | • Atmospheric temperature, pressure, and composition for aerosols, ozone, and other minor gases |
| | | STIKSCAT | • Ocean surface vector wind maps |
| **Mission of Opportunity** | TBD | ACRIM | • Total (bolometric) solar irradiance above atmosphere |
| | | SOLSTICE | • Solar spectral irradiance from 5 to 440 nm with 0.1 nm resolution from 115 to 440 nm<br>• Equivalent comparison spectra from 30 bright stars with known luminosity stability<br>• Solar spectra from 115 to 320 nm with 0.0015 nm resolution |

## 2.1 Instrument Payloads

### 2.1.1 Morning (AM) Satellite

The recommended NASA morning platform, of which an equator crossing time is 10:30 a. m., includes a suite of sensors focused on cloud and aerosol radiative properties. The instruments selected for flight on the first satellite (NASA AM-1) to be launched in June 1998 are as follows:

- ASTER (Advanced Spaceborne Thermal Emission and Reflection), to be provided by the Japanese Ministry of International Trade and Industry (MITI), will provide high-resolution images (15 to 90 m) of the land surface and clouds for climatological, hydrological, biological, and geological studies.
- CERES (Clouds and the Earth's Radiant Energy System) will provide long-term measurements of the Earth's radiation budget. CERES is also planned to fly on TRMM, NASA afternoon satellite, and one of ESA's polar platforms.
- MISR (Multi-Angle Imaging Spectro-Radiometer) will provide information on the directional characteristics of reflected light for the study of aerosols, clouds, and land surface.
- MODIS (Moderate-Resolution Imaging Spectroradiometer) will provide measurements of biological and physical processes in the study of land, oceanic, and atmospheric phenomena.
- MOPITT (Measurements of Pollution in the Troposphere) will provide global measurements of carbon monoxide and methane in the troposphere.

On the subsequent morning platforms (NASA AM-2 and -3) to be launched in 2003 and 2008, ASTER will be replaced by HIRIS, and MOPITT by EOSP (the selection of EOSP is tentative, pending science review).

- HIRIS (High-Resolution Imaging Spectrometer) will use its high-resolution imaging capabilities to study biological and geophysical processes, as well as interactions along borders of different ecosystems. .
- EOSP (Earth Observing Scanner Polarimeter) will make global observations of polarized light to quantify the effects of aerosols and clouds in heating and cooling the Earth, as well as help characterize cloud feedbacks in global change processes.

### 2.1.2 Afternoon (PM) Satellite

The instruments on the NASA afternoon platform with a 1:30 p. m. equator crossing time allow study of cloud formation, precipitation and radiative properties. The instruments selected for flight on the first satellite (NASA PM-1) to be launched in December 2000 are as follows:

- AIRS/AMSU-A/MHS (Atmospheric Infrared Sounder/Advanced Microwave Sounding Unit/Microwave Humidity Sounder) will measure atmospheric temperature/humidity profiles and provide data on cloud cover and sea- and land-

surface temperatures. MHS is a planned contribution from EUMETSAT. *On the second satellite (NASA PM-2), AIRS and MHS may be replaced by subsitute instruments.*

- CERES (Clouds and the Earth's Radiant Energy System) will provide long-term measurements of the Earth's radiation budget. CERES is also planned to fly on TRMM, NASA afternoon satellite, and one of ESA's polar platforms.
- MIMR (Multi-frequency Imaging Microwave Radiometer) is to be provided by the ESA and will measure water vapor, liquid water content, rain rate, soil moisture, ice and snow cover, and sea surface temperature.
- MODIS (Moderate Resolution Imaging Spectroradiometer ) will provide measurements of biological and physical processes in the study of land, oceanic, and atmospheric phenomena.

### 2.1.3 Aerosol Satellite

The aerosol platform in an inclined orbit of 57°, designed to measure global coverage of aerosol measurements, includes EOSP and SAGE III (the selection of EOSP is tentative, pending science review).

- SAGE III (Stratospheric Aerosol and Gas Experiment III) will measure profiles of aerosols, trace gases ($O_3$, $NO_2$, etc.), temperature and pressure between cloud tops and the upper mesosphere with 1-2 km vertical resolutions. SAGE III is an improved version of Stratospheric Aerosol Measurement II (SAM II), SAGE I, and SAGE II. SAGE III is also planned to fly on the chemistry satellite in 2002.

### 2.1.4 Altimetry Satellite

The altimetry satellite to be launched in June 2002 includes three EOS instruments:

- ALT (Altimeter) will map the topography of the sea surface and polar ice sheets. Through the mapping of sea surface topography, ALT provides information on the ocean surface current velosity. ALT will provide ocean ice sheet topography maps with 50 cm height accuracy and 15 km resolution.
- GGI (GPS Geoscience Instrument) is a high-performance Global Positioning System (GPS) receiver-processor. GGI will provide measurments of high-precision geodesy, atmospheric temperature profile, and ionospheric gravity wave.
- GLRS-A (Geoscience Laser Ranging System-Altimeter) is an altimeter designed to measure ice sheet heights, slope, and roughness characteristics. GLRS-A will also provide measurements of along-track cloud and aerosol distributions with a vertical resolution of 75 to 100 m from the surface to a height of 30 km.

### 2.1.5 Chemistry Satellite

The chemistry satellite to be launched in June 2002 includes three EOS instruments:

- HIRDLS (High-Resolution Dynamic Limb Sounder) will measure levels of trace gases that contribute to the greenhouse effect. In addition, measurements from HIRDLS will contribute to understanding the physical and chemical fluxes between the troposphere and stratosphere.

- TES (Tropospheric Emission Spectrometer) will measure global profiles of all infrared active species from the surface to the lower stratosphere, including greenhouse gases, tropospheric ozone, acid rain precursors, and gases which lead to stratospheric ozone depletion.
- SAGE III (Stratospheric Aerosol and Gas Experiment III) will measure profiles of aerosols, trace gases ($O_3$, $NO_2$, etc.), temperature and pressure between cloud tops and the upper mesosphere with 1-2 km vertical resolutions. SAGE III is an improved version of Stratospheric Aerosol Measurement II (SAM II), SAGE I, and SAGE II. SAGE III is also planned to fly on the chemistry satellite in 2002.
- STIKSCAT (Stick Scatterometer) will provide information on surface wind speeds and directions over global oceans in all weather conditions.

### 2.1.6 Mission of Opportunity

Two instruments, ACRIM and SOLSTICE, were recommended for mission of opportunity beyond 2001:

- ACRIM (Active Cavity Radiometer Irradiance Monitor) will provide measurements of the total solar irradiance above the atmosphere.
- SOLSTICE (Solar Stellar Irradiance Comparison Experiment) will determine the absolute solar ultraviolet flux above the atmosphere and flux stability by intercomparison with stellar standard candles.

## 2.2 Instrument and Data Product Allocation

The EOSDIS DAACs will facilitate global change research by offering improved and "one-stop-shopping" access to NASA's entire Earth science database (NASA, 1990). Eight U.S. institutions have been designated as DAACs on the basis of their existing data system capabilities, infrastructure and institutional scientific expertise. They include four NASA centers: the Goddard Space Flight Center (GSFC), the Jet Propulsion Laboratory (JPL), the Langley Research Center (LaRC), and the Marshall Space Flight Center (MSFC) and four non NASA centers : the Alaska SAR Facility (ASF) at University of Alaska, Earth Resource Observation System (EROS) Data Center (EDC) of U. S. Geological Survey (USGS), the National Snow and Ice Data Center (NSIDC) and the Department of Energy (DOE) Oak Ridge National Laboratory (ORNL). These data centers will serve as the focal points for data services by producing standard products, using algorithms developed by EOS investigators. Table 2.2 shows discipline responsibilites and data product allocation of each DAAC, based on NASA Headquarters program guidance (NASA HQ, 1990).

In addition to the eight DAACs, the Consortium for International Earth Science Information Network (CIESIN) located in Saginaw, Michigan, designated as Socioeconomic Data and Information Center, will archive and distribute social and economic data, and related earth science data to complement the efforts of other DAACs. However, CIESIN will not be responsible for archival and distribution of data products needed for the genaration of other EOS products. For that reason, CIESIN was not included in Table 2-2.

**Table 2-2 Instrument and Data Product Allocation**

| DAAC | Discipline | Data Products |
|---|---|---|
| ASF | Sea Ice (SAR) | • L2/3 sea ice products from SAR. |
| EDC | Land Processes Imagery | • L2/3 products from MODIS-N (L2 products will be generated at GSFC, but will be archived and distributed at EDC).<br>• All data products from ASTER. |
| JPL | Ocean Circulation, Air-Sea Interaction | • All products from ALT, GGI, and STIKSCAT. |
| GSFC | Atmospheric Dynamics, Upper Atmosphere, Global Biosphere, Geophysics | • All products from ACRIM, AIRS/AMSU, GOS, HIRDLS, MLS, SAFIRE, and SOLSTICE.<br>• L1 & L2/3 atmospheric and ocean products from MODIS.<br>• L1 & L2/3 atmospheric products from GLRS-A. |
| LaRC | Radiation Budget, Aerosols, Tropospheric Chemistry | • All products from CERES, EOSP, MISR, MOPITT, SAGE III, and TES. |
| MSFC | Hydrology | • All products from MIMR. |
| NSIDC | Snow and Ice (non-SAR), Polar Processes Imagery | • L2/3 snow & ice products from ALT, GLRS-A, and MODIS-N. |
| ORNL | Trace Gases | • TBD |

## 3.0 EOS DATA PRODUCT DATABASE

Since March 1989, the SPSO at the GSFC has been responsible for collecting and synthesizing the science user requirements to characterize the baseline processing requirements needed to support the generation, archival, and distribution of science data products proposed by EOS investigators. This section describes the EOS Data Product Database based on the SPSO-compiled information. The Master Data Product Database constains descriptions of EOS measurement and science parameters. The various data product attributes (see below) refer to the parameters themselves. This particular database is not a compilation of *data sets* , and does not describe their structures or how they will be stored within EOSDIS. Information on actual data sets is limited at the present time, although such information on data sets and data granules that is available has been compiled by the SPSO into other databases.

### 3.1 Information Sources

The Master Data Product Database contains information on over 2,400 input and output data products proposed by EOS investigators. The sources of information include the following:

- The 160+ research proposals selected from the Announcement of Opportunity
- The "Silver Bullet" listings for the Facility Instrument, Interdisciplinary Investigators, and Principal Investigators as compiled by V. Salomonson (GSFC), J. Way (JPL), and J. Russell (LaRC), respectively

- The 85 Phase C/D proposals submitted by Facility Instrument Team members and Interdisciplinary Investigators
- The 11 Conceptual Design and Cost Review (CDCR) presentations by the Facility and Principal Investigator Instrument Teams
- The MODIS data study team weekly reports
- EOS Interdisciplinary Science Investigations Objectives and Data Product Requirements (VersionS 4.0 and 6.0) by M. Schier and J. Way
- Comments and revisions received from EOS investigators
- Input data survey for EOS instruments
- Algorithm reports by AIRS and MODIS teams
- Updated data product information from AIRS, ASTER, CERES and MODIS teams

## 3.2 Compilation and Integration

A complete list of EOS input/output data products is provided in Appendix C (Master Product List). In the EOS data product lists, a common format was adopted to enable cross comparison of Interdisciplinary Science (IDS) input data requirements with proposed Facility Instrument (FI) and Principal Investigator (PI) Instrument measurements. The attributes of the common format are summarized below.

- Attributes describing the measurement: (*Product Name, Units*, and *Category*)
- Attributes describing the source of information: (*Type, Source*, and *Investigator*)
- Attributes quantifying the resolution, location, and accuracy of the measurement: (*Accuracy, Temporal Resolution, Horizontal/Vertical Resolution*, and *Horizontal/Vertical Coverage*)
- Attributes describing the input requirements: (*Channels* and *Required EOS and non-EOS Input Products*)

The *Category* attribute is displayed in this report only for the instrument data products in Appendices E and F. This attribute is useful for sorting data products applicable to the atmospheric (A), ocean (O), land (L), and space sciences (S), as well as for sorting by subcategories such as hydrology and biology (e.g., AH, LH, LB, OB). The categories shown here have been revised so that all products from a particular discipline may be grouped together, solely as a matter of convenience in sorting EOS products (e.g., the original "Land Hydrology" category, GH, and the "Land Biology" category, BT, are displayed as the more natural LH and LB, respectively. The original category designations are still preserved in the databases. Product names were further corrected to eliminate inconsistencies and revised to allow more flexible sorting of data products and linkage to keywords in the Master Directory (MD). Product names used in this report are composites generated from four naming fields in the SPSO databases. A data product group name, such as "Cloud" or "Sea_Ice," describes what geophysical "entity" or "process" is involved, and corresponds in most cases to a related MD keyword. The list of data product group names and matching MD Keywords is presented in Appendix B. In addition, a physical parameter keyword identifies a particular measurement, such as "Temperature",

and two modifiers provide supplemental information on unique qualities of that measurement. The product names listed in the Appendices are of the form "Group Name + Physical Parameter Keyword, Modifier-1, Modifier-2." An alphabetic sort by product name displays similar groups (e.g., all cloud products) together. This approach provides common naming conventions among IDS, FI and PI data products. (In addition, the naming-fields can be combined in various other ways with spreadsheet formulae to yield "English-Language" product names such as "Land_sfc Spectral Emissivity," or names consistent with Global Change parameters, such as "Emissivity, Spectral, Land_sfc." The system is flexible and can be easily modified.)

Detailed descriptions of attributes and acronyms/abbreviations used in this report are given in Tables A-1 through A-5 in Appendix A. The Master Product List presented in Appendix C contains information on characteristics of data products proposed by all EOS instrument teams and the Interdisciplinary Investigators. It also contains information on platform and the DAAC assignment of each data product. The assignment of EOS output products to DAACs was based on the NASA Headquarters guidance (1990) described in Section 2.2. For those interested in data products for a specific instrument or for an IDS investigator, separate output data product lists for instrument teams and IDS investigators are presented in Appendices E and K, respectively.

Data products listed in Appendix C were used to generate so-called "concatenated" product lists for IDS investigators and instrument teams (Appendix D) by grouping similar data products. In grouping data products, the concept of "major" and "minor" groups was introduced. The major group is used to identify a group of independent data product names (which are classified as the minor groups). Each major group, in principle, will have a corresponding Master Directory (MD) keyword. One example for the major group is "cloud". The example for the minor group includes: cloud optical depth, cloud height, cloud top pressure, etc. A product group index list, containing a complete list of major and minor groups and the corresponding MD keywords, is presented in Appendix B. (In Appendix B, three question marks (???) for the MD keyword indicate that no appropriate keyword is available.)

Data products proposed for the instruments selected for flight on EOS platforms are listed in Appendix E. The listing in Appendix E is taken from the Master Product List (Appendix C) and is arranged by instrument name. In Appendix F, the same data product information is presented in alphabetical order by product name. As described earlier, the restructured EOS program involves the deseletion of eight (8) EOS instruments - GLRS-R, GOS, IPEI, LAWS, MODIS-T, SAR, SWIRLS, and XIE. Data products originally proposed for these instruments are presented in Appendix H.

EOS and non-EOS input data products required by instrument teams are listed in Appendix G. There are four types of input data required by EOS investigators: ancillary, correlative, algorithm development, and research. Ancillary data are data other than instrument data required to perform an instrument's data processing. They include orbit data, attitude data, time information, platform engineering data, calibration data, and data

from other instruments. Correlative data are scientific data from other sources used in the interpretation or validation of instrument data products (e.g., ground truth data or data products from other instruments.) It is important to note that correlative data are not used or required in processing instrument data. In Appendix G, there are two other data types; Development data to be used for developing/testing algorithms, and Research data to be used for new or improved products and other research activities. They are indicated by *Dev* and *Res*, respectively.

## 4.0 ANALYSIS OF SCIENCE PROCESSING REQUIREMENTS

Several tables for storage and processing load requirements are given in Appendix I. They are based on a multilayer model for the sizing analysis of the EOSDIS System. The methodology and assumptions used to develop the model are described in the following sections.

### 4.1 Approach

A multilayer model was used in the compilation and tabulation of the science data processing requirements. The model uses the Foxbase™* database and the Excel™ spreadsheet systems running on a Macintosh computer. It consists of five logical components that effectively partition the science requirements information into discrete elements. Information dependencies between components are represented by links between spreadsheets and by the database relational commands. The model components are summarized below:

- Assumptions—This spreadsheet contains various constants and assumptions used in the volume and processing load calculations including: platform parameters; instrument characteristics (e.g., average data rates); fractional coverage of the earth's surface (e.g., land, ocean); and estimated number of operations per pixel needed to generate categories of data products.
- Master List—This spreadsheet contains detailed information on the EOS standard data products.
- Product Analysis—This spreadsheet encodes the various numerical expressions that are used to estimate the data volumes and processing loads for each of the EOS standard data products. This spreadsheet references information from the Assumptions and Master List spreadsheets.
- Traffic Analysis—This database program is used to estimate the data distribution volumes from each EOSDIS DAAC. This program references information from the Master List and Product Analysis spreadsheets.
- Baseline Requirements—These spreadsheets are used to generate the tables to summarize the science data processing requirements. These spreadsheets reference information from the Traffic Analysis program results and the Product Analysis spreadsheets.

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* Use of trade names is for informational purposes only and does not constitute endorsement by NASA.

This approach was adopted to maximize flexibility and to reduce the effort needed to perform updates in response to: changes in the proposed operating characteristics and platform assignments of EOS instruments; reallocation of data products to the EOSDIS Archive Centers; and science data product information updates resulting from feedback from the EOS investigator community or from recent SPSO data product review and analysis activity.

## 4.2 Assumptions

This section describes assumptions used in estimating daily data volume and processing load presented in Appendix I.

### 4.2.1 Data Volume Estimates

Volume estimates for EOS instruments are given in Appendix I (Tables I-1 and -2). Level 0 data volumes for all instruments are computed from average data rates by multiplying them by the number of seconds in a day and converting to daily data volumes in gigabytes (GB/day). Because the EOSDIS is interested in a long-term projection, average data rates rather than peak data rates were used in computations.

In estimating Level 1A volumes, it was assumed that packed Level 0 data (12 bits) would be unpacked and each sample of data would require 16 bits. In addition, a 10% volume overhead was added for housekeeping data, header, and calibration information. The Level 1A volume estimates for all instruments were made by multiplying the Level 0 volumes by a factor of 1.47 (i.e., 1.1 * [1+4/12]). For Level 1B, the volume estimates by instrument teams, from their proposals and Conceptual Design and Cost Review (CDCR) presentations, were used when specific information was available. If no information was available, it was assumed that the Level 1B volume was the same as the Level 1A volume.

For Level 2, the volume estimates by instrument teams, in their proposals and CDCR presentations, were used when specific information was available. If no information was available, the data volumes were estimated based on the information for standard data products compiled by the SPSO.

A maximum number of pixels per day was determined for a given spatial resolution, spacecraft speed, swath width, and duty cycle of an instrument. For example, the maximum number of 1 x 1 km pixels for MODIS, can be determined as follows:

$$M_{pix} = (V_{speed} * P_{cross} * N_{sec} * F_{dcycle}) / R \qquad [1]$$

| | | |
|---|---|---|
| $M_{pix}$ | = | Maximum number of pixels per day |
| $V_{speed}$ | = | Spacecraft speed (6.76 km/sec) |
| Pcross | = | Number of pixels across track (1582 for MODIS-T) |
| $N_{sec}$ | = | Number of seconds in a day (86400) |
| $F_{dcycle}$ | = | Duty cycle expressed as a fraction (1.0 for MODIS) |
| R | = | Spatial resolution in km |

An effective number of pixels per day for each product was computed by multiplying the maximum number of pixels by the fractional coverage according to surface type. This calculation is based on the assumption that each data product is produced only for the corresponding surface type. For example, sea surface temperatures (SST) will be retrieved only over oceans, and normalized difference vegetation indexes (NDVI) will be computed over land areas. For a data product (e.g., temperature profile from AIRS) that is a function of altitude (or pressure), the number of levels was considered in determining the effective number of pixels. Another factor considered was whether each data product is produced for daytime only or subject to cloud filtering.

For example, an effective number of pixels for an ocean data product to be retrieved over cloud-free oceans during daytime is given by the following equation:

$$E_{pix} = M_{pix} * F_{ocean} * F_{day} * F_{cloud} \qquad [2]$$

| | | |
|---|---|---|
| $E_{pix}$ | = | Effective number of pixels per day |
| $M_{pix}$ | = | Maximum number of pixels per day |
| $F_{ocean}$ | = | Fractional coverage of oceans |
| $F_{day}$ | = | Fraction of the daytime portion of an orbit |
| $F_{cloud}$ | = | Fraction for cloud covered areas |

The Level 2 data volumes were computed by multiplying the effective number of pixels by four bytes (two bytes for retrieved parameter value and 2 bytes for error estimate), with the exception of certain data products such as atmospheric-corrected radiances, which were assumed to be stored as a two-byte word. A 10% overhead was added to the computed volumes to obtain the final Level 2 volume estimates.

For Level 3 data volumes, estimates from the proposals and CDCR presentations by instrument teams were used when available. If no information were available, the data volumes were estimated, as described below, based on the spatial and temporal resolutions of the proposed standard data products compiled by the SPSO.

First, the number of equal-area grid-points for a given data product was determined from the known spatial resolution and Earth's surface area (calculated using a mean radius of 6,371 km). Then the number of equal-area grid-points was adjusted for the surface type of the data product by multiplying by an appropriate fraction from the Assumptions spreadsheet. For certain atmospheric data products, for which horizontal resolution is given in degrees of latitude and longitude, the number of grid-points was determined assuming an equal-angle grid (rather than an equal-area grid). For a data product that is a function of altitude (or pressure), the number of levels was considered in determining the total number of grid-points.

The Level 3 volumes were estimated by assuming that each grid-point would have three associated values (mean, standard deviation, and number of observations), each being a two-byte word, and by considering the temporal resolution of the data product. For

instance, the daily data volume for monthly averaged aerosol concentration at a spatial resolution of 1° x 1° can be computed as follows:

$$\text{Volume} = N_{grid} * N_{parm} * N_{byte} * F_{time} \quad [3]$$

$N_{grid}$ = Number of grid-points (64800=360*180)

$N_{parm}$ = 3 (mean, standard deviation, no. of observations)

$N_{byte}$ = 2 bytes

$F_{time}$ = Time factor (0.033 =1/30), i.e., the daily processing load corresponding to a product produced on monthly basis

The final Level 3 volumes were determined by adding 10% overhead to the volume estimates obtained from this formula.

### 4.2.2 Processing Load Estimates

Processing load estimates for EOS instruments are presented in Appendix I (Tables I-3 and I-4). The processing loads were estimated by multiplying the appropriate number of operations per pixel times the number of pixels represented by the effective data volumes. The assumptions regarding the number of operations per pixel were made only for the purpose of estimating the baseline processing load requirements. The processing requirements were derived from the AO proposals, CDCR presentations, and instrument data study team reports. The Level 1A processing load estimates were based on an assumption of fifteen operations per pixel. The Level 1B processing load estimates were based on an assumption of thirty operations per pixel. Estimates of the Level 2 processing loads were made according to discipline category (e.g., atmosphere, land, and oceans), and groups of computational similar data products. The Level 3 processing load estimates were based on an assumption of 100 operations per pixel. It should be noted that the processing load cannot, at present, be estimated as reliably as data volumes because of the uncertainty in estimating the number of operations per pixel.

### 4.2.3. Data Traffic Analysis

Data traffic analysis was performed by first identifying all ancillary data required by each instrument team (Appendix G) and the source data centers for those products, and then estimating daily data transfer among the various data centers. In determining the source data centers for EOS data products, the assignment of data products was made based on NASA Headquarters program guidances (NASA HQ, 1990). Grouping of data products was based primarily on science disciplines considering the experience and expertise of each data center as described in Section 2.2. The results of data traffic analysis are presented in Appendix I (Tables I-5 and I-6).

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# List of Acronyms/Abbreviations and Keywords

Appendix A

**Science Processing Support Office (SPSO)**

**Goddard Space Flight Center**

**August 1992**

| | | |
|---|---|---|
| **(d)** | diurnal | (temporal resolution field abbreviation) |
| **(d, n)** | diurnal and nocturnal | (temporal resolution field abbreviation) |
| **(n)** | nocturnal | (temporal resolution field abbreviation) |
| **Abs** | Absolute | ( product name abbreviation) |
| **AC** | Alternating Current | (product name abbreviation) |
| **AC** | Atmospheric Chemistry | (atmospheres product category) |
| **ACRIM** | Active Cavity Radiometer Irradiance Monitor | |
| **AD** | Atmospheric Dynamics | (atmospheres data product category) |
| **ADEOS** | Advanced Earth Observing Satellite | |
| **AE** | Atmospheric Electricity | (atmospheres data product category) |
| **AEM** | Application Explorer Mission | |
| **AH** | Atmospheric Hydrology | (atmospheres data product category) |
| **AIR** | Airborne Imaging Radar | |
| **AIRS** | Atmospheric Infrared Sounder | |
| **AIS** | Airborne Imaging Spectrometer | |
| **ALT** | NOAA-provided Facility Altimeter | |
| **AMRIR** | Advanced Medium Resolution Imaging Radiometer | |
| **AMSR** | Advanced Microwave Scanning Radiometer | |
| **AMSU-A** | Advanced Microwave Sounding Unit-A | |
| **Antarctica** | Antarctica | (horizontal coverage keyword) |
| **AOL** | NASA Airborne Oceanographic Lidar | |
| **APAR** | Absorbed PAR | (product name abbreviation) |
| **AR** | Atmospheric Radiation | (atmospheres data product category) |
| **arcsec** | arc second | (units abbreviation) |
| **ASF** | Alaskan SAR Facility | |
| **ASTER** | Advanced Spaceborne Thermal Emission and Reflection (formerly known as ITIR) | |
| **Asymm** | Asymmetric | (product name abbreviation) |
| **ATMOS** | Atmospheric Trace Molecule Spectrometer/Spectroscopy | |
| **Atmos** | Atmosphere | (product name abbreviation) |
| **Atmos** | Troposphere + stratosphere | (vertical coverage keyword) |
| **AVHRR** | Advanced Very High Resolution Radiometer | |
| **AVHRR GAC** | AVHRR Global Area Coverage | |
| **AVHRR LAC** | AVHRR Local Area Coverage | |
| **AVIRIS** | Advanced Visible and Infrared Imaging Spectrometer | |
| **b** | bar | (units abbreviation) |
| **b** | baseline | (accuracy field abbreviation) |
| **Back** | Backscattering | (product name abbreviation) |
| **BC** | Biochemistry | (biosphere data product category) |
| **Biochem** | Biochemical | (product name abbreviation) |
| **BM** | Marine Ecosystem Dynamics | (biosphere data product category) |
| **Bot** | Bottom, Base | (product name abbreviation) |
| **BRDF** | Bidirectional Reflectance Dist. Function | (product name abbreviation) |
| **BT** | Terrestrial Ecosystem Dynamics | (biosphere data product category) |
| **C** | Centigrade | (units abbreviation) |
| **Canada** | Canadian sites | (horizontal coverage keyword) |
| **CCRS** | Canada Centre for Remote Sensing | |
| **CERES** | Clouds and Earth's Radiant Energy System | |
| **Char** | Characteristics | (product name abbreviation) |
| **Chem** | Chemistry | (product name abbreviation) |
| **cld** | cloudy | (accuracy field abbreviation) |
| **cloud** | Cloud layer, regardless of altitude | (vertical coverage keyword) |
| **clr** | clear (sky) | (accuracy field abbreviation) |
| **cm** | centimeter | (units abbreviation) |

| | | |
|---|---|---|
| **CNES** | Centre National D'Etudes Spatial/Scientifique | |
| **Coeff** | Coefficient | (product name abbreviation) |
| **Conc** | Concentration | (product name abbreviation) |
| **Corr** | Correction | (product name abbreviation) |
| **Cryos** | Cryosphere | (horizontal coverage keyword) |
| **CSIRO** | Commonwealth Scientific and Industrial Research Organization | |
| **Curv** | Curvature | (product name abbreviation) |
| **CZCS** | Coastal Zone Color Scanner | |
| **dB** | decibel | (units abbreviation) |
| **DC** | Direct Current | (product name abbreviation) |
| **Deriv** | Derivative | (product name abbreviation) |
| **Dev** | Developmental data to be used for algorithm development | |
| **dg** | degree | (units abbreviation) |
| **Diff** | Differences | (product name abbreviation) |
| **DMSP** | Defense Meteorological Satellite Program | |
| **DU** | Dobson Unit | (units abbreviation) |
| **dy** | day | (units abbreviation) |
| **E** | irradiance (radiant flux density: $W/m^2$) | (units abbreviation) |
| **ECMWF** | European Center for Medium Range Weather Forecasting | |
| **EDC** | EROS Data Center | |
| **ENACEOS** | Energetic Neutral Atom Camera for the Earth Observing System | |
| **EOSAT** | Earth Observation Satellite Corporation | |
| **EOSP** | Earth Observing Scanning Polarimeter | |
| **Equiv** | Equivalent | (product name abbreviation) |
| **ERB** | Earth Radiation Budget (instrument) | |
| **ERBE** | Earth Radiation Budget Experiment | |
| **ERBI** | Earth Radiation Budget Instrument | |
| **ERBS** | Earth Radiation Budget Satellite | |
| **ERS-1** | Earth Resources Satellite-1 | |
| **ESA** | European Space Agency | |
| **EUMETSAT** | European Meteorological Satellite Organization | |
| **Evapotrans** | Evapotranspiration | (product name abbreviation) |
| **Ex** | Exosphere | (vertical coverage keyword) |
| **FI** | Facility Instrument | |
| **FLI** | Fluorescence Line Imager | |
| **Fluor** | Fluorescence | (product name abbreviation) |
| **Fnc** | Function | (product name abbreviation) |
| **FNOC** | Fleet Numerical Oceanographic Center | |
| **FP** | Facility Instruments and Principal Investigator Instrument | |
| **G** | Gauss (cgs unit of magnetic induction) | (units abbreviation) |
| **g** | grams | (units abbreviation) |
| **GC** | Geochemistry | (solid Earth data product category) |
| **GD** | Geodynamics/Geomorphology | (solid Earth data product category) |
| **Geochem** | Geochemical | (product name abbreviation) |
| **GEOSAT** | Geodesy Satellite | |
| **GeV** | giga-electron volts ($10^9$ eV) | (units abbreviation) |
| **GGI** | GPS Geoscience Instrument | |
| **GH** | Geo-Hydrology | (solid Earth data product category) |
| **GISS** | Goddard Institute for Space Studies | |
| **Glacier** | Glacier | (horizontal coverage keyword) |
| **Global or G** | Global atmosphere or surface | (horizontal coverage keyword) |
| **GLRS** | Geodynamics Laser Ranging System | |
| **GMS** | Geostationary Meterological Satellite | |

| | | |
|---|---|---|
| **GOES** | Geostationary Operational Environmental Satellite (Geosynchronous Weather Satellite System) | |
| **GOS** | Geomagnetic Observing System | |
| **GPS** | Global Positioning System | |
| **GSFC** | Goddard Space Flight Center | |
| **ha** | hectare | (units abbreviation) |
| **high_cloud** | Upper-level cloud (e.g., Cirrus) | (vertical coverage keyword) |
| **HIRDLS** | High-Resolution Dynamics Limb Sounder | |
| **HIRIS** | High Resolution Imaging Spectrometer | |
| **HIRS/2** | High Resolution Infrared Radiation Sounder - 2nd Generation | |
| **Hor** | Horizontal | (product name abbreviation) |
| **hr** | hour | (units abbreviation) |
| **Hz** | Hertz (1 cycle/s) | (units abbreviation) |
| **IC** | Instrument Calibration | (data product category) |
| **IERS** | International Earth Rotation Service | |
| **II** | Interdisciplinary Investigator | |
| **In_situ** | Spacecraft location (EOS platform) | (vertical coverage keyword) |
| **Instr** | Instrument | (product name abbreviation) |
| **Ionos** | Ionosphere | (vertical coverage keyword) |
| **IOSDL** | TBD | |
| **IPAR** | Incident PAR, Intercepted PAR | (product name abbreviation) |
| **IPEI** | Ionospheric Plasma and Electrodynamics Instrument | |
| **IU** | Instrument Utility | (data product category) |
| **JERS-1** | Japanese Eath Remote Sensing Satellite - 1 | |
| **JPDF** | Joint Probability Distribution Function | |
| **JPL** | Jet Propulsion Laboratory | |
| **K** | Kelvin (degrees of temperature) | (units abbreviation) |
| **keV** | kilo-electron volts (1000eV) | (units abbreviation) |
| **kg** | kilograms | (units abbreviation) |
| **km** | kilometer | (units abbreviation) |
| **kt** | kilotonP | (units abbreviation) |
| **l** | liter | (units abbreviation) |
| **Land** | Global land surface | (horizontal coverage keyword) |
| **LANDSAT** | Land Remote Sensing Satellite System | |
| **LaRC** | Langley Research Center | |
| **Lat** | Latitude | (product name abbreviation) |
| **lat** | latitude | (units abbreviation) |
| **LAWS** | Laser Atmospheric Wind Sounder | |
| **LB** | Land Biology (Terrestrial Biology) | (data product category) |
| **LC** | Land Chemistry (Geochemistry) | (data product category) |
| **LD** | Land Dynamics (Geodynamics) | (data product category) |
| **LH** | Land Hydrology | (data product category) |
| **LR** | Land Radiation | (data product category) |
| **Limb** | Limb sounding | (horizontal coverage keyword) |
| **LIMS** | Limb Infrared Monitor of the Stratosphere | |
| **Liq** | Liquid | (product name abbreviation) |
| **LIS** | Lightning Imaging Sensor | |
| **Local or L** | Local land or Oceanic sites | (horizontal coverage keyword) |
| **Local/6** | Six local sites | (horizontal coverage keyword) |
| **lon** | longitude | (units abbreviation) |
| **low_cloud** | Low-level cloud (e.g., Stratus) | (vertical coverage keyword) |
| **LW** | Longwave | (product name abbreviation) |
| **Ly** | Langley (insolation: calorie/$cm^2$) | (units abbreviation) |

| | | |
|---|---|---|
| **m** | meter | (units abbreviation) |
| **Max** | Maximum | (product name abbreviation) |
| **mb** | millibar | (units abbreviation) |
| **MeV** | mega-electron volts ($10^6$ eV) | (units abbreviation) |
| **mg** | milligrams | (units abbreviation) |
| **mg-X** | milligrams of substance X | (units abbreviation) |
| **MHS** | Microwave Humidity Sounder | |
| **Mid_atmos** | Upper troposphere to mesopause | (vertical coverage keyword) |
| **mid_cloud** | Mid-level cloud (e.g., AltoStratus) | (vertical coverage keyword) |
| **MIMR** | Multi-Frequency Imaging Microwave Radiometer | |
| **Min** | Minimum | (product name abbreviation) |
| **min** | minutes | (units abbreviation) |
| **MISR** | Multi-angle Imaging Spectro-Radiometer | |
| **mix** | mixing (in mixing ratio) | (units abbreviation) |
| **mixed_lyr** | ocean mixed layer | (vertical coverage keyword) |
| **MLS** | Microwave Limb Sounder/Spectrometer | |
| **mm** | millimeter | (units abbreviation) |
| **mmol** | millimoles | (units abbreviation) |
| **mo** | month | (units abbreviation) |
| **MODIS** | Moderate Resolution Imaging Spectroradiometer | |
| **mol-X** | moles of substance X | (units abbreviation) |
| **MOPITT** | Measurement of Pollution in the Troposphere | |
| **MOS-1** | Marine Observation Satellite (Japan) | |
| **MSFC** | Marshall Space Flight Center | |
| **MSR** | Microwave Scanning Radiometer | |
| **MSS** | Multispectral Scanner System | |
| **MST** | Mesospheric/Stratospheric/Tropospheric | |
| **MSU** | Microwave Sounding Unit | |
| **mW** | milliwatts | (units abbreviation) |
| **N** | Newtons ($kg/m/s^2$) | (units abbreviation) |
| **NASA** | National Aeronautics and Space Administration | |
| **NASDA** | National Space Development Agency (Japan) | |
| **NBIOME** | Northern Biospere Observation and Modeling Experiment | |
| **NCDC** | National Climatic Data Center, formerly NCC | |
| **NCDS** | NASA Climate Data System, formerly PCDS | |
| **Near_sfc** | Near surface layer (within boundary layer) | (vertical coverage keyword) |
| **NESDIS** | National Environmental Satellite Data and Information Service | |
| **NEXRAD** | Next Generation Radar | |
| **NHC/JTWC** | National Hurricane Center / Joint Thunderstorm Warning Center | |
| **NIR** | Near Infrared | (product name abbreviation) |
| **nm** | nanometer ($10^{-9}$ m) | (units abbreviation) |
| **NMC** | National Meteorological Center | |
| **no** | number | (units abbreviation) |
| **NOAA** | National Oceanographic and Atmospheric Administration | |
| **NOAA DBC** | NOAA Data Buoy Center | |
| **NOAA/WPL** | NOAA Wave Propagation Laboratory | |
| **NODC** | National Oceanographic Data Center | |
| **NODS** | NASA Ocean Data System | |
| **NPP** | Net Primary Production | (product name abbreviation) |
| **NSCAT** | NASA Scatterometer | |
| **NSF/DPP** | National Science Foundation / Polar Projects Division | |
| **NSIDC** | National Snow and Ice Data Center | |
| **NSSDC** | National Space Science Data Center | |

| | | |
|---|---|---|
| **NWS** | National Weather Service | |
| **o/oo** | thousandths | (units abbreviation) |
| **OC** | Ocean Chemistry | (oceans data product category) |
| **Ocean** | Global ocean | (horizontal coverage keyword) |
| **Ocean-I** | Ocean with Case I sediments | (horizontal coverage keyword) |
| **Ocean-II** | Ocean with Case II sediments | (horizontal coverage keyword) |
| **Ocean/Cryos** | Regions with sea-ice | (horizontal coverage keyword) |
| **OD** | Ocean Dynamics | (oceans data product category) |
| **OH** | Ocean Hydrology | (oceans data product category) |
| **OLR** | Outgoing Longwave Spectral Radiation | (product name abbreviation) |
| **OR** | Oceanic Radiation | (oceans data product category) |
| **PAN** | Peroxyacetyl Nitrate | (product name abbreviation) |
| **PAR** | Photosynthetically Active Radiation | (product name abbreviation) |
| **PBL** | Planetary Boundary Layer | (product name abbreviation) |
| **PBL** | planetary boundary layer | (vertical coverage keyword) |
| **PI** | Principal Investigator | |
| **PLDS** | Pilot Land Data System | |
| **Plume_col** | Vertical extent of volcanic eruption plume | (vertical coverage keyword) |
| **Plume_top** | Top of volcanic eruption plume | (vertical coverage keyword) |
| **POEMS** | Positron Electron Magnet Spectrometer | |
| **Polar** | Latitudes > 60°N & S | (horizontal coverage keyword) |
| **ppb** | parts per billion | (units abbreviation) |
| **ppm** | parts per million | (units abbreviation) |
| **ppt** | parts per trillion | (units abbreviation) |
| **Precip** | Precipitation | (product name abbreviation) |
| **PSC** | Polar Stratospheric Cloud | (product name abbreviation) |
| **RADARSAT** | Canadian Synthetic Aperture Radar Satellite | |
| **recog.** | recognition (in feature recognition) | (units abbreviation) |
| **Regional or R** | Regional Land or Oceanic areas | (horizontal coverage keyword) |
| **Rel** | Relative | (product name abbreviation) |
| **Res** | Resolution | (product name abbreviation) |
| **Res** | Research data to be used for research activities | |
| **s** | second | (units abbreviation) |
| **SAFIRE** | Spectroscopy of the Atmosphere Using Far Infrared Emission | |
| **SAGE** | Stratospheric Aerosol and Gas Experiment | |
| **SAM** | Stratospheric Aerosol Measurement | |
| **SAR** | Synthetic Aperture Radar | |
| **SASS** | Seasat–A Scatterometer System | |
| **SBUV** | Solar Backscatter Ultraviolet radiometer | |
| **SCATT** | Scatterometer | |
| **SE** | Space Electrodynamics | (space data product category) |
| **seas** | seasonal | (units abbreviation) |
| **SeaWiFS** | Sea-viewing Wide Field of View Sensor | |
| **Sel_basins** | Selected Basins | (horizontal coverage keyword) |
| **SESAME-IV** | Solid Earth Science and Application Mission for Europe | |
| **Sfc** | Surface | (product name abbreviation) |
| **Sfc** | Surface of ocean or land, regardless of topography | (vertical coverage keyword) |
| **SIR-C** | Spaceborne Imaging Radar-C | |
| **SIR–A, –B** | Shuttle Imaging Radar | |
| **SMMR** | Scanning Multichannel Microwave Radiometer | |
| **Snow** | Snow | (horizontal coverage keyword) |
| **SOLSTICE** | SOLar STellar Irradiance Comparison Experiment | |
| **SPOT** | System pour l'Observation de la Terre (France) | |
| **sr** | steradian (unit solid angle) | (units abbreviation) |

| | | |
|---|---|---|
| **SSM/I** | Special Sensor for Microwave Imaging | |
| **SST** | Sea Surface Temperature | (product name abbreviation) |
| **SSU** | Stratospheric Sounding Unit | |
| **STICKSCAT** | Stick Scatterometer | |
| **Strat** | Stratosphere | (product name abbreviation) |
| **Strat** | Stratosphere | (vertical coverage keyword) |
| **Sub_sfc** | Layers immediately beneath land surface | (vertical coverage keyword) |
| **SW** | Shortwave | (product name abbreviation) |
| **SWIRLS** | Stratospheric Wind Infrared Limb Sounder | |
| **t** | metric ton | (units abbreviation) |
| **TEC** | Total Electron Content | (product name abbreviation) |
| **TES** | Tropospheric Emission Spectrometer | |
| **Tesla** | mks unit of magnetic flux density (weber/$m^2$) | (units abbreviation) |
| **THIR** | Temperature Humidity Infrared Radiometer | |
| **TIR** | Thermal Infrared | (product name abbreviation) |
| **TM** | Thematic Mapper | |
| **TOA** | Top of Atmosphere | (product name abbreviation) |
| **TOA** | Top of atmosphere | (vertical coverage keyword) |
| **TOMS** | Total Ozone Mapping Spectrometer | |
| **TOO** | Top of ocean (oceanic mixed layer) | (vertical coverage keyword) |
| **TOPEX/POSEIDON** | Ocean Topography Experiment | |
| **TOVS** | TIROS Operational Vertical Sounder | |
| **TRACER** | Tropospheric Radiometer for Atmospheric Chemistry and Environmental Research | |
| **TRMM** | Tropical Rainfall Measurement Mission | |
| **Trop** | Troposphere | (product name abbreviation) |
| **Trop** | troposphere | (vertical coverage keyword) |
| **Tropic** | Zonal Band 30°N to 30°S | (horizontal coverage keyword) |
| **UARS** | Upper Atmosphere Research Satellite | |
| **UNESCO** | United Nations Economic and Social Commission for Asia and the Pacific | |
| **USDA** | United States Department of Agriculture | |
| **USGS** | United States Geological Survey | |
| **UV** | Ultraviolet | (product name abbreviation) |
| **UWA** | University of Washington | |
| **UWI** | University of Wisconsin | |
| **VAS** | VISSR Vertical Atmospheric Sounder | |
| **Ver** | Vertical | (product name abbreviation) |
| **VIS** | Visible | (product name abbreviation) |
| **VISSR** | Visible Infrared Spin-Scan Radiometer | |
| **VLBI** | Very Long Baseline Interferometry | |
| **vlc** | volcanic eruption | (accuracy field abbreviation) |
| **VO** | Volcanic Activity | (solid Earth data product category) |
| **W** | Watts ($kg/m^2/s^3$) | (units abbreviation) |
| **Wetlands** | Global wet lands | (horizontal coverage keyword) |
| **wk** | week | (units abbreviation) |
| **x** | volcanic eruption | (accuracy field abbreviation) |
| **XIE** | X-ray Imaging Experiment | |
| **yr** | year | (units abbreviation) |
| **zm** | zonal mean | (temporal resolution field abbreviation) |
| **μg** | micrograms | (units abbreviation) |
| **μm** | micron (micrometer: $10^{-6}$ m) | (units abbreviation) |

| | |
|---|---|
| **Prod Number** | Sequential reference number assigned to each data product for use in cross-referencing input/output data dependencies (i.e., designating the specific input products required to product each output product). The product number followed by asterisk (*) indicates that the data product is a post-launch data product. |
| **Product Name** | Data product name based on a common format, allowing the cross reference between data products from instrument teams and IDS investigators. |
| **Type** | Type of data product based on investigator (II, FI, PI), and whether the product is input or output (I,O). |
| **Investigator** | Name of responsible scientist. |
| **Instrument** | Name of instrument providing the measurement capability. |
| **Platform** | Name of platform on which an instrument is to fly (e.g., AERO for Aerosol Mission, ALT for Altimetry Satellite, AM for Morining Satellite, CHEM for Chemistry Satellite, MO for Satellite of Opportunity, PM for Afternoon Satellite, and TRM for TRMM). |
| **Source or DAAC** | Name of a data center where a data product is generated and archived. |
| **Units** | Scientific units of the data product in ISU (e.g. °K). Table A-1 lists units abbreviations. |
| **Accuracy** | The database contains both the anticipated absolute (ABS) accuracy of the data product and the relative (Rel) accuracy (or precision). |
| **Temporal Resolution** | 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). |
| **Horizontal Resolution** | Horizontal spatial resolution of each data product (e.g. 10 x 10km, 1° x 1° [latitude and longitude], 5° zonal mean). |
| **Horizontal Coverage** | Horizontal region over which the measurement is taken or the data product is to be produced (e.g. global, polar, ocean). Table A-4 lists the keyword definitions. |
| **Vertical Resolution** | Vertical spatial resolution of each data product or measurement (e.g., 1km, 100mb, column [for vertically integrated quantities], NA if not-applicable [surface, TOA properties]). |
| **Vertical Coverage** | Vertical region or zone over which measurements are taken or data products are to be produced (e.g. surface, surface to 10km, stratosphere). Table A-4 lists the keyword definitions. |
| **Data Volume** | Estimated daily data volume in GB/day. |
| **Time Frame** | Time when a data product is expected to be generated (e.g., AL for at-launch, PL for post-launch). |
| **Required Input Data** | EOS input data products needed to produce an output data product. |

## HORIZONTAL COVERAGE KEYWORD DEFINITIONS AND APPROXIMATE FRACTION OF GLOBAL COVERAGE

| Horizontal Coverage Keyword | Description | Global Coverage Fraction (percent) |
|---|---|---|
| Canada/R | Regional Canadian sites | — |
| Cryo | Cryosphere | 25% |
| Global | Global surface | 100% |
| Land | Global land surface | 20% |
| Land/Cryo | Land ice and snow regions | 10% |
| Land/L | Local land sites | — |
| Land/R | Regional land sites | — |
| Limb | Limb sounding | 100% |
| Local | Local sites | — |
| Local/6 | Six local sites | — |
| Ocean | Global ocean surface | 80% |
| Ocean/Cryo | Regions with sea-ice | 10% |
| 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/S,A | Southern & Eastern North Atlantic | — |
| Polar | Latitudes > 60°N & S | 10% |
| Regional | Regional areas | — |
| Tropic | Zonal Band 35°N to 35°S | 40% |
| Wetlands | Global wet lands | — |

## VERTICAL COVERAGE KEYWORD DEFINITIONS AND APPROXIMATE RANGE FOR VERTICAL COVERAGE

| Vertical Coverage Keyword | Descriptions | Vertical Coverage Approx Range |
|---|---|---|
| Atmos | Troposphere + stratosphere | Sfc to 30 km |
| Ex | Exosphere | 700 km |
| In_situ | Spacecraft location (EOS platform) | |
| 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 |

## MATCH TYPES FOR IDS INPUT REQUIREMENTS (BY INVESTIGATOR)

| Match Type | Description |
|---|---|
| **BM** | BM indicates that the specified instrument output data product was identified as a "Best Match" product for a particular IDS input requirement, meaning that the instrument product's accuracy, temporal resolution, horizontal resolution and coverage, and vertical resolution and coverage meets or very nearly meets the IDS requirement, and is a standard output product as opposed to a specialized product. |
| **AM** | AM indicates that the specified instrument output data product was identified as an "Alternate Match" product for a particular IDS input requirement, meaning that the instrument product does not sufficiently meet the italicized IDS product in terms of horizontal, vertical or temporal resolutions, horizontal or vertical coverage, or accuracy; and/or is not a standard output product.<br><br>NOTE: For IDS inputs listed by instrument, the AM designation used without a suffix indicates that another product from that particular EOS instrument is a "Best-Match" to the specified IDS input product. |
| - | The suffix "-" is used, in general with BM and AM, e.g., "BM-" or "AM-" to indicate that the instrument output product does not precisely satisfy the IDS input product requirement, but might be readily derivable from the given output product. For example, maps of Vegetation "Extent" can be derived from the appropriate maps of Vegetation "Index". |
| **AM $-** | The suffix "$-" is used with AM to indicate that the instrument output data product was identified as coming closest to the specified IDS input requirement; however, the match is considered to be relatively poor, or in other words, no real "best-match" or "alternative match" exists. |

## DATA PRODUCT CATEGORIES

### Geophysical Properties and Biosphere

| | | |
|---|---|---|
| **Atmospheres** | | |
| **AC** | Atmospheric Chemistry (& Composition) | Atmospheric Chemistry, Aerosol Properties |
| **AD** | Atmospheric Dynamics | Temperature, Winds, Surface Heat Budget |
| **AE** | Atmospheric Electricity | Lightning |
| **AH** | Atmospheric Hydrology | Precipitation, Water Content (Liquid, Vapor), Cloud Properties |
| **AR** | Atmospheric Radiation | Radiation Budget, Atmospheric Opacity, Optical Depth, Optical Thickness |
| **Land** | | |
| **LB** | Land Biology | Terrestrial Ecosystem Dynamics, Canopy, Vegetation Index, Biomass, Productivity, Land Use, Fires |
| **LC** | Land Chemistry | Composition, Mineralogy |
| **LD** | Land Dynamics | Temperature, Topography, DEM |
| **LH** | Land Hydrology | Soil Moisture, Snow/Ice, Lakes/Rivers, Runoff |
| **LR** | Land Radiation | Reflectance, BRDF, Albedo, Scattering Properties |
| **Oceans** | | |
| **OB** | Ocean Biology | Phytoplankton, Productivity, Marine Ecosystem |
| **OC** | Ocean Chemistry | Salinity, Particulates |
| **OD** | Ocean Dynamics | Surface Wind and Wind Stress, Ocean Currents, Waves, Sea Level, Temperature (Bulk Water) |
| **OH** | Ocean Hydrology | Sea Ice |
| **OR** | Oceanic Radiation | Attenuation, Water Leaving Radiances |
| **Volcanology** | | |
| **VO** | Volcanic Activity | Volcano Properties, Plume Dynamics |
| **Space** | | |
| **SE** | Space Electrodynamics | |

### Instrument Characterization

| | | |
|---|---|---|
| **IC** | Instrument Calibration | Calibration Products |
| **IU** | Instrument Utility | Utility Products, Cloud Masks |

# List of Major and Minor Product Group Names

Appendix B

Science Processing Support Office (SPSO)

Goddard Space Flight Center

August 1992

| *Product Group Name* | *MD Keyword* |
|---|---|
| **Acceleration** | *Winds* |
| Diffusive_Meridional | |
| Diffusive_Zonal | |
| **Aerosol** | *Aerosol* |
| Angstrom Exponent | |
| Backscatter | |
| Conc | |
| Stratospheric | |
| Tropospheric | |
| Dispersal, Eruption Plume | |
| Extinction | |
| Coef | |
| Layer Boundary Height | |
| Mass Loading | |
| Optical Depth | |
| Spectral | |
| Phase Function, Asymmetric | |
| Radiance | |
| Single_scattering | |
| Size-distribution | |
| **Albedo** | *Albedo* |
| Aerosol | |
| Cloud | |
| Land_sfc | |
| Planetary Spectral, TOA | |
| Sea_Ice | |
| Snow | |
| Spectral, Land_sfc | |
| TOA | |
| Total [SW] | |
| Vegetation | |
| **Anisotropy** | *Heat Flux* |
| LW_broadband | |
| Clear-sky | |
| Cloudy-sky | |
| **Bedrock Lithology** | *Lithology* |
| **Bowen Ratio** | *Humidity* |
| **Br (Bromine)** | *Trace-gases* |
| Conc | |
| BrO Conc | |
| BrO($Br^{81}O$) Conc | |
| $BrONO_2$ Conc | |
| $BrO_y$ Conc | |
| **C (Carbon)** | *Major Elements* |
| Budget, Global | |
| Conc, Dissolved_Organic | |
| Flux | |
| Global | |
| Cycle Diagnostic Data | |
| **$C_2H_6$** | *Trace-gases* |
| Conc | |
| **Calibration** | *???* |
| Data, MODIS | |
| Data Characteristics, MODIS | |
| **Camera Model** | *???* |
| Photogrammetric | |
| **$CBrClF_2$** | *Trace-gases* |
| Conc | |
| **$CCl_4$** | *Trace-gases* |
| Conc | |
| **CFCs** | *CFCs* |
| CFC-11($CFCl_3$) Conc | |
| CFC-113($C_2Cl_3F_3$) Conc | |
| CFC-114($C_2Cl_2F_4$) Conc | |
| CFC-115($C_2ClF_5$) Conc | |
| CFC-12($CF_2Cl_2$) Conc | |
| CFC-XXX (HCFCs) Conc | |
| CFC-XXX Conc | |
| CFClO Conc | |

| *Product Group Name* | *MD Keyword* |
|---|---|
| **$CH_3$** | *Trace-gases* |
| Conc | |
| $CH_3Br$ Conc | |
| $CH_3CCl_3$ Conc | |
| $CH_3Cl$ Conc | |
| $CH_3O$ Conc | |
| $CH_3O_2$ Conc | |
| $CH_3OOH$ Conc | |
| **$CH_4$ (Methane)** | *Methane* |
| Budget | |
| Conc | |
| Emission | |
| Flux | |
| Total Burden | |
| Uptake | |
| Uptake Time-derivative | |
| **Chemistry** | *Trace-gases* |
| Diagnostics, Seasonal | |
| **Chlorophyll** | *Chlorophyll* |
| Absorption Line Height | |
| Conc | |
| Fluorescence | |
| Fluorescence Efficiency | |
| Fluorescence Line Curv | |
| Fluorescence Line Height | |
| _a Conc | |
| Case-I Waters Phytoplankton | |
| Case-II Waters | |
| **CHO** | *Trace-gases* |
| Conc | |
| **Cl** | *Trace-gases* |
| Conc | |
| **Classification Masks** | *???* |
| Cloud | |
| Level 2 | |
| Level 3 | |
| Cloud/Land/Snow/Water | |
| Level 2 | |
| Level 3 | |
| **Climatology** | *???* |
| Diagnostic Data | |
| **ClOs** | *Trace-gases* |
| ClO Conc | |
| $ClONO_2$ Conc | |
| $ClO_y$ Conc | |
| **Cloud** | *Cloud* |
| Condensation Rate, Total | |
| Cover | |
| Cirrus | |
| Low-level | |
| Mid-level | |
| Distribution | |
| Drop Phase | |
| Drop Size(Effective Radius) | |
| Emissivity | |
| Field Area | |
| Field Organization scale | |
| Field Perimeter | |
| Field Size-distribution | |
| Field Structure | |
| Height | |
| Cirrus | |
| PSC | |
| Stratoform | |
| Base | |
| Cirrus | |
| Low-level | |
| Mid-level | |
| Top | |
| Cirrus | |

| *Product Group Name* | *MD Keyword* |
|---|---|
| Low-level | |
| Mid-level | |
| PSC | |
| Ice | |
| Content | |
| Index | |
| JPDF | |
| Liq_water | |
| Content | |
| Total Column (Cloud+Rain) | |
| Masking-shadowing | |
| Optical Depth (Thickness) | |
| Cirrus | |
| LW | |
| PSC | |
| SW | |
| Phase | |
| Pressure | |
| Top | |
| PSC | |
| Radiation | |
| Radiative Forcing | |
| LW | |
| Reflectance, Bi-directional (BRDF) | |
| Reflectivity, Spectral | |
| Spectral Characteristics | |
| Structure | |
| 3-D | |
| Cirrus | |
| Mesoscale | |
| Temperature | |
| Emission | |
| Top | |
| Thickness | |
| Transmissivity | |
| Spectral | |
| **CO** | *Trace-gases* |
| Conc | |
| Flux | |
| Total Burden | |
| **$CO_2$** | *Carbon Dioxide* |
| Conc | |
| Exchange | |
| Exchange Time-deriv | |
| Flux | |
| Partial Pressure | |
| Total Burden (Mixing Ratio) | |
| **Coccolith** | *Suspended Solids* |
| Backscatter Coef | |
| Conc, Detached | |
| **$COF_2$** | *Trace-gases* |
| Conc | |
| **Coral Reef Maps** | *???* |
| **COS** | *Trace-gases* |
| Conc | |
| Flux | |
| **Crustal Motion** | *???* |
| **$CS_2$** | *Trace-gases* |
| Conc | |
| **DMS** | *Trace-gases* |
| Conc | |
| Flux | |
| **Drainage** | *Rivers* |
| Basin Boundary | |
| Network Structure | |
| **Dust** | *Aerosol* |
| Composition | |
| Conc | |
| Size | |
| Source | |
| Spatial Distribution | |
| **Electric Field** | *Electric Field* |
| Electric Conductivity | |
| Potential Difference, DC, Ionosphere | |
| Potential Drop, DC, High-latitude | |
| Strength | |
| AC | |
| DC | |
| **Electron** | *Electron Flux* |
| Content, Total (TEC) | |
| Content-Difference, Total (TEC-difference) | |
| Energy Spectra | |
| **Energy Flux** | *Heat Flux* |
| Net | |
| **Erosion** | *Erosion* |
| Chemical Denudation | |
| Rock Weathering | |
| Sediment Yield | |
| **Eruption-Plume** | *Volcano* |
| Characteristics | |
| Dispersal | |
| Fallout Rate | |
| HCl Content (Mass Eruption Rate) | |
| Height | |
| $SO_2$ | |
| Content (Mass Eruption Rate) | |
| Conc Spike | |
| Eruption Rate, Mass | |
| Temperature | |
| **Evaporation** | *Evaporation* |
| Land_sfc | |
| **Fire** | *Fires* |
| Burning Index | |
| Class | |
| Count | |
| Extent | |
| Temperature | |
| **Fish-stock Abundance** | *???* |
| **Forest** | *Surface Vegetation* |
| Deforestration | |
| **Gelbstoff** | *Light Tranmission* |
| Absorption Coef | |
| @300nm | |
| @410nm | |
| **Geodetic** | *Geodesy* |
| Baselines | |
| Carrier Phase, GPS(L1,L2) | |
| EOS-platform Position | |
| Geocenter | |
| Location, Reference | |
| Orientation | |
| Pseudorange, GPS(L1,L2) | |
| Site Position | |
| Horizontal | |
| Vertical | |
| Site Velocity | |
| Post_seismic | |
| Relative | |
| Secular | |
| **Geometric** | *???* |
| Error | |
| MODIS Level 2 | |
| MODIS Level 3 | |
| **Geopotential** | *Geopotential/Gravity Field* |
| Gravity Field | |
| Height | |
| Gradient | |
| RMSE | |
| **Glacier** | *Glacier* |
| Cover | |

| *Product Group Name* | *MD Keyword* |
|---|---|
| Bare_Ice | |
| Displacement | |
| Percolation Zone | |
| Velocity | |
| **Glint** | *Albedo* |
| Field | |
| **Ground Control Points** | *???* |
| Potential | |
| **Ground Water** | *GroundWater* |
| Sum Routing | |
| **H (Hydrogen)** | *Trace-gases* |
| Conc | |
| **$H_2$** | *Trace-gases* |
| Conc | |
| **$H_2CO$** | *Trace-gases* |
| Conc | |
| **$H_2O$** | *Water Vapor* |
| ($H_2O^{17}$) Conc | |
| ($H_2O^{18}$) Conc | |
| (HDO) Conc | |
| Conc | |
| Stratospheric | |
| Tropospheric | |
| **$H_2O_2$** | *Trace-gases* |
| Conc | |
| **$H_2S$** | *Trace-gases* |
| Conc | |
| **Halons** | *Trace-gases* |
| Conc | |
| **HBr** | *Trace-gases* |
| Conc | |
| **HCl** | *Trace-gases* |
| Conc | |
| ($HCl^{35}$) Conc | |
| ($HCl^{37}$) Conc | |
| **HCN** | *Trace-gases* |
| Conc | |
| **Heat Flux** | *Heat Flux* |
| Convergence, Eddy | |
| Feedback | |
| Flux-Change Statistics | |
| Latent | |
| Sensible | |
| Horizontal | |
| Latent | |
| Net | |
| Rate, Latent | |
| Sensible | |
| Sfc | |
| Zonal_mean | |
| **Heat Transport** | *Heat Flux* |
| **Heating Rate** | *Heat Flux* |
| Convective | |
| Diffusive | |
| Latent | |
| LW_Radiative | |
| SW Radiative | |
| U-horizontal_Diffusive | |
| V-horizontal_Diffusive | |
| **Heating** | *Heat Flux* |
| Convective | |
| Diabatic | |
| Net | |
| Latent | |
| Sfc-stress | |
| North-South | |
| East-West | |
| **HF** | *Trace-gases* |
| Conc | |
| **HNOx Conc** | *Trace-gases/Nitric Acid* |
| $HNO_3$ Conc | |
| $HNO_4$ Conc | |
| **$HO_2$** | *Trace-gases* |
| Conc | |
| **HOCl** | *Trace-gases* |
| Conc | |
| **HOy** | *Trace-gases* |
| Conc | |
| **Humidity** | *Humidity* |
| Change, Specific, Convective_Adjusted | |
| Near_sfc | |
| Profile | |
| Microwave | |
| PBL | |
| Specific | |
| Relative, Near_sfc | |
| RMSE, Specific | |
| Specific | |
| Near_sfc | |
| Tendency | |
| **Hydrological Parameter** | *???* |
| **Ice Sheet** | *Ice* |
| Accumulation | |
| Boundary (Margin) | |
| Cover | |
| Index | |
| Displacement | |
| Elevation | |
| Mass balance | |
| Roughness | |
| Strain Rate | |
| Temperature | |
| Thickness | |
| Velocity | |
| Polar (Outflow) | |
| **Industrial_Emissions** | *Contaminants* |
| Conc | |
| **Infiltration** | *Infiltration* |
| Capacity | |
| **Inundation** | *Surface Water* |
| Depth | |
| Extent | |
| **Irradiance** | *Solar Radiation* |
| Incident, Sfc | |
| Lunar | |
| Solar | |
| Total | |
| UV | |
| Visible | |
| Total | |
| **Lake** | *Lakes/Volcano* |
| Extent | |
| Water Area | |
| Water Attenuation Coef | |
| Water Chemistry | |
| Water Chlorophyll Conc | |
| Water Temperature, Volcano Summit | |
| **Land Chemistry** | *Geo/bio-chemical Analysis* |
| Biochemical Analysis, Sfc | |
| Geochemical Analysis | |
| **Land Heat Capacity** | *Geothermal* |
| **Land Thermal inertia** | *Thermal Inertia* |
| **Landform** | *Landforms* |
| Distribution | |
| Face Freshness | |
| Feature Distribution | |
| Lineament /Slope Maps | |

| *Product Group Name* | *MD Keyword* |
|---|---|
| Morphology | |
| Scarp-fault Elevation | |
| Sfc units, Geologic | |
| Stratigraphy | |
| Structures(Relief/Lithology-Change) | |
| **Land Cover** | *???* |
| Material boundaries, Sfc | |
| Type | |
| Type-Change | |
| **Land_Crustal** | *Seismic* |
| Strain Rate | |
| **Land_sfc Emissivity** | *???* |
| Relative Spectral | |
| Spectral | |
| LW (8-12μm) | |
| SW (3-16μm) | |
| Microwave | |
| **Land_sfc Rebound** | *Terrain Elevation* |
| Post-Glacial | |
| **Land_sfc Reflectance** | *Albedo* |
| Bi-directional | |
| Spectral, (BRDF) | |
| SW_Broadband, (BRDF) | |
| BRDF | |
| AM-PM Asymmetry | |
| AM-PM Degree of Asymmetry | |
| Directional | |
| Reflectance Factor, MODIS | |
| Relative Spectral | |
| **Land_sfc Roughness** | *???* |
| Aerodynamic | |
| Geometric | |
| **Land_sfc Temperature** | *Temperature* |
| Anomalies | |
| Average | |
| Brightness Temperature | |
| Difference, Day-Night | |
| Skin | |
| Variability (&Extrema) | |
| **Lava-Flow** | *Volcano* |
| Advance Rate | |
| Areal Change | |
| Cooling Rate | |
| Eruption Rate, Mass | |
| Temperature | |
| Thickness | |
| **Level-1B Backscatter** | *Radiance/Albedo* |
| Coef | |
| ALT | |
| GLRS-A | |
| HIRIS | |
| SAR | |
| SAR_EOS | |
| STIKSCAT | |
| Waveforms, ALT | |
| **Level-1B Radiance** | *Radiance* |
| AIRS | |
| AMSU-A | |
| MHS | |
| ASTER | |
| CERES | |
| EOSP | |
| Polarization | |
| GGI | |
| HIRDLS | |
| HIRIS | |
| LIS | |
| MIMR | |
| MISR | |
| Mixture-Model, MODIS Spectral-spatial | |
| MLS | |
| MODIS | |
| MOPITT | |
| SAFIRE | |
| SAGE-III | |
| SOLSTICE | |
| TES | |
| **Level-2 Data Comparisons** | *???* |
| EOS Instrument | |
| **Level-2 Radiance** | *Radiance* |
| Atmos_corrected, EOSP | |
| Land_leaving | |
| Water-leaving | |
| **Lightning** | *???* |
| Intensity | |
| Occurrence | |
| Radiant Energy | |
| Rate | |
| **Lithosphere** | *Gravity Fields* |
| Gravity Field | |
| **Magnetic Field** | *Magnetic Field* |
| Strength, DC | |
| **Mineral** | *Economic Minerals* |
| Conc, Rock-Soil | |
| Flux, Geochemical | |
| Index | |
| Maps | |
| Thermal history | |
| $CO_3$ Relative Abundance | |
| Fe Relative Abundance | |
| OH Relative Abundance | |
| $SO_4$ Relative Abundance | |
| **Moistening** | *Water Vapor* |
| Convective | |
| Diffusive | |
| **Moisture** | *Water Vapor* |
| Budget | |
| Flux | |
| Horizontal | |
| Net | |
| Sfc | |
| Flux-Change Statistics , Net | |
| Transport | |
| Statistics | |
| **Momentum** | *???* |
| Angular | |
| Change Statistics | |
| Flux | |
| Transport | |
| **N (Nitrogen)** | *Nitrogen* |
| Conc | |
| **$N_2O$** | *Trace-gases* |
| Budget | |
| Conc | |
| Emission | |
| Time-deriv | |
| Total Burden | |
| **$N_2O_5$** | *Trace-gases* |
| Conc | |
| **$NH_3$** | *Trace-gases* |
| Conc | |
| **$NH_4$** | *Trace-gases* |
| Exchange | |
| Time-deriv | |
| **NMHC** | *Trace-gases* |
| Flux | |
| Time-deriv | |
| **NO** | *Trace-gases* |
| Conc | |

| *Product Group Name* | *MD Keyword* |
|---|---|
| **$NO_2$** | *Nitrogen Dioxide* |
| Conc | |
| **$NO_3$** | *Trace-gases* |
| Conc | |
| **$NO_x$** | *Trace-gases* |
| Conc | |
| Emission | |
| Time-deriv | |
| **$NO_y$** | *Trace-gases* |
| Budget | |
| Conc | |
| **O (Oxygen)** | *Oxygen* |
| O(1D) Conc | |
| O(3P) Conc | |
| $O_2$ Conc | |
| $O_2$(NU1) Conc | |
| **$O_3$ (Ozone)** | *Ozone* |
| Budget | |
| Conc | |
| SBUV-2_Corrected | |
| SBUV-2_Follow-on | |
| SBUV_Corrected | |
| $O_3(O^{17}OOO)$ Conc | |
| $O_3(O^{18}OOO)$ Conc | |
| $O_3$(NU2) Conc | |
| $O_3(O^{17}OO)$ Conc | |
| $O_3(O^{17}\_O)$ Conc | |
| $O_3(OO^{18})$ Conc | |
| $O_3(OO^{18}\_O)$ Conc | |
| $O_3(O^{18}\_OO)$ Conc | |
| $O_3O_3$(NU1,3) Conc | |
| Total Burden | |
| TOMS_Follow-on | |
| TOMS_Version-6 | |
| **Ocean Color/Temperature** | *Temperature* |
| Composite Maps | |
| **Ocean Crust Deformation** | *Geodesy* |
| **Ocean Current** | *Currents* |
| Angular Momentum | |
| Circulation, Large-scale | |
| Model, Eddy-Resolving | |
| Location | |
| Velocity | |
| Boundary | |
| Geostrophic | |
| Meridional | |
| Zonal | |
| **Ocean Eddy Kinetic Energy** | *???* |
| **Ocean Productivity** | *Biomass* |
| Primary | |
| Near sfc | |
| Total Column | |
| Variability | |
| **Ocean Tide** | *Ocean Tides* |
| Model | |
| **Ocean Water Attenuation** | *Light Transmission* |
| Coef | |
| Diffuse | |
| PAR | |
| @490nm | |
| @520nm, Beam | |
| **Ocean Water Backscatter** | *Light Transmission* |
| Coef | |
| Total | |
| @565nm | |
| Particulate | |
| **Ocean Water Salinity** | *Salinity* |
| Salt Flux | |
| Sub ice | |
| **Ocean Water Temperature** | *Temperature* |
| Internal | |
| Pattern | |
| **Ocean Water Turbidity** | *Light Transmission* |
| **Ocean Wave** | *Ocean Waves* |
| Direction | |
| Height | |
| Along-track | |
| Significant | |
| Length | |
| Power Spectrum, 2-D | |
| **OClO** | *Trace-gases* |
| Conc | |
| **OCS** | *Trace-gases* |
| Conc | |
| **OH** | *Trace-gases* |
| Conc | |
| **Oil_Slick** | *Pollutants* |
| Cover | |
| **Optical Depth** | *Light Transmission* |
| Total | |
| **Organic Matter** | *Organic Matter* |
| Conc | |
| Dissolved | |
| Particulate | |
| Degradation Product Absorption Coef@415nm (DOM + Detritus) | |
| Fluorescence Efficiency, Colored Dissolved | |
| Particulate | |
| **Oragraphy** | *Terrain Elevation* |
| Model | |
| **Ox** | *Oxygen* |
| Conc | |
| **PAN** | *Contaminants* |
| Conc | |
| **PAR** | *Solar Radiation* |
| Absorbed | |
| Non-vegetative, (APAR) | |
| Vegetative, (APAR) | |
| Incident / Intercepted (IPAR) | |
| Surface | |
| Surface Vegetation | |
| **PBL** | *Altitude* |
| Height | |
| Thickness | |
| **Permafrost** | *???* |
| Distribution | |
| Sensitivity | |
| **Phytoplankton** | *Phytoplankton* |
| Backscatter | |
| Coef | |
| Biomass | |
| Species Composition | |
| Type | |
| **Pigment Conc** | *Pigment Concentration* |
| Accessory | |
| Non-photosynthetic | |
| Phycoerythrin | |
| Phytoplankton | |
| **Planetary Wave** | *Winds* |
| Structure | |
| **Precipitable Water** | *Water Vapor* |
| Microwave | |
| **Precipitation** | *Precipitation* |
| Amount | |
| Average | |
| Convective | |
| Large-scale_stable | |
| Rain | |

| *Product Group Name* | *MD Keyword* |
|---|---|
| Snow | |
| Convective | |
| Large-scale_Stable | |
| Depth | |
| Drop Phase, Sfc | |
| Ice Conc | |
| Index | |
| Antecedent | |
| Microwave | |
| Rate | |
| Rain | |
| Snow | |
| Sampling statistics, Rain | |
| Storm Depth (Precip-thickness) | |
| Variability(&Extrema) | |
| **Pressure** | *Pressure* |
| RMSE, Sfc | |
| Sfc | |
| Tendency, Sfc | |
| Tropopause | |
| **Proton** | *Proton Flux* |
| Energy Spectra | |
| **Radar Backscatter** | *Light Transmission* |
| Coef | |
| **Radiance** | *Radiance* |
| At-Satellite, MODIS Level 2 | |
| Cloud Cleared | |
| Error, MODIS Level 2 | |
| Lunar Reference, MODIS Level 1 | |
| Solar Diffuser, MODIS Level 1 | |
| Total | |
| **Radiation** | *Radiance/Solar Radiation* |
| Budget | |
| Intensity | |
| IR | |
| UV | |
| Visible | |
| **Radiative Flux** | *Heat Flux* |
| Broadband | |
| Down | |
| Change Statistics | |
| LW | |
| Solar | |
| Convergence | |
| Divergence | |
| Clear-sky | |
| Cloudy_sky | |
| LW | |
| SW | |
| LW | |
| Spectral | |
| Average_Net | |
| Clear-sky | |
| Down | |
| Net | |
| Up | |
| TOA | |
| Up | |
| Net | |
| Down | |
| Sea_sfc | |
| Solar | |
| Ave-absorbed | |
| Net_Down | |
| Sfc Clear-sky | |
| TOA Clear-sky | |
| SW | |
| Down | |
| Net | |
| Down | |
| TOA | |
| Up | |
| **River** | *Rivers* |
| Channel Geometry | |
| Major-stream | |
| Channel Patterns | |
| Discharge | |
| Extent | |
| Floodplain Extent | |
| Ice Cover | |
| Stage (Flooding) | |
| Water Attenuation Coef | |
| Water Chemistry | |
| Water Chlorophyll Conc | |
| **Runoff** | *Runoff* |
| Soil Moisture | |
| Chemistry | |
| Contributing-area | |
| **Sand** | *Soil* |
| Depth | |
| **Sea_Ice** | *Sea Ice* |
| Age | |
| Albedo | |
| Area | |
| Conc | |
| First-year | |
| GCM | |
| Multi-year | |
| Cover | |
| Open water | |
| Duration, Ice-free_Season | |
| Edge | |
| Emissivity | |
| Extent | |
| Fraction | |
| Open-water | |
| New (First Year) | |
| Meltpond | |
| Leads | |
| Max Extent | |
| Motion | |
| Regional | |
| Roughness | |
| Size Distribution | |
| Temperature | |
| Thickness | |
| **Sea Level Height** | *Sea Sfc Height* |
| Along-track | |
| Change | |
| Statistics | |
| Variability, RMSE | |
| **Sea_sfc Feature** | *Waves* |
| Position | |
| Velocity | |
| Occurence Statistics | |
| Gradient-Changes Statistics | |
| **Sea_sfc Height** | *Sea Surface Height* |
| **Sea_sfc Reflectance** | *Albedo* |
| Factor, MODIS | |
| **Sea_sfc State** | *Waves* |
| **Sea_sfc Temperature (SST)** | *Temperature* |
| Brightness Temperature | |
| Change Statistics | |
| Statistics | |
| **Sea_sfc Topographic Height** | *Topographic Data* |
| **Sediment** | *Sedimentation* |
| Conc | |
| C Constituent Flux | |
| N Constituent Flux | |
| P Constituent Flux | |

| *Product Group Name* | *MD Keyword* |
|---|---|
| **Snow** | *Snow* |
| Area | |
| Chemistry | |
| Contaminant Conc | |
| Cover | |
| Index | |
| Cold | |
| Wet | |
| Depth | |
| Extent | |
| Grain Size | |
| Ice Content | |
| Liq-water Content | |
| Mass | |
| Melt | |
| Area, Distributed | |
| Chemistry | |
| Reflectance, Spectral | |
| State | |
| Temperature, Sfc | |
| Water Equivalent | |
| **$SO_2$** | *Trace-gases* |
| Conc | |
| **Soil** | *Soil* |
| Brightness Index | |
| Bulk Density | |
| Chemistry | |
| Class | |
| Color Index | |
| Composition | |
| Extent | |
| Hydraulic Conditions, Unsaturated | |
| Hydraulic Properties | |
| Index | |
| Maps, Level-4 [Class,Comp,Age,etc.] | |
| Mineral Type | |
| Moisture | |
| N Turnover | |
| Time-deriv | |
| Proportion, Bare | |
| Reflectance, Bi-directional, (BRDF) | |
| Roughness | |
| Spectral-characteristics | |
| Temperature | |
| **Stability** | *???* |
| Lifted Index | |
| **Stratopause** | *Altitude* |
| Height | |
| Structure-Location, Significant Mappable | |
| **Surface Water** | *Surface Water* |
| Area | |
| Content (Soil Moisture+Lakes+Rivers) | |
| Saturated Area | |
| **Suspended-Solid** | *Suspended Solids* |
| Conc | |
| Lake Water | |
| Ocean Water | |
| River Water | |
| **Temperature** | *Temperature* |
| Change, Convective_Adjustment | |
| Dry-bulb | |
| Near_sfc | |
| PBL | |
| Tropopause | |
| Near_sfc | |
| PBL | |
| Profile | |
| Microwave | |
| RMSE | |
| Stratospheric | |
| Tendency | |
| Tropospheric | |
| **Texture** | *???* |
| MODIS Level 2 | |
| MODIS Level 3 | |
| **Topographic Elevation** | *Topographic Data* |
| Land_sfc | |
| DEM | |
| Change Rate | |
| Slope (Azimuth) | |
| Sea_sfc | |
| **Torque** | *???* |
| Friction | |
| Mountain | |
| Ocean-Land | |
| **Trace Gas** | *Trace-gases* |
| Conc | |
| Non-diurnally-varying | |
| Total Burden | |
| Greenhouse | |
| Transfer Coef | |
| Transport Diagnostics | |
| **Tropopause** | *Altitude* |
| Height | |
| Aerosol_located | |
| Cirrus_located | |
| **Vegetation** | *Surface Vegetation* |
| Biomass | |
| Above_sfc | |
| Dead | |
| Green | |
| Sub_sfc | |
| Biome Area | |
| Cellulose Conc | |
| Change | |
| Chlorophyll Conc | |
| Class(Type) | |
| Condition | |
| Cover | |
| Crown | |
| Height | |
| Spacing | |
| Density | |
| Evapotrans | |
| Time-deriv, Annual | |
| Actual, (AET) | |
| Potential | |
| Extent | |
| Growing_Season Duration | |
| Height | |
| Index | |
| Composited, Sfc | |
| Hemispherical, Sfc | |
| Integrated Annual | |
| LAI | |
| Normalized | |
| Polarization | |
| Self_Atmospheric-Correcting | |
| Temporal Signal | |
| Index-Directional Reflectances | |
| Atmosphere Corrected (O3 and mol.scatt.) | |
| Leaf Water Content | |
| Leaf-tissue Water Content | |
| Lignin Conc | |
| Litter Biomass | |
| Moisture, Root-zone | |
| N Conc | |
| Phenologic State | |
| Physiography | |
| Phytomass | |
| Production | |
| Net Ecosystem, (NEP) | |

| *Product Group Name* | *MD Keyword* |
|---|---|
| Net Primary, (NPP) | |
| Net Primary, Time-deriv (dNPP/dt) | |
| Productivity | |
| Primary | |
| Reflectance | |
| Factor | |
| Bi-directional, (BRDF) | |
| Rooting Depth | |
| Roughness | |
| Spatial Density | |
| State | |
| Stomatal Resistance | |
| Stress | |
| Index, Water | |
| Structure | |
| Succession | |
| Temperature | |
| Type | |
| Boundaries | |
| Water Content | |
| Integrated | |
| Water Potential | |
| **Vertical Motion** | *Winds* |
| Omega | |
| **Volcano** | *Volcano* |
| Activity | |
| Extent | |
| Temperature | |
| Age | |
| Cone Deformation | |
| Deformation | |
| Elevation | |
| Change | |
| Reference | |
| Emissions, Eruption | |
| Morphology | |
| Roughness | |
| Temperature | |
| Eruption Spike | |
| Change | |
| Volume-Change | |
| **Vorticity** | *Winds* |
| Potential | |
| **Wetland** | *Surface Water* |
| Extent | |
| **Wind** | *Winds* |
| Direction | |
| Flux (Draw) | |
| Friction Velocity | |
| Geostrophic | |
| Speed | |
| Along-track | |
| Land_sfc | |
| Meridional | |
| PBL | |
| RMSE | |
| Mean_Meridional | |
| Mean_Zonal | |
| Sea_sfc | |
| Zonal | |
| Stress | |
| Meridional | |
| Sea Sfc | |
| Zonal | |
| Trajectories | |
| Tendency | |
| U (zonal) | |
| V (meridional) | |
| Velocity | |
| 3-D | |
| Divergent Horizontal | |
| Friction | |
| Geostrophic | |
| Land_sfc | |
| Line of Sight | |
| Prevailing | |
| Rotational, Horizontal | |
| Sea_sfc | |
| Sea_sfc Glint-Pattern | |
| Tropospheric 3-D | |
| **X-Ray** | *X-ray* |
| Energy Spectra | |
| Images | |

# Output/Input Data Products
# Listed by
# Product Number
# (Master Product List)

Appendix C

**Science Processing Support Office (SPSO)**

**Goddard Space Flight Center**

**August 1992**

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1001 | Aerosol Optical Depth | I :: II | Hansen | | | | | tau=0.02 :: | 1/wk | 500 km :: G | :: Trop |
| 1002 | Aerosol Optical Depth | I :: II | Hartmann | | | | | tau=0.02 :: | 1/day | 20 km :: G | 3 km :: 0-15 km |
| 1003 | Aerosol XXX | I :: II | Pyle | | | | | | 2/day | :: G | :: Strat |
| 1004 | Aerosol XXX | I :: II | Sellers | | | | | | | | |
| 1005 | Aerosol XXX | I :: II | Bates | | | | /m/sr | | 1/(1-3 day) [few day] | 100 km :: G | 1 km :: Atmos |
| 1006 | Aerosol Conc | I :: II | Grose | | | | no/cm^3 | 20% :: 10% | 2/day | 15 x 4 dg :: G | 2 km :: Strat |
| 1007 | Aerosol Conc | I :: II | Kerr, Sorooshian | | | | type,amount | 5% :: 5% | 1/day | 25 km :: Land | 3 km :: Atmos |
| 1008 | Aerosol Conc | I :: II | Moore | | | | mg/cm^3 | 50% :: | 1/(2 day) | 1 km :: G | |
| 1009 | Aerosol Conc | I :: II | Moore | | | | mg/cm^3 | 50% :: | 1/(2 day) | 30 m :: L | |
| 1010 | Aerosol Conc | I :: II | Schoeberl | | | | no/cm^3 | 10% :: 5% | 1/day | 200 km :: G | 1 km :: Strat |
| 1012 | *Aerosol Extinction Coef* | O :: PI | McCormick | SAGE-III | AERO,CHEM | LaRC | /km | 5% :: 5% | 1/(2 min), 30/day | <2 x <1 dg :: G | 1 km :: 0-40 km |
| 1013 | Aerosol Layer Boundary Height | I :: II | Bates | | | | m | 75 m :: | | 2-200 km :: G | 75 m :: Atmos |
| 1014 | *Aerosol Layer Boundary Height* | O :: FI | Spinhirne et al | GLRS-A | ALT | GSFC | m | 150 m :: | 1/(2-16 day) | 2-200 km :: G | 75 m :: Atmos |
| 1015 | Aerosol Layer Boundary Height | I :: II | Isacks | | | | m | 75 m :: | 1/event, 1/mo | 2 km :: Land/R | 75 m :: Atmos |
| 1016 | Aerosol Mass Loading | I :: II | Isacks | | | | g/m^2 | 30% :: 10% | 1/wk | 1-10 km :: Land/R | N/A :: Atmos |
| 1017 | *Aerosol Mass Loading* | O :: FI | Kaufman, Tanre | MODIS | AM,PM | GSFC | g/m^2 | 30% :: 10% | 1/day,1/mo | 0.5 dg :: G,R | N/A :: Atmos |
| 1019 | Aerosol Size-distribution | I :: II | Bates | | | | dimensionless | :: 20% | 1/(5-16 day) | 15.4 km :: G | Column :: Atmos |
| 1020 | Aerosol Size-distribution | I :: II | Hartmann | | | | um | 20% :: 20% | 1/day | 20 km :: G | N/A :: 0-15 km |
| 1021 | Aerosol Size-distribution | I :: II | Schoeberl | | | | no/cm^3/um | 10% :: 5% | 1/day | 200 km :: G | 1 km :: Strat |
| 1022 | *Aerosol Size-distribution (Radius-* | O :: FI | Tanre, Kaufman | MODIS | AM,PM | GSFC | um, dimensionless | 10-30% :: 10% | 1/day,1/mo | 0.5 dg :: G,R | N/A :: Atmos |
| 1024 | Aerosol Size-distribution | I :: II | Isacks | | | | | :: 20% | 1/wk | 2-15 km :: | Column :: Atmos |
| 1025 | Br Conc | O :: II | Schoeberl | | | | ppt | 20% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1026 | BrO Conc | I :: II | Grose | | | | mix ratio | 20% :: 15% | 1/wk | 30 x 4 dg :: G | 3 km :: Strat |
| 1027 | BrO Conc | I :: II | Pyle | | | | mix ratio (-log10) | 25% :: 10% | 2/day | 15 x 4 km :: G | 3 km :: Strat |
| 1028 | BrO Conc | I :: II | Schoeberl | | | | ppt | 20% :: 1 | 1/wk | 8 x 10 dg :: G | 2 km :: Strat |
| 1029 | BrO Conc | O :: II | Schoeberl | | | | ppt | 20% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1030 | BrO(Br^81-O) Conc | O :: PI | Waters | MLS | MO | GSFC | mix ratio | :: 1x10-12 | 1/mo. [z. mean] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: 15-50 km |
| 1031 | BrONO2 Conc | I :: II | Pyle | | | | mix ratio (-log10) | 25% :: 10% | 2/day | 15 x 4 km :: G | 3 km :: Strat |
| 1032 | BrONO2 Conc | O :: II | Schoeberl | | | | ppt | 20% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1033 | BrOy Conc | O :: II | Pyle | | | | | | | | |
| 1034 | CFC-114(C2Cl2F4) Conc | O :: II | Schoeberl | | | | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1035 | CFC-113(C2Cl3F3) Conc | O :: II | Schoeberl | | | | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1036 | CFC-115(C2ClF5) Conc | O :: II | Schoeberl | | | | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1037 | C2H6 Conc | I :: II | Schoeberl | | | | ppb | 20% :: 0.2 | 1/wk | 8 x 10 dg :: G | 3 km :: Strat |
| 1038 | CBrClF2 Conc | O :: II | Schoeberl | | | | ppt | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1039 | CCl4 Conc | O :: II | Schoeberl | | | | ppt | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1041 | CCl4 Conc | O :: II | Schoeberl | | | | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1042 | CFC-12(CF2Cl2) Conc | I :: II | Grose | | | | mix ratio | 15% :: 5% | 1/wk | 30 x 4 dg :: G | 3 km :: Strat |
| 1043 | CFC-12(CF2Cl2) Conc | I :: II | Pyle | | | | mix ratio (-log10) | 15% :: 5% | 2/day | 15 x 4 km :: G | 3 km :: Strat |
| 1044 | CFC-12(CF2Cl2) Conc | I :: II | Schoeberl | | | | ppb | 15% :: 10 | 1/day | 2 x 3 dg :: G | 1.5 km :: Strat |
| 1045 | CFC-12(CF2Cl2) Conc | O :: II | Schoeberl | | | | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1046 | CFC-12(CF2Cl2) Conc | O :: II | Schoeberl | | | | ppb | 15% :: | (1-4)/day | 2 x 3 dg :: G | 2 km :: Atmos |
| 1047 | *CFC-12(CF2Cl2) Conc* | O :: PI | Barnett, Gille | HIRDLS | CHEM | GSFC | mix ratio | 5-10% :: 1-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 7-30 km |
| 1050 | CFC-11(CFCl3) Conc | I :: II | Grose | | | | mix ratio | 15% :: 5% | 1/wk | 30 x 4 dg :: G | 3 km :: Strat |
| 1051 | CFC-11(CFCl3) Conc | I :: II | Pyle | | | | mix ratio (-log10) | 15% :: 5% | 2/day | 15 x 4 km :: G | 3 km :: Strat |
| 1052 | CFC-11(CFCl3) Conc | I :: II | Schoeberl | | | | ppt | 15% :: 10 | 1/day | 2 x 3 dg :: G | 1.5 km :: Strat |
| 1053 | CFC-11(CFCl3) Conc | O :: II | Schoeberl | | | | ppb | 15% :: | (1-4)/day | 2 x 3 dg :: G | 2 km :: Atmos |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1054 | CFC-11(CFCl3) Conc | O :: II | Schoeberl | | | | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1055 | *CFC-11(CFCl3) Conc* | O :: PI | Barnett, Gille | HIRDLS | CHEM | GSFC | mix ratio | 5-10% :: 1-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 7-30 km |
| 1056 | CFClO Conc | O :: II | Schoeberl | | | | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1057 | CFC-XXX Conc | I :: II | Hansen | | | | mix ratio | | 1/wk | 500 km :: G | :: Trop |
| 1058 | CFC-XXX Conc | O :: II | Pyle | | | | | | | | |
| 1059 | H2CO Conc | O :: II | Schoeberl | | | | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1060 | CH3 Conc | O :: II | Schoeberl | | | | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1061 | CH3Br Conc | I :: II | Pyle | | | | mix ratio (-log10) | 25% :: 10% | 2/day | 15 x 4 km :: G | 3 km :: Strat |
| 1062 | CH3Br Conc | I :: II | Schoeberl | | | | ppt | 20% :: 2 | 1/wk | 8 x 10 dg :: G | 3 km :: Strat |
| 1063 | CH3Br Conc | O :: II | Schoeberl | | | | ppt | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1064 | CH3CCl3 Conc | O :: II | Schoeberl | | | | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1065 | CH3Cl Conc | I :: II | Grose | | | | mix ratio | 15% :: 5% | 1/wk | 30 x 4 dg :: G | 3 km :: Strat |
| 1066 | CH3Cl Conc | I :: II | Pyle | | | | mix ratio (-log10) | 15% :: 5% | 2/day | 15 x 4 km :: G | 3 km :: Strat |
| 1067 | CH3Cl Conc | I :: II | Schoeberl | | | | ppt | 15% :: 20 | 1/wk | 8 x 10 dg :: G | 3 km :: Strat |
| 1068 | CH3Cl Conc | O :: II | Grose | | | | mix ratio | | 1/mo | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| 1069 | CH3Cl Conc | O :: II | Schoeberl | | | | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1070 | CH3Cl Conc | O :: PI | Waters | MLS | MO | GSFC | mix ratio | :: 1x10-11 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: TPSE, 40 km |
| 1071 | CH3O Conc | O :: II | Schoeberl | | | | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1072 | CH3O2 Conc | O :: II | Schoeberl | | | | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1073 | CH3OOH Conc | O :: II | Schoeberl | | | | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1074 | CH4 Conc | I :: II | Grose | | | | mix ratio | 15% :: 5% | 2/day | 30 x 4 dg :: G | 3 km :: Mid-atmos |
| 1075 | CH4 Conc | I :: II | Hansen | | | | mix ratio | 0.10% :: | 1/wk | 500 km :: Wetlands | :: Trop |
| 1076 | CH4 Conc | I :: II | Hansen | | | | mix ratio | | 1/wk | 500 km :: G | :: Trop |
| 1077 | CH4 Conc | I :: II | Pyle | | | | mix ratio (-log10) | 10% :: 5% | 2/day | 15 x 4 km :: G | 3 km :: Strat |
| 1078 | CH4 Conc | I :: II | Schoeberl | | | | ppm | 15% :: 0.05 | 1/day | 2 x 3 dg :: G | 1.5 km :: Strat |
| 1080 | CH4 Conc | O :: II | Grose | | | | mix ratio | | 1/mo | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| 1081 | CH4 Conc | O :: II | Pyle | | | | | | | | |
| 1082 | CH4 Conc | O :: II | Schoeberl | | | | ppm | 15% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1083 | CH4 Conc | O :: II | Schoeberl | | | | ppm | 10% :: 10% | 1/(3 mo) | 6 regions :: R | 1 km :: 0-15 km |
| 1084 | CH4 Conc | O :: II | Schoeberl | | | | ppm | 15% :: | (1-4)/day | 2 x 3 dg :: G | 2 km :: Atmos |
| 1085 | *CH4 Conc* | O :: PI | Barnett, Gille | HIRDLS | CHEM | GSFC | mix ratio | 5-10% :: 1-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 7-65 km |
| 1086 | CH4 Conc | O :: PI | Russell | SAFIRE | MO | GSFC | ppmv | :: 7% (15-55km) | 1/(18-72 s) [?] | 25 x 1-5 dg :: 86S-86N | 1.5 km :: 10-65 km |
| 1087 | *CH4 Conc* | O :: PI | Beer | TES | CHEM | LaRC | ppb | :: 14 ppb | 1/(16 day) | 16 x 5 km :: G | 4-6 km :: 0-12 km |
| 1088 | *CH4 Conc* | O :: PI | Beer | TES | CHEM | LaRC | ppb | :: 30 ppb | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 13-30 km |
| 1089 | *CH4 Conc* | O :: PI | Beer | TES | CHEM | LaRC | ppb | :: 40 ppb | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 4-12 km |
| 1090 | CH4 Budget | O :: II | Grose | | | | | | 1/mo | ~6 x 6 dg :: G | |
| 1091 | CH4 Emission | O :: II | Moore | | | | g/ha/timestep | 30%? :: 5-10%? | 1/mo | 1 km :: Land | :: Sfc |
| 1092 | CH4 Emission | O :: II | Moore | | | | g/ha/timestep | 30%? :: 5-10%? | 1/mo | .030-1 km :: Land/R,L | :: Sfc |
| 1093 | CH4 Flux | O :: II | Richey, Batista | | | | g/ha/day | 20% :: 20% | 1/day | 1 km :: Land/R | :: Sfc |
| 1094 | CH4 Flux | O :: II | Richey, Batista | | | | g/ha/day | 20% :: 20% | 1/day | 1 km :: Land/R | |
| 1095 | *CH4 Total Burden* | O :: FI | Chedin, Revercomb, Strow | AIRS | PM | GSFC | ppb, dimensionless | 50 - 175 ppb, 2% :: 30 - 150 ppb, TBD | 1/day [n] - 2/day [d,n] | 50 - 250 km :: G | Column :: Atmos |
| 1096 | *CH4 Total Burden* | O :: PI | Drummond | MOPITT | AM1 | LaRC | ppbv | :: 1% | 1/(12 s) [?] | 120 km :: G | Column :: Atmos |
| 1098 | CH4 Uptake | O :: II | Schimel | | | | g/ha/mo | 30% :: 5% | 1/seas | [multiple] :: 6 sites/L | :: Sfc |
| 1099 | CH4 Uptake | O :: II | Schimel | | | | g/ha/mo | 30% :: 1% | 1/seas | 30 m :: 6 sites/L | :: Sfc |
| 1100 | CH4 Uptake Time-derivative | O :: II | Schimel | | | | g/ha/mo^2 | 30% :: 1% | 1/seas | [multiple] :: 6 sites/L | :: Sfc |
| 1101 | CHO Conc | O :: II | Schoeberl | | | | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1102 | Cl Conc | O :: II | Schoeberl | | | | ppb | 20% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1103 | ClO Conc | I :: II | Grose | | | | mix ratio | 20% :: 10% | 2/day | 30 x 4 dg :: G | 3 km :: Mid-atmos |
| 1104 | ClO Conc | I :: II | Pyle | | | | mix ratio (-log10) | 15% :: 5% | 2/day | 15 x 4 km :: G | 3 km :: Strat |
| 1105 | ClO Conc | I :: II | Schoeberl | | | | ppb | 10% :: 0.02 | 1/day | 8 x 10 dg :: G | 3 km :: Strat |
| 1106 | ClO Conc | O :: II | Schoeberl | | | | ppb | 20% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1107 | ClO Conc | O :: PI | Waters | MLS | MO | GSFC | mix ratio | <=5% :: 0.3-3x10-10 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: TPSE, 70 km |
| 1108 | ClONO2 Conc | I :: II | Grose | | | | mix ratio | 20% :: 10% | 2/day | 30 x 4 dg :: G | 3 km :: Strat |
| 1109 | ClONO2 Conc | I :: II | Pyle | | | | mix ratio (-log10) | 25% :: 10% | 2/day | 15 x 4 km :: G | 3 km :: Strat |
| 1110 | ClONO2 Conc | I :: II | Schoeberl | | | | ppb | 15% :: 0.05 | 1/day | 8 x 10 dg :: G | 3 km :: Strat |
| 1111 | ClONO2 Conc | O :: II | Schoeberl | | | | ppb | 20% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1112 | ClOy Conc | O :: II | Grose | | | | mix ratio | | 1/mo | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| 1113 | ClOy Conc | O :: II | Grose | | | | mix ratio | | 1/mo | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| 1114 | ClOy Conc | O :: II | Grose | | | | mix ratio | | 48/day [for 10 day] | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| 1115 | ClOy Conc | O :: II | Pyle | | | | | | | | |
| 1116 | CO Conc | I :: II | Grose | | | | mix ratio | 15% :: 5% | 2/day | 30 x 4 dg :: G | 3 km :: Mid-atmos |
| 1117 | CO Conc | I :: II | Hansen | | | | mix ratio | 0.10% :: | 1/wk | 500 km :: | :: Trop |
| 1118 | CO Conc | I :: II | Moore | | | | ppmv | 25% :: 10% | 1/day | 100 km :: G | :: Trop |
| 1119 | CO Conc | I :: II | Pyle | | | | mix ratio (-log10) | 15% :: 5% | 2/day | 15 x 4 km :: G | 2 km :: Strat |
| 1120 | CO Conc | I :: II | Schoeberl | | | | ppb | 15% :: 5 | 1/day | 2 x 3 dg :: G | 2 km :: Trop |
| 1121 | CO Conc | I :: II | Schoeberl | | | | ppb | 15% :: 5 | 1/day | 8 x 10 dg :: G | 3 km :: Mid-atmos |
| 1123 | CO Conc | O :: II | Schoeberl | | | | ppb | 20% :: | 1/(3 mo) | 6 regions :: R | 1 km :: 0-15 km |
| 1124 | CO Conc | O :: PI | Waters | MLS | MO | GSFC | mix ratio | <=5% :: 3x10-8 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: TPSE, 60 km |
| 1125 | CO Conc | O :: PI | Waters | MLS | MO | GSFC | mix ratio | <=5% :: 1x10-5 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: 60-100 km |
| 1126 | *CO Conc* | O :: PI | Drummond | MOPITT | AM1 | LaRC | ppb | :: 10% | 1/(0.4 s) [?] | 22 km :: G | 3-4 km :: 0-15 km |
| 1127 | *CO Conc* | O :: PI | Beer | TES | CHEM | LaRC | ppb | :: 10 ppb | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 13-30 km |
| 1128 | *CO Conc* | O :: PI | Beer | TES | CHEM | LaRC | ppb | :: 15 ppb | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 4-12 km |
| 1129 | *CO Conc* | O :: PI | Beer | TES | CHEM | LaRC | ppb | :: 3 ppb | 1/(16 day) | 16 x 5 km :: G | 4-6 km :: 0-12 km |
| 1134 | CO Flux | O :: II | Brewer | | | | mol-CO/m^2/s | 30% :: 20% | 1/day | 20 km :: Ocean | N/A :: Sfc |
| 1135 | CO Flux | O :: II | Brewer | | | | mol-CO/m^2/s | 30% :: 20% | 1/day | 30 m :: Ocean/L | N/A :: Sfc |
| 1136 | *CO Total Burden* | O :: FI | Revercomb, Strow | AIRS | PM | GSFC | ppb | 10 - 20 :: 6 - 15 | 2/day [d,n] | 50 - 250 km :: G | Column :: Atmos |
| 1137 | *CO Total Burden* | O :: PI | Drummond | MOPITT | AM1 | LaRC | ppb | :: 10% | 1/(4 s) [?] | 66 km :: G [dy] | Column :: Atmos |
| 1138 | CO2 Conc | I :: II | Grose | | | | mix ratio | 1% :: 0.5% | 1/mo | ZM :: G | 10 km :: Mid-atmos |
| 1139 | CO2 Conc | I :: II | Hansen | | | | mix ratio | 0.2 ppm :: | 1/wk | 500 km :: G | :: Trop |
| 1140 | CO2 Conc | I :: II | Kerr, Sorooshian | | | | ppm | 15% :: 15% | 1/day | 50 km :: G | 1 km :: Atmos |
| 1141 | CO2 Conc | I :: II | Sellers | | | | | | | | |
| 1143 | CO2 Exchange | O :: II | Moore | | | | various | | | Mult :: Land/R | |
| 1144 | CO2 Exchange | O :: II | Moore | | | | various | | | Mult :: Land | |
| 1145 | CO2 Exchange | O :: II | Schimel | | | | g/ha/hr | 25% :: 1% | 1/day | Mult :: 6 sites/L | :: Sfc |
| 1146 | CO2 Exchange Time-deriv | O :: II | Schimel | | | | g/ha/hr^2 | 25% :: 1% | 1/day | Mult :: 6 sites/L | :: Sfc |
| 1147 | CO2 Flux | O :: II | Richey, Batista | | | | kg/ha/hr | 20% :: 20% | 1/day | 1 km :: Land/R | :: Sfc |
| 1148 | CO2 Flux | O :: II | Brewer | | | | mol-CO2/m^2/s | | 1/day | 30 m :: Ocean/L | N/A :: TOO |
| 1149 | CO2 Flux | O :: II | Brewer | | | | mol-CO2/m^2/s | | 1/day | 20 km :: Ocean | N/A :: TOO |
| 1150 | CO2 Flux | O :: II | Sellers | | | | mmol/m^2/s | | 1/hr | 1 dg :: | |
| 1151 | CO2 Total Burden (Mixing Ratio) | O :: FI | Revercomb | AIRS | PM | GSFC | ppm | 25 :: 20 | 2/day [d,n] | 50 km :: G | Column :: Atmos |
| 1152 | COF2 Conc | O :: II | Schoeberl | | | | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1153 | COF2 Conc | O :: II | Brewer | | | | mix ratio | 30% :: 20% | 1/day | :: L | :: PBL |
| 1154 | COS Conc | O :: II | Brewer | | | | mix ratio | 30% :: 20% | 1/day | :: G | :: PBL |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1155 | COS Flux | O :: II | Richey, Batista | | | | kg/ha/hr | 20% :: 20% | 1/day | 1 km :: Land/R | |
| 1156 | CS2 Conc | O :: II | Brewer | | | | mix ratio | 30% :: 20% | 1/day | :: G | :: PBL |
| 1157 | CS2 Conc | O :: II | Brewer | | | | mix ratio | 30% :: 20% | 1/day | :: L | :: PBL |
| 1158 | DMS Conc | I :: II | Schoeberl | | | | ppb | 20% :: 0.1 | 1/wk | 8 x 10 dg :: G | 3 km :: Trop |
| 1159 | DMS Conc | O :: II | Brewer | | | | mix ratio | 30% :: 20% | 1/day | :: L | :: PBL |
| 1160 | DMS Conc | O :: II | Brewer | | | | mix ratio | 30% :: 20% | 1/day | :: G | :: PBL |
| 1161 | DMS Flux | O :: II | Brewer | | | | mol/m^2/s | 30% :: 20% | 1/day | 20 km :: Ocean | N/A :: Sfc |
| 1162 | DMS Flux | O :: II | Brewer | | | | mol/m^2/s | 30% :: 20% | 1/day | 30 m :: Ocean/L | N/A :: Sfc |
| 1163 | H Conc | O :: II | Schoeberl | | | | ppb | 30% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1164 | H2 Conc | O :: II | Schoeberl | | | | ppm | 15% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1165 | H2CO Conc | O :: PI | Waters | MLS | MO | GSFC | mix ratio | :: 2x10-11 | 1/day [z. mean] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 30-50 km |
| 1166 | H2O2 Conc | I :: II | Grose | | | | mix ratio | 25% :: 10% | 2/day | 30 x 10 dg :: G | 3 km :: Strat |
| 1167 | H2O2 Conc | I :: II | Pyle | | | | mix ratio (-log10) | 20% :: 10% | 2/day | 15 x 4 km :: G | 3 km :: Strat |
| 1168 | H2O2 Conc | I :: II | Schoeberl | | | | ppb | 20% :: .1t,.05s | 1/wk | 8 x 10 dg :: G | 2 km :: Strat |
| 1169 | H2O2 Conc | O :: II | Schoeberl | | | | ppb | 30% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1170 | H2O2 Conc | O :: II | Schoeberl | | | | ppb | 30% :: | 1/(3 mo) | 6 regions :: R | 1 km :: 0-15 km |
| 1171 | H2O2 Conc | O :: PI | Waters | MLS | MO | GSFC | mix ratio | :: 1x10-10 | 1/day [z. mean] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: 30-40 km |
| 1172 | H2O2 Conc | O :: PI | Russell | SAFIRE | MO | GSFC | ppbv | :: 7% (30-35 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-50 km |
| 1173 | H2S Conc | O :: II | Brewer | | | | mix ratio | 30% :: 20% | 1/day | :: L | :: PBL |
| 1174 | H2S Conc | O :: II | Brewer | | | | mix ratio | 30% :: 20% | 1/day | :: G | :: PBL |
| 1175 | Halons Conc | O :: II | Pyle | | | | | | | | |
| 1176 | HBr Conc | I :: II | Grose | | | | mix ratio | 25% :: 10% | 1/day | 30 x 4 dg :: G | 3 km :: Strat |
| 1177 | HBr Conc | I :: II | Pyle | | | | mix ratio (-log10) | 25% :: 10% | 2/day | 15 x 4 km :: G | 3 km :: Strat |
| 1178 | HBr Conc | I :: II | Schoeberl | | | | ppt | 20% :: 1 | 1/wk | 8 x 10 dg :: G | 3 km :: Strat |
| 1179 | HBr Conc | O :: II | Schoeberl | | | | ppt | 20% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1180 | HBr Conc | O :: PI | Russell | SAFIRE | MO | GSFC | ppbv | :: 10% (25-35 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 15-40 km |
| 1181 | CFC-XXX (HCFCs) Conc | O :: II | Pyle | | | | | | | | |
| 1182 | HCl Conc | I :: II | Grose | | | | mix ratio | 15% :: 10% | 1/day | 30 x 4 dg :: G | 3 km :: Mid-atmos |
| 1183 | HCl Conc | I :: II | Pyle | | | | mix ratio (-log10) | 15% :: 5% | 2/day | 15 x 4 km :: G | 3 km :: Strat |
| 1184 | HCl Conc | I :: II | Schoeberl | | | | ppb | 15% :: 0.1 | 1/day | 4 x 5 dg :: G | 2 km :: Strat |
| 1185 | HCl Conc | O :: II | Grose | | | | mix ratio | | 1/seas | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| 1186 | HCl Conc | O :: II | Schoeberl | | | | ppb | 20% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1187 | HCl Conc | O :: PI | Russell | SAFIRE | MO | GSFC | ppbv | :: 5% (25-55 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 10-65 km |
| 1188 | HCl(H_Cl^35) Conc | O :: PI | Waters | MLS | MO | GSFC | mix ratio | <=5% :: 0.1-10x10-10 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: TPSE, 90 km |
| 1189 | HCl(H_Cl^37) Conc | O :: PI | Waters | MLS | MO | GSFC | mix ratio | <=5% :: 0.1-10x10-10 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: TPSE, 80 km |
| 1190 | HCN Conc | I :: II | Schoeberl | | | | ppb | 20% :: 0.01 | 1/wk | 8 x 10 dg :: G | 3 km :: Strat |
| 1191 | HCN Conc | O :: PI | Waters | MLS | MO | GSFC | mix ratio | <=5% :: 4x10-11 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: 20-65 km |
| 1192 | HCN Conc | O :: PI | Russell | SAFIRE | MO | GSFC | ppbv | :: 35% (25-30 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 25-35 km |
| 1193 | HF Conc | I :: II | Grose | | | | mix ratio | 25% :: 10% | 1/day | 30 x 4 dg :: G | 3 km :: Strat |
| 1194 | HF Conc | I :: II | Pyle | | | | mix ratio (-log10) | 15% :: 5% | 2/day | 15 x 4 km :: G | 3 km :: Strat |
| 1195 | HF Conc | I :: II | Schoeberl | | | | ppb | 15% :: 0.05 | 1/day | 4 x 5 dg :: G | 2 km :: Strat |
| 1196 | HF Conc | O :: II | Schoeberl | | | | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1197 | HF Conc | O :: PI | Russell | SAFIRE | MO | GSFC | ppbv | :: 15% (40-60 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 40-60 km |
| 1198 | HNO3 Conc | I :: II | Grose | | | | mix ratio | 20% :: 5% | 2/day | 30 x 10 dg :: G | 3 km :: Mid-atmos |
| 1199 | HNO3 Conc | I :: II | Pyle | | | | mix ratio (-log10) | 15% :: 5% | 2/day | 15 x 4 km :: G | 3 km :: Strat |
| 1200 | HNO3 Conc | I :: II | Schoeberl | | | | ppb | 15% :: 0.1 | 1/day | 2 x 3 dg :: G | 2 km :: Strat |
| 1201 | HNO3 Conc | O :: II | Schoeberl | | | | ppm | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1202 | *HNO3 Conc* | O :: PI | Barnett, Gille | HIRDLS | CHEM | GSFC | mix ratio | 5-10% :: 1-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 10-40 km |
| 1203 | HNO3 Conc | O :: PI | Waters | MLS | MO | GSFC | mix ratio | <=5% :: 5x10-10 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: TPSE, 46 km |
| 1204 | HNO3 Conc | O :: PI | Russell | SAFIRE | MO | GSFC | ppbv | :: 7% (15-40 km) | 1/(18-72 s) [?] | 25 x 1-5 dg :: 86S-86N | 1.5 km :: 10-45 km |
| 1205 | HNO3 Conc | O :: PI | Beer | TES | CHEM | LaRC | ppt | :: 3 ppt | 1/(16 day) | 160 x 23 km :: G | 2.3 km :: 4-12 km |
| 1206 | HNO3 Conc | O :: PI | Beer | TES | CHEM | LaRC | ppt | :: 3 ppt | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 13-30 km |
| 1207 | HNO4 Conc | I :: II | Grose | | | | mix ratio | 50% :: 10% | 2/day | 30 x 4 dg :: G | 3 km :: Mid-atmos |
| 1208 | HNO4 Conc | I :: II | Schoeberl | | | | ppb | 20% :: 0.02 | 1/wk | 8 x 10 dg :: G | 3 km :: Strat |
| 1209 | HNO4 Conc | O :: II | Schoeberl | | | | ppm | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1210 | HNOx Conc | I :: II | Pyle | | | | mix ratio (-log10) | 25% :: 10% | 2/day | 15 x 4 km :: G | 3 km :: Strat |
| 1211 | OH Conc | I :: II | Pyle | | | | mix ratio (-log10) | 20% :: 10% | 2/day | 15 x 4 km :: G | 2 km :: Strat |
| 1212 | HO2 Conc | I :: II | Grose | | | | mix ratio | 25% :: 10% | 2/day | 30 x 10 dg :: G | 3 km :: Mid-atmos |
| 1213 | HO2 Conc | I :: II | Pyle | | | | mix ratio (-log10) | 25% :: 10% | 2/day | 15 x 4 km :: G | 3 km :: Strat |
| 1214 | HO2 Conc | I :: II | Schoeberl | | | | ppb | 15% :: 0.02 | 1/day [d] | 6 x 8 dg :: G | 2 km :: Strat |
| 1215 | HO2 Conc | O :: II | Schoeberl | | | | ppb | 30% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1216 | HO2 Conc | O :: PI | Waters | MLS | MO | GSFC | mix ratio | :: 3-20x10-10 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: 30-80 km |
| 1217 | HO2 Conc | O :: PI | Russell | SAFIRE | MO | GSFC | ppbv | :: 7% (30-60 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-75 km |
| 1218 | HOCl Conc | I :: II | Grose | | | | mix ratio | 20% :: 10% | 2/day | 30 x 4 dg :: G | 3 km :: Strat |
| 1219 | HOCl Conc | I :: II | Pyle | | | | mix ratio (-log10) | 25% :: 10% | 2/day | 15 x 4 km :: G | 3 km :: Strat |
| 1220 | HOCl Conc | I :: II | Schoeberl | | | | ppb | 20% :: 0.02 | 1/wk | 8 x 10 dg :: G | 3 km :: Strat |
| 1221 | HOCl Conc | O :: II | Schoeberl | | | | ppb | 20% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1222 | HOCl Conc | O :: PI | Waters | MLS | MO | GSFC | mix ratio | :: 3x10-11 | 1/day | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: 25-45 km |
| 1223 | HOCl Conc | O :: PI | Russell | SAFIRE | MO | GSFC | ppbv | :: 7% (35-40 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-45 km |
| 1224 | HOy Conc | O :: II | Grose | | | | | | 1/mo | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| 1225 | HOy Conc | O :: II | Grose | | | | mix ratio | | 1/mo | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| 1226 | HOy Conc | O :: II | Grose | | | | mix ratio | | 48/day [for 10 day] | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| 1227 | HOy Conc | O :: II | Pyle | | | | | | | | |
| 1228 | N Conc | O :: II | Schoeberl | | | | ppm | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1229 | N2O Conc | I :: II | Grose | | | | mix ratio | 15% :: 5% | 1/day | 30 x 4 dg :: G | 3 km :: Mid-atmos |
| 1230 | N2O Conc | I :: II | Hansen | | | | mix ratio | | 1/wk | 500 km :: G | :: Trop |
| 1231 | N2O Conc | I :: II | Pyle | | | | mix ratio (-log10) | 15% :: 5% | 2/day | 15 x 4 km :: G | 3 km :: Strat |
| 1232 | N2O Conc | I :: II | Schoeberl | | | | ppb | 15% :: 10 | 1/day | 2 x 3 dg :: G | 2 km :: Strat |
| 1234 | N2O Conc | O :: II | Grose | | | | mix ratio | | 1/mo | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| 1235 | N2O Conc | O :: II | Grose | | | | mix ratio | | 1/mo | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| 1236 | N2O Conc | O :: II | Pyle | | | | | | | | |
| 1237 | N2O Conc | O :: II | Schoeberl | | | | ppb | 15% :: | (1-4)/day | 2 x 3 dg :: G | 2 km :: Atmos |
| 1238 | N2O Conc | O :: II | Schoeberl | | | | ppb | 25% :: 10% | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1239 | *N2O Conc* | O :: PI | Barnett, Gille | HIRDLS | CHEM | GSFC | mix ratio | 5-10% :: 1-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 7-60 km |
| 1240 | N2O Conc | O :: PI | Waters | MLS | MO | GSFC | mix ratio | <=5% :: 1-10x10-8 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | .5 km [1.2] :: TPSE, 65 km |
| 1241 | N2O Conc | O :: PI | Russell | SAFIRE | MO | GSFC | ppmv | :: 15% (20-35 km) | 1/(18-72 s) [?] | 25 x 1-5 dg :: 86S-86N | 1.5 km :: 20-40 km |
| 1243 | N2O Conc | O :: PI | Beer | TES | CHEM | LaRC | ppt | :: 10 ppt | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 13-30 km |
| 1244 | N2O Budget | O :: II | Grose | | | | | | 1/mo | ~6 x 6 dg :: G | |
| 1245 | N2O Emission | O :: II | Moore | | | | g/ha/mo | 30% :: 5-10% | 1/mo, 1/yr | .030-1 km :: Land/L,R | |
| 1246 | N2O Emission | O :: II | Moore | | | | g/ha/mo | 30% :: 5-10% | 1/mo, 1/yr | 1 km :: Land | |
| 1247 | N2O Emission | O :: II | Schimel | | | | g/ha/mo | 25% :: 1% | 1/seas | [multiple] :: 6 sites/L | :: Sfc |
| 1248 | N2O Emission Time-deriv | O :: II | Schimel | | | | g/ha/mo^2 | 50% :: 1% | 1/seas | [multiple] :: 6 sites/L | :: Sfc |
| 1249 | *N2O Total Burden* | O :: FI | Revercomb, Strow | AIRS | PM | GSFC | ppb | 20 - 40 :: 15 - 30 | 2/day [d,n] | Zonal_ave :: G | Column :: Atmos |
| 1250 | N2O5 Conc | I :: II | Grose | | | | mix ratio | 20% :: 10% | 2/day | 30 x 4 dg :: G | 3 km :: Mid-atmos |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1251 | N2O5 Conc | I :: II | Pyle | | | | mix ratio (-log10) | 20% :: 10% | 2/day | 15 x 4 km :: G | 3 km :: Strat |
| 1252 | N2O5 Conc | I :: II | Schoeberl | | | | ppb | 15% :: 20% | 1/day | 8 x 10 dg :: G | 3 km :: Strat |
| 1253 | N2O5 Conc | O :: II | Schoeberl | | | | ppm | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1254 | *N2O5 Conc* | O :: PI | Barnett, Gille | HIRDLS | CHEM | GSFC | mix ratio | 5-10% :: 1-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 15-45 km |
| 1255 | N2O5 Conc | O :: PI | Russell | SAFIRE | MO | GSFC | ppbv | :: 10% (20-40 km) | 1/(18-72 s) [?] | 25 x 1-5 dg :: 86S-86N | 1.5-3 km :: 10-45 km |
| 1256 | *NH3 Conc* | O :: PI | Beer | TES | CHEM | LaRC | ppt | :: 300 ppt | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 4-12 km |
| 1257 | NH4 Exchange | O :: II | Schimel | | | | g/ha/mo | 25% :: 1% | 1/seas | [multiple] :: 6 sites/L | :: Sfc |
| 1258 | NH4 Exchange Time-deriv | O :: II | Schimel | | | | g/ha/mo^2 | 25% :: 1% | 1/seas | [multiple] :: 6 sites/L | :: Sfc |
| 1259 | NMHC Flux | O :: II | Schimel | | | | g/ha/mo | 50% :: 5% | 1/seas | [multiple] :: 6 sites/L | :: Sfc |
| 1260 | NMHC Flux | O :: II | Schimel | | | | g/ha/mo | 50% :: 1% | 1/seas | 30 m :: 6 sites/L | :: Sfc |
| 1261 | NMHC Flux Time-deriv | O :: II | Schimel | | | | g/ha/mo^2 | 50% :: 1% | 1/seas | 30 m :: 6 sites/L | :: Sfc |
| 1262 | NO Conc | I :: II | Grose | | | | mix ratio | 15% :: 5% | 2/day | 30 x 4 dg :: G | 3 km :: Mid-atmos |
| 1263 | NO Conc | I :: II | Pyle | | | | mix ratio (-log10) | 15% :: 5% | 2/day | 15 x 4 km :: G | 3 km :: Strat |
| 1264 | NO Conc | I :: II | Schoeberl | | | | ppb | 15% :: .2s,1.0m | 1/day [d] | 4 x 5 dg :: G | 2 km :: Mid-atmos |
| 1265 | NO Conc | O :: II | Schoeberl | | | | ppm | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1266 | NO Conc | O :: PI | Waters | MLS | MO | GSFC | mix ratio | :: .1-10x10-7 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 30-120 km |
| 1267 | *NO Conc* | O :: PI | Beer | TES | CHEM | LaRC | ppt | :: 15 ppt | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 4-12 km |
| 1268 | *NO Conc* | O :: PI | Beer | TES | CHEM | LaRC | ppt | :: 25 ppt | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 13-30 km |
| 1269 | NO2 Conc | I :: II | Grose | | | | mix ratio | 15% :: 5% | 2/day | 30 x 4 dg :: G | 3 km :: Mid-atmos |
| 1270 | NO2 Conc | I :: II | Pyle | | | | mix ratio (-log10) | 15% :: 5% | 2/day | 15 x 4 km :: G | 3 km :: Strat |
| 1271 | NO2 Conc | I :: II | Schoeberl | | | | ppb | 10% :: | 1/day | 4 x 5 dg :: G | 2 km :: Mid-atmos |
| 1272 | NO2 Conc | O :: II | Schoeberl | | | | ppm | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1273 | *NO2 Conc* | O :: PI | Barnett, Gille | HIRDLS | CHEM | GSFC | mix ratio | 5-10% :: 3-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 10-55 km |
| 1274 | NO2 Conc | O :: PI | Waters | MLS | MO | GSFC | mix ratio | :: 1-8x10-8 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 30-60 km |
| 1275 | NO2 Conc | O :: PI | Russell | SAFIRE | MO | GSFC | ppbv | :: 5% (20-55 km) | 1/(18-72 s) [?] | 25 x 1-5 dg :: 86S-86N | 1.5 km :: 15-60 km |
| 1276 | *NO2 Conc* | O :: PI | McCormick | SAGE-III | AERO,CHEM | LaRC | /cm^3&ppbv | 10% :: 10% | 1/(2 min), 30/day | <2 x <1 dg :: Polar | 1 km :: 10-50 km |
| 1277 | *NO2 Conc* | O :: PI | McCormick | SAGE-III | AERO,CHEM | LaRC | /cm^3&ppbv | 10% :: 15% | 1/(2 min), 30/day | <2 x <1 dg :: G | 1 km :: 20-50 km |
| 1278 | *NO2 Conc* | O :: PI | Beer | TES | CHEM | LaRC | ppt | :: 500 ppt | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 4-12 km |
| 1279 | NO3 Conc | I :: II | Grose | | | | mix ratio | 20% :: 10% | 1/day [n] | 30 x 4 dg :: G | 3 km :: Mid-atmos |
| 1280 | NO3 Conc | I :: II | Pyle | | | | mix ratio (-log10) | 25% :: 10% | 1/day [n] | 15 x 4 km :: G | 3 km :: Strat |
| 1281 | NO3 Conc | O :: II | Schoeberl | | | | ppm | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1282 | NO3 Conc | O :: PI | McCormick | SAGE-III | AERO,CHEM | LaRC | /cm^3&ppbv | 10% :: 10% | 1/(2 min), 30/day | <2 x <1 dg :: G | 1 km :: 20-55 km |
| 1283 | NOx Conc | O :: II | Schoeberl | | | | ppt | 30% :: | 1/(3 mo) | 6 regions :: R | 1 km :: 0-15 km |
| 1284 | NOx Emission | O :: II | Schimel | | | | g/ha/mo | 25% :: 1% | 1/seas | 30 m :: 6 sites/L | :: Sfc |
| 1285 | NOx Emission | O :: II | Schimel | | | | g/ha/mo | 25% :: 5% | 1/seas | [multiple] :: 6 sites/L | :: Sfc |
| 1286 | NOx Emission Time-deriv | O :: II | Schimel | | | | g/ha/mo^2 | 25% :: 1% | 1/seas | 30 m :: 6 sites/L | :: Sfc |
| 1287 | NOy Conc | O :: II | Grose | | | | | | 1/mo | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| 1288 | NOy Conc | O :: II | Grose | | | | mix ratio | | 1/mo | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| 1289 | NOy Conc | O :: II | Grose | | | | mix ratio | | 48/day [for 10 day] | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| 1290 | NOy Conc | O :: II | Pyle | | | | | | | | |
| 1291 | NOy Budget | O :: II | Grose | | | | | | 1/mo | ~6 x 6 dg :: G | |
| 1292 | NOy Conc | O :: II | Grose | | | | mix ratio | | 1/mo | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| 1293 | O(1D) Conc | O :: II | Schoeberl | | | | ppm | 20% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1294 | O(3P) Conc | I :: II | Grose | | | | mix ratio | 30% :: 10% | 1/wk | 30 x 4 dg :: G | 3 km :: Mid-atmos |
| 1295 | O(3P) Conc | I :: II | Pyle | | | | mix ratio (-log10) | 15% :: 5% | 1/wk | 15 x 4 km :: G | 2 km :: Strat |
| 1296 | O(3P) Conc | I :: II | Schoeberl | | | | ppb | 15% :: 10% | 1/wk [d] | 8 x 10 dg :: G | 3 km :: Strat |
| 1297 | O(3P) Conc | O :: II | Schoeberl | | | | ppm | 20% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1298 | O(3P) Conc | O :: PI | Russell | SAFIRE | MO | GSFC | % | :: 15%(110-180 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 90-180 km |
| 1299 | O2 Conc | O :: PI | Waters | MLS | MO | GSFC | | <=5% :: 1% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 5 km [6.5] :: TPSE, 120 k |
| 1300 | O2 Conc | O :: PI | Russell | SAFIRE | MO | GSFC | % | :: <2%(10-65 km) | 1/(36-72 s) [?] | 25 x 1-5 dg :: 86S-86N | 3 km :: 10-80 km |
| 1301 | *Pressure* | O :: PI | McCormick | SAGE-III | AERO,CHEM | LaRC | /cm^3 | 2% :: 2% | 1/(2 min), 30/day (Lun.) | <2 x <1 dg :: G | 1 km :: 6-55 km |
| 1302 | *Pressure* | O :: PI | McCormick | SAGE-III | AERO,CHEM | LaRC | /cm^3 | 2% :: 2% | 1/(2 min), 30/day (Sol.) | <2 x <1 dg :: G | 1 km :: 6-70 km |
| 1303 | O2(NU1) Conc | O :: PI | Waters | MLS | MO | GSFC | | :: 10% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [6.5] :: 20-80 km |
| 1304 | O3(OO^18) Conc | O :: PI | Waters | MLS | MO | GSFC | | :: 10% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 30-80 km |
| 1305 | O3 Conc | I :: II | Bates | | | | | 5-10% :: 1-5% | 2/day | 4 x 4 dg :: G | 1-1.5 km :: 10-80 km |
| 1306 | O3 Conc | I :: II | Grose | | | | mix ratio | 2%,5% :: 2% | 2/day | 30 x 4 dg :: G | 3 km :: Mid-atmos |
| 1307 | O3 Conc | I :: II | Hansen | | | | mix ratio | 3% :: | 1/wk | 500 km :: G | :: Atmos |
| 1308 | O3 Total Burden | I :: II | Kerr, Sorooshian | | | | ppm | 5% :: 5% | 1/day | 25 km :: G | Column :: Atmos |
| 1309 | O3 Conc | I :: II | Moore | | | | ppmv | 25% :: 10% | 1/day | 100 km :: G | :: Atmos |
| 1310 | O3 Conc | I :: II | Murakami | | | | ppmv (mix ratio) | 10% :: | | | N/A :: TOA |
| 1311 | O3 Conc | I :: II | Pyle | | | | mix ratio (-log10) | 5% :: 2% | 2/day | 15 x 4 km :: G | 3 km :: Strat |
| 1312 | O3 Conc | I :: II | Schoeberl | | | | ppm | 10% :: 10% | 1/day | 4 x 5 dg :: G | 2.5 km :: Trop |
| 1313 | O3 Conc | I :: II | Schoeberl | | | | ppm | 10% :: 5% | 1/day | 2 x 3 dg :: G | 1.5 km :: Mid-atmos |
| 1315 | O3 Conc | O :: II | Schoeberl | | | | ppm | 20% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1316 | O3 Conc | O :: II | Schoeberl | | | | ppm | 10% :: 10% | (1-4)/day | 2 x 3 dg :: G | 2 km :: Atmos |
| 1317 | O3 Conc | O :: II | Schoeberl | | | | ppb | 20% :: | 1/(3 mo) | 6 regions :: R | 1 km :: 0-15 km |
| 1318 | *O3 Conc* | O :: PI | Barnett, Gille | HIRDLS | CHEM | GSFC | mix ratio | 5-10% :: 1-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 7-80 km |
| 1319 | O3 Conc | O :: PI | Waters | MLS | MO | GSFC | | <= 3% :: 1%(<50km) | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 5 km [1.2] :: TPSE, 110 k |
| 1320 | O3 Conc | O :: PI | Russell | SAFIRE | MO | GSFC | ppmv | :: 5% (10-70 km) | 1/(18-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 1.5-3 km :: 10-100 km |
| 1321 | *O3 Conc* | O :: PI | McCormick | SAGE-III | AERO,CHEM | LaRC | /cm^3&ppmv | 6% :: 5 % | 1/(2 min), 30/day | <2 x <1 dg :: Polar | 1 km :: 6-85 km |
| 1323 | *O3 Conc* | O :: PI | Beer | TES | CHEM | LaRC | ppb | :: 20 ppb | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 13-30 km |
| 1324 | *O3 Conc* | O :: PI | Beer | TES | CHEM | LaRC | ppb | :: 3 ppb | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 4-12 km |
| 1325 | *O3 Conc* | O :: PI | Beer | TES | CHEM | LaRC | ppb | :: 13 ppb | 1/(16 day) | 16 x 5 km :: G | 4-6 km :: 0-12 km |
| 1326 | O3O3(NU1,3) Conc | O :: PI | Waters | MLS | MO | GSFC | | :: 50% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 20-60 km |
| 1327 | O3O3(NU1,3) Conc | O :: PI | Russell | SAFIRE | MO | GSFC | ppbv | :: 15% (20-30 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-35 km |
| 1328 | O3 Conc | O :: PI | Waters | MLS | MO | GSFC | | :: 10% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | .5 km [1.2] :: TPSE, 70 k |
| 1329 | O3(NU2) Conc | O :: PI | Russell | SAFIRE | MO | GSFC | ppbv | :: 10% (20-40 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-50 km |
| 1330 | O3 Budget | O :: II | Grose | | | | | | 1/mo | ~6 x 6 dg :: G | |
| 1331 | O3 Conc | I :: II | Murakami | | | | /m^3 | 5-10% :: 2-10% | | | |
| 1332 | *O3 Total Burden* | O :: FI | Chedin, Revercomb, Smith, Susskind | AIRS | PM | GSFC | Dobson unit | 5 - 15% :: 3 - 10% | 2/day [d,n] | 50 km :: G | Column :: Atmos |
| 1333 | O3 Total Burden | O :: FI | Menzel | MODIS | AM,PM | GSFC | DU | 15-20DU :: 10DU | 2/day, 1/day | 5 km :: G | Column :: Atmos |
| 1334 | O3 Total Burden | O :: FI | Menzel | MODIS | AM,PM | GSFC | DU | 15-20DU :: 10DU | 1/day, 1/mo | 0.5 dg :: G | Column :: Atmos |
| 1335 | O3 Total Burden, TOMS_Follow-on | O :: II | Schoeberl | | | | DU | 5 :: 2 | 1/day | 1 x 1 dg :: G | Column :: Atmos |
| 1336 | O3 Total Burden, TOMS_Version-6 | O :: II | Schoeberl | | | | DU | 5 DU :: 2 | 1/day | 1 x 1 dg :: R | Column :: Atmos |
| 1337 | O3(OO^17_O) Conc | O :: PI | Waters | MLS | MO | GSFC | | :: 100% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 25-45 km |
| 1338 | O3(OO^18_O) Conc | O :: PI | Waters | MLS | MO | GSFC | | :: 50% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 20-60 km |
| 1339 | O3(17^OOO) Conc | O :: PI | Waters | MLS | MO | GSFC | | :: 50% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 20-50 km |
| 1340 | O3(O17^OO) Conc | O :: PI | Russell | SAFIRE | MO | GSFC | ppbv | :: 40% (20-30 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-35 km |
| 1341 | O3(17^OOO) Conc | O :: PI | Russell | SAFIRE | MO | GSFC | ppbv | :: 15% (20-35 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-40 km |
| 1342 | O3(18^OOO) Conc | I :: II | Schoeberl | | | | ratio to ^ (48)O3 | 10% :: 10% | 1/wk | 8 x 10 dg :: G | 5 km :: Strat |
| 1343 | O3(^18OOO) Conc | O :: PI | Waters | MLS | MO | GSFC | | :: 20% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 20-60 km |
| 1344 | O3(O^18_OO) Conc | O :: PI | Russell | SAFIRE | MO | GSFC | ppbv | :: 15% (20-30 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-35 km |
| 1345 | O3(^18OOO) Conc | O :: PI | Russell | SAFIRE | MO | GSFC | ppbv | :: 15% (20-35 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-40 km |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1346 | O3 Conc, SBUV-2_Corrected | O :: II | Schoeberl | | | | ppm | 0.5 :: 0.2 | 1/day | 8 x 10 dg :: G | 5 km :: Atmos |
| 1347 | O3 Conc, SBUV-2_Follow-on | O :: II | Schoeberl | | | | ppm | 0.5 :: 0.2 | 1/day | 8 x 10 dg :: G | 5 km :: Atmos |
| 1348 | O3 Conc, SBUV_Corrected | O :: II | Schoeberl | | | | ppm | 0.5 :: 0.2 | 1/day | 8 x 10 dg :: R | 5 km :: Atmos |
| 1349 | OClO Conc | I :: II | Grose | | | | mix ratio | 20% :: 10% | 2/day | 30 x 4 dg :: G | 3 km :: Strat |
| 1350 | OClO Conc | I :: II | Pyle | | | | mix ratio (-log10) | 25% :: 10% | 2/day | 15 x 4 km :: G | 3 km :: Strat |
| 1351 | OClO Conc | I :: II | Schoeberl | | | | ppb | 20% :: 0.01 | 1/wk [n] | 8 x 10 dg :: G | 3 km :: Strat |
| 1352 | OClO Conc | O :: PI | Waters | MLS | MO | GSFC | mix ratio | :: 3x10-11 | 1/mo. [z. mean] | 0.1 x 2.5 dg :: 82N-82S | .5 km [1.2] :: TPSE, 25 km |
| 1353 | *OClO Conc* | O :: PI | McCormick | SAGE-III | AERO,CHEM | LaRC | /cm^3&ppbv | 20% :: 20% | 1/(2 min), 30/day | <2 x <1 dg :: G | 2 km :: 15-25 km |
| 1354 | OCS Conc | I :: II | Schoeberl | | | | ppb | 20% :: 0.1 | 1/wk | 8 x 10 dg :: G | 3 km :: Strat |
| 1355 | OH Conc | I :: II | Grose | | | | mix ratio | 25% :: 10% | 2/day | 30 x 4 dg :: G | 3 km :: Mid-atmos |
| 1356 | OH Conc | I :: II | Schoeberl | | | | ppb | 10% :: .02s,.05m | 1/day [d] | 6 x 8 dg :: G | 2 km :: Mid-atmos |
| 1357 | OH Conc | O :: II | Schoeberl | | | | no/cm^3 | 30% :: | 1/(3 mo) | 6 regions :: R | 1 km :: 0-15 km |
| 1358 | OH Conc | O :: II | Schoeberl | | | | no/cm^3 | 15% :: 10% | 1/mo | 2 x 3 dg :: G | 2 km :: Trop |
| 1359 | OH Conc | O :: II | Schoeberl | | | | ppb | 30% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1360 | OH Conc | O :: PI | Russell | SAFIRE | MO | GSFC | ppbv | :: 7% (30-75 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-90 km |
| 1361 | Ox Conc | O :: II | Grose | | | | mix ratio | | 1/mo | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| 1362 | Ox Conc | O :: II | Grose | | | | | | 1/mo | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| 1363 | Ox Conc | O :: II | Grose | | | | mix ratio | | 48/day [for 10 day] | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| 1364 | Ox Conc | O :: II | Pyle | | | | | | | | |
| 1365 | PAN Conc | I :: II | Schoeberl | | | | ppb | 20% :: 0.01 | 1/day | 8 x 10 dg :: G | 3 km :: Strat |
| 1366 | SO2 Conc | I :: II | Schoeberl | | | | ppb | 20% :: | 1/wk | 8 x 10 dg :: G | 3 km :: Strat |
| 1367 | SO2 Conc | O :: II | Brewer | | | | mix ratio | 30% :: 20% | 1/day | :: L | :: PBL |
| 1368 | SO2 Conc | O :: II | Brewer | | | | mix ratio | 30% :: 20% | 1/day | :: G | :: PBL |
| 1369 | SO2 Conc | O :: PI | Waters | MLS | MO | GSFC | mix ratio | :: 5x10-10 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | .5 km [1.2] :: TPSE, 30 km |
| 1370 | *SO2 Conc* | O :: PI | Beer | TES | CHEM | LaRC | ppt | :: 600 ppt | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 4-12 km |
| 1371 | Chemistry Diagnostics, Seasonal | O :: II | Grose | | | | | | 1/mo | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| 1372 | Industrial_Emissions Conc | I :: II | Hansen | | | | mix ratio | 2% :: | 1/wk | 500 km :: G | :: Trop |
| 1373 | Trace Gas Total Burden | O :: II | Schoeberl | | | | column density | 25% :: 15% | [irreg] | N/A :: R | Column :: Atmos |
| 1374 | Trace Gas Conc | I :: II | Murakami | | | | mix ratio | 20% :: | | | N/A :: TOA |
| 1375 | Trace Gas Conc, Non-diurnally-varying | O :: II | Grose | | | | mix ratio | | 1/day | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| 1376 | Acceleration, Diffusive_Zonal | O :: II | Bates | | | | m/s^2 | | 1/(4-6 hr) | 50 km :: G | 25 lyr :: 1000-0.1 mb |
| 1377 | Acceleration, Diffusive_Meridional | O :: II | Bates | | | | m/s^2 | | 1/(4-6 hr) | 50 km :: G | 25 lyr :: 1000-0.1 mb |
| 1378 | Angular Momentum | I :: II | Bates | | | | kg m^2/s | 1% :: | | :: G | :: Atmos |
| 1379 | Angular Momentum | O :: II | Tapley | | | | kg m^2/s | 1% :: | 4/day | :: G | :: Atmos |
| 1380 | Cloud Height, Base | I :: II | Barron | | | | m | 100 m :: 50 m | 1/day | 100 km :: G | 100 m :: Cloud |
| 1381 | Cloud Height, Base | I :: II | Barron | | | | m | 100 m :: 50 m | 1/day | 10 km :: R | 100 m :: Cloud |
| 1382 | Cloud Height, Base | I :: II | Barron | | | | m | 100 m :: 50 m | 1/day | 30 m :: L | 100 m :: Cloud |
| 1383 | Cloud Height, Base | I :: II | Bates | | | | mb | :: 100 mb | | 25 km :: G | 100 mb :: Cloud |
| 1384 | Cloud Height, Base | I :: II | Bates | | | | mb | :: 100 mb | 1/(6 hr) | 1 x 1 dg :: G | 100 mb :: Cloud |
| 1385 | Cloud Height, Base | I :: II | Kerr, Sorooshian | | | | km or mb | 200m :: 200m | 1/hr | 1 km :: Land | 100 mb :: Trop |
| 1386 | Cloud Height, Base | I :: II | Wielicki | | | | km | 1 km :: 0.1 km | 6/day [d,n] | 25-100 km :: G | 0.1 km :: Atmos |
| 1387 | Cloud Height, Base | I :: II | Wielicki | | | | km | 0.1 km :: 0.1 km | 1/(16 day) | 0.2 km :: R | 0.1 km :: Atmos |
| 1388 | Cloud Height, Base | I :: II | Wielicki | | | | km | 0.1 km :: 0.1 km | 2/day [d,n] | 50 km :: R | 0.1 km :: Atmos |
| 1389 | *Cloud Height, Base* | O :: FI | Spinhirne et al | GLRS-A | ALT | GSFC | m | 75 m :: | 1/(2-16 day) | .2-100 km :: G | 75 m :: Cloud |
| 1390 | Cloud Height, Base | O :: FI | Welch | HIRIS | AM2 | EDC | m | 50 m :: 50 m | 1/(2-16 day) | 30 m :: L | N/A :: Cloud |
| 1391 | Cloud Height, Base | O :: FI | Welch | ASTER | AM1 | EDC | m | 100 m :: 100 m | 1/(16 day) | 100 m :: L | N/A :: Cloud |
| 1392 | Cloud Height, Base | O :: II | Wielicki | | | | km | 1.0 km :: 0.1 km | 18/day [d,n] | 25 km :: R | 0.1 km :: Atmos |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1393 | Cloud Height, Base | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | km | 1.0 km :: 0.1 km | 6/day [d,n] | 25 km :: G | 0.1 km :: Atmos |
| 1394 | Cloud Height, Base | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | km | 1.0 km :: 0.1 km | 1/(6 hr) | 1.25 x 1.25 dg :: G | 0.1 km :: Atmos |
| 1395 | Cloud Height, Base | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | km | 1.0 km :: 0.1 km | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | 0.1 km :: Atmos |
| 1396 | Cloud Height, Base, Cirrus | O :: II | Bates | | | | mb | | 1/(20 min) | 50 km :: G | N/A :: High_cloud |
| 1397 | Cloud Height, Base, Low-level | O :: II | Bates | | | | mb | | 1/(20 min) | 50 km :: G | N/A :: Low_Cloud |
| 1398 | Cloud Height, Base, Mid-level | O :: II | Bates | | | | mb | | 1/(20 min) | 50 km :: G | N/A :: Mid_Cloud |
| 1399 | Cloud Height | I :: II | Hansen | | | | km (m) | 50 m :: | 1/wk | 500 km :: G | :: Cloud |
| 1400 | *Cloud Height* | O :: FI | Spinhirne | GLRS-A | ALT | GSFC | m | 75 m :: | 1/(2-16 day) | .2-10 km :: G | 75 m :: |
| 1401 | Cloud Height, Cirrus | I :: II | Bates | | | | m | 500 m :: | 2/day | 50 km :: G | N/A :: Cloud |
| 1402 | Cloud Height, Cirrus | I :: II | Lau | | | | m | 100 m :: | 2/day | 50 km :: G | N/A :: Atmos |
| 1404 | Cloud Height, PSC | I :: II | Pyle | | | | | | 2/day | :: G | :: Strat |
| 1405 | *Cloud Height, PSC* | O :: FI | Spinhirne et al | GLRS-A | ALT | GSFC | m | 150 m :: | 1/(2-16 day) | 2-200 km :: Polar | 75 m :: Strat |
| 1406 | Cloud Height, Stratoform | I :: II | Bates | | | | m | 50 m :: | 2/day | 50 km :: G | N/A :: Cloud |
| 1408 | *Cloud Height, PSC* | O :: PI | Barnett, Gille | HIRDLS | CHEM | GSFC | km | 0.4 km :: 0.4 km | 2/day [d,n] | 4 x 4 dg :: G | 0.4 km :: Strat |
| 1409 | Cloud Structure, 3-D | O :: FI | Welch | ASTER | AM1 | EDC | | | 1/(16 day) | 90 m :: L | :: Cloud |
| 1410 | Cloud Structure, Cirrus | O :: FI | Spinhirne | GLRS-A | ALT | GSFC | /m | 0.2 :: | 1/(2-16 day) | 1-10 km :: G | 75 m :: |
| 1411 | Cloud Structure, Mesoscale | O :: II | Hartmann | | | | | | 1/day | 100 km :: Sites | |
| 1412 | Cloud Height, Top | I :: II | Barron | | | | m | 100 m :: 25 m | 1/day | 100 km :: G | 100 m :: Cloud |
| 1413 | Cloud Height, Top | I :: II | Barron | | | | m | 100 m :: 25 m | 1/day | 10 km :: R | 100 m :: Cloud |
| 1414 | Cloud Height, Top | I :: II | Barron | | | | m | 100 m :: 25 m | 1/day | 30 m :: L | 100 m :: Cloud |
| 1415 | Cloud Height, Top | I :: II | Bates | | | | mb | :: 100 mb | 1/(6 hr) | 1 x 1 dg :: G | 100 mb :: Cloud |
| 1416 | Cloud Height, Top | I :: II | Bates | | | | km | 0.5 km :: 0.25 km | 2/day [d,n] | 15 x 45 km :: G | N/A :: Cloud |
| 1417 | Cloud Height, Top | I :: II | Kerr, Sorooshian | | | | km | :: 0.5 km | 1/hr | 1 km :: Land/R | :: Cloud |
| 1418 | Cloud Height, Top | I :: II | Murakami | | | | km | 1 km :: | | | :: Cloud |
| 1419 | Cloud Height, Top | I :: II | Rothrock | | | | km | 0.2km :: 0.2km | 1/day | 100 km :: Polar | :: Cloud |
| 1420 | Cloud Height, Top | I :: II | Wielicki | | | | km | 0.1 km :: 0.1 km | 2/day [d,n] | 50 km :: R | 0.1 km :: Atmos |
| 1421 | Cloud Height, Top | I :: II | Wielicki | | | | km | 0.1 km :: 0.1 km | 1/(16 day) | 0.2 km :: R | 0.1 km :: Atmos |
| 1422 | Cloud Height, Top | I :: II | Wielicki | | | | km | 0.5 km :: 0.1 km | 6/day [d,n] | 25-100 km :: G | 0.1 km :: Atmos |
| 1423 | *Cloud Height, Top* | O :: FI | Chahine, Chedin, Smith | AIRS | PM | GSFC | km | 0.5 km :: 0.25 km | 2/day [d,n] | 15 x 15 - 50 x 50 km :: G | N/A :: Cloud |
| 1425 | *Cloud Height, Top* | O :: FI | Spinhirne et al | GLRS-A | ALT | GSFC | m | 75 m :: | 1/(2-16 day) | 200 m :: G | 75 m :: Cloud |
| 1426 | Cloud Height, Top | O :: FI | Welch, Goetz | HIRIS | AM2 | EDC | m | 500 m :: 250 m | 1/(2-16 day) | 30 m :: L | N/A :: Cloud |
| 1427 | Cloud Height, Top | O :: FI | Welch | ASTER | AM1 | EDC | m | 300 m :: 300 m | 1/(16 day) | 90 m :: L | N/A :: Cloud |
| 1428 | Cloud Height, Top | O :: II | Wielicki | | | | km | 0.5 km :: 0.1 km | 18/day [d,n] | 25 km :: R | 0.1 km :: Atmos |
| 1429 | Cloud Height, Top | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | km | 1.0 km :: 0.1 km | 6/day [d,n] | 25 km :: G | 0.1 km :: Atmos |
| 1430 | Cloud Height, Top | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | km | 1.0 km :: 0.1 km | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | 0.1 km :: Atmos |
| 1431 | Cloud Height, Top | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | km | 0.5 km :: 0.1 km | 1/(6 hr) | 1.25 x 1.25 dg :: G | 0.1 km :: Atmos |
| 1432 | Cloud Height, Top | O :: PI | Diner | MISR | AM | LaRC | m | <1000 m :: <1000 m | 1/(5-16 day) [d] | 5 km :: G | N/A :: Trop |
| 1433 | *Cloud Height, Top* | O :: PI | Diner | MISR | AM | LaRC | m | 100 m :: 100 m | 1/(5-16 day) [d] | 500 m :: R | N/A :: Trop |
| 1434 | Cloud Height, Top, Cirrus | O :: II | Bates | | | | mb | | 1/(20 min) | 50 km :: G | N/A :: High_cloud |
| 1435 | Cloud Height, Top, Low-level | O :: II | Bates | | | | mb | | 1/(20 min) | 50 km :: G | N/A :: Low_Cloud |
| 1436 | Cloud Height, Top, Mid-level | O :: II | Bates | | | | mb | | 1/(20 min) | 50 km :: G | N/A :: Mid_Cloud |
| 1437 | Cloud Height, Top, PSC | O :: PI | McCormick | SAGE-III | AERO,CHEM | LaRC | km | 0.2 km :: 5% | 1/(2 min), 30/day | <2 x <1 dg :: G | 1 km :: Strat/Trop |
| 1439 | Humidity, Specific | O :: II | Barron | | | | g/kg | | 1/(5 min) | 30 km :: [East. U.S.] | |
| 1440 | Humidity, Specific | O :: II | Barron | | | | g/kg | | 1/(5 min) | 500 m :: [East. U.S.] | |
| 1441 | Heating Rate, Convective | O :: II | Bates | | | | K/s | | 1/(4-6 hr) | 50 km :: G | 25 lyr :: 1000-0.1 mb |
| 1442 | Heating Rate, Diffusive | O :: II | Bates | | | | K/s | | 1/(4-6 hr) | 50 km :: G | 25 lyr :: 1000-0.1 mb |
| 1443 | Heating, Convective | O :: II | Barron | | | | W/m^3 | | 1/hr | 20-100 km :: R | |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1444 | Heating, Convective | O :: II | Barron | | | | W/m^3 | | 1/hr | 1 km :: R | |
| 1445 | Heating, East-West Sfc-stress | O :: II | Barron | | | | J/m^2/s | | 2/day | 4.5 x 7.5 dg :: G | |
| 1446 | Heating, East-West Sfc-stress | O :: II | Barron | | | | J/m^2/s | | 2/day | 2.8 x 2.8 dg :: G | |
| 1447 | Heating, North-South Sfc-stress | O :: II | Barron | | | | J/m^2/s | | 2/day | 4.5 x 7.5 dg :: G | |
| 1448 | Heating, North-South Sfc-stress | O :: II | Barron | | | | J/m^2/s | | 2/day | 2.8 x 2.8 dg :: G | |
| 1449 | Heating, Net_Diabatic | O :: II | Barron | | | | W/m^2 | | 1/(5 day) | 2.5 dg :: G | 10 lvl :: |
| 1450 | Heating Rate, LW_Radiative | O :: II | Barron | | | | K/s | | 2/day | 4.5 x 7.5 dg :: G | |
| 1451 | Heating Rate, LW_Radiative | O :: II | Barron | | | | K/s | | 2/day | 2.8 x 2.8 dg :: G | |
| 1452 | Heating Rate, LW_Radiative | O :: II | Bates | | | | K/s | | 1/(4-6 hr) | 50 km :: G | N/A :: 1000-0.1 mb |
| 1453 | Heating Rate, SW Radiative | O :: II | Barron | | | | K/s | | 2/day | 4.5 x 7.5 dg :: G | :: Sfc |
| 1454 | Heating Rate, SW Radiative | O :: II | Barron | | | | K/s | | 2/day | 2.8 x 2.8 dg :: G | :: Sfc |
| 1455 | Heating Rate, U-horizontal_Diffusive | O :: II | Barron | | | | K/s | | 2/day | 4.5 x 7.5 dg :: G | |
| 1456 | Heating Rate, U-horizontal_Diffusive | O :: II | Barron | | | | K/s | | 2/day | 2.8 x 2.8 dg :: G | |
| 1457 | Heating Rate, U-horizontal_Diffusive | O :: II | Barron | | | | K/s | | 2/day | 4.5 x 7.5 dg :: G | |
| 1458 | Heating Rate, U-horizontal_Diffusive | O :: II | Barron | | | | K/s | | 2/day | 2.8 x 2.8 dg :: G | |
| 1459 | Heating Rate, V-horizontal_Diffusive | O :: II | Barron | | | | K/s | | 2/day | 4.5 x 7.5 dg :: G | |
| 1460 | Heating Rate, V-horizontal_Diffusive | O :: II | Barron | | | | K/s | | 2/day | 2.8 x 2.8 dg :: G | |
| 1461 | Heating Rate, V-horizontal_Diffusive | O :: II | Barron | | | | K/s | | 2/day | 4.5 x 7.5 dg :: G | |
| 1462 | Heating Rate, V-horizontal_Diffusive | O :: II | Barron | | | | K/s | | 2/day | 2.8 x 2.8 dg :: G | |
| 1463 | Heating, Latent | I :: II | Bates | | | | | | | 25 km :: G | 10 lvl :: Trop |
| 1464 | Heat Flux, Latent | I :: II | Bates | | | | W/m^2 or mm/day | 10 :: 10 | 1/day | 100 km :: Ocean | N/A :: Sfc |
| 1465 | Heat Flux, Latent | I :: II | Bates | | | | W/m^2 | :: 20% | 1/(3 day) | 100 km :: >60 dgLAT | |
| 1467 | Heat Flux, Latent | I :: II | Brewer | | | | W/m^2 | | 1/day, 1/seas | :: Ocean | N/A :: Sfc |
| 1468 | Heat Flux, Latent | I :: II | Lau | | | | W/m^2 | 10% :: 10% | 1/hr | 30 m :: Land/L | N/A :: Sfc |
| 1469 | Heat Flux, Latent | O :: II | Abbott | | | | W/m^2 | 40 W/m^2 :: TBD | 1/wk | 50 km :: Ocean [Southern] | :: Sfc |
| 1470 | Heat Flux, Latent | O :: II | Barron | | | | W/m^2 | | 1/(5 day) | 2.5 dg :: G | 10 lvl :: |
| 1471 | Heat Flux, Latent | O :: II | Bates | | | | W/m^2 | | 1/(20 min) | 50 km :: G | N/A :: Sfc |
| 1472 | Heat Flux, Latent | O :: II | Hartmann | | | | W/m^2 | 10 :: 10 | 1/day | 100 km :: Ocean | Sfc :: |
| 1473 | Heat Flux, Latent | O :: II | Kerr, Sorooshian | | | | W/m^2 | 10% :: 10% | 1/day | 500 m :: Land | N/A :: Sfc |
| 1474 | Heat Flux, Latent | O :: II | Rothrock | | | | W/m^2 | 20% :: 20% | 1/(3 day) | 100 km :: > 60 dgLAT | |
| 1475 | Heat Flux, Net | I :: II | Murakami | | | | W/m^2 | 5% :: | | | |
| 1476 | Heat Flux, Sensible | I :: II | Bates | | | | W/m^2 | :: 20% | 1/day | 100 km :: > 60 dgLAT | |
| 1477 | Heat Flux, Sensible | I :: II | Brewer | | | | W/m^2 | | 1/day, 1/seas | :: Ocean | N/A :: Sfc |
| 1479 | Heat Flux, Sensible | I :: II | Lau | | | | W/m^2 | 10% :: 10% | 1/hr | 30 m :: Land/L | N/A :: Sfc |
| 1480 | Heat Flux, Sensible | O :: II | Barron | | | | W/m^2 | | 2/day | 4.5 x 7.5 dg :: G | |
| 1481 | Heat Flux, Sensible | O :: II | Barron | | | | W/m^2 | | 2/day | 2.8 x 2.8 dg :: G | |
| 1482 | Heat Flux, Sensible | O :: II | Barron | | | | W/m^2 | | 1/day | 10 km :: R | :: Sfc |
| 1483 | Heat Flux, Sensible | O :: II | Bates | | | | W/m^2 | | 1/(20 min) | 50 km :: G | N/A :: Sfc |
| 1484 | Heat Flux, Sensible | O :: II | Kerr, Sorooshian | | | | W/m^2 | 10% :: 10% | 1/hr | 500 km :: Land/R | N/A :: Sfc |
| 1485 | Heat Flux, Sensible | O :: II | Kerr, Sorooshian | | | | W/m^2 | 10% :: 10% | 1/hr | 500 m :: Land/R | N/A :: Sfc |
| 1486 | Heat Flux, Sensible | O :: II | Rothrock | | | | W/m^2 | 20% :: 20% | 1/day, 1/wk | 100 km :: > 60 dgLAT | |
| 1487 | Heat Flux, Sensible | O :: II | Sellers | | | | W/m^2 | | 4/day | 1 dg :: | |
| 1488 | Heat Flux, Sfc | O :: II | Barron | | | | W/m^2 | | 1/(5 day) | 2.5 dg :: G | 10 lvl :: |
| 1489 | Heat Flux, Sfc | O :: II | Barron | | | | W/m^2 | | 1/(5 min) | 30 km :: [East. U.S.] | :: Afc |
| 1490 | Heat Flux, Sfc | O :: II | Barron | | | | W/m^2 | | 1/hr | 20-100 km :: R | :: Sfc |
| 1491 | Heat Flux, Sfc | O :: II | Barron | | | | W/m^2 | | 1/(5 min) | 500 m :: [East. U.S.] | :: Afc |
| 1492 | Radiative Flux, SW | I :: II | Brewer | | | | W/m^2 | | 1/day, 1/seas | :: Ocean | |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1493 | Radiative Flux, SW | I :: II | Brewer | | | | W/m^2 | | 1/day, 1/seas | :: Ocean/L | |
| 1494 | Heat Flux Convergence, Eddy | O :: II | Barron | | | | W/m^2 | | 1/(5 day) | 2.5 dg :: G | 10 lvl :: |
| 1495 | Heat Flux Rate, Latent | O :: II | Barron | | | | m/s ? | | 2/day | 4.5 x 7.5 dg :: G | |
| 1496 | Heat Flux Rate, Latent | O :: II | Barron | | | | m/s ? | | 2/day | 2.8 x 2.8 dg :: G | |
| 1498 | Geopotential Height | O :: II | Bates | | | | m | | 1/(20 min) | 50 km :: G | 50 lvl :: 1000-0.1 mb |
| 1499 | Geopotential Height Gradient | I :: II | Bates | | | | m/km | 0.04m/km :: | 2/day | 4 x 4 dg :: G | 1-1.5 km :: Atmos |
| 1500 | Geopotential Height-Gradient | O :: PI | Barnett, Gille | HIRDLS | CHEM | GSFC | m/km | 0.04m/km :: 0.04m/km | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 15-80 km |
| 1501 | Heating Rate, Latent | I :: II | Lau | | | | C/day | 0.5 C/day :: 5% | 1/mo | 500 km :: G | 2 km :: Trop |
| 1502 | Heating Rate, Latent | I :: II | Lau | | | | C/day | 1 C/day :: 5% | 1/day | 50 km :: R | 1 km :: Trop |
| 1503 | Cloud Field Structure | O :: FI | Welch | HIRIS | AM2 | EDC | | | | :: L | |
| 1504 | Vertical Motion, Omega | O :: II | Barron | | | | Pa/s | | 2/day | 2.8 x 2.8 dg :: G | |
| 1505 | Vertical Motion, Omega | O :: II | Barron | | | | Pa/s | | 2/day | 4.5 x 7.5 dg :: G | |
| 1506 | Vertical Motion | O :: II | Barron | | | | cm/s | | 1/hr | 1 km :: R | |
| 1507 | Vertical Motion | O :: II | Barron | | | | cm/s | | 1/hr | 20-100 km :: R | |
| 1508 | Vertical Motion, Omega | O :: II | Barron | | | | Pa/s | | 1/(6 hr) | 1 dg :: G | 15-20 lvl :: |
| 1509 | Cloud Field Organization scale | O :: FI | Welch | HIRIS | AM2 | EDC | | | | :: L | |
| 1510 | PBL Height | I :: II | Barron | | | | m | 75 m :: | 1/day | 10 km :: R | 100 m :: Mixed_lyr |
| 1511 | PBL Height | I :: II | Barron | | | | m | 75 m :: | 1/day | 100 km :: G | 100 m :: Mixed_lyr |
| 1512 | PBL Height | I :: II | Bates | | | | m | 75 m :: | | 2-200 km :: G | 75 m :: Trop |
| 1513 | PBL Height | I :: II | Sellers | | | | | | | | |
| 1514 | PBL Height | O :: FI | Spinhirne et al | GLRS-A | ALT | GSFC | m | 150 m :: | 1/(2-16 day) | 2-200 km :: G | 75 m :: Trop |
| 1515 | Planetary Wave Structure | O :: II | Grose | | | | | | 1/day | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| 1516 | Pressure | I :: II | Grose | | | | mb | 0.05 :: 2% | 2/day | 15 x 4 dg :: G | 3 km :: Mid-atmos |
| 1517 | Pressure, Sfc | I :: II | Isacks | | | | mb | | | :: Land/R | N/A :: Sfc |
| 1518 | Pressure | I :: II | Kerr, Sorooshian | | | | mb | 5% :: 5% | 1/hr | 25 km :: Land | 3 km :: Trop |
| 1519 | Pressure, Sfc | I :: II | Rothrock | | | | mb | 1 mb :: 1 mb | 1/day | 500 km :: Polar | N/A :: Sfc |
| 1520 | Pressure, Sfc | I :: II | Tapley | | | | mb | 1-5 mb :: | 4/day | 50 km :: G | N/A :: Sfc |
| 1521 | Pressure | O :: II | Barron | | | | mb | | 1/hr | 20-100 km :: R | |
| 1522 | Pressure | O :: II | Barron | | | | mb | | 1/hr | 1 km :: R | |
| 1523 | Pressure, Sfc | O :: II | Rothrock | | | | mb | | 1/(3 day) | 100 km :: > 60 dgLAT | N/A :: Sfc |
| 1524 | Pressure | O :: PI | Barnett, Gille | HIRDLS | CHEM | GSFC | mb | 0.1% :: 0.1% | 2/day [d,n] | 4 x 4 dg :: G | 0.2 km :: 7-80 km |
| 1525 | Pressure | O :: PI | Waters | MLS | MO | GSFC | mb | :: 1%(30-50km) | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | .5 km [1.2] :: TPSE, 70 km |
| 1526 | Pressure | O :: PI | Russell | SAFIRE | MO | GSFC | mb | :: <2% (16-70 km) | 1/(18-72 s) [?] | 25 x 1-5 dg :: 86S-86N | 1.5 km :: 10-110 km |
| 1527 | Cloud Pressure, Top | I :: II | Bates | | | | mb | 50 mb :: 20 mb | 2/day | 5 km :: G | N/A :: Cloud |
| 1528 | Cloud Pressure, Top | O :: FI | Menzel | MODIS | AM,PM | GSFC | mb | 50 mb :: 20 mb | 2/day | 5 km :: G | N/A :: Cloud |
| 1529 | Cloud Pressure, Top | O :: FI | Menzel | MODIS | AM,PM | GSFC | mb | 50 mb :: 20 mb | 1/day, 1/mo | 1 dg :: G | N/A :: Cloud |
| 1530 | Cloud Pressure, Top | O :: PI | Travis | EOSP | AERO,AM2 | LaRC | mb | 30 mb :: 30 mb | 1/day [d] | 40 km :: G | 30 mb :: Cloud |
| 1531 | *Cloud Pressure, Top* | O :: PI | Barnett, Gille | HIRDLS | CHEM | GSFC | mb | 5-10% :: 5-10% | 2/day [d,n] | 4 x 4 dg :: G | 0.4 km :: Trop |
| 1532 | Pressure, Sfc | O :: II | Bates | | | | mb | 1 :: 0.5 | 1/(20 min) | 50 km :: G | N/A :: Sfc [Sea_lvl] |
| 1533 | Pressure, Sfc | I :: II | Lau | | | | mb | 5% :: | 1/day | 100 km :: G | N/A :: Sfc |
| 1534 | Pressure, Sfc | O :: II | Barron | | | | Pa | | 2/day | 4.5 x 7.5 dg :: G | N/A :: Sfc |
| 1535 | Pressure, Sfc | O :: II | Barron | | | | Pa | | 2/day | 2.8 x 2.8 dg :: G | N/A :: Sfc |
| 1536 | Pressure, Sfc | O :: II | Bates | | | | mb | 1 :: 0.5 | 1/(20 min) | 50 km :: G | N/A :: Sfc |
| 1537 | Pressure, Tropopause | O :: II | Bates | | | | mb | | 1/(20 min) | 50 km :: G | N/A :: Tropopause |
| 1538 | Pressure-Tendency, Sfc | O :: II | Barron | | | | Pa/s | | 2/day | 4.5 x 7.5 dg :: G | N/A :: Sfc |
| 1539 | Pressure-Tendency, Sfc | O :: II | Barron | | | | Pa/s | | 2/day | 2.8 x 2.8 dg :: G | N/A :: Sfc |
| 1540 | Geopotential Height RMSE | O :: II | Bates | | | | m | | 1/(20 min) | 100 km :: G | 25 lvl :: 1000-0.1 mb |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1541 | Pressure-RMSE, Sfc | O :: II | Bates | | | | mb | | 1/(20 min) | 100 km :: G | N/A :: Sfc |
| 1542 | Temperature-RMSE | O :: II | Bates | | | | K | | 1/(20 min) | 100 km :: G | 25 lyr :: 1000-0.1 mb |
| 1543 | Wind Speed RMSE, Mean_Meridional | O :: II | Bates | | | | m/s | | 1/(20 min) | 100 km :: G | 25 lyr :: 1000-0.1 mb |
| 1544 | Wind Speed RMSE, Mean_Zonal | O :: II | Bates | | | | m/s | | 1/(20 min) | 100 km :: G | 25 lyr :: 1000-0.1 mb |
| 1545 | Land_sfc Roughness | I :: II | Barron | | | | m | 10% :: 0.1 | 1/mission, 1/yr | 10 km :: Land/R | N/A :: Sfc |
| 1546 | Land_sfc Roughness | I :: II | Barron | | | | m | 10% :: 0.1 | 1/mission, 1/yr | 30 m :: Land/L | N/A :: Sfc |
| 1547 | Land_sfc Roughness | I :: II | Barron | | | | m | 10% :: 0.1 | 1/mission, 1/yr | 100 km :: Land | N/A :: Sfc |
| 1549 | Land_sfc Roughness, Aerodynamic | I :: II | Kerr, Sorooshian | | | | cm | 0.1 m :: 0.2 m | 1/seas | 25 km :: Land | N/A :: Sfc |
| 1550 | Land_sfc Roughness, Aerodynamic | I :: II | Lau | | | | cm | 10% :: 10% | 1/hr | 30 m :: Land/L | N/A :: Sfc |
| 1551 | Land_sfc Roughness, Aerodynamic | I :: II | Lau | | | | cm | 10% :: 10% | 1/wk | 10 km :: Land/R | N/A :: Sfc |
| 1552 | Land_sfc Roughness, Geometric, | I :: II | Kerr, Sorooshian | | | | cm | 0.1 cm :: 0.2 cm | 2/mo | 25 km :: Land | N/A :: Sfc |
| 1553 | Land_sfc Roughness | I :: II | Isacks | | | | cm | 2 cm :: 1 cm | 1/mission, 1/mo | 30 m :: Land/L | N/A :: Sfc |
| 1554 | *Ice_Sheet Roughness* | O :: FI | Bentley | GLRS-A | ALT | NSIDC | mm | 100 mm :: 100 mm | 1/(3 mo) | 75 m :: Cryo | :: Sfc |
| 1555 | Sea_Ice Roughness | I :: II | Bates | | | | mm | 100 mm :: | 1/(3 mo) | :: Polar | N/A :: Sfc |
| 1556 | Land_sfc Roughness | O :: FI | Tanre, Muller | MODIS | AM,PM | EDC | dimensionless | 15% :: 5 - 8% | 1/day, 1/wk | 1 km :: G,R | N/A :: Sfc |
| 1557 | Land_sfc Roughness | O :: FI | Tanre, Muller | MODIS | AM,PM | EDC | dimensionless | 15% :: 5 - 8% | 1/day, 1/wk | 10 km :: G,R | N/A :: Sfc |
| 1558 | Wind Stress, Meridional | O :: II | Barron | | | | N/m^2 | | 2/day | 2.8 x 2.8 dg :: G | Sfc :: |
| 1559 | Stability (Lifted Index), Atmospheric | O :: FI | Menzel | MODIS | AM,PM | GSFC | C | 2 C :: 1 C | 2/day | 5 km :: G | N/A :: Atmos |
| 1560 | Stability (Lifted Index), Atmospheric | O :: FI | Menzel | MODIS | AM,PM | GSFC | C | 2 C :: 1 C | 2/day, 1/mo | 0.5 dg :: G | N/A :: Atmos |
| 1561 | Stratopause Height | I :: II | Bates | | | | km | 1 km :: 0.5 km | 2/day [d,n] | 50 km :: G | N/A :: Mid-atmos |
| 1562 | Stratopause Height | O :: FI | Smith | AIRS | PM | GSFC | km | 1 km :: 0.5 km | 2/day [d,n] | 50 x 50 km :: G | N/A :: Mid-atmos |
| 1563 | Temperature Profile | I :: II | Abbott | | | | C | 10% :: 5% | 1/(1-2 day) | 25 km :: Ocean [Southern] | 1 km :: Trop |
| 1564 | Temperature Profile | I :: II | Barron | | | | K | 1 K :: 0.5 K | 1/day | 100 km :: G | 1 km :: Trop |
| 1565 | Temperature Profile | I :: II | Barron | | | | K | 1 K :: 0.5 K | 1/day | 10 km :: R | 1 km :: Trop |
| 1566 | Temperature, Near_sfc | I :: II | Barron | | | | K | 0.5 :: | 1/day | 100 km :: Ocean | N/A :: Sfc |
| 1568 | Temperature, Near_sfc | I :: II | Barron | | | | K | 0.5 :: | 1/day | 10 km :: Ocean/R | N/A :: Sfc |
| 1569 | Temperature Profile | I :: II | Bates | | | | K | :: 1-2 K | | 1.8 x .16 dg :: G | 3 km :: 20-60 km |
| 1570 | Temperature Profile | I :: II | Bates | | | | K | K;2K>50km :: .3;1K>50k | 2/day | 4 x 4 dg :: G | 1-1.5 km :: 10-80 km |
| 1571 | Temperature Profile | I :: II | Bates | | | | K | 1.0 K :: 0.4 K | 2/day [d,n] | 50 km :: G | 1 km :: Atmos |
| 1572 | Temperature Profile | I :: II | Grose | | | | K | 2 K :: 0.5 K | 2/day | 15 x 4 dg :: G | 2 km :: Mid-atmos |
| 1573 | Temperature Profile | I :: II | Hansen | | | | C [K] | 0.3 C :: | 1/wk | 500 km :: G | :: Strat |
| 1574 | Temperature Profile | I :: II | Hansen | | | | K | 0.3 C :: | 1/wk | 500 km :: G | :: Trop |
| 1575 | Temperature Profile | I :: II | Hartmann | | | | K | 1 :: 1 | 1/day | 10 km :: Ocean | 1 km :: 0-15 km |
| 1576 | Temperature Profile | I :: II | Isacks | | | | K | 1 :: 0.4 | 1/wk | 50 km :: Land/R | 1 km :: Trop |
| 1577 | Temperature Profile | I :: II | Kerr, Sorooshian | | | | K | 1 K :: 1 K | 2/day | 50 km :: Land | 1 km :: Atmos |
| 1578 | Temperature Profile | I :: II | Lau | | | | K | 1 K :: | 1/day | 100 km :: G | 1 km :: Trop |
| 1579 | Temperature Profile | I :: II | Liu | | | | K | 0.5 :: 0.5 | 1/day | 25 km :: Ocean | 0.5 km :: Trop |
| 1580 | Temperature Profile | I :: II | Murakami | | | | K | 1% :: | | | |
| 1581 | Temperature Profile | I :: II | Pyle | | | | K | 2 K :: 0.5 K | 2/day | 15 x 4 km :: G | 2 km :: Strat |
| 1582 | Temperature Profile | I :: II | Schoeberl | | | | K | 2 K :: 1 K | 1/day | 2 x 2 dg :: G | 2 km :: Atmos |
| 1583 | Temperature Profile | I :: II | Sellers | | | | K | 1 K :: | 4/day | 100 km :: | 0.5 km :: Trop |
| 1584 | Temperature Profile | I :: II | Srokosz | | | | K | 1 K :: 0.1 K | 2/day | 0 km :: Ocean [South Atlan] | |
| 1585 | Temperature Profile | I :: II | Wielicki | | | | K | 1 K :: 1 K | 4/day [d,n] | 1.25 dg :: G | 1 km :: Atmos |
| 1588 | *Temperature Profile* | O :: FI | Chedin, Fleming, Smith, Susskind | AIRS | PM | GSFC | K | 1.0 K :: 0.4 K | 2/day [d,n] | 15 x 50 - 50 x 50 km :: G | 1, 2 km :: Atmos |
| 1589 | Temperature Profile | O :: II | Barron | | | | K | | 2/day | 4.5 x 7.5 dg :: G | |
| 1590 | Temperature Profile | O :: II | Barron | | | | C | | 1/(5 min) | 30 km :: [East. U.S.] | |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1591 | Temperature Profile | O :: II | Barron | | | | K | | 1/hr | 20-100 km :: R | |
| 1592 | Temperature Profile | O :: II | Barron | | | | K | | 2/day | 2.8 x 2.8 dg :: G | |
| 1593 | Temperature Profile | O :: II | Barron | | | | C | | 1/(5 min) | 500 m :: [East. U.S.] | |
| 1594 | Temperature Profile | O :: II | Barron | | | | K | | 1/hr | 1 km :: R | |
| 1595 | Temperature Profile | O :: II | Grose | | | | K | | 1/day | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| 1596 | Temperature Profile | O :: II | Grose | | | | K | | 48/day [for 10 day] | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| 1597 | Temperature Profile | O :: II | Grose | | | | K | | 1/mo | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| 1598 | Temperature Profile | O :: II | Pyle | | | | | | | | |
| 1599 | Temperature Profile | O :: II | Schoeberl | | | | K | 2 K :: 2 K | (1-4)/day | x 3 dg :: 1-3 sites [few site | 2 km :: Atmos |
| 1600 | Temperature Profile | O :: II | Schoeberl | | | | K | 2 K :: 2 K | 1/day | 4 x 5 dg :: G | 3.8 km :: Strat |
| 1601 | Temperature Profile | O :: II | Schoeberl | | | | K | 2 K :: 2 K | 1/day | 4 x 5 dg :: G | 110 mb :: Trop |
| 1602 | Temperature Profile | O :: II | Schoeberl | | | | K | 2 K :: 2 K | 1/day | 4 x 5 dg :: G | 3.8 km :: Strat |
| 1603 | Temperature Profile | O :: II | Schoeberl | | | | K | 2 K :: 2 K | 1/day | 4 x 5 dg :: G | 110 mb :: Trop |
| 1604 | Temperature Profile | O :: II | Schoeberl | | | | K | 2 K :: 2 K | 1/day | 2 x 3 dg :: G | 2 km :: |
| 1605 | *Temperature Profile* | O :: PI | Melbourne | GGI | ALT | JPL | K | 1 K :: 1 K | 700 ret/day | 1-200 km :: G | 1 km :: 5 - 50 km |
| 1606 | Temperature Profile | O :: PI | Melbourne | GGI | ALT | JPL | K | 1 K :: 1 K | 700 ret/day | 1-200 km :: G | 1 km :: 2-5/50-60 km |
| 1608 | Temperature Profile | O :: PI | Barnett, Gille | HIRDLS | CHEM | GSFC | K | ;2K>50km :: 0.3K;1K>50 | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 7-80 km |
| 1609 | Temperature Profile | O :: PI | Waters | MLS | MO | GSFC | K | :: 2K <100km) | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 5 km [1.2] :: TPSE, 120 k |
| 1610 | Temperature Profile | O :: PI | Russell | SAFIRE | MO | GSFC | K | :: <0.5K(16-65 km) | 1/(18-72 s) [?] | 25 x 1-5 dg :: 86S-86N | 1.5 km :: 10-110 km |
| 1611 | *Temperature Profile* | O :: PI | McCormick | SAGE-III | AERO,CHEM | LaRC | K | 2 K :: 2K | 1/(2 min), 30/day | <2 x <1 dg :: G | 1 km :: 6-55 km |
| 1612 | *Temperature Profile* | O :: PI | McCormick | SAGE-III | AERO,CHEM | LaRC | K | 2 K :: 2 K | 1/(2 min), 30/day | <2 x <1 dg :: Polar | 1 km :: 6-70 km |
| 1614 | Temperature Profile | O :: PI | Beer | TES | CHEM | LaRC | K | :: 2 K | 1/(16 day) | 16 x 5 km :: G | 1 km, 4-6 km :: 0-12 km |
| 1615 | Temperature Profile | O :: PI | Beer | TES | CHEM | LaRC | K | :: 2 K | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 13-30 km |
| 1616 | Temperature Profile | O :: PI | Beer | TES | CHEM | LaRC | K | :: 2 K | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 4-12 km |
| 1617 | Temperature, Dry-bulb, Near_sfc | O :: II | Bates | | | | K | | 1/(20 min) | 25 km :: G | N/A :: 10 m |
| 1618 | Temperature, Dry-bulb, PBL | O :: II | Bates | | | | K | | 1/(20 min) | 50 km :: G | N/A :: PBL [top of] |
| 1619 | Temperature, Dry-bulb, Near_sfc | O :: II | Bates | | | | K | | 1/(20 min) | 50 km :: G | N/A :: 10 m |
| 1620 | Temperature, Dry-bulb, Near_sfc | O :: II | Bates | | | | | | 1/(20 min) | 50 km :: G | N/A :: Near_sfc |
| 1621 | Temperature, Stratospheric | O :: II | Bates | | | | K | | 1/(20 min) | 25 km :: G | N/A :: PBL [Top of] |
| 1622 | Temperature, Tropospheric | O :: II | Bates | | | | K | | 1/(20 min) | 50 km :: G | N/A :: Tropopause |
| 1623 | Temperature, Dry-bulb, Near_sfc | O :: II | Bates | | | | K | | 1/(20 min) | 50 km :: G | N/A :: Near_sfc |
| 1624 | Temperature Profile | O :: II | Schoeberl | | | | K | 2 K :: 1 K | 1/day | 2 x 2 dg :: R | 2 km :: Atmos |
| 1625 | Temperature Profile | O :: II | Schoeberl | | | | K | 2 K :: 1 K | 1/day | 2 x 2 dg :: G | 2 km :: Atmos |
| 1626 | Temperature Profile | O :: II | Bates | | | | K | 0.8 K :: TBD | 1/(20 min) | 50 km :: G | 50 lyr :: 1000-0.1 mb |
| 1627 | Temperature, Near_sfc | I :: II | Rothrock | | | | K | 2 K :: 2 K | 1/day | 100 km :: Polar | N/A :: Near_sfc |
| 1628 | Temperature, Dry-bulb, PBL | O :: II | Barron | | | | K | | 1/day | 10 km :: R | :: PBL |
| 1629 | Temperature, Near_sfc | I :: II | Hansen | | | | K | 0.2 C :: | 1/wk | 500 km :: Land | :: Sfc |
| 1630 | Temperature, Near_sfc | I :: II | Hansen | | | | K | 0.2 C :: | 1/wk | 500 km :: Ocean | :: Sfc |
| 1631 | Temperature, Near_sfc | I :: II | Kerr, Sorooshian | | | | K | 1 K :: 1 K | 2/day [d,n] | 500 m :: Land/R | N/A :: Sfc |
| 1632 | Temperature, Near_sfc | I :: II | Schimel | | | | C | 10% :: 1% | [multiple] | [multiple] :: 6 sites/L | N/A :: Sfc |
| 1633 | Temperature, Near_sfc | I :: II | Schimel | | | | C | 10% :: 1% | 1/day, 1/wk | 30 m :: 6 sites/L | N/A :: Sfc |
| 1634 | Temperature-Change, | O :: II | Barron | | | | K/s | | 2/day | 4.5 x 7.5 dg :: G | |
| 1635 | Temperature-Change, | O :: II | Barron | | | | K/s | | 2/day | 2.8 x 2.8 dg :: G | |
| 1636 | Temperature-Tendency | O :: II | Barron | | | | K/s | | 2/day | 4.5 x 7.5 dg :: G | |
| 1637 | Temperature-Tendency | O :: II | Barron | | | | K/s | | 2/day | 2.8 x 2.8 dg :: G | |
| 1638 | PBL Thickness | O :: II | Bates | | | | m | | 1/(20 min) | 25 km :: G | N/A :: PBL |
| 1639 | PBL Thickness | O :: II | Bates | | | | m | | 1/(20 min) | 50 km :: G | N/A :: PBL |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1640 | Torque, Friction | I :: II | Bates | | | | kg m^2/s^2 | 5% :: | | :: G | :: Atmos |
| 1641 | Torque, Friction | O :: II | Tapley | | | | kg m^2/s^2 | 5% :: | 4/day | 50 km :: G | N/A :: Sfc |
| 1642 | Tropopause Height, Aerosol_located | I :: II | Bates | | | | m | 75 m :: | | 200 km :: G | 75 m :: Trop |
| 1643 | Tropopause Height, Aerosol_located | O :: FI | Spinhirne et al | GLRS-A | ALT | GSFC | m | 300 m :: | 1/(2-16 day) | 200 km :: G | 300 m :: Trop |
| 1644 | Tropopause Height, Cirrus_located | O :: FI | Spinhirne et al | GLRS-A | ALT | GSFC | m | 300 m :: | 1/(2-16 day) | 10 km :: G | 300 m :: Trop |
| 1645 | Vorticity, Potential | O :: II | Grose | | | | | | 1/day | ~6 x 6 dg :: G | 1 lvl :: 0-30 km |
| 1646 | Vorticity, Potential | O :: II | Pyle | | | | | | | | |
| 1647 | Wind V Tendency | O :: II | Barron | | | | m/s^2 | | 2/day | 4.5 x 7.5 dg :: G | |
| 1648 | Wind V Tendency | O :: II | Barron | | | | m/s^2 | | 2/day | 2.8 x 2.8 dg :: G | |
| 1649 | Wind Stress, Meridional | O :: II | Bates | | | | N/m^2 | | 1/(20 min) | 25 km :: G | N/A :: Sfc |
| 1650 | Wind Velocity | I :: II | Barron | | | | m/s,dg | 1 m/s :: 0.5 m/s | 1/day | 30 m :: L | 1 km :: 0-12 km |
| 1651 | Wind Velocity | I :: II | Barron | | | | m/s,dg | 1 m/s :: 0.5 m/s | 1/day | 10 km :: R | 1 km :: 0-12 km |
| 1652 | Wind Velocity | I :: II | Barron | | | | m/s,dg | 1 m/s :: 0.5 m/s | 1/day | 100 km :: L | 1 km :: 0-12 km |
| 1653 | Wind Velocity, Sea_sfc | I :: II | Barron | | | | m/s,dg | 1 m/s,? :: 1 m/s,? | 1/day | 10 km :: Ocean/R | N/A :: Sfc |
| 1654 | Wind Velocity, Land_sfc | I :: II | Barron | | | | m/s,dg | 1 :: 1 | 1/day | 100 km :: Land | N/A :: Sfc |
| 1655 | Wind Velocity, Land_sfc | I :: II | Barron | | | | m/s,dg | 1 :: 1 | 1/day | 30 m :: Land/L | N/A :: Sfc |
| 1656 | Wind Velocity, Land_sfc | I :: II | Barron | | | | m/s,dg | 1 :: 1 | 1/day | 10 km :: Land/R | N/A :: Sfc |
| 1657 | Wind Velocity, Sea_sfc | I :: II | Barron | | | | m/s,dg | 1 m/s,? :: 1 m/s,? | 1/day | 100 km :: Ocean | N/A :: Sfc |
| 1658 | Wind Velocity, Sea_sfc | I :: II | Bates | | | | m/s,dg | :: 10%; 20 dg | | 25 km :: Ocean | N/A :: Near_sfc |
| 1659 | Wind Velocity | I :: II | Bates | | | | m/s,dg | :: <2 m/s | 1/(12 min) | 3.1 x 1.8 dg :: G | 3 km :: 38-60 km |
| 1660 | Wind Velocity | I :: II | Bates | | | | m/s,dg | :: <5 m/s | 1/(12 min) | 1.8 x 3.1 dg :: G | 3 km :: 20-38 km |
| 1661 | Wind Velocity | I :: II | Bates | | | | m/s,dg | 1-5 m/s :: | 2/day | 100 km :: G | 1 km :: Atmos |
| 1662 | Wind Velocity | I :: II | Grose | | | | m/s,dg | 5m/s,10dg :: 5m/s,5dg | 2/day | 15 x 4 dg :: G | 2 km :: Mid-atmos |
| 1663 | Wind Velocity, Sea_sfc | I :: II | Hansen | | | | m/s,dg | 10% :: | 1/wk | 500 km :: Ocean | :: Sfc |
| 1664 | Wind Velocity, Sea_sfc | I :: II | Hartmann | | | | m/s,dg | 2 m/s :: 2 m/s | 1/day | 50 km :: Ocean | N/A :: Sfc |
| 1665 | Wind Velocity | I :: II | Hartmann | | | | m/s,dg | 4 m/s :: 4 m/s | 1/day | 100 km :: G | :: 0-15 km |
| 1666 | Wind Velocity | I :: II | Isacks | | | | m/s,dg | :: 0.4 | 1/wk | 100 km :: Land/R | :: Trop |
| 1667 | Wind Velocity | I :: II | Liu | | | | m/s,dg | 1 :: 1 | 1/day | 25 km :: Ocean | :: Trop |
| 1668 | Wind Velocity | I :: II | Murakami | | | | m/s,dg | 10% :: TBD | | | |
| 1669 | Wind Velocity, Sea_sfc | I :: II | Rothrock | | | | m/s,dg | 2 m/s :: 2 m/s | 1/day | 100 km :: Polar | N/A :: Near_sfc |
| 1670 | Wind Velocity, Sea_sfc | I :: II | Rothrock | | | | m/s,dg | 2 m/s :: 2 m/s | 1/day | 25 km :: Polar | N/A :: Sfc |
| 1671 | Wind Velocity | I :: II | Schoeberl | | | | m/s,dg | 2 m/s :: 3 m/s | 1/day | 200 x 200 km :: G | 2 km :: Strat |
| 1672 | Wind Velocity | I :: II | Srokosz | | | | m/s,dg | 2m/s :: 1m/s | 1/day | 5 km :: Ocean [South Atla | 500 m :: |
| 1673 | Wind Velocity | I :: II | Wielicki | | | | m/s,dg | 5 m/s :: 2 m/s | 4/day [d,n] | 1.25 dg :: G | 1 km :: Atmos |
| 1676 | Wind Velocity | O :: II | Grose | | | | m/s,dg | | 48/day | ~6 x 6 dg :: G | [24 lvl] :: 0-90 km |
| 1677 | Wind Velocity | O :: II | Grose | | | | m/s,dg | | 1/mo | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| 1678 | Wind Velocity, Sea_sfc | O :: II | Rothrock | | | | m/s,dg | | 1/(3 day) | 100 km :: > 60 dgLAT | |
| 1679 | Wind Velocity, Sea_sfc | O :: PI | Freilich | STIKSCAT | CHEM | JPL | m/s,dg | :: 7%, 16 deg | 1/(2 day) | 1 dg :: Ocean | N/A :: Near_Sfc |
| 1680 | *Wind Velocity, Sea_sfc* | O :: PI | Freilich | STIKSCAT | CHEM | JPL | m/s,dg | :: 10%; 16 deg | 1/(2 day) | 25 km :: Ocean | N/A :: Near_Sfc |
| 1683 | Wind Velocity, 3-D | O :: II | Pyle | | | | | | | | |
| 1684 | Wind Velocity, Friction | I :: II | Srokosz | | | | m/s,dg | 5%,5 dg :: .01m/s,1dg | 1/day | 5 km :: Ocean [South Atla | N/A :: Sfc |
| 1685 | Wind Velocity, Geostrophic | I :: II | Bates | | | | m/s | 2 m/s :: | 2/day | 4 x 4 dg :: G | 1-1.5 km :: Atmos |
| 1686 | Wind Velocity, Geostrophic | O :: II | Rothrock | | | | m/s | | 1/(3 day) | 100 km :: > 60 dgLAT | |
| 1687 | Wind Velocity, Geostrophic | O :: PI | Barnett, Gille | HIRDLS | CHEM | GSFC | m/s | 3 m/s :: 3 m/s | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 7-80 km |
| 1688 | Wind Velocity, Sea_sfc Glint-Pattern | O :: FI | Gordon | MODIS | AM,PM | GSFC | m/s | | 1/orbit [d] | 1 km :: Ocean/R | N/A :: Sfc |
| 1691 | Wind Speed, Mean Meridional | O :: II | Bates | | | | m/s | | 1/(20 min) | 50 km :: G | 50 lyr :: 1000-0.1 mb |
| 1692 | Vertical Motion | O :: II | Bates | | | | mb/s | | 1/(20 min) | 50 km :: G | 50 lyr :: 1000-0.1 mb |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1693 | Wind Speed, Mean Zonal | O :: II | Bates | | | | m/s | | 1/(20 min) | 50 km :: G | 50 lyr :: 1000-0.1 mb |
| 1694 | Wind Speed, Meridional | O :: II | Bates | | | | m/s | | 1/(20 min) | 50 km :: G | N/A :: Near_sfc |
| 1695 | Wind Trajectories | O :: II | Bates | | | | dg (lat,lon),mb-pre | | 1/(20 min) | 50 km :: G | 50 lyr :: 1000-0.1 mb |
| 1696 | Wind U Tendency | O :: II | Barron | | | | m/s^2 | | 2/day | 2.8 x 2.8 dg :: G | |
| 1698 | Wind U Tendency | O :: II | Barron | | | | m/s^2 | | 2/day | 4.5 x 7.5 dg :: G | |
| 1699 | Wind Speed, Zonal | O :: II | Bates | | | | m/s | | 1/(20 min) | 50 km :: G | N/A :: Near_sfc |
| 1700 | Wind Speed, Zonal | O :: II | Bates | | | | m/s | | 1/(20 min) | 25 km :: G | N/A :: Near_sfc |
| 1701 | Wind Speed, Meridional | O :: II | Bates | | | | m/s | | 1/(20 min) | 25 km :: G | N/A :: Near_sfc |
| 1702 | Wind Direction | I :: II | Liu | | | | dg | 10 dg :: 10 dg | 1/day | 25 km :: Ocean | N/A :: Sfc |
| 1703 | Wind Direction | I :: II | Srokosz | | | | dg | 10 dg :: 1 dg | 1/day | 5 km :: Ocean [South Atlan] | |
| 1704 | Wind Direction | O :: II | Barron | | | | dg | | 1/(5 min) | 30 km :: [East. U.S.] | |
| 1705 | Wind Direction | O :: II | Barron | | | | dg | | 1/(5 min) | 500 m :: [East. U.S.] | |
| 1706 | Wind Flux(Draw) | I :: II | Kerr, Sorooshian | | | | km/day | | 1/day | 25 km :: Land | 10 km :: Trop |
| 1707 | Wind Speed, Sea_sfc | I :: II | Abbott | | | | m/s | 10% :: 5% | 1/(10-20 day) | 25 km :: Ocean [Southern] | N/A :: Sfc |
| 1708 | Wind Speed, Sea_sfc | I :: II | Abbott | | | | m/s | 10% :: 5% | 1/(1-2 day) | 25 km :: Ocean [Southern] | N/A :: Sfc |
| 1709 | Wind Speed, Sea_sfc | I :: II | Bates | | | | m/s | | 2/day [d,n] | 50 km :: Ocean | N/A :: Sfc |
| 1710 | Wind Speed, Sea_sfc | I :: II | Brewer | | | | m/s | 15% :: 5% | 1/day, 1/seas | 25 km :: Ocean | N/A :: Sfc |
| 1711 | Wind Speed, Land_sfc | I :: II | Kerr, Sorooshian | | | | m/s | 5 m/s :: 5 m/s | 1/hr | 25 km :: Land/R | N/A :: Sfc |
| 1712 | Wind Speed | I :: II | Lau | | | | m/s | 1 m/s :: 2% | 2/day | 100 km :: G | 1 km :: Trop |
| 1713 | Wind Speed, Sea_sfc | I :: II | Liu | | | | m/s | 1 :: 1 | 1/day | 25 km :: Ocean | N/A :: Sfc |
| 1714 | Wind Speed | I :: II | Pyle | | | | m/s | 5 m/s :: 5 m/s | 2/day | 15 x 4 km :: G | 2 km :: Strat |
| 1715 | Wind Speed | I :: II | Sellers | | | | m/s | 1 m/s :: | 4/day | 100 km :: | 0.5 km :: Trop |
| 1716 | Wind Speed, Sea_sfc | I :: II | Srokosz | | | | m/s | 1 m/s :: 0.1 m/s | 1/day | 5 km :: Ocean [South Atlan | N/A :: Sfc |
| 1717 | Wind Speed, Sea_sfc | I :: II | Tapley | | | | m/s | 1 m/s :: | 4/day | 50 km :: Ocean | N/A :: Sfc |
| 1718 | Wind Speed, Sea_sfc | O :: FI | Aumann | AIRS | PM | GSFC | m/s | | 1/day | 50 km :: Ocean | N/A :: Sfc |
| 1721 | Wind Speed | O :: II | Barron | | | | m/s | | 1/(5 min) | 30 km :: [East. U.S.] | |
| 1722 | Wind Speed | O :: II | Barron | | | | m/s | | 1/(5 min) | 500 m :: [East. U.S.] | |
| 1723 | Wind Speed | O :: II | Barron | | | | m/s | | 1/hr | 20-100 km :: R | |
| 1724 | Wind Speed | O :: II | Barron | | | | m/s | | 1/hr | 1 km :: R | |
| 1725 | Wind Speed | O :: II | Schoeberl | | | | m/s | 2 m/s :: 2 m/s | (1-4)/day | 2 x 3 dg :: G | 2 km :: Atmos |
| 1726 | Wind Speed | O :: II | Schoeberl | | | | m/s | 2 m/s :: 2 m/s | 1/day | 4 x 5 dg :: G | 3.8 km :: Strat |
| 1727 | Wind Speed | O :: II | Schoeberl | | | | m/s | 2 m/s :: 2 m/s | 1/day | 4 x 5 dg :: G | 110 mb :: Trop |
| 1728 | Wind Speed | O :: II | Schoeberl | | | | m/s | 2 m/s :: 2 m/s | 1/day | 4 x 5 dg :: G | 3.8 km :: Strat |
| 1729 | Wind Speed | O :: II | Schoeberl | | | | m/s | 2 m/s :: 2 m/s | 1/day | 4 x 5 dg :: G | 110 mb :: Trop |
| 1730 | Wind Speed | O :: II | Schoeberl | | | | m/s | 2 m/s :: 2 m/s | 1/day | 2 x 3 dg :: G | 2 km :: |
| 1734 | Wind Speed | O :: PI | Waters | MLS | MO | GSFC | m/s | :: 10m/s | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 60-110 km |
| 1735 | *Wind Speed, Along-track* | O :: FI | Fu | ALT | ALT | JPL | m/s | 2 m/s :: | | 7 km :: Ocean | N/A :: Sfc |
| 1736 | Wind Speed, Meridional | O :: II | Barron | | | | m/s | | 2/day | 4.5 x 7.5 dg :: G | |
| 1737 | Wind Speed, Meridional | O :: II | Barron | | | | m/s | | 2/day | 2.8 x 2.8 dg :: G | |
| 1738 | Wind Speed, PBL | I :: II | Lau | | | | m/s | 20% :: 10% | 1/hr | 30 m :: Land/L | N/A :: PBL |
| 1739 | Wind Speed | I :: II | Lau | | | | m/s | 0.5 m/s :: 2% | 2/day | 100 km :: G | N/A :: Sfc |
| 1740 | Wind Speed, Zonal | O :: II | Barron | | | | m/s | | 2/day | 4.5 x 7.5 dg :: G | |
| 1741 | Wind Speed, Zonal | O :: II | Barron | | | | m/s | | 2/day | 2.8 x 2.8 dg :: G | |
| 1742 | Wind Stress | I :: II | Bates | | | | | | | :: Ocean | :: Sfc |
| 1743 | Wind Stress | I :: II | Lau | | | | N/m^2 | 0.01 :: | | :: Ocean | N/A :: Sfc |
| 1744 | Wind Stress | I :: II | Murakami | | | | N/m^2 | 0.01 :: | | :: Ocean | N/A :: Sfc |
| 1745 | Wind Stress | I :: II | Tapley | | | | N/m^2 | 10% :: | 4/day | 50 km :: Ocean | N/A :: Sfc |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1746 | Wind Stress | O :: PI | Freilich | STIKSCAT | CHEM | JPL | | | | :: Ocean | :: Sfc |
| 1747 | Wind Stress, Zonal | O :: II | Barron | | | | N/m^2 | | 2/day | 4.5 x 7.5 dg :: G | Sfc :: |
| 1748 | Wind Stress, Zonal | O :: II | Barron | | | | N/m^2 | | 2/day | 2.8 x 2.8 dg :: G | Sfc :: |
| 1749 | Wind Stress, Meridional | O :: II | Bates | | | | N/m^2 | | 1/(20 min) | 50 km :: G | N/A :: Sfc |
| 1750 | Wind Stress, Meridional | O :: II | Barron | | | | N/m^2 | | 2/day | 4.5 x 7.5 dg :: G | Sfc :: |
| 1751 | Wind Stress, Zonal | O :: II | Bates | | | | N/m^2 | | 1/(20 min) | 25 km :: G | N/A :: Sfc |
| 1752 | Wind Stress, Zonal | O :: II | Bates | | | | N/m^2 | | 1/(20 min) | 50 km :: G | N/A :: Sfc |
| 1753 | Wind Velocity, Sea_sfc | I :: II | Abbott | | | | m/s,dg | 10%,<20dg :: 5% | 1/(1-2 day) | 25 km :: Ocean [Southern] | N/A :: Sfc |
| 1754 | Wind Velocity | I :: II | Abbott | | | | m/s,dg | 10%,<20dg :: 5% | 1/(1-2 day) | 25 km :: Ocean [Southern] | 1 km :: Trop |
| 1755 | Trace Gas Transport Diagnostics | O :: II | Grose | | | | | | 1/mo | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| 1756 | Lightning Rate | O :: PI | Christian | LIS | TRM | MSFC | | :: 5% | | .07 dg :: G | N/A :: Atmos |
| 1757 | Lightning Rate | I :: II | Barron | | | | /s | 10% :: 10% | 1/day | 10 km :: G | N/A :: Atmos |
| 1758 | Lightning Rate | I :: II | Kerr, Sorooshian | | | | #/hr | 1 :: 1 | 1/(10 min) | 1 km :: Land | :: Trop |
| 1759 | Cloud Drop Phase | I :: II | Bates | | | | water/ice | | 1/day, 1/mo | 1 dg :: G | N/A :: Cloud |
| 1760 | Cloud Drop Phase | I :: II | Wielicki | | | | | 25% :: 10% | 1/(16 day) | .03-10 km :: R | N/A :: Atmos |
| 1761 | Cloud Drop Phase | I :: II | Wielicki | | | | | 90% Conf :: 90% Conf | 6/day [d,n] | 25-100 km :: G | N/A :: Atmos |
| 1762 | Cloud Drop Phase | O :: FI | Welch | HIRIS | AM2 | EDC | water/ice | | 1/(2-16 day) | 30 m :: L | N/A :: Cloud |
| 1763 | Cloud Drop Phase | O :: FI | Welch | ASTER | AM1 | EDC | dimensionless | water/ice :: | 1/(16 day) | 15-30 m :: L | N/A :: Cloud |
| 1764 | Cloud Drop Phase | O :: FI | King, Menzel | MODIS | AM,PM | GSFC | water/ice | 90% Conf :: 90% Conf | 1/day | 5 km :: G | N/A :: Cloud |
| 1765 | Cloud Drop Phase | O :: FI | King, Menzel | MODIS | AM,PM | GSFC | water/ice | 90% Conf :: 90% Conf | 1/day, 1/mo | 1 dg :: G | N/A :: Cloud |
| 1766 | Cloud Drop Phase | O :: II | Wielicki | | | | water/ice | 90% Conf :: 90% Conf | 18/day [d,n] | 25 km :: R | N/A :: Atmos |
| 1767 | Cloud Drop Phase | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | water/ice | 90% Conf :: 90% Conf | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: Atmos |
| 1768 | Cloud Drop Phase | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | water/ice | 90% Conf :: 90% Conf | 6/day [d,n] | 25 km :: G | N/A :: Atmos |
| 1769 | Cloud Drop Phase | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | water/ice | 90% Conf :: 90% Conf | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: Atmos |
| 1770 | *Cloud Drop Phase* | O :: PI | Travis | EOSP | AERO,AM2 | LaRC | water/ice | :: 95% Corr | 1/day [d] | 100 km :: G | N/A :: Cloud |
| 1771 | Cloud Drop Size | I :: II | Wielicki | | | | um | 25% :: 10% | 1/(16 day) | .03-10 km :: R | N/A :: Atmos |
| 1772 | Cloud Drop Size | I :: II | Wielicki | | | | um | 30% :: 10% | 6/day [d,n] | 25-100 km :: G | N/A :: Atmos |
| 1773 | Cloud Drop Size | O :: II | Wielicki | | | | um | 30% :: 10% | 18/day [d,n] | 25 km :: R | N/A :: Atmos |
| 1774 | *Cloud Drop Size* | O :: PI | Travis | EOSP | AERO,AM2 | LaRC | um | 25% :: 25% | 1/day [d] | 100 km :: G | N/A :: Cloud |
| 1775 | Cloud Drop Size-distribution | I :: II | Hartmann | | | | um | 20% :: 20% | 1/day | 10 km :: G | 0-15 km :: Cloud |
| 1776 | Cloud Drop Size-distribution | O :: FI | Welch | HIRIS | AM2 | EDC | no/cm^2/um | 20% :: 10% | 1/(2-16 day) | 30 m :: L | :: Cloud |
| 1777 | Cloud Drop Size(Effective Radius) | I :: II | Bates | | | | um | 0-40% :: 5% | 1/day, 1/mo | 1 dg :: G | N/A :: Cloud |
| 1778 | Cloud Drop Size(Effective Radius) | O :: FI | Welch | HIRIS | AM2 | EDC | um | 10 um :: | 1/(2-16 day) | 30 m :: L | :: Cloud |
| 1779 | Cloud Drop Size(Effective Radius) | O :: FI | Welch | ASTER | AM1 | EDC | um | 10 um :: | 1/(16 day) | 15-90 m :: L | :: Cloud |
| 1780 | Cloud Drop Size(Effective Radius) | O :: FI | King, Menzel | MODIS | AM,PM | GSFC | um | 0-40% :: 5% | 1/day | 5 km :: G | N/A :: Cloud |
| 1781 | Cloud Drop Size(Effective Radius) | O :: FI | King, Menzel | MODIS | AM,PM | GSFC | um | 0-40% :: 5% | 1/day, 1/mo | 1 dg :: G | N/A :: Cloud |
| 1782 | Cloud Drop Size(Effective Radius) | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | um | 30% :: 10% | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: Atmos |
| 1783 | Cloud Drop Size(Effective Radius) | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | um | 30% :: 10% | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: Atmos |
| 1784 | Cloud Drop Size(Effective Radius) | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | um | 30% :: 10% | 6/day [d,n] | 25 km :: G | N/A :: Atmos |
| 1785 | Cloud Ice Content | I :: II | Hartmann | | | | kg/m^2 | 0.02 :: 0.02 | 1/day | 10 km :: Ocean | N/A :: Cloud |
| 1786 | Cloud Condensation Rate, Total | O :: II | Barron | | | | kg/m^2/s | | 2/day | 4.5 x 7.5 dg :: G | |
| 1787 | Cloud Condensation Rate, Total | O :: II | Barron | | | | kg/m^2/s | | 2/day | 2.8 x 2.8 dg :: G | |
| 1788 | Vegetation Evapotrans | I :: II | Lau | | | | W/m^2 ? | 10% :: 10% | 1/day | 1 km :: Land/L | N/A :: Sfc |
| 1789 | Vegetation Evapotrans | I :: II | Simard | | | | | | | :: Canada/R | N/A :: Sfc |
| 1790 | Vegetation Evapotrans | I :: II | Schimel | | | | cm ? | 20% :: 5% | 1/wk | 30 m :: 6 sites/L | N/A :: Sfc |
| 1791 | Vegetation Evapotranspiration (ET) | O :: FI | Schmugge | ASTER | AM1 | EDC | mm/day | 1 mm/day :: 0.5 mm/day | | 90 m :: Land/R,L | N/A :: Sfc |
| 1792 | Vegetation Evapotrans | O :: II | Barron | | | | W/m^2 ? | | 1/event, 1/mo, 1/yr | 30-90 m :: R | |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1793 | Vegetation Evapotrans | O :: II | Barron | | | | W/m^2 ? | | 1/event, 1/mo, 1/yr | 900 m :: R | |
| 1794 | Vegetation Evapotrans | O :: II | Barron | | | | W/m^2 ? | | 1/event, 1/mo, 1/yr | 18 km :: R | |
| 1795 | Vegetation Evapotrans | O :: II | Richey, Batista | | | | mm/mo | 5% :: 5% | 1/mo | 1 km :: Land/R | :: Sfc |
| 1796 | Vegetation Evapotrans | O :: II | Richey, Batista | | | | mm/mo | 5% :: 5% | 1/mo | 1 km :: Land/R | |
| 1797 | Vegetation Evapotrans | O :: II | Moore | | | | mm/day | 1 :: 1 | 1/day, 1/wk | .030-1 km :: Land/R,L | |
| 1798 | Vegetation Evapotrans | O :: II | Moore | | | | mm/day | 1 :: 1 | 1/day, 1/wk | 1 km :: Land | |
| 1799 | Vegetation Evapotrans | O :: II | Schimel | | | | cm/day | 20% :: 1% | 1/day | [multiple] :: 6 sites/L | :: Sfc |
| 1800 | Vegetation Evapotrans, Actual, (AET) | I :: II | Bates | | | | mm/day | 0.5 :: 1 | 1/day | 500 m :: Land | N/A :: Sfc |
| 1801 | Vegetation Evapotrans, Actual, (AET) | I :: II | Lau | | | | W/m^2 ? | 10% :: 10% | 1/day | 1 km :: Land/L | N/A :: Sfc |
| 1802 | Vegetation Evapotrans, Actual, (AET) | I :: II | Lau | | | | W/m^2 ? | 10% :: 10% | 1/day | 10 km :: Land/R | N/A :: Sfc |
| 1803 | Vegetation Evapotrans Time-deriv, Annual | O :: II | Schimel | | | | cm ? | 20% :: 1% | 1/day | [multiple] :: 6 sites/L | :: Sfc |
| 1804 | Vegetation Evapotrans, Potential | I :: II | Lau | | | | W/m^2 ? | 10% :: 10% | 1/day | 10 km :: Land/R | N/A :: Sfc |
| 1805 | Humidity Profile | I :: II | Abbott | | | | g/kg | 10% :: 5% | 1/(1-2 day) | 25 km :: Ocean [Southern] | 1 km :: Trop |
| 1806 | Humidity Profile | I :: II | Barron | | | | g/kg | 10% :: 5% | 1/day | 10 km :: R | :: Trop |
| 1807 | Humidity Profile | I :: II | Barron | | | | g/kg | 10% :: 5% | 1/day | 100 km :: G | :: Trop |
| 1808 | H2O Conc | I :: II | Bates | | | | g/m^3 | 5-10% :: 1-5% | 2/day | 4 x 4 dg :: G | 1-1.5 km :: 10-80 km |
| 1809 | Humidity Profile | I :: II | Bates | | | | g/kg | 10% :: 5% | 2/day [d,n] | 50 km :: G | 2 km :: Atmos |
| 1810 | Precipitable Water | I :: II | Richey, Batista | | | | % | 5% :: 5% | 1/day | :: R | :: Trop |
| 1811 | H2O Conc | I :: II | Grose | | | | mix ratio | 15% :: 5% | 2/day | 30 x 4 dg :: G | 3 km :: Trop/meso |
| 1812 | Humidity Profile | I :: II | Hansen | | | | mix ratio | 3% :: | 1/wk | 500 km :: G | :: Atmos |
| 1813 | Humidity Profile | I :: II | Hansen | | | | | 3% :: | 1/wk | 500 km :: G | :: Trop |
| 1814 | Humidity Profile | I :: II | Hartmann | | | | g/kg | 10% :: 10% | 1/day | 10 km :: G | 1 km :: 0-15 km |
| 1815 | Humidity Profile | I :: II | Isacks | | | | g/kg | 10% :: 0.05 | 1/wk | 50 km :: Land/R | 2 km :: Trop |
| 1816 | Humidity Profile | I :: II | Kerr, Sorooshian | | | | g/cm^3 | 10% :: 10% | 2/day | 50 km :: Land | 1 km :: Atmos |
| 1817 | Humidity Profile | I :: II | Liu | | | | g/kg | 0.5 :: 0.5 | 1/day | 25 km :: Ocean | 0.5 km :: Trop |
| 1818 | Humidity | I :: II | Murakami | | | | g/kg | 10% :: | | | |
| 1819 | H2O Conc | I :: II | Pyle | | | | mix ratio (-log10) | 10% :: 5% | 2/day | 15 x 4 km :: G | 3 km :: Strat |
| 1820 | Humidity, Near_sfc | I :: II | Rothrock | | | | g/cm^3 | | 1/day | 100 km :: Polar | :: Near_sfc |
| 1821 | H2O Conc | I :: II | Schoeberl | | | | ppm | 10% :: 5%t,0.05s | 1/day | 2 x 3 dg :: G | 1.5 km :: 0-Strat |
| 1822 | H2O Conc | I :: II | Schoeberl | | | | ppm | 10% :: 0.05 | 1/day | 4 x 5 dg :: G | 2.5 km :: Meso |
| 1823 | Humidity Profile | I :: II | Sellers | | | | Pa | 10% :: | 4/day | 100 km :: | 0.5 km :: Trop |
| 1824 | Humidity Profile, Specific | I :: II | Srokosz | | | | g/kg | 0.3g/kg :: 0.1g/kg | 2/day | 0 km :: Ocean [South Atlan] | |
| 1825 | Humidity Profile | I :: II | Tapley | | | | g/kg | 5% :: | 4/day | 50 km :: G | 1 km :: Atmos |
| 1826 | Humidity Profile | I :: II | Wielicki | | | | g/kg | 20% :: 10% | 4/day [d,n] | 1.25 dg :: G | 2 km :: Atmos |
| 1828 | *Humidity Profile* | O :: FI | Chedin, Fleming, Smith, Susskind | AIRS | PM | GSFC | g/kg | 10% :: 5% | 2/day [d,n] | 15 x 50 - 50 x 50 km :: G | 2 km :: Atmos |
| 1829 | Humidity | O :: II | Barron | | | | g/kg | | 1/hr | 20-100 km :: R | |
| 1830 | Humidity | O :: II | Barron | | | | g/kg | | 1/hr | 1 km :: R | |
| 1831 | Humidity Profile | O :: II | Barron | | | | g/cm^3 | | 1/(6 hr) | 1 dg :: G | 15-20 lvl :: |
| 1832 | H2O Conc | O :: II | Grose | | | | mix ratio | | 48/day [for 10 day] | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| 1833 | H2O Conc | O :: II | Pyle | | | | | | | | |
| 1834 | H2O Conc | O :: II | Schoeberl | | | | ppm | 30% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| 1835 | H2O Conc | O :: II | Schoeberl | | | | ppm | 15% :: 10% | (1-4)/day | 2 x 3 dg :: G | 2 km :: Atmos |
| 1837 | *H2O Conc* | O :: PI | Barnett, Gille | HIRDLS | CHEM | GSFC | mix ratio | 5-10% :: 1-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 7-80 km |
| 1838 | H2O Conc | O :: PI | Waters | MLS | MO | GSFC | | :: 2% <50km | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 5 km [1.2] :: TPSE, 100 k |
| 1839 | H2O Conc | O :: PI | Russell | SAFIRE | MO | GSFC | ppmv | :: 5% (20-80 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 10-100 km |
| 1840 | *H2O Conc* | O :: PI | McCormick | SAGE-III | AERO,CHEM | LaRC | /cm^3&ppmv | 10% :: 10% | 1/(2 min), 30/day | <2 x <1 dg :: Polar | 1 km :: 3-50 km |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1841 | *H2O Conc* | O :: PI | McCormick | SAGE-III | AERO,CHEM | LaRC | /cm^3&ppmv | 10% :: 15% | 1/(2 min), 30/day | <2 x <1 dg :: G | 1 km :: 3-50 km |
| 1842 | *H2O Conc, Tropospheric* | O :: PI | Beer | TES | CHEM | LaRC | ppm | :: 50 ppm | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 4-12 km |
| 1843 | *H2O Conc, Stratospheric* | O :: PI | Beer | TES | CHEM | LaRC | ppm | :: 0.5 ppm | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 13-30 km |
| 1844 | *H2O Conc* | O :: PI | Beer | TES | CHEM | LaRC | ppm | :: 50 ppm | 1/(16 day) | 16 x 5 km :: G | 4-6 km :: 0-12 km |
| 1845 | Moisture Budget | O :: II | Grose | | | | | | 1/mo | ~6 x 6 dg :: G | |
| 1846 | Moisture Flux | O :: II | Sellers | | | | kg/m^2/s | | 4/day | 1 dg :: | |
| 1847 | Moisture Flux | O :: II | Barron | | | | kg (H2O)/m^2 | | 1/mo | 10 x 10 km :: N. Atlantic | |
| 1848 | Moisture Flux, Sfc | O :: II | Barron | | | | W/m^2 | | 1/day | 10 km :: R | N/A :: Sfc |
| 1849 | Moisture Flux, Sfc | O :: II | Barron | | | | g/m^2/s | | 1/(5 min) | 30 km :: [East. U.S.] | :: Sfc |
| 1850 | Moisture Flux, Sfc | O :: II | Barron | | | | g/m^2/s | | 1/hr | 20-100 km :: R | :: Sfc |
| 1851 | Moisture Flux, Sfc | O :: II | Barron | | | | g/m^2/s | | 1/(5 min) | 500 m :: [East. U.S.] | :: Sfc |
| 1852 | H2O (H2^17O) Conc | O :: PI | Russell | SAFIRE | MO | GSFC | ppbv | :: 10% (20-40 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-50 km |
| 1853 | H2O (H2^18O) Conc | O :: PI | Russell | SAFIRE | MO | GSFC | ppmv | :: 10% (20-50 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-60 km |
| 1854 | H2O (H2^17O) Conc | O :: PI | Waters | MLS | MO | GSFC | | :: 2%<50km | 2/day [d,n] | | 2.5 km [1.2] :: TPSE, 90 kn |
| 1855 | H2O (H2^18O) Conc | O :: PI | Waters | MLS | MO | GSFC | | :: 2%<50km | 2/day [d,n] | | 2.5 km [1.2] :: TPSE, 80 kn |
| 1856 | H2O (HDO) Conc | I :: II | Schoeberl | | | | ratio to H2O | 10% :: 10% | 1/day | 8 x 10 dg :: G | 3 km :: Strat |
| 1857 | H2O (HDO) Conc | O :: PI | Russell | SAFIRE | MO | GSFC | ppmv | :: 7% (20-50 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 10-60 km |
| 1858 | Precipitable Water | I :: II | Abbott | | | | kg/m^2 | 10% :: 5% | 1/(1-2 day) | 25 km :: Ocean [Southern] | Column :: Trop |
| 1859 | Precipitable Water | I :: II | Barron | | | | mm | 3% :: 1% | 1/day | 30 m :: L | Column :: Trop |
| 1860 | Precipitable Water | I :: II | Barron | | | | mm | 3% :: 1% | 1/day | 10 km :: R | Column :: Trop |
| 1861 | Precipitable Water | I :: II | Barron | | | | mm | 3% :: 1% | 1/day | 100 km :: G | Column :: Trop |
| 1862 | Precipitable Water | I :: II | Bates | | | | mm | 5% :: 3% | 2/day [d,n] | 50 km :: G | N/A :: Trop |
| 1863 | Precipitable Water | I :: II | Richey, Batista | | | | mm/mo ? | | 1/wk | 1 km :: R | Column :: Trop |
| 1864 | H2O Conc, Stratospheric | I :: II | Hansen | | | | | 3% :: | 1/wk | 500 km :: G | Column :: Strat |
| 1865 | Precipitable Water | I :: II | Kerr, Sorooshian | | | | cm | 10% :: 10% | 2/day | 50 km :: Land | Column :: Atmos |
| 1866 | Precipitable Water | I :: II | Liu | | | | g/cm^2 | 0.5 :: 0.5 | 1/day | 25 km :: Ocean | Column :: Trop |
| 1867 | Precipitable Water | I :: II | Murakami | | | | g/cm^2 | 20% :: | | | |
| 1868 | Precipitable Water | I :: II | Srokosz | | | | kg/m^2 | 1kg/m^2 :: 0.1kg/m^2 | 2/day | 0 km :: Ocean [South Atla | N/A :: Atmos |
| 1869 | *Precipitable Water* | O :: FI | Chedin, Fleming, Smith, Susskind | AIRS | PM | GSFC | mm | 5% :: 3% | 2/day [d,n] | 50 km :: G | N/A :: Trop |
| 1872 | Precipitable Water | O :: FI | Goetz | HIRIS | AM2 | EDC | cm | 10% :: 3% | 1/(1-3 min), 1(2-16 day) | 30 m :: L | Column :: Atmos |
| 1873 | Precipitable Water | O :: FI | Goetz | HIRIS | AM2 | EDC | cm | 10% :: 3% | 1/(1-3 min), 1/(2-16 day) | 30 m :: L | Column :: Trop |
| 1874 | Precipitable Water | O :: FI | Kaufman, Tanre | MODIS | AM,PM | GSFC | dimensionless ? | 8% :: 6% | 1/day | 5 km :: Land | N/A :: Atmos |
| 1875 | Precipitable Water | O :: FI | Menzel | MODIS | AM,PM | GSFC | mm | 10 mm :: 5 mm | 2/day | 5 km :: G | N/A :: Atmos |
| 1876 | Precipitable Water | O :: II | Barron | | | | g/kg ? | | 1/hr | 20-100 km :: R | |
| 1877 | Precipitable Water | O :: II | Barron | | | | g/kg ? | | 1/hr | 1 km :: R | |
| 1879 | Humidity Profile, Specific | O :: II | Bates | | | | g/kg | | 1/(20 min) | 50 km :: G | 50 lyr :: 1000-0.1 mb |
| 1880 | Humidity Profile, PBL | O :: II | Barron | | | | g/kg | | 1/day | 10 km :: R | :: PBL |
| 1881 | Humidity, Relative, Near_sfc | I :: II | Kerr, Sorooshian | | | | % | 10% :: 10% | 1/hr | 1 km :: Land/R | N/A :: Sfc |
| 1882 | Humidity, Specific | O :: II | Barron | | | | kg/kg | | 2/day | 4.5 x 7.5 dg :: G | |
| 1883 | Humidity, Specific | O :: II | Barron | | | | kg/kg | | 2/day | 2.8 x 2.8 dg :: G | |
| 1884 | Humidity, Specific, Near_sfc | O :: II | Bates | | | | g/kg | | 1/(20 min) | 25 km :: G | N/A :: Near_sfc |
| 1885 | Humidity, Specific, Near_sfc | O :: II | Bates | | | | g/kg | | 1/(20 min) | 50 km :: G | N/A :: Near_sfc |
| 1886 | Humidity-Change, Specific, Convective_Adjusted | O :: II | Barron | | | | kg/kg/s | | 2/day | 4.5 x 7.5 dg :: G | |
| 1887 | Humidity-Change, Specific, Convective_Adjusted | O :: II | Barron | | | | kg/kg/s | | 2/day | 2.8 x 2.8 dg :: G | |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1888 | Humidity-Tendency, Specific | O :: II | Barron | | | | kg/kg/s | | 2/day | 4.5 x 7.5 dg :: G | |
| 1889 | Humidity-Tendency, Specific | O :: II | Barron | | | | kg/kg/s | | 2/day | 2.8 x 2.8 dg :: G | |
| 1890 | Cloud Ice Content | I :: II | Bates | | | | kg/m^2 | 0.02 :: 0.02 | 1/day | 10 km :: G | |
| 1891 | Cloud Ice Content | O :: II | Hartmann | | | | kg/m^2 | 0.02 :: 0.02 | 1/day | 10 km :: G | |
| 1892 | Cloud Ice Index | I :: II | Bates | | | | dimensionless | | 2/day [d,n] | 50 km :: G | N/A :: Cloud |
| 1893 | Cloud Ice Index | O :: FI | Staelin | AIRS | PM | GSFC | dimensionless | TBD :: TBD | 2/day [d,n] | 50 km :: G | N/A :: Cloud |
| 1894 | Cloud Liq_water Content | I :: II | Bates | | | | | :: 75% | 1/(6 hr) | 1 x 1 dg :: G | 1yr :: 0-30 km |
| 1895 | Cloud Liq_water Content | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | g/m^3 | 75% :: 10% | 1/(6 hr) | 1.25 x 1.25 dg :: G | 1yr :: Atmos |
| 1896 | Cloud Liq_water Content | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | g/m^3 | 75% :: 10% | 6/day [d,n] | 25 km :: G | 1yr :: Atmos |
| 1897 | Cloud Liq_water Content | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | g/m^3 | 75% :: 10% | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | 1yr :: Atmos |
| 1898 | Cloud Liq_water Content | O :: PI | Waters | MLS | MO | GSFC | | :: 5% | 1/day [z. mean] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: Upper Trop |
| 1899 | Cloud Liq_water Total Column | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | kg/m^2 | 50% :: 10% | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | Column :: Atmos |
| 1900 | Cloud Liq_water Total Column | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | kg/m^2 | 50% :: 10% | 6/day [d,n] | 25 km :: G | Column :: Atmos |
| 1901 | Cloud Liq_water Total Column | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | kg/m^2 | 50% :: 10% | 1/(6 hr) | 1.25 x 1.25 dg :: G | Column :: Atmos |
| 1902 | Cloud Liq_water Content | I :: II | Barron | | | | mm | 0.1 :: 0.05 | 1/day | 100 km :: G | 1 km :: Cloud |
| 1903 | Cloud Liq_water Content | I :: II | Barron | | | | mm | 0.1 :: 0.05 | 1/day | 10 km :: R | 1 km :: Cloud |
| 1904 | Cloud Liq_water Content | I :: II | Bates | | | | mm | 0.1 :: 0.1 | 2/day [d,n] | 50 km :: G | N/A :: Cloud |
| 1905 | Cloud Liq_water Content | I :: II | Kerr, Sorooshian | | | | | | | 30 m :: Land/R | :: Cloud |
| 1906 | Cloud Liq_water Content | I :: II | Wielicki | | | | g/m^2 | 20% :: 10% | 2/day [d,n] | 12-25 km :: G | N/A :: Atmos |
| 1907 | Cloud Liq_water Content | I :: II | Wielicki | | | | g/m^2 | 50% :: 10% | 6/day [d,n] | 25-100 km :: G | N/A :: Atmos |
| 1908 | Cloud Liq_water Content | O :: FI | Rosenkranz | AIRS | PM | GSFC | mm | 0.1 :: 0.1 | 2/day [d,n] | 50 km :: G | N/A :: Cloud |
| 1912 | Cloud Liq_water Content | O :: II | Barron | | | | g/cm^3 | | 1/(6 hr) | 1 dg :: G | 15-20 lvl :: |
| 1913 | Cloud Liq_water Content | O :: II | Barron | | | | g/cm^3 | | 1/(6 hr) | 1 dg :: G | 15-20 lvl :: |
| 1914 | Cloud Liq_water Content | O :: II | Barron | | | | g/kg | | 1/hr | 20-100 km :: R | |
| 1915 | Cloud Liq_water Content | O :: II | Barron | | | | g/kg | | 1/hr | 1 km :: R | |
| 1916 | Cloud Liq_water Content | O :: II | Wielicki | | | | g/m^2 | 30% :: 10% | 18/day [d,n] | 25 km :: R | N/A :: Atmos |
| 1918 | Cloud Liq_water Total Column | I :: II | Abbot | | | | kg/m^2 | 10% :: 5% | 1/(1-2 day) | 25 km :: Ocean [Southern] | Column :: Trop |
| 1919 | Cloud Liq_water Total Column | I :: II | Hartmann | | | | kg/m^2 | 0.05 :: 0.05 | 1/day | 10 km :: Ocean | Column :: Trop |
| 1920 | Cloud Liq_water Total Column | I :: II | Lau | | | | kg/m^2 | 0.05 :: 0.05 | 1/day | 100 km :: G | N/A :: Trop |
| 1921 | Cloud Liq_water Total Column | I :: II | Sellers | | | | | | | | |
| 1922 | Cloud Liq_water Total Column | I :: II | Srokosz | | | | kg/m^2 | 10% :: 0.1kg/m^2 | 2/day | 0 km :: Ocean [South Atla | N/A :: Trop |
| 1923 | Cloud Liq_water Total Column | O :: II | Hartmann | | | | kg/m^2 | 0.05 :: 0.05 | 1/day | 10 km :: G | Column :: Trop |
| 1924 | Moistening, Convective | O :: II | Bates | | | | g/kg/s | | 1/(4-6 hr) | 50 km :: G | 25 lyr :: 1000-0.1 mb |
| 1925 | Moistening, Diffusive | O :: II | Bates | | | | g/kg/s | | 1/(4-6 hr) | 50 km :: G | 25 lyr :: 1000-0.1 mb |
| 1926 | Precipitation Amount | I :: II | Barron | | | | mm/day | 2 :: 1 | 1/day | 100 km :: G | N/A :: Trop |
| 1927 | Precipitation Amount | I :: II | Barron | | | | mm/day | 2 :: 1 | 1/day | 10 km :: R | N/A :: Trop |
| 1928 | Precipitation Amount | I :: II | Brewer | | | | mm/day | 2 :: TBD | 1/day, 1/seas | :: Ocean/L | N/A :: Sfc |
| 1929 | Precipitation Amount | I :: II | Brewer | | | | mm/day | 2 :: TBD | 1/day, 1/seas | :: Ocean | N/A :: Sfc |
| 1930 | Precipitation Amount | I :: II | Hansen | | | | mm/wk | 10% :: | 1/wk | 500 km :: G | :: Sfc |
| 1931 | Precipitation Amount | I :: II | Hartmann | | | | mm/day | 10 :: 10 | 1/day | 10 km :: Ocean | N/A :: Trop |
| 1932 | Precipitation Amount | I :: II | Isacks | | | | mm | | 1/wk | 5-50 km :: Land/R | N/A :: Sfc |
| 1933 | Precipitation Rate | I :: II | Isacks | | | | mm/hr | | 1/event, 1/mo | 5-50 km :: Land/R | N/A :: Sfc |
| 1934 | Precipitation Amount, Daily | I :: II | Kerr, Sorooshian | | | | mm | 1 mm :: 1 mm | 1/day | 1 km :: Land/R | N/A :: Sfc |
| 1935 | Precipitation Amount | I :: II | Lau | | | | mm/day | 2 :: 2 | 1/mo | 500 km :: G | N/A :: Trop |
| 1936 | Precipitation Amount | I :: II | Lau | | | | mm/day | 2 :: 2 | 1/day | 50 km :: R | N/A :: Sfc |
| 1937 | Precipitation Rate | I :: II | Simard | | | | | 20% :: | | :: Canada/R | N/A :: Trop |
| 1938 | Precipitation Amount | I :: II | Murakami | | | | mm/day | 10% :: | | | |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1939 | Precipitation Amount | I :: II | Sellers | | | | mm | | 4/day | 100 km :: | |
| 1940 | Precipitation Amount | I :: II | Wielicki | | | | mm/day | 50% :: 25% | 4/day [d,n] | 25-50 km :: G | N/A :: Trop |
| 1942 | Precipitation Amount | O :: II | Bates | | | | mm | | 1/(4-6 hr) | 50 km :: G | N/A :: Sfc |
| 1943 | Precipitation Amount | O :: II | Richey, Batista | | | | mm/mo | 10% :: 10% | 1/wk | 1 km :: Land/R | :: Sfc |
| 1944 | Precipitation Amount | O :: II | Richey, Batista | | | | mm/mo | 10% :: 10% | 1/wk | 1 km :: R | |
| 1945 | Precipitation Amount | O :: II | Hartmann | | | | mm/day | 10 :: 10 | 1/day | 10 km :: Ocean | |
| 1946 | Precipitation Amount, Convective | O :: II | Barron | | | | m/s ? | | 2/day | 4.5 x 7.5 dg :: G | |
| 1947 | Precipitation Amount, Convective | O :: II | Barron | | | | m/s ? | | 2/day | 2.8 x 2.8 dg :: G | |
| 1948 | Precipitation Amount, Convective | O :: II | Bates | | | | mm | | 1/(4-6 hr) | 50 km :: G | N/A :: Sfc |
| 1949 | Precipitation Conc, Ice | I :: II | Bates | | | | g/m^3 | | | 10 km :: G | 7 lvl :: Trop |
| 1951 | Precipitation Conc, Ice | O :: II | Barron | | | | g/cm^3 | | 1/(6 hr) | 1 dg :: G | 15-20 lvl :: |
| 1952 | Precipitation Amount, Large-scale_stable | O :: II | Barron | | | | m/s ? | | 2/day | 4.5 x 7.5 dg :: G | |
| 1953 | Precipitation Amount, Large-scale_stable | O :: II | Barron | | | | m/s ? | | 2/day | 2.8 x 2.8 dg :: G | |
| 1954 | Precipitation Rate, Rain | I :: II | Bates | | | | g/m^3 | | | 10 km :: G | 7 lvl :: Trop |
| 1956 | Precipitation Amount, Rain | O :: II | Barron | | | | g/cm^3 | | 1/(6 hr) | 1 dg :: G | 15-20 lvl :: |
| 1957 | Precipitation Amount, Rain, Monthly | I :: II | Kerr, Sorooshian | | | | mm | 10% :: 10% | 1/mo | 500 m :: Land/L | N/A :: Sfc |
| 1958 | Precipitation Rate | I :: II | Bates | | | | mm/hr | | | 10 km :: G | 1 lvl :: Sfc |
| 1959 | Precipitation Rate, Rain | I :: II | Kerr, Sorooshian | | | | mm/hr | 20% :: 20% | 1/day | 500 m :: G | N/A :: Trop |
| 1960 | Precipitation Rate | I :: II | Lau | | | | mm/hr | 25% :: 10% | 1/hr | 100 m :: Land/L | N/A :: Sfc |
| 1962 | Precipitation Rate | O :: II | Barron | | | | cm/hr | | 1/hr | 20-100 km :: R | |
| 1965 | Precipitation Storm Depth (Precip-thickness) | I :: II | Lau | | | | mm | 10% :: 10% | 1/hr | 100 m :: Land/L | N/A :: Sfc |
| 1966 | Precipitation_Drop Phase, Sfc | I :: II | Bates | | | | type (snow,water) | | | 10 km :: G | N/A :: Sfc |
| 1968 | Precipitation Index | I :: II | Bates | | | | mm | 2mm/hr :: 1mm/hr | 2/day [d,n] | 50 km :: G | N/A :: Trop |
| 1969 | Precipitation Index | O :: FI | Susskind | AIRS | PM | GSFC | mm | 2mm/day :: 1mm/day | 2/day [d,n] | 50 km :: G | N/A :: Trop |
| 1970 | Precipitation Index, Antecedent | I :: II | Bates | | | | dimensionless | | 1/day | 26-52 km :: Land | N/A :: Sfc |
| 1972 | Precipitation Rate, Rain | I :: II | Abbott | | | | mm/hr | 5% :: 1% | (1-2)/day | 25 km :: Ocean [Southern] | N/A :: Trop |
| 1973 | Precipitation Amount, Rain | I :: II | Liu | | | | mm/day | 1 :: 1 | 2/day | 25 km :: Ocean | N/A :: Trop |
| 1974 | Precipitation Amount, Rain | I :: II | Moore | | | | mm/wk | 10% :: 10% | 1/wk | 1 km :: G | |
| 1975 | Precipitation Rate, Rain | I :: II | Srokosz | | | | mm/hr | 10% :: 1mm/hr | 2/day | 0 km :: Ocean [South Atla | N/A :: Trop |
| 1980 | Precipitation Rate, Rain | O :: II | Barron | | | | cm/hr | | 1/(5 min) [?] | 30 km :: [East. U.S.] | |
| 1981 | Precipitation Rate, Rain | O :: II | Barron | | | | cm/hr | | 1/(5 min) [?] | 500 m :: [East. U.S.] | |
| 1982 | Humidity-RMSE, Specific | O :: II | Bates | | | | g/kg | | 1/(20 min) | 100 km :: G | 25 lyr :: 1000-0.1 mb |
| 1983 | Precipitation Amount, Snow | I :: II | Moore | | | | mm/wk | 10% :: 10% | 1/wk | 1 km :: G | |
| 1984 | Precipitation Amount, Snow | I :: II | Sellers | | | | | | | | |
| 1985 | Precipitation Amount, Snow, Convective | O :: II | Barron | | | | m/s | | 2/day | 4.5 x 7.5 dg :: G | |
| 1986 | Precipitation Amount, Snow, Convective | O :: II | Barron | | | | m/s | | 2/day | 2.8 x 2.8 dg :: G | |
| 1987 | Precipitation Amount, Snow, Large-scale_Stable | O :: II | Barron | | | | m/s | | 2/day | 4.5 x 7.5 dg :: G | |
| 1988 | Precipitation Amount, Snow, Large-scale_Stable | O :: II | Barron | | | | m/s | | 2/day | 2.8 x 2.8 dg :: G | |
| 1989 | Vegetation Evapotrans | I :: II | Bates | | | | mm/day | 1 :: 1 | 1/day | 500 m :: Land | N/A :: Sfc |
| 1990 | Vegetation Evapotrans | I :: II | Bates | | | | m/yr | 0.02 :: | | | |
| 1991 | Vegetation Evapotrans | I :: II | Murakami | | | | m/yr | 0.02 :: | | | |
| 1992 | *Aerosol Extinction Coef* | O :: PI | Barnett, Gille | HIRDLS | CHEM | GSFC | /km | 5-10% :: 1-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 7-30 km |
| 1993 | Aerosol Size-distribution | O :: PI | Diner | MISR | AM | LaRC | dimensionless | 15% :: 10% | 1/(5-16 day) [d] | 15.4 km :: G | Column :: Atmos |
| 1994 | Aerosol Size-distribution | O :: PI | Diner | MISR | AM | LaRC | dimensionless | 15% :: 10% | 1/(5-16 day) | 1.9 km :: R | Column :: Atmos |
| 1995 | Albedo, Land_sfc | I :: II | Bates | | | | dimensionless | | 1/day | 50 km :: Land | N/A :: Sfc |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1997 | Albedo, Land_sfc | I :: II | Hartmann | | | | dimensionless | 1% :: 0.5% | 1/day | 20 km :: G | N/A :: |
| 1998 | Albedo, Land_sfc | I :: II | Isacks | | | | | :: 3% | 1/wk | 250 m :: Land/R | N/A :: Sfc |
| 1999 | Albedo, Land_sfc | I :: II | Sellers | | | | | 1% :: 10% | 1/(5 day) | 100 km :: Land | |
| 2000 | Albedo, Land_sfc | O :: FI | Gautier ?? | AIRS | PM | GSFC | dimensionless | | 1/day | 50 km :: Land | N/A :: Sfc |
| 2001 | Albedo, Spectral, TOA | O :: FI | Muller, Strahler | MODIS | AM,PM | GSFC | fraction | 10% :: 5% | 1/(3-8 day) | 1 km :: Land/R | N/A :: TOA |
| 2002 | Albedo, Land_sfc | O :: II | Schimel | | | | % | 10% :: 1% | 1/day, 1/wk | [multiple] :: 6 sites/L | |
| 2003 | *Albedo, Aerosol* | O :: FI | Tanre, Kaufman | MODIS | AM,PM | GSFC | dimensionless | 0.06 :: 0.03 | 1/day, 1/mo | 0.5 dg :: G,R | N/A :: Atmos |
| 2004 | Albedo, Planetary Spectral, TOA | O :: II | Barron | | | | fraction | | 2/day | 4.5 x 7.5 dg :: G | :: TOA |
| 2005 | Albedo, Planetary Spectral, TOA | O :: II | Barron | | | | fraction | | 2/day | 2.8 x 2.8 dg :: G | :: TOA |
| 2006 | Albedo, Cloud | I :: II | Kerr, Sorooshian | | | | % | 5% :: 5% | 1/hr | 500 m :: Land/R | :: Cloud |
| 2007 | Albedo, Cloud | I :: II | Sellers | | | | | | | | |
| 2008 | Albedo, Cloud | O :: FI | Welch | HIRIS | AM2 | EDC | % | 5% :: 5% | | 90 m :: R | :: Cloud |
| 2009 | Albedo, Planetary Spectral, TOA | I :: II | Kerr, Sorooshian | | | | % | 10% :: 10% | 1/day | 25 km :: Land/R | :: TOA |
| 2010 | Albedo, Planetary Spectral, TOA | O :: PI | Diner | MISR | AM | LaRC | dimensionless | <=0.03 :: 0.01 | 1/(5-16 day) [d] | 240 m :: R | N/A :: TOA |
| 2011 | *Albedo, Planetary Spectral, TOA* | O :: PI | Diner | MISR | AM | LaRC | dimensionless | <=0.03 :: 0.01 | 1/(5-16 day) [d] | 1.92 km :: G | N/A :: TOA |
| 2012 | Albedo, Sea_Ice | I :: II | Rothrock | | | | fraction | 0.05 :: 0.05 | 1/(3 day) | 25 km :: Polar | N/A :: Sfc |
| 2013 | Albedo, Land_sfc | I :: II | Barron | | | | % | 1% :: 1% | 1/wk | 10 km :: G | N/A :: Sfc |
| 2014 | Albedo, Land_sfc | I :: II | Kerr, Sorooshian | | | | % | 10% :: 10% | 1/wk | 500 m :: Land | N/A :: Sfc |
| 2015 | Albedo, Land_sfc | O :: FI | Tanre, Muller | MODIS | AM,PM | EDC | dimensionless | 15% :: 5 - 8% | 1/day, 1/wk | 1 km :: G,R | N/A :: Sfc |
| 2016 | Albedo, Land_sfc | O :: FI | Tanre, Muller | MODIS | AM,PM | EDC | dimensionless | 15% :: 5 - 8% | 1/day, 1/wk | 10 km :: G,R | N/A :: Sfc |
| 2017 | Albedo, Snow | I :: II | Hansen | | | | | 0.02 :: | 1/wk | 500 km :: Land | :: Sfc |
| 2018 | Albedo, Snow | I :: II | Lau | | | | % | 10% :: 10% | 1/wk | 100 m :: Land/R | N/A :: Sfc |
| 2019 | Albedo, Snow | I :: II | Simard | | | | | 2% :: | | :: Canada/R | N/A :: Sfc |
| 2020 | Albedo, Spectral, Land_sfc | I :: II | Dozier | | | | dimensionless | 5% :: 1% | 1/wk, 1/mo | 50 m :: Land/L | |
| 2021 | Albedo, Spectral, Land_sfc | O :: PI | Diner | MISR | AM | LaRC | dimensionless | <=0.03 :: 0.01 | 1/(5-16 day) [d] | 240 m :: R | N/A :: Sfc |
| 2022 | *Albedo, Spectral, Land_sfc* | O :: PI | Diner | MISR | AM | LaRC | dimensionless | <=0.03 :: 0.01 | 1/(5-16 day) [d] | 1.92 km :: G | N/A :: Sfc |
| 2023 | Albedo, TOA | I :: II | Barron | | | | % | 3 :: | 1/day | 100 km :: G | N/A :: TOA |
| 2024 | Albedo, Vegetation | I :: II | Hansen | | | | | 0.02 :: | 1/wk | 500 km :: Land | :: Sfc |
| 2025 | Anisotropy, LW_broadband, Clear-sky | I :: II | Wielicki | | | | fraction | 2% :: 1% | | 10 dg [Angle] :: G/clr | N/A :: Sfc, Atmos |
| 2026 | Anisotropy, LW_broadband, Cloudy-sky | I :: II | Wielicki | | | | fraction | 2% :: 1% | | 10 dg [Angle] :: G/cld | N/A :: Sfc, Atmos |
| 2027 | *Anisotropy, LW_broadband* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | fraction | 2% :: 0.5% | | 10 dg [Angle] :: G | N/A :: Sfc,Atmos |
| 2029 | PAR, Absorbed, Non-vegetative, (APAR) | O :: FI | Ustin, Wessman | HIRIS | AM2 | EDC | W/m^2 | 25% :: 10% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2030 | PAR, Absorbed, Vegetative, (APAR) | O :: FI | Ustin, Wessman | HIRIS | AM2 | EDC | W/m^2 | 25% :: 10% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2031 | Ocean Water Attenuation Coef, PAR | O :: FI | Clark | MODIS | AM,PM | GSFC | /m | 35% :: 10% | 1/day, 1/wk | 1 km :: Ocean-I/L | N/A :: TOO |
| 2032 | Ocean Water Attenuation Coef, PAR | O :: FI | Clark | MODIS | AM,PM | GSFC | /m | 35% :: 10% | 1/day, 1/wk | 20 km :: Ocean-I | N/A :: TOO |
| 2034 | Land_sfc Reflectance, Bi-directional, (BRDF) | I :: II | Sellers | | | | | | | | |
| 2035 | Land_sfc Reflectance, Bi-directional, (BRDF) | O :: FI | Gerstl | HIRIS | AM2 | EDC | dimensionless | 5% :: 5% | 1/(16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2037 | Cloud Reflectance, Bi-directional, (BRDF) | O :: FI | Welch | HIRIS | AM2 | EDC | | :: 1% | | 30 m :: R | :: Cloud |
| 2038 | Cloud Reflectance, Bi-directional, (BRDF) | O :: PI | Diner | MISR | AM | LaRC | /sr | 3% :: 1% | [variable] [d] | 240 m :: R | N/A :: Trop |
| 2039 | *Cloud Reflectance, Bi-directional, (BRDF)* | O :: PI | Diner | MISR | AM | LaRC | /sr | 3% :: 1% | [variable] [d] | 1.92 km :: G | N/A :: Trop |
| 2041 | Land_sfc Reflectance, Bi-directional Spectral, (BRDF) | I :: II | Sellers | | | | | | | 250-500 m :: Land | |
| 2042 | Soil Reflectance, Bi-directional, (BRDF) | I :: II | Kerr, Sorooshian | | | | dimensionless | 10% :: 10% | 1/seas | N/A :: Land | N/A :: Sfc |
| 2043 | Land_sfc Reflectance, Bi-directional, SW_Broadband, (BRDF) | I :: II | Wielicki | | | | fraction | 5% :: 2% | 1/day [d] | 0.2-2km :: R | N/A :: Sfc, Atmos |
| 2044 | Land_sfc Reflectance, Bi-directional, SW_Broadband, (BRDF) | I :: II | Wielicki | | | | fraction | 5% :: 2% | | 10 dg [Angle] :: G | N/A :: Sfc, Atmos |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2045 | Land_sfc Reflectance, Bi-directional, SW_Broadband, (BRDF) | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | fraction | 5% :: 1% | | 10 dg [Angle] :: G | N/A :: Sfc,Atmos |
| 2046 | Vegetation Reflectance, Bi-directional, (BRDF) | I :: II | Kerr, Sorooshian | | | | N/A | 10% :: 10% | 1/seas | N/A :: Land | N/A :: Sfc |
| 2047 | Soil Brightness Index | O :: FI | Huete | MODIS | AM,PM | EDC | dimensionless | 5% :: 5% | 1/mo | 1 km :: Land/R | N/A :: Sfc |
| 2048 | Soil Brightness Index | O :: II | Kerr, Sorooshian | | | | % | 5% :: 10% | 1/(2 mo) | 30 m :: Land/R | |
| 2049 | Cloud Cover | I :: II | Barron | | | | % | 5 :: 5 | 1/day | 100 km :: G | N/A :: Cloud |
| 2050 | Cloud Cover | I :: II | Barron | | | | % | 5 :: 5 | 1/day | 10 km :: R | N/A :: Cloud |
| 2051 | Cloud Cover | I :: II | Barron | | | | % | 5 :: 5 | 1/day | 30 m :: L | N/A :: Cloud |
| 2052 | Cloud Cover | I :: II | Hansen | | | | | 3% :: | 1/wk | 500 km :: G | :: Cloud |
| 2053 | Cloud Cover | I :: II | Isacks | | | | % | | 1/wk | 5 km :: Land/R | N/A :: Cloud |
| 2054 | Cloud Cover | I :: II | Lau | | | | % | 5% :: 5% | 2/day | 50 km :: R | N/A :: Atmos |
| 2055 | Cloud Cover | I :: II | Liu | | | | | | | :: Ocean | N/A :: Cloud |
| 2056 | Cloud Cover | I :: II | Simard | | | | | 5% :: | | :: Canada/R | N/A :: Cloud |
| 2057 | Cloud Cover | I :: II | Moore | | | | % cover | 10% :: 10% | 1/wk | 1 km :: G | |
| 2058 | Cloud Cover | I :: II | Murakami | | | | % cover | 10% :: | | | N/A :: Cloud |
| 2059 | Cloud Cover | I :: II | Sellers | | | | | | 4/day | 100 km :: | 0.5 km :: Trop |
| 2060 | Cloud Cover | I :: II | Srokosz | | | | % | 5% :: 1% | 2/day | 0 km :: Ocean [South Atla | N/A :: Cloud |
| 2061 | Cloud Cover | I :: II | Wielicki | | | | | 5% :: 2% | 6/day [d,n] | 25-100 km :: G | N/A :: Atmos |
| 2062 | *Cloud Cover* | O :: FI | Chahine, Chedin, Smith | AIRS | PM | GSFC | dimensionless | 0.05 :: 0.025 | 2/day [d,n] | 15 x 15 - 50 x 50 km :: G | N/A :: Cloud |
| 2064 | Cloud Cover | O :: II | Barron | | | | % | | 1/day | 10 km :: R | |
| 2065 | Cloud Cover | O :: II | Barron | | | | % | | 1/(5 min) | 30 km :: [East. U.S.] | |
| 2066 | Cloud Cover | O :: II | Barron | | | | % | | 1/(5 min) | 2 km :: [East. U.S.] | |
| 2067 | Cloud Cover | O :: II | Wielicki | | | | fraction | 5% :: 1% | 18/day [d,n] | 25 km :: R | N/A :: Atmos |
| 2068 | Cloud Field Area | O :: FI | Kaufman | MODIS | AM,PM | GSFC | km^2 | | 1/mo | 1 dg :: G | N/A :: Sfc |
| 2069 | Cloud Cover, Cirrus | I :: II | Bates | | | | /m/sr | | 1/day | 100 km :: G | 0.5 km :: Trop |
| 2070 | Cloud Cover, Cirrus | I :: II | Lau | | | | % | 5% :: 5% | 1/day | 100 km :: G | N/A :: |
| 2072 | Cloud Cover, Cirrus | I :: II | Bates | | | | dimensionless | 0.05 :: 0.025 | 2/day [d,n] | 15 x 45 km :: G | N/A :: Cloud |
| 2073 | Cloud Cover | I :: II | Bates | | | | | :: 10% | 1/(6 hr) | 1 x 1 dg :: G | N/A :: Cloud |
| 2074 | Cloud Cover | I :: II | Bates | | | | % | 10% :: 5% | 1/day, 1/mo | 1 dg :: G | N/A :: Cloud |
| 2075 | Cloud Cover | I :: II | Kerr, Sorooshian | | | | % | 5% :: 5% | 1/day | 10 km :: Land/R | N/A :: Cloud |
| 2076 | Cloud Cover | I :: II | Rothrock | | | | dimensionless | 0.1 :: 0.1 | 1/day | 100 km :: Polar | N/A :: Cloud |
| 2077 | Cloud Cover | I :: II | Wielicki | | | | | 2% :: 2% | 1/(16 day) | 30 m :: R | N/A :: Atmos |
| 2078 | Cloud Cover | O :: FI | Spinhirne | GLRS-A | ALT | GSFC | % | 1% :: | 1/(2-16 day) | 10-200 km :: G | N/A :: |
| 2079 | Cloud Cover | O :: FI | Welch | HIRIS | AM2 | EDC | dimensionless | 1% :: 0.5% | 1/(1-3 min), 1/(2-16 day) | 30 m :: L | :: Cloud |
| 2080 | Cloud Cover | O :: FI | Welch | ASTER | AM1 | EDC | fractional area | 3% :: 3% | 1/(16 day) | 90 m :: L | N/A :: Cloud |
| 2081 | Cloud Cover | O :: FI | King | MODIS | AM,PM | GSFC | % | 10% :: 5% | 2/day [d,n], 1/mo | 5 km :: G | N/A :: Cloud |
| 2082 | Cloud Cover | O :: FI | King | MODIS | AM,PM | GSFC | % | 10% :: 5% | 1/day, 1/mo | 1 dg :: G | N/A :: Cloud |
| 2083 | Cloud Cover, Cirrus | O :: II | Bates | | | | dimensionless | | 1/(20 min) | 50 km :: G | N/A :: High_cloud |
| 2084 | Cloud Cover, Mid-level | O :: II | Bates | | | | dimensionless | | 1/(20 min) | 50 km :: G | N/A :: Mid_Cloud |
| 2085 | Cloud Cover, Low-level | O :: II | Bates | | | | dimensionless | | 1/(20 min) | 50 km :: G | N/A :: Low_Cloud |
| 2086 | Cloud Cover | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | dimensionless | 5% :: 2% | 6/day [d,n] | 25 km :: G | N/A :: Atmos |
| 2087 | Cloud Cover | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | dimensionless | 5% :: 2% | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: Atmos |
| 2088 | Cloud Cover | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | dimensionless | 5% :: 2% | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: Atmos |
| 2089 | Cloud Cover | O :: II | Barron | | | | fraction | | 2/day | 4.5 x 7.5 dg :: G | |
| 2090 | Cloud Cover | O :: II | Barron | | | | fraction | | 2/day | 2.8 x 2.8 dg :: G | |
| 2092 | Cloud Field Perimeter | O :: FI | Kaufman | MODIS | AM,PM | GSFC | km | | 1/mo | 1 dg :: G | N/A :: Sfc |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2093 | Cloud Field Size-distribution | O :: FI | Welch | ASTER | AM1 | EDC | dimensionless | | 1/(16 day) | 90 m :: L | N/A :: Cloud |
| 2094 | Cloud JPDF | O :: FI | King, Menzel | MODIS | AM,PM | GSFC | dimensionless | | 1/day, 1/mo | 1 dg :: G | N/A :: N/A |
| 2095 | Soil Color Index | O :: FI | Huete | MODIS | AM,PM | EDC | class | 10% :: 5% | 1/mo | 1 km :: Land/R | N/A :: Sfc |
| 2096 | Level-1B Backscatter Coef, ALT | I :: II | Srokosz | | | | dB | 0.2dB :: 0.1dB | 1/(10 day) | 0 km :: Ocean [South Atla | N/A :: Sfc |
| 2097 | Level-1B Backscatter, STIKSCAT | I :: II | Brewer | | | | dB | 10% :: TBD | 1/day, 1/seas | 25 km :: Ocean | N/A :: Sfc |
| 2102 | Level-1B Backscatter Coef, SAR_EOS | I :: II | Cihlar | | | | | 2 dB :: 1 dB | 1/(3 mo) | 25 m :: Canada/R | N/A :: Sfc |
| 2104 | Level-1B Backscatter Coef, GLRS | O :: FI | Spinhirne | GLRS-A | ALT | GSFC | /m | 10% :: | 1/(2-16 day) | 1-100 km :: G | 75 m :: |
| 2105 | Aerosol Backscatter | I :: II | Murakami | | | | /km/sr | 10-50% :: | | | |
| 2106 | Level-1B Backscatter, SAR | I :: II | Srokosz | | | | dB | 0.2 dB :: TBD | [occasional] | 25 m :: Ocean [South Atlan | N/A :: Sfc |
| 2108 | Level-1B Backscatter Coef | O :: PI | Freilich | STIKSCAT | CHEM | JPL | dB | :: 0.25 dB | | 25 km :: G | N/A :: Sfc |
| 2109 | Level-1B Backscatter Coef, STIKSCAT | I :: II | Srokosz | | | | dB | 0.3 dB :: 0.1 dB | 1/day | 5 km :: Ocean [South Atla | N/A :: Sfc |
| 2110 | Land_sfc Emissivity | O :: FI | Barton | MODIS | AM,PM | EDC | dimensionless | 0.01 :: 0.01 | 1/day, 1/wk | 1 km :: G,R | N/A :: Sfc |
| 2111 | Land_sfc Emissivity | O :: FI | Barton | MODIS | AM,PM | EDC | dimensionless | 0.01 :: 0.01 | 1/day, 1/wk | 50 km :: G,R | N/A :: Sfc |
| 2112 | Land_sfc Emissivity | I :: II | Bates | | | | dimensionless | 0.05 :: 0.025 | 2/day [d,n] | 50 km :: Land | N/A :: Sfc |
| 2113 | *Land_sfc Emissivity, Spectral* | O :: FI | Chedin, Fleming, Revercomb, Smith, Susskind | AIRS | PM | GSFC | dimensionless | 0.05 :: 0.025 | 2/day [d,n] | 15 x 15 - 50 x 50 km :: Land | N/A :: Sfc |
| 2114 | Cloud Emissivity | O :: FI | Spinhirne | GLRS-A | ALT | GSFC | | 10% :: | 1/(2-16 day) | 1-100 km :: G | 150 m :: |
| 2115 | Cloud Emissivity | O :: FI | Welch | ASTER | AM1 | EDC | dimensionless | 5% :: | 1/(16 day) | 90 m :: L | N/A :: Cloud |
| 2116 | Cloud Emissivity | O :: FI | Menzel | MODIS | AM,PM | GSFC | dimensionless | | | | N/A :: Cloud |
| 2117 | Cloud Emissivity | O :: II | Barron | | | | fraction | | 2/day | 4.5 x 7.5 dg :: G | |
| 2118 | Cloud Emissivity | O :: II | Barron | | | | fraction | | 2/day | 2.8 x 2.8 dg :: G | |
| 2120 | Land_sfc Emissivity | I :: II | Wielicki | | | | fraction | 0.025 :: 0.025 | 2/day [d,n] | 1.25 dg :: Land | N/A :: Sfc |
| 2121 | Sea_Ice Emissivity | I :: II | Bates | | | | dimensionless | | 1/day | 10 km :: Polar | N/A :: Sfc |
| 2123 | Land_sfc Emissivity | I :: II | Kerr, Sorooshian | | | | % | 0.05 :: 0.05 | 1/yr | 90 m :: Land/R | N/A :: Sfc |
| 2124 | Land_sfc Emissivity [1] | O :: FI | Kahle, Becker, Christensen | ASTER | AM1 | EDC | emissivity units | 0.05-0.1 :: 0.005 | 1/(0.5-16 day) | 90 m :: L | N/A :: Sfc |
| 2125 | Land_sfc Emissivity, Spectral | I :: II | Isacks | | | | | | 1/yr | 15-90 m :: Land/L | N/A :: Sfc |
| 2126 | *Cloud Emissivity* | O :: FI | Menzel | MODIS | AM,PM | GSFC | dimensionless | 0.10 :: 0.05 | 2/day | 5 km :: G | N/A :: Cloud |
| 2127 | *Cloud Emissivity* | O :: FI | Menzel | MODIS | AM,PM | GSFC | dimensionless | 0.10 :: 0.05 | 1/day, 1/mo | 1 dg :: G | N/A :: Cloud |
| 2128 | Cloud Emissivity, IR Spectral (3-14um) | O :: FI | Chahine, Smith | AIRS | PM | GSFC | dimensionless | 0.05 :: 0.025 | 2/day [d,n] | 15 x 15 - 15 x 45 km :: G | N/A :: Cloud |
| 2129 | Land_sfc Emissivity, Relative Spectral | O :: FI | Kahle, Becker, Schmugge | ASTER | AM1 | EDC | arbitrary units | N/A :: N/A | 1/(0.5-16 day) | 90 m :: Land/R,L | N/A :: Sfc |
| 2130 | Heat Flux | O :: II | Barron | | | | W/m^2 | | 1/day | 200 km :: R | |
| 2131 | Heat Flux, Sfc | I :: II | Dozier | | | | W/m^2 | 10% :: 10% | 1/wk | 50 m :: Land/L | N/A :: Sfc |
| 2132 | Heat Flux, Sfc | O :: II | Barron | | | | W/m^2 | | 1/day | 200 km :: R | :: Sfc |
| 2133 | Radiative Flux, Solar, Net_Down | O :: II | Barron | | | | W/m^2 | | 2/day | 4.5 x 7.5 dg :: G | :: Sfc |
| 2134 | Radiative Flux, Solar, Net_Down | O :: II | Barron | | | | W/m^2 | | 2/day | 2.8 x 2.8 dg :: G | :: Sfc |
| 2135 | Heat Flux, Feedback, | O :: II | Hansen | | | | W/m^2 | | 1/wk | 500 km :: G | :: Atmos |
| 2136 | Heat Flux, Horizontal | O :: II | Kerr, Sorooshian | | | | W/m^2/um | | | 10 km :: Land/R | :: Trop |
| 2137 | Radiative Flux, Net | I :: II | Simard | | | | | 10% :: | | :: Canada/R | |
| 2138 | Radiative Flux, Net | O :: II | Kerr, Sorooshian | | | | W/m^2 | 15% :: 15% | [diurnal] | 1 km :: Land/R | N/A :: Sfc |
| 2139 | Radiative Flux, Net_Down | O :: II | Barron | | | | W/m^2 | | 2/day | 4.5 x 7.5 dg :: G | |
| 2140 | Radiative Flux, Net_Down | O :: II | Barron | | | | W/m^2 | | 2/day | 2.8 x 2.8 dg :: G | |
| 2141 | Radiative Flux, Broadband | I :: II | Richey, Batista | | | | W/m^2 | | 2/day | :: Land/R | |
| 2142 | Radiative Flux, Broadband, Down | I :: II | Kerr, Sorooshian | | | | W/m^2 | 1 W/m^2 :: 1 W/m^2 | 1/hr | 8 km :: Land/R | N/A :: TOA |
| 2143 | Radiative Flux Convergence | O :: II | Barron | | | | W/m^2/km | | 1/(5 day) | 2.5 dg :: G | 10 lvl :: |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2144 | *Radiative Flux Divergence, Clear-sky* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2/km | 10% :: 5% | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | lyr :: Atmos |
| 2145 | *Radiative Flux Divergence, Clear-sky* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2/km | 10% :: 5% | 6/day [d,n] | 1.25 dg :: G | lyr :: Atmos |
| 2146 | *Radiative Flux Divergence, Clear-sky* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2/km | 10% :: 5% | 1/(6 hr) | 1.25 x 1.25 dg :: G | lyr :: Atmos |
| 2147 | *Radiative Flux Divergence, Cloudy_sky* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2/km | 25% :: 10% | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | lyr :: Atmos |
| 2148 | *Radiative Flux Divergence, Cloudy_sky* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2/km | 50% :: 10% | 1/(6 hr) | 1.25 x 1.25 dg :: G | lyr :: Atmos |
| 2149 | *Radiative Flux Divergence, Cloudy_sky* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2/km | 50% :: 10% | 6/day [d,n] | 1.25 dg :: G | lyr :: Atmos |
| 2150 | Radiative Flux Divergence, LW | I :: II | Wielicki | | | | W/m^2/km | %clr/25%cld :: 5%clr/10% | 6/day [d,n] | 1.25 dg :: G | :: Atmos |
| 2151 | Radiative Flux Divergence, LW | O :: II | Wielicki | | | | W/m^2/km | %clr,25%cld :: 5%clr,10% | 18/day [d,n] | 25 km :: R | N/A :: Atmos |
| 2152 | Radiative Flux Divergence, SW | I :: II | Wielicki | | | | W/m^2/km | %clr/25%cld :: 5%clr/10% | 3/day [d] | 1.25 dg :: G | :: Atmos |
| 2153 | Radiative Flux Divergence, SW | O :: II | Wielicki | | | | W/m^2/km | %clr,25%cld :: 5%clr,10% | 9/day [d] | 25 km :: R | :: Atmos |
| 2154 | Radiative Flux, LW | I :: II | Lau | | | | W/m^2 | 10W/m^2 :: 10% | 1/day | 500 km :: G | N/A :: Sfc |
| 2155 | Radiative Flux, LW, Average_Net | O :: II | Barron | | | | W/m^2 | | 2/day | 4.5 x 7.5 dg :: G | :: TOA |
| 2156 | Radiative Flux, LW, Average_Net | O :: II | Barron | | | | W/m^2 | | 2/day | 2.8 x 2.8 dg :: G | :: TOA |
| 2159 | Radiative Flux, LW, Clear-sky | O :: II | Barron | | | | W/m^2 | | 2/day | 4.5 x 7.5 dg :: G | :: Sfc |
| 2160 | Radiative Flux, LW, Clear-sky | O :: II | Barron | | | | W/m^2 | | 2/day | 2.8 x 2.8 dg :: G | :: Sfc |
| 2161 | Radiative Flux, LW, Clear-sky | O :: II | Barron | | | | W/m^2 | | 2/day | 4.5 x 7.5 dg :: G | :: TOA |
| 2162 | Radiative Flux, LW, Clear-sky | O :: II | Barron | | | | W/m^2 | | 2/day | 2.8 x 2.8 dg :: G | :: TOA |
| 2163 | Radiative Flux, LW, Down | I :: II | Kerr, Sorooshian | | | | W/m^2 | 10% :: 10% | [diurnal] | 500 m :: Land/R | :: Sfc |
| 2164 | Radiative Flux, LW, Down | I :: II | Sellers | | | | W/m^2 | 20% :: 20% | 4/day | 100 km :: Land | 0.5 km :: |
| 2165 | Radiative Flux, LW, Down | I :: II | Wielicki | | | | W/m^2 | 7 W/m^2 :: 2 W/m^2 | 6/day [d,n] | 1.25 dg :: G | N/A :: Sfc |
| 2166 | Radiative Flux, LW, Down | O :: II | Bates | | | | W/m^2 | | 1/(20 min) | 50 km :: Land | N/A :: Sfc |
| 2167 | Radiative Flux, LW, Down | O :: II | Wielicki | | | | W/m^2 | 7 W/m^2 :: 2 W/m^2 | 18/day [d,n] | 25 km :: R | N/A :: Sfc |
| 2168 | *Radiative Flux, LW, Down* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2 | 5 W/m^2 :: 2 W/m^2 | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2169 | *Radiative Flux, LW, Down* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2 | 7 W/m^2 :: 2 W/m^2 | 6/day [d,n] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2170 | *Radiative Flux, LW, Down* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2 | 7 W/m^2 :: 2 W/m^2 | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2173 | Radiative Flux, LW, Net | I :: II | Bates | | | | W/m^2 | | 2/day [d,n] | 50 km :: Land | N/A :: |
| 2174 | Radiative Flux, LW, Net | I :: II | Bates | | | | W/m^2 | | 2/day [d,n] | 50 km :: Ocean | N/A :: |
| 2175 | Radiative Flux, LW, Net | I :: II | Wielicki | | | | W/m^2 | 7 W/m^2 :: 2 W/m^2 | 6/day [d,n] | 1.25 dg :: G | N/A :: Sfc |
| 2176 | Radiative Flux, LW, Net | O :: FI | Gautier | AIRS | PM | GSFC | W/m^2 | <15 :: TBD | 1/day | 50 km :: Land | N/A :: Sfc |
| 2177 | Radiative Flux, LW, Net | O :: FI | Gautier | AIRS | PM | GSFC | W/m^2 | <10 :: TBD | 1/day | 50 km :: Ocean | N/A :: Sfc |
| 2178 | Radiative Flux, LW, Net | O :: II | Rothrock | | | | W/m^2 | 10% :: 10% | 1/day | 100 km :: > 60 dgLAT | |
| 2179 | Radiative Flux, LW, Net | O :: II | Wielicki | | | | W/m^2 | 7 W/m^2 :: 2 W/m^2 | 18/day [d,n] | 25 km :: R | N/A :: Sfc |
| 2180 | *Radiative Flux, LW, Net* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2 | 7 W/m^2 :: 2 W/m^2 | 6/day [d,n] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2181 | *Radiative Flux, LW, Net* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2 | 7 W/m^2 :: 2 W/m^2 | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2182 | *Radiative Flux, LW, Net* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2 | 5 W/m^2 :: 2 W/m^2 | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2183 | Radiative Flux, LW, Net Up | I :: II | Murakami | | | | W/m^2 | 2% :: | | | N/A :: Atmos |
| 2184 | Radiative Flux, LW, Up | O :: II | Bates | | | | W/m^2 | | 1/(20 min) | 50 km :: Land | N/A :: TOA |
| 2185 | Radiative Flux, LW | I :: II | Barron | | | | W/m^2 | 10 :: 5 | 1/day | 100 km :: G | N/A :: Sfc |
| 2186 | Radiative Flux, LW | I :: II | Barron | | | | W/m^2 | 10 :: 5 | 1/day | 30 m :: L | N/A :: Sfc |
| 2187 | Radiative Flux, LW | I :: II | Barron | | | | W/m^2 | 10 :: 5 | 1/day | 10 km :: R | N/A :: Sfc |
| 2188 | Radiative Flux, LW | I :: II | Hartmann | | | | W/m^2 | 5% :: 2% | 1/day | <30 km :: Ocean | N/A :: Sfc |
| 2189 | Radiative Flux, LW | I :: II | Barron | | | | W/m^2 | 10 :: 5 | 1/day | 100 km :: G | N/A :: TOA |
| 2190 | Radiative Flux, LW | I :: II | Hartmann | | | | W/m^2 | 5% :: 2% | 1/day | <30 km :: Ocean | N/A :: TOA |
| 2191 | Radiative Flux, LW, Up | I :: II | Bates | | | | W/m^2 | | 2/day [d,n] | 50 km :: G | N/A :: TOA |
| 2192 | Radiative Flux, LW, Up | I :: II | Kerr, Sorooshian | | | | W/m^2 | 15% :: 15% | [diurnal] | 500 m :: Land/R | :: TOA |
| 2193 | Radiative Flux, LW, Up | I :: II | Sellers | | | | W/m^2 | 20% :: 20% | 4/day | 100 km :: Land | 0.5 km :: |
| 2194 | Radiative Flux, LW, Up | I :: II | Wielicki | | | | W/m^2 | 5 W/m^2 :: 2 W/m^2 | 6/day [d,n] | 1.25 dg :: G | N/A :: TOA |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2195 | Radiative Flux, LW, Up | I :: II | Wielicki | | | | W/m^2 | 7 W/m^2 :: 2 W/m^2 | 6/day [d,n] | 1.25 dg :: G | N/A :: Sfc |
| 2197 | Radiative Flux, LW, Up | O :: II | Bates | | | | W/m^2 | | 1/(20 min) | 50 km :: Land | N/A :: Sfc |
| 2198 | Radiative Flux, LW, Up | O :: II | Wielicki | | | | W/m^2 | 5 W/m^2 :: 2 W/m^2 | 18/day [d,n] | 25 km :: R | N/A :: TOA |
| 2199 | Radiative Flux, LW, Up | O :: II | Wielicki | | | | W/m^2 | 7 W/m^2 :: 2 W/m^2 | 18/day [d,n] | 25 km :: R | N/A :: Sfc |
| 2200 | *Radiative Flux, LW, Up* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2 | 3 W/m^2 :: 1 W/m^2 | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: TOA |
| 2201 | *Radiative Flux, LW, Up* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2 | 7 W/m^2 :: <7 W/m^2 | 6/day [d,n] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2202 | *Radiative Flux, LW, Up* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2 | 7 W/m^2 :: <7 W/m^2 | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2203 | *Radiative Flux, LW, Up* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2 | 5 W/m^2 :: <5 W/m^2 | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2204 | *Radiative Flux, LW, Up* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2 | 5 W/m^2 :: 2 W/m^2 | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: TOA |
| 2205 | *Radiative Flux, LW, Up* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2 | 5 W/m^2 :: 2 W/m^2 | 6/day [d,n] | 25 km :: G | N/A :: TOA |
| 2209 | *Radiative Flux, LW Spectral* | O :: FI | Gautier ??, Susskind | AIRS | PM | GSFC | W/m^2 | <10 - TBD :: <5 - TBD | 2/day [d,n] | 50 km :: Land | N/A :: Sfc |
| 2210 | *Radiative Flux, LW Spectral* | O :: FI | Gautier ??, Susskind | AIRS | PM | GSFC | W/m^2 | <10 - TBD :: <5 - TBD | 2/day [d,n] | 50 km :: Ocean | N/A :: Sfc |
| 2213 | Radiative Flux, SW | I :: II | Hartmann | | | | W/m^2 | 0.5% :: 0.5% | 1/day | 20 km :: G | N/A :: TOA |
| 2214 | Radiative Flux, SW | I :: II | Hartmann | | | | W/m^2 | 0.5% :: 0.5% | 1/day | 20 km :: G | N/A :: Sfc |
| 2215 | Radiative Flux, SW | I :: II | Lau | | | | W/m^2 | 10W/m^2 :: 10% | 1/day | 500 km :: G | N/A :: Sfc |
| 2216 | Radiative Flux, SW, Down | I :: II | Kerr, Sorooshian | | | | W/m^2 | 10% :: 10% | [diurnal] | 500 m :: Land/R | :: Sfc |
| 2217 | Radiative Flux, SW, Down | I :: II | Sellers | | | | W/m^2 | 20% :: 20% | 1/hr | 100 km :: Land | |
| 2218 | Radiative Flux, SW, Down | I :: II | Wielicki | | | | W/m^2 | 15 W/m^2 :: 2 W/m^2 | 3/day [d] | 1.25 dg :: G | N/A :: Sfc |
| 2219 | Radiative Flux, SW, Down | O :: II | Bates | | | | W/m^2 | | 1/(20 min) | 50 km :: Land | N/A :: Sfc |
| 2220 | Radiative Flux, SW, Down | O :: II | Wielicki | | | | W/m^2 | 15 W/m^2 :: 2 W/m^2 | 9/day [d] | 25 km :: R | N/A :: Sfc |
| 2221 | *Radiative Flux, SW, Down* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2 | 15 W/m^2 :: 2 W/m^2 | 3/day [d] | 1.25 dg :: G | N/A :: Sfc |
| 2222 | *Radiative Flux, SW, Down* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2 | 10 W/m^2 :: 2 W/m^2 | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2223 | *Radiative Flux, SW, Down* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2 | 15 W/m^2 :: 2 W/m^2 | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2226 | Radiative Flux, SW, Net | I :: II | Wielicki | | | | W/m^2 | 15 W/m^2 :: 2 W/m^2 | 3/day [d] | 1.25 dg :: G | N/A :: Sfc |
| 2227 | Radiative Flux, SW, Net | O :: II | Rothrock | | | | W/m^2 | 15% :: 15% | 1/day, 1/wk | 100 km :: > 60 dgLAT | |
| 2228 | Radiative Flux, SW, Net | O :: II | Wielicki | | | | W/m^2 | 15 W/m^2 :: 2 W/m^2 | 9/day [d] | 25 km :: R | N/A :: Sfc |
| 2229 | *Radiative Flux, SW, Net* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2 | 15 W/m^2 :: 2 W/m^2 | 3/day [d] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2230 | *Radiative Flux, SW, Net* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2 | 10 W/m^2 :: 2 W/m^2 | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2231 | *Radiative Flux, SW, Net* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2 | 15 W/m^2 :: 2 W/m^2 | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2232 | Radiative Flux, SW, Net | O :: FI | Gautier | AIRS | PM | GSFC | W/m^2 | <15 :: <5 | 1/day | 50 km :: Land | N/A :: Sfc |
| 2233 | Radiative Flux, SW, Net | O :: FI | Gautier | AIRS | PM | GSFC | W/m^2 | <10 :: <5 | 1/day | 50 km :: Ocean | N/A :: Sfc |
| 2234 | Radiative Flux, SW, Net_Down | I :: II | Murakami | | | | W/m^2 | 2% :: | | | N/A :: Atmos |
| 2235 | Radiative Flux, SW, Up | O :: II | Bates | | | | | | 1/(20 min) | 50 km :: Land | N/A :: TOA |
| 2236 | Radiative Flux, SW | I :: II | Barron | | | | W/m^2 | 10 :: 5 | 1/day | 30 m :: L | N/A :: Sfc |
| 2237 | Radiative Flux, SW | I :: II | Barron | | | | W/m^2 | 10 :: 5 | 1/day | 100 km :: G | N/A :: Sfc |
| 2238 | Radiative Flux, SW | I :: II | Barron | | | | W/m^2 | 10 :: 5 | 1/day | 10 km :: R | N/A :: Sfc |
| 2239 | Radiative Flux, SW | I :: II | Barron | | | | W/m^2 | 10 :: 5 | 1/day | 100 km :: G | N/A :: TOA |
| 2240 | Radiative Flux, SW, Up | I :: II | Kerr, Sorooshian | | | | W/m^2 | 15% :: 15% | [diurnal] | 500 m :: Land/R | N/A :: Sfc |
| 2241 | Radiative Flux, SW, Up | I :: II | Wielicki | | | | W/m^2 | 10 W/m^2 :: 2 W/m^2 | 3/day [d] | 1.25 dg :: G | N/A :: TOA |
| 2242 | Radiative Flux, SW, Up | I :: II | Wielicki | | | | W/m^2 | 15 W/m^2 :: 2 W/m^2 | 3/day [d] | 1.25 dg :: G | N/A :: Sfc |
| 2243 | Radiative Flux, SW, Up | O :: II | Bates | | | | W/m^2 | | 1/(20 min) | 50 km :: Land | N/A :: Sfc |
| 2244 | Radiative Flux, SW, Up | O :: II | Wielicki | | | | W/m^2 | 15 W/m^2 :: 2 W/m^2 | 9/day [d] | 25 km :: R | N/A :: Sfc |
| 2245 | Radiative Flux, SW, Up | O :: II | Wielicki | | | | W/m^2 | 10 W/m^2 :: 2 W/m^2 | 9/day [d] | 25 km :: R | N/A :: TOA |
| 2246 | *Radiative Flux, SW, Up* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2 | 12 W/m^2 :: 2 W/m^2 | 3/day [d] | 1.25 x 1.25 dg :: G | N/A :: TOA |
| 2247 | *Radiative Flux, SW, Up* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2 | 15 W/m^2 :: 2 W/m^2 | 3/day [d] | 1.25 dg :: G | N/A :: Sfc |
| 2248 | *Radiative Flux, SW, Up* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2 | 10 W/m^2 :: 2 W/m^2 | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2249 | *Radiative Flux, SW, Up* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2 | 12 W/m^2 :: 2 W/m^2 | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: TOA |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2250 | *Radiative Flux, SW, Up* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2 | 15 W/m^2 :: 2 W/m^2 | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2251 | *Radiative Flux, SW, Up* | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2 | 7 W/m^2 :: 2 W/m^2 | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: TOA |
| 2254 | Glint Field | O :: FI | Gordon | MODIS | AM,PM | GSFC | dimensionless | | 1/orbit [d] | 1 km :: Ocean/R | N/A :: Sfc |
| 2255 | Radiative Flux, LW | I :: II | Brewer | | | | W/m^2 | | 1/day, 1/seas | :: Ocean/L | |
| 2256 | Radiative Flux, LW | I :: II | Brewer | | | | W/m^2 | | 1/day, 1/seas | :: Ocean | |
| 2263 | PAR, Intercepted, (IPAR) | I :: II | Schimel | | | | 5E, % :: | 10% :: 1% | 1/day | 500 m :: 6 sites/L | N/A :: Sfc |
| 2264 | PAR, Intercepted, (IPAR) | I :: II | Schimel | | | | 5E, % :: | 10% :: 1% | 1/wk | 30 m :: 6 sites/L | N/A :: Sfc |
| 2265 | PAR, Intercepted, (IPAR) | I :: II | Schimel | | | | 5E, % :: | 10% :: 1% | [multiple] | [multiple] :: 6 sites/L | N/A :: Sfc |
| 2266 | PAR, Sfc (IPAR) | O :: FI | Gordon | MODIS | AM,PM | GSFC | quanta/m^2/s | 10% :: 5% | 1/day [d] | 1 km :: Ocean/L | N/A :: Sfc |
| 2267 | PAR, Sfc (IPAR) | O :: FI | Gordon | MODIS | AM,PM | GSFC | quanta/m^2/s | 10% :: 5% | 1/day [d] | 1 km :: Ocean | N/A :: Sfc |
| 2268 | PAR, Incident, (IPAR) | O :: FI | Tanre | MODIS | AM,PM | EDC | MJ/m^2 | 200 :: 5 - 20% | 1/day, 1/wk | 1 km :: G,R | N/A :: Atmos |
| 2269 | Irradiance, Solar | I :: II | Abbott | | | | W/m^2 | 5% :: 1% | 1/(1-2 day) | 1-4 km :: Ocean [Southern | N/A :: Sfc |
| 2270 | Irradiance, Total | O :: II | Kerr, Sorooshian | | | | W/m^2 | 50 :: 25 | | 500 m :: Land/R | N/A :: Sfc |
| 2271 | Irradiance, Solar | I :: II | Grose | | | | W/m ^2/nm | 5% :: 1% | 2/day | 15 x 4 dg :: G | :: TOA |
| 2272 | Irradiance, Solar | I :: II | Hansen | | | | | 0.05% :: | 1/wk | 500 km :: G | :: TOA |
| 2273 | Irradiance, Solar | I :: II | Pyle | | | | W/m ^2/nm | :: 1% | 2/day | 15 x 4 km :: G | 3 km :: Strat |
| 2274 | *Irradiance, Solar, Total* | O :: PI | Willson | ACRIM | MO | GSFC | W/m^2 | 0.1% :: 0.0005% | 1/(2 min) | N/A :: N/A | N/A :: TOA |
| 2275 | Irradiance, UV Solar | I :: II | Brewer | | | | E/m^2/s/Hz | 20% :: 5% | 1/day, 1/seas | 30 m :: Ocean/L | |
| 2276 | Irradiance, UV Solar | I :: II | Brewer | | | | E/m^2/s/Hz | 20% :: 5% | 1/day, 1/seas | 20 km :: Ocean | |
| 2277 | *Irradiance, UV Solar [0.0015 nm res.]* | O :: PI | Rottman | SOLSTICE | MO | GSFC | photons/cm^2/s/nr | <5% :: <1% | 1/hr | N/A :: N/A | N/A :: NA |
| 2278 | *Irradiance, UV Solar [0.1 nm res.]* | O :: PI | Rottman | SOLSTICE | MO | GSFC | photons/cm^2/s/nr | <5% :: <1% | 1/hr | N/A :: N/A | N/A :: NA |
| 2279 | Irradiance, Visible Solar | I :: II | Brewer | | | | E/m^2/s/Hz | 20% :: 5% | 1/day, 1/seas | 20 km :: Ocean | |
| 2280 | Irradiance, Visible Solar | I :: II | Brewer | | | | E/m^2/s/Hz | 20% :: 5% | 1/day, 1/seas | 30 m :: Ocean/L | |
| 2281 | Cloud Liq_water Content | O :: FI | Welch | HIRIS | AM2 | EDC | g/m^2 | 30% :: 10% | | 90 m :: R | :: Cloud |
| 2282 | Cloud Masking-shadowing | O :: FI | Salomonson | MODIS | AM,PM | GSFC | dimensionless | 5% :: | 1/day | .25 km :: G | N/A :: Sfc |
| 2283 | Cloud Masking-shadowing | O :: FI | Salomonson | MODIS | AM,PM | GSFC | dimensionless | 30% :: | 1/day | 1 km :: G | N/A :: Sfc |
| 2284 | Cloud Masking-shadowing | O :: FI | Salomonson | MODIS | AM,PM | GSFC | dimensionless | 15% :: | 1/day | 0.5 km :: G | N/A :: Sfc |
| 2286 | Level-1B Radiance Mixture-Model, MODIS Spectral-spatial | O :: FI | Huete | MODIS | AM,PM | GSFC | dimensionless | 5-10% :: 0.05 | 1/day | pixel_size :: G | N/A :: Sfc |
| 2287 | Aerosol Optical Depth | I :: II | Hansen | | | | | tau=0.02 :: | 1/wk | 500 km :: G | :: Strat |
| 2288 | Aerosol Optical Depth | I :: II | Sellers | | | | | :: | | | |
| 2289 | Aerosol Optical Depth | I :: II | Wielicki | | | | dimensionless | 0.10 :: 0.10 | 1/day | 1.25 dg :: G | N/A :: Atmos |
| 2291 | *Aerosol Optical Depth* | O :: FI | Spinhirne et al | GLRS-A | ALT | GSFC | dimensionless | 20% :: | 1/(2-16 day) | 2-200 km :: G | N/A :: Atmos |
| 2292 | Aerosol Optical Depth | O :: FI | Gerstl | HIRIS | AM2 | EDC | dimensionless | 0.05 :: 0.01 | 1/(2-16 day) | 100 m :: L | Column :: Atmos |
| 2293 | *Aerosol Optical Depth, Spectral* | O :: FI | Kaufman, Tanre | MODIS | AM,PM | GSFC | dimensionless | 0.1 :: 0.05 | 1/day, 1/mo | 0.5 dg :: Land | N/A :: Atmos |
| 2294 | *Aerosol Optical Depth, Spectral* | O :: FI | Tanre, Kaufman | MODIS | AM,PM | GSFC | dimensionless | 0.05 :: 0.02 | 1/day, 1/mo | 0.5 dg :: Ocean | N/A :: Atmos |
| 2295 | *Aerosol Angstrom Exponent* | O :: FI | Gordon | MODIS | AM,PM | GSFC | dimensionless | 15% :: 5% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/R,L | N/A :: Atmos |
| 2296 | *Aerosol Angstrom Exponent* | O :: FI | Gordon | MODIS | AM,PM | GSFC | dimensionless | 15% :: 5% | 1/day, 1/wk, 1/mo | 20 km :: Ocean | N/A :: Atmos |
| 2297 | *Aerosol Optical Depth* | O :: PI | Travis | EOSP | AERO,AM2 | LaRC | dimensionless | 0.2 :: 10% | 1/day [d] | 40 km :: G | Column :: Atmos |
| 2298 | Aerosol Optical Depth | O :: PI | Diner | MISR | AM | LaRC | dimensionless | 0.05/10% :: 0.05/10% | 1/(5-16 day) [d] | 1.92 km :: R | Column :: Atmos |
| 2299 | *Aerosol Optical Depth* | O :: PI | Diner | MISR | AM | LaRC | dimensionless | 0.05/10% :: 0.05/10% | 1/(5-16 day) [d] | 15.4 km :: G | Column :: Atmos |
| 2300 | *Cloud Optical Depth, Cirrus* | O :: FI | Spinhirne | GLRS-A | ALT | GSFC | | 20% :: | 1/(2-16 day) | 1-100 km :: G | |
| 2301 | Cloud Optical Depth | I :: II | Barron | | | | | 3% :: 3% | 1/day | 100 km :: Ocean | N/A :: Cloud |
| 2302 | Cloud Optical Depth | I :: II | Barron | | | | | 3% :: 3% | 1/day | 10 km :: Ocean/R | N/A :: Cloud |
| 2303 | Cloud Optical Depth | I :: II | Barron | | | | | 3% :: 3% | 1/day | 30 m :: Ocean/L | N/A :: Cloud |
| 2304 | Cloud Optical Depth | I :: II | Bates | | | | dimensionless | | 1/day | 15 x 45 km :: G | N/A :: Cloud |
| 2305 | Cloud Optical Depth | I :: II | Bates | | | | dimensionless | 20% :: 10% | 1/day, 1/mo | 1 dg :: G | N/A :: Cloud |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2306 | Cloud Optical Depth | I :: II | Hartmann | | | | dimensionless | 25% :: 0.25 | 1/day | 10 km :: Ocean | N/A :: Cloud |
| 2308 | *Cloud Optical Depth* | O :: FI | Spinhirne et al | GLRS-A | ALT | GSFC | dimensionless | 0.1 :: | | 2-200 km :: G | N/A :: Cloud |
| 2309 | Cloud Optical Depth | O :: FI | Welch | HIRIS | AM2 | EDC | dimensionless | 3% :: 1.5% | 1/(1-3 min), 1/(2-16 day) | 30 m :: L | N/A :: Cloud |
| 2310 | Cloud Optical Depth | O :: FI | Welch | ASTER | AM1 | EDC | dimensionless | 3% :: 3% | 1/(16 day) | 15-30 m :: L | N/A :: Cloud |
| 2311 | *Cloud Optical Depth* | O :: FI | King | MODIS | AM,PM | GSFC | dimensionless | 20% :: 10% | 1/day [d] | 5 km :: G | N/A :: Cloud |
| 2312 | *Cloud Optical Depth* | O :: FI | King | MODIS | AM,PM | GSFC | dimensionless | 20% :: 10% | 1/day, 1/mo | 1 dg :: G | N/A :: Cloud |
| 2313 | *Cloud Optical Depth* | O :: PI | Travis | EOSP | AERO,AM2 | LaRC | dimensionless | 20% :: 10% | 1/day [d] | 40 km :: G | Column :: Cloud |
| 2314 | Cloud Optical Depth, LW | I :: II | Wielicki | | | | dimensionless | 25% :: 10% | 6/day [d,n] | 25-100 km :: G | N/A :: Atmos |
| 2315 | Cloud Optical Depth, LW | O :: II | Wielicki | | | | dimensionless | 25% :: 10% | 18/day [d,n] | 25 km :: R | N/A :: Atmos |
| 2316 | Cloud Optical Depth, LW | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | dimensionless | 25% :: 10% | 6/day [d,n] | 25 km :: G | N/A :: Atmos |
| 2317 | Cloud Optical Depth, LW | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | dimensionless | 10% :: 5% | 1/day [Avg], 1/mo [Avg] | 1.25 dg :: G | N/A :: Atmos |
| 2318 | Cloud Optical Depth, LW | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | dimensionless | 25% :: 5% | 1/(6 hr) | 1.25 dg :: G | N/A :: Atmos |
| 2319 | Cloud Optical Depth, SW | I :: II | Wielicki | | | | dimensionless | 25% :: 10% | 3/day [d] | 25-100 km :: G | N/A :: Atmos |
| 2320 | Cloud Optical Depth, SW | O :: II | Wielicki | | | | dimensionless | 25% :: 10% | 9/day [d] | 25 km :: R | N/A :: Atmos |
| 2321 | Cloud Optical Depth, SW | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | dimensionless | 25% :: 10% | 3/day [d] | 25 km :: G | N/A :: Atmos |
| 2322 | Cloud Optical Depth, SW | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | dimensionless | 10% :: 5% | 1/day [Avg], 1/mo [Avg] | 1.25 dg :: G | N/A :: Atmos |
| 2323 | Cloud Optical Depth, SW | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | dimensionless | 25% :: 5% | 1/(6 hr) | 1.25 dg :: G | N/A :: Atmos |
| 2324 | *Cloud Optical Depth, PSC* | O :: FI | Spinhirne et al | GLRS-A | ALT | GSFC | dimensionless | 0.1 :: | | 200 m :: Polar | N/A :: Strat |
| 2325 | Optical Depth, Total | I :: II | Kerr, Sorooshian | | | | eq.atm | 10% :: 10% | 1/(5-16 day) | 10 km :: Land/R | :: Atmos |
| 2326 | Optical Depth, Total | I :: II | Isacks | | | | | 5-15% :: 1-10% | 1/wk | 10-50 km :: Land/R | Column :: Atmos |
| 2327 | Aerosol Extinction Coef | I :: II | Murakami | | | | /km | 5-10% :: | | :: G | N/A :: Atmos |
| 2328 | PAR | I :: II | Moore | | | | W/m^2/sr | 20% :: 10% | 1/day, 1/wk | 30 m :: Land/L | |
| 2329 | PAR | I :: II | Moore | | | | W/m^2/sr | 20% :: 10% | 1/day, 1/wk | 500 m :: Land/R | |
| 2330 | PAR | O :: FI | Esaias | MODIS | AM,PM | GSFC | quanta/m^2/s | TBD :: TBD | 1/day | N/A :: G | N/A :: Atmos |
| 2331 | PAR | O :: II | Kerr, Sorooshian | | | | W/m^2 | 100 :: 100 | 1/day | 500 m :: Land/R | N/A :: Sfc |
| 2332 | PAR | O :: II | Moore | | | | W/m^2 | 100 :: 100 | 1/day | .030-1 km :: Land/R,L | |
| 2333 | PAR | O :: II | Moore | | | | W/m^2 | 100 :: 100 | 1/day | 1 km :: Land | |
| 2334 | Aerosol Phase Function, Asymmetric | O :: PI | Diner | MISR | AM | LaRC | dimensionless | 0.05 :: 0.05 | 1/(5-16 day) [d] | 15.4 km :: G | Column :: Atmos |
| 2335 | Aerosol Phase Function, Asymmetric | O :: PI | Diner | MISR | AM | LaRC | dimensionless | 0.05 :: 0.05 | 1/(5-16 day) [d] | 1.9 km :: R | Column :: Atmos |
| 2336 | *Level-1B Polarization, EOSP* | O :: PI | Travis | EOSP | AERO,AM2 | LaRC | dimensionless | 0.2% :: 0.1% | 1/day [d] | 10-70 km :: G | N/A :: N/A |
| 2337 | *Vegetation Index, Polarization* | O :: FI | Vanderbilt | MODIS | AM,PM | EDC | dimensionless | | 1/day | pixel_size :: Land | N/A :: Sfc |
| 2338 | Level-1B Radiance, MODIS<3um | O :: FI | Salomonson | MODIS | AM,PM | GSFC | W/m^2/sr/um | 5%(1Σ) :: RMS<NEdL | 1/day | 0.5 km :: G | N/A :: N/A |
| 2339 | Level-1B Radiance, MODIS<3um | O :: FI | Salomonson | MODIS | AM,PM | GSFC | W/m^2/sr/um | 5%(1Σ) :: RMS<NEdL | 1/day | 1 km :: G | N/A :: N/A |
| 2340 | Level-1B Radiance, MODIS>3um | O :: FI | Salomonson | MODIS | AM,PM | GSFC | W/m^2/sr/um | 1%(1Σ) :: RMS<NEdL | 1/day | 1 km :: G | N/A :: N/A |
| 2344 | *Aerosol Radiance* | O :: FI | Gordon | MODIS | AM,PM | GSFC | mW/cm^2/sr/um | 10% :: 5% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/G,R,L | N/A :: Atmos |
| 2345 | *Aerosol Radiance* | O :: FI | Gordon | MODIS | AM,PM | GSFC | mW/cm^2/sr/um | 10% :: 5% | 1/day, 1/wk, 1/mo | 20 km :: Ocean/G,R,L | N/A :: Atmos |
| 2346 | Level-1B Radiance, AIRS | I :: II | Bates | | | | | :: | | | |
| 2347 | Level-1B Radiance, AIRS | O :: FI | Chahine | AIRS[AIRS] | PM | GSFC | W/m^2/sr/um | 0.2dg NEdT :: 0.2dg NEdT | 2/day [d,n] | 15 x 15 km :: G | N/A :: N/A |
| 2349 | Level-1B Radiance, AMSU-A | I :: II | Bates | | | | K | 0.2dg NEdT :: 0.2dg NEdT | 2/day [d,n] | 40 x 40 km :: G | N/A :: N/A |
| 2350 | Level-1B Radiance, AMSU-A | O :: FI | Chahine | AIRS[AMSU-A] | PM | GSFC | K | 0.2dg NEdT :: 0.2dg NEdT | 2/day [d,n] | 40 x 40 km :: G | N/A :: N/A |
| 2351 | Level-1B Radiance, MHS | I :: II | Bates | | | | K | 0.2dg NEdT :: 0.2dg NEdT | 2/day [d,n] | 15 x 15 km :: G | N/A :: N/A |
| 2352 | Level-1B Radiance, MHS | O :: FI | Chahine | AIRS [MHS] | PM | GSFC | K | 0.2dg NEdT :: 0.2dg NEdT | 2/day [d,n] | 15 x 15 km :: G | N/A :: N/A |
| 2353 | Level-2 Radiance, Atmos_corrected, EOSP | O :: PI | Travis | EOSP | AERO,AM2 | LaRC | W/m^2/sr/um | 25% :: 15% | 1/day [d] | 40 km :: G | N/A :: N/A |
| 2355 | Level-1B Radiance, AVHRR(ESA?) | I :: II | Wielicki | | | | W/m^2/sr/um | 5%,LW.2K :: SW2%,LW | 2/day [d,n] | 1 km :: R | N/A :: Atmos |
| 2357 | Radiation Budget | I :: II | Hansen | | | | | | 1/wk | 500 km :: G | |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2358 | Level-1B Radiance, CERES | I :: II | Wielicki | | | | W/m^2/sr/um | 2%,LW1% :: SW2%,LW | 6/day [d,n] | 25 km :: R | N/A :: Atmos |
| 2359 | Level-1B Radiance, CERES | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | W/m^2/sr/um | SW 2%,LW 1% :: 0.005 | 6/day [d,n] | 25 km :: G | N/A :: N/A |
| 2360 | Cloud Radiation | I :: II | Moore | | | | cal/cm^2/day | 10% :: 10% | 1/wk | 1 km :: G | :: Cloud |
| 2362 | Level-1B Radiance, EOSP | O :: PI | Travis | EOSP | AERO,AM2 | LaRC | W/m^2/sr/um | 5% :: 2% | 1/day [d] | 10-70 km :: G | N/A :: N/A |
| 2364 | Level-1B Radiance, GGI | O :: PI | Melbourne | GGI | ALT | JPL | | | | | |
| 2369 | Level-1B Radiance, HIRDLS | O :: PI | Barnett, Gille | HIRDLS | CHEM | GSFC | W/m^2/sr/um | | | | |
| 2370 | *Level-1B Radiance, HIRIS* | O :: FI | Goetz | HIRIS | AM2 | EDC | W/m^2/sr/um | | | | |
| 2374 | Radiation Intensity, IR | I :: II | Schoeberl | | | | photons/cm^2/s/cr | 1%(~1K) :: 0.5% | 1/day | 100 km :: G | 1.5 km :: Strat |
| 2375 | Level-1B Radiance, ASTER | O :: FI | Tsu | ASTER | AM1 | EDC | W/m^2/sr/um | 2-4% :: 1% | 1/16 day | 15,30,90m :: G | N/A :: at sensor |
| 2378 | Level-2 Radiance, Land_leaving | O :: FI | Palluconi et al | ASTER | AM1 | EDC | W/m^2/sr/um | TBD :: 0.065-0.085 | 1/(2-16 day) | 90 m :: Land/R,L | N/A :: Sfc |
| 2379 | Level-2 Radiance, Land_leaving | O :: FI | Kaufman, Tanre | MODIS | AM,PM | GSFC | W/m^2/sr/um | 10% :: 5% | 1/day | 1 km :: Land/R | N/A :: Sfc |
| 2380 | Level-2 Radiance, Land_leaving | O :: FI | Kaufman, Tanre | MODIS | AM,PM | GSFC | W/m^2/sr/um | 10% :: 5% | 1/day, 1/mo | 10 km :: Land | N/A :: Sfc |
| 2381 | Level-2 Radiance, Land_leaving | O :: FI | Kaufman, Tanre | MODIS | AM,PM | GSFC | W/m^2/sr/um | 10% :: 5% | 1/day | 0.5 km :: Land/R | N/A :: Sfc |
| 2382 | Wind Velocity, LAWS Line-of-sight (Level-1B) | I :: II | Bates | | | | | | | | |
| 2384 | Level-1B Radiance, LIS | O :: PI | Christian | LIS | TRM | MSFC | W/m^2/sr/um | | | | |
| 2385 | Radiative Flux, LW | I :: II | Srokosz | | | | W/m^2 | 10W/m^2 :: 1W/m^2 | 2/day | 0 km :: Ocean [South Atlan] | |
| 2386 | Level-1B Radiance, MISR | O :: PI | Diner | MISR | AM | LaRC | W/m^2/sr/um | 3% :: 1% | 1/(5-16 day) [d] | 1.92 km :: G | N/A :: TOA |
| 2387 | Level-1B Radiance, MISR | O :: PI | Diner | MISR | AM | LaRC | W/m^2/sr/um | 3% :: 1% | 1/(5-16 day) [d] | 240 m :: R,L | N/A :: TOA |
| 2388 | Level-1B Radiance, MLS | O :: PI | Waters | MLS | MO | GSFC | K | | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | .5 km [1.2] :: Trop-150 km |
| 2389 | Level-1B Radiance, MODIS | I :: II | Sellers | | | | W/m^2/sr/um | | | | |
| 2390 | Level-1B Radiance, MODIS | I :: II | Wielicki | | | | W/m^2/sr/um | 5%,LW.1K :: SW2%,LW | 2/day [d,n] | 0.25-1 km :: R | N/A :: Atmos |
| 2392 | Level-1B Radiance, MODIS<3um | O :: FI | Salomonson | MODIS | AM,PM | GSFC | W/m^2/sr/um | 5%(1Σ) :: RMS<NEdL | 1/day | 0.25 km :: G | N/A :: N/A |
| 2394 | Level-1B Radiance, MOPITT | O :: PI | Drummond | MOPITT | AM1 | LaRC | W/m^2/sr/um | 2% :: | 1/(0.4 s) [?] | 22 km :: G | Column :: Atmos |
| 2395 | Radiative Flux, LW, Up | I :: II | Murakami | | | | mW/m^2/sr/cm | 10% :: | | | N/A :: TOA |
| 2396 | Level-1B Radiance, SAFIRE | O :: PI | Russell | SAFIRE | MO | GSFC | | | | | |
| 2398 | Level-1B Irradiance, SOLSTICE | O :: PI | Rottman | SOLSTICE | MO | GSFC | W/m^2 | | 1/hr | 2 dg :: G | 1 km :: Mid_atm |
| 2400 | Radiative Flux, SW | I :: II | Srokosz | | | | W/m^2 | 10W/m^2 :: 1W/m^2 | 2/day | 0 km :: Ocean [South Atlan] | |
| 2402 | Level-1B Radiance, TES | O :: PI | Beer | TES | CHEM | LaRC | | | | | |
| 2404 | Land_sfc Radiance-Correction, Topographic | O :: FI | Muller | MODIS | AM,PM | EDC | | 1 km :: 0.3 km | 1/day | 1 km :: Land/R | N/A :: Sfc |
| 2405 | Land_sfc Radiance-Correction, Topographic | O :: FI | Muller | MODIS | AM,PM | EDC | | 1 km :: 0.3 km | 1/day | 10 km :: Land | N/A :: Sfc |
| 2406 | Radiance, Total | O :: II | Rothrock | | | | mW/m^2 | | 1/(3 day) | 100 km :: > 60 dgLAT | |
| 2411 | Radiation Intensity, UV | I :: II | Schoeberl | | | | photons/cm^2/s/nr | 5% :: 2% | 1/day | :: G | :: Strat |
| 2412 | Radiation Intensity, UV | O :: II | Schoeberl | | | | photons/cm^2/s/nr | 20% :: 15% | 1/day | 2 x 3 dg :: G | 2 km :: Trop |
| 2413 | Radiation Intensity, Visible | I :: II | Schoeberl | | | | photons/cm^2/s/nr | 5% :: 2% | 1/day | :: G | :: Strat |
| 2414 | Level-2 Radiance, Water-leaving | I :: II | Brewer | | | | E/m^2/s/Hz | 10% :: TBD | 1/day, 1/seas | 30 m :: Ocean/L | N/A :: TOO |
| 2415 | Level-2 Radiance, Water-leaving | I :: II | Brewer | | | | E/m^2/s/Hz | 10% :: TBD | 1/day, 1/seas | 20 km :: Ocean | N/A :: TOO |
| 2416 | *Level-2 Radiance, Water-leaving* | O :: FI | Gordon et al | MODIS | AM,PM | GSFC | mW/cm^2/sr/um | 5% :: 5% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/R,L | N/A :: Sfc |
| 2417 | *Level-2 Radiance, Water-leaving* | O :: FI | Gordon et al | MODIS | AM,PM | GSFC | mW/cm^2/sr/um | 5% :: 5% | 1/day, 1/wk, 1/mo | 20 km :: Ocean/G,R | N/A :: Sfc |
| 2421 | Cloud Radiative Forcing | I :: II | Bates | | | | W/m^2 | | 1/wk | 500 km :: G | :: Atmos |
| 2422 | Cloud Radiative Forcing | O :: II | Hansen | | | | W/m^2 | | 1/wk | 500 km :: G | :: Atmos |
| 2423 | Cloud Reflectance, Bi-directional, (BRDF) | I :: II | Wielicki | | | | fraction | 5% :: 2% | 1/day | 0.2-2 km :: R | N/A :: Cloud |
| 2424 | Land_sfc Reflectance, Bi-directional, (BRDF) | O :: FI | Tanre, Muller | MODIS | AM,PM | EDC | % | 15% :: 5 - 8% | 1/day, 1/wk | 1 km :: G,R | N/A :: Sfc |
| 2425 | Land_sfc Reflectance, Bi-directional, (BRDF) | O :: FI | Tanre, Muller | MODIS | AM,PM | EDC | % | 15% :: 5 - 8% | 1/day, 1/wk | 10 km :: G,R | N/A :: Sfc |
| 2426 | Land_sfc Reflectance, Directional | I :: II | Brewer | | | | | 3% :: 1% | 1/day, 1/seas | 1.7 km :: Ocean | N/A :: Sfc |
| 2427 | Land_sfc Reflectance, Directional | I :: II | Brewer | | | | | 3% :: 1% | 1/day, 1/seas | .22 km :: Ocean/L | N/A :: Sfc |
| 2428 | Land_sfc Reflectance, Directional | I :: II | Kerr, Sorooshian | | | | % | 3% :: 5% | 1/(2 mo) | 30 m :: Land/R | :: Sfc |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2429 | Land_sfc Reflectance, Directional | O :: FI | Kaufman et al | MODIS | AM,PM | EDC | dimensionless | 0.01 :: 0.005 | 1/day | 1 km :: G | N/A :: Sfc |
| 2430 | Land_sfc Reflectance, Directional | O :: FI | Kaufman et al | MODIS | AM,PM | EDC | dimensionless | 0.01 :: 0.005 | 1/day | 0.5 km :: G | N/A :: Sfc |
| 2431 | Land_sfc Reflectance, Directional | O :: FI | Kaufman et al | MODIS | AM,PM | EDC | dimensionless | 0.01 :: 0.005 | 1/day | 0.25 km :: G | N/A :: Sfc |
| 2432 | Land_sfc Reflectance, Directional | O :: FI | Slater | HIRIS | AM2 | EDC | dimensionless | 3% :: 1% | 1/mo | 30 m :: Land/R,L | N/A :: Sfc |
| 2433 | Land_sfc Reflectance, Directional | O :: FI | Slater | ASTER | AM1 | EDC | dimensionless | 4% :: 0.5-1.3 | 3/yr | 15,30 m :: Land/R,L | N/A :: Sfc |
| 2434 | Land_sfc Reflectance, Directional | O :: FI | Muller, Strahler | MODIS | AM,PM | EDC | fraction | 5% :: 3% | 1/day | 1 km :: R | N/A :: Sfc |
| 2435 | Land_sfc Reflectance, Relative Spectral | O :: FI | Kahle, Becker | ASTER | AM1 | EDC | arbitrary units | N/A :: N/A | 1/(2-16 day) | 15,30 m :: Land/R,L | N/A :: Sfc |
| 2437 | Land_sfc Reflectance Factor, MODIS | I :: II | Cihlar | | | | | 0.05 :: 0.001 | 1/(3 mo) | 0.25 km :: Canada/R | N/A :: Atmos |
| 2438 | Sea_sfc Reflectance Factor, MODIS-T | I :: II | Cihlar | | | | | 0.05 :: 0.001 | 1/(3 mo) | 0.5 km :: Canada/R | |
| 2440 | Snow Reflectance, Spectral | O :: FI | Dozier | HIRIS | AM2 | NSIDC | dimensionless | 5% :: 1% | 1/wk, 1/mo | 50 m :: Land/L | N/A :: Sfc |
| 2441 | Radiative Flux, Solar, Ave-absorbed | O :: II | Barron | | | | W/m^2 | | 2/day | 4.5 x 7.5 dg :: G | |
| 2442 | Radiative Flux, Solar, Ave-absorbed | O :: II | Barron | | | | W/m^2 | | 2/day | 2.8 x 2.8 dg :: G | |
| 2443 | Radiative Flux, Solar, TOA Clear-sky | O :: II | Barron | | | | W/m^2 | | 2/day | 4.5 x 7.5 dg :: G | :: TOA |
| 2444 | Radiative Flux, Solar, Sfc Clear-sky | O :: II | Barron | | | | W/m^2 | | 2/day | 4.5 x 7.5 dg :: G | :: Sfc |
| 2445 | Radiative Flux, Solar, TOA Clear-sky | O :: II | Barron | | | | W/m^2 | | 2/day | 2.8 x 2.8 dg :: G | :: TOA |
| 2446 | Radiative Flux, Solar, Sfc Clear-sky | O :: II | Barron | | | | W/m^2 | | 2/day | 2.8 x 2.8 dg :: G | :: Sfc |
| 2447 | Land_sfc Thermal Change | O :: FI | Kieffer, Christensen, Pieri, Schmugge | ASTER | AM1 | EDC | dimensionless | 1-2 K :: 0.5 K | | 90 m :: Land/R,L | N/A :: Sfc |
| 2452 | *Brightness Temperature (at Sensor)* | O :: FI | Kahle | ASTER | AM1 | EDC | K | .5NEdT :: .2NEdT | 1/(2-16 day) | 90 m :: G | N/A :: at sensor |
| 2453 | Land_sfc Brightness Temperature (Radiance) | O :: FI | Kahle, Palluconi, Christensen | ASTER | AM1 | EDC | K | 1-2 K :: 0.3 | 1/(2-16 day) | 90 m :: G | N/A :: Sfc |
| 2454 | Sea_sfc Brightness Temperature (Radiance) | O :: II | Barron | | | | K | | 1/(5 day) | 2.5 dg :: G | |
| 2455 | Land_sfc Brightness Temperature (Radiance) | O :: PI | Beer | TES | CHEM | LaRC | K | :: 1 K | 1/(16 day) | 16 x 5 km :: G | N/A :: Sfc |
| 2456 | Vegetation Temperature | I :: II | Kerr, Sorooshian | | | | K | 0.5 K :: 0.5 K | 2/day [d,n] | 500 m :: Land/R | :: Sfc |
| 2457 | Cloud Temperature | I :: II | Sellers | | | | | | | | |
| 2458 | Cloud Temperature, Emission | I :: II | Barron | | | | K | 2 :: 1 | 1/day | 100 km :: G | N/A :: Cloud |
| 2459 | Cloud Temperature, Emission | I :: II | Barron | | | | K | 2 :: 1 | 1/day | 10 km :: R | N/A :: Cloud |
| 2460 | Cloud Temperature, Top | I :: II | Bates | | | | K | 1 K :: 0.5 K | 2/day [d,n] | 15 x 45 km :: G | N/A :: Cloud |
| 2461 | Cloud Temperature, Top | I :: II | Hansen | | | | K | 5% :: | 1/wk | 500 km :: G | :: Cloud |
| 2462 | Cloud Temperature, Top | I :: II | Kerr, Sorooshian | | | | K | 5% :: 5% | 1/hr | 500 m :: Land/R | :: Cloud |
| 2463 | *Cloud Temperature, Top* | O :: FI | Chahine, Chedin, Smith | AIRS | PM | GSFC | K | 1 K :: 0.5 K | 2/day [d,n] | 15 x 15 - 50 x 50 km :: G | N/A :: Cloud |
| 2465 | Cloud Temperature, Top | O :: FI | Welch | ASTER | AM1 | EDC | K | 2 K :: 2 K | 1/(16 day) | 90 m :: L | N/A :: Cloud |
| 2466 | *Cloud Temperature, Top* | O :: FI | Menzel | MODIS | AM,PM | GSFC | C | 2 C :: 1 C | 1/day, 1/mo | 1 dg :: G | N/A :: Cloud |
| 2467 | *Cloud Temperature, Top* | O :: FI | Menzel | MODIS | AM,PM | GSFC | C | 2 C :: 1 C | 2/day | 5 km :: G | N/A :: Cloud |
| 2468 | Cloud Temperature, Top | O :: II | Bates | | | | K | | 1/(20 min) | 50 km :: G | N/A :: Low_Cloud |
| 2469 | Cloud Temperature, Top | O :: II | Bates | | | | K | | 1/(20 min) | 50 km :: G | N/A :: Mid_Cloud |
| 2470 | Cloud Temperature, Top | O :: II | Bates | | | | K | | 1/(20 min) | 50 km :: G | N/A :: High_cloud |
| 2471 | *Fire Temperature* | O :: FI | Kaufman, Justice | MODIS | AM,PM | EDC | C | 10 C :: 5 C | 1/day, 1/wk | 1 km :: Land/R | N/A :: Sfc |
| 2472 | Land_sfc Temperature, Skin | I :: II | Barron | | | | K | 1 :: 0.5 | 1/day | 30 m :: Land/L | N/A :: Sfc |
| 2473 | Land_sfc Temperature, Skin | I :: II | Barron | | | | K | 1 :: 0.5 | 1/day | 10 km :: Land/R | N/A :: Sfc |
| 2474 | Land_sfc Temperature, Skin | I :: II | Barron | | | | K | 1 :: 0.5 | 1/day | 100 km :: G | N/A :: Sfc |
| 2475 | Land_sfc Temperature, Skin | I :: II | Bates | | | | K | 1.0 K :: 0.5 K | 2/day [d,n] | 50 km :: Land | N/A :: Sfc |
| 2476 | Land_sfc Temperature | I :: II | Richey, Batista | | | | K | | 1/day | :: Land/R | N/A :: Sfc |
| 2477 | Land_sfc Temperature | I :: II | Hansen | | | | K | 0.2 C :: | 1/wk | 500 km :: Land | :: Sfc |
| 2478 | Land_sfc Temperature | I :: II | Sellers | | | | | :: | | 500 m :: | |
| 2479 | Land_sfc Temperature, Skin | I :: II | Wielicki | | | | K | 1 K :: 0.5 K | 4/day [d,n] | 1.25 dg :: Land | N/A :: Sfc |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2481 | *Land_sfc Temperature, Skin* | O :: FI | Chedin, Fleming, Revercomb, Smith, Susskind | AIRS | PM | GSFC | K | 1.0 K :: 0.5 K | 2/day [d,n] | 50 km :: Land | N/A :: Sfc |
| 2483 | Land_sfc Temperature (3-products) | O :: FI | Kahle, Becker, Christensen | ASTER | AM1 | EDC | K | 1-6 K :: 0.3 K | 1/(2-16 day) | 90 m :: Land | N/A :: Sfc |
| 2484 | *Land_sfc Temperature* | O :: FI | Wan | MODIS | AM,PM | EDC | C | 1 C :: 1 C | 1/day, 1/wk | 1 km :: Land/R | N/A :: Sfc |
| 2485 | Land_sfc Temperature | O :: FI | Wan | MODIS | AM,PM | EDC | C | 1-3 C :: 1 C | 1/day, 1/wk | 10 km :: Land | N/A :: Sfc |
| 2486 | Land_sfc Temperature | O :: II | Barron | | | | C | | 1/(5 min) | 30 km :: [East. U.S.] | |
| 2487 | Land_sfc Temperature | O :: II | Barron | | | | C | | 1/(5 min) | 500 m :: [East. U.S.] | |
| 2489 | Sea_Ice Temperature | I :: II | Bates | | | | K | | 1/day | 10 km :: Polar | N/A :: Sfc |
| 2490 | Sea_Ice Temperature | I :: II | Rothrock | | | | K | 2 K :: 2 K | 1/(3 day) | 25 km :: Polar | N/A :: Sfc |
| 2494 | Land_sfc Temperature | O :: II | Barron | | | | K | | 2/day | 4.5 x 7.5 dg :: G | :: Sfc |
| 2495 | Land_sfc Temperature | O :: II | Barron | | | | K | | 2/day | 2.8 x 2.8 dg :: G | :: Sfc |
| 2496 | Land_sfc Temperature, Skin | I :: II | Isacks | | | | K | 1-3 :: 1 | 1/wk | 1 km :: Land/R | N/A :: Sfc |
| 2497 | Land_sfc Temperature, Skin | I :: II | Isacks | | | | K | 1-6 :: 0.3 | 1/wk | 90 m :: Land/L | N/A :: Sfc |
| 2499 | Land_sfc Temperature, Skin | O :: II | Bates | | | | K | | 1/(20 min) | 50 km :: Land | N/A :: Sfc |
| 2500 | Snow Temperature, Sfc | I :: II | Dozier | | | | K | 1 K :: 0.3 K | 1/wk | 500 m :: Snow/L | |
| 2501 | Soil Temperature | I :: II | Lau | | | | K | 0.5 K :: 0.5 K | 1/(3 day) | 100 m :: Land/L | N/A :: Sfc |
| 2502 | Soil Temperature | I :: II | Lau | | | | K | 1 K :: 1 K | 1/(3 day) | 1 km :: Land/R | N/A :: Sfc |
| 2503 | Soil Temperature | O :: II | Kerr, Sorooshian | | | | K | 0.5 K :: 0.5 K | 2/day [d,n] | 500 m :: Land/R | :: Sfc |
| 2504 | Sea_sfc Temperature (SST) | I :: II | Abbott | | | | K | 0.5 K :: 0.05 K | (1-2)/day | 1-4 km :: Ocean [Southern | N/A :: Sfc |
| 2505 | Sea_sfc Temperature (SST) | I :: II | Abbott | | | | K | 1 K :: 0.1 K | (1-2)/day | 50 km :: Ocean [Southern] | N/A :: Sfc |
| 2506 | Sea_sfc Temperature (SST) | I :: II | Barron | | | | K | 0.5 K :: | 1/day | 100 km :: Ocean | N/A :: Sfc |
| 2507 | Sea_sfc Temperature (SST) | I :: II | Barron | | | | K | 0.5 K :: | 1/day | 10 km :: Ocean/R | N/A :: Sfc |
| 2508 | Sea_sfc Temperature (SST) | I :: II | Bates | | | | K | 0.3-0.6 K :: 0.1-0.3 K | 1/day, 1/wk, 1/mo | 20 km :: Ocean/G,R | N/A :: Sfc |
| 2509 | Sea_sfc Temperature (SST) | I :: II | Bates | | | | K | 0.5 K :: 0.4 K | 2/day [d,n] | 50 km :: Ocean | N/A :: Sfc |
| 2510 | Sea_sfc Temperature (SST) | I :: II | Brewer | | | | K | 0.5 K :: 0.5 K | 1/day, 1/seas | 30 m :: Ocean/L | N/A :: Sfc |
| 2511 | Sea_sfc Temperature (SST) | I :: II | Brewer | | | | K | 0.5 K :: 0.5 K | 1/day, 1/seas | 20 km :: Ocean | N/A :: Sfc |
| 2512 | Sea_sfc Temperature (SST) | I :: II | Hansen | | | | K | 0.2 C :: | 1/wk | 500 km :: Ocean | :: Sfc |
| 2513 | Sea_sfc Temperature (SST) | I :: II | Hartmann | | | | K | 0.5 K :: 0.5 K | 1/day | 10 km :: Ocean | N/A :: Sfc |
| 2514 | Sea_sfc Temperature (SST) | I :: II | Lau | | | | K | 0.5 K :: | 1/wk | 100 km :: Ocean | N/A :: Sfc |
| 2515 | Sea_sfc Temperature (SST) | I :: II | Lau | | | | K | 0.2 K :: 0.2 K | 1/wk | 200 km :: Ocean | N/A :: Sfc |
| 2516 | Sea_sfc Temperature (SST) | I :: II | Lau | | | | K | 0.5 K :: | 1/day | 50 km :: R | N/A :: Sfc |
| 2517 | Sea_sfc Temperature (SST) | I :: II | Liu | | | | K | 0.5 :: 0.5 | 1/wk | 10 km :: G | N/A :: Sfc |
| 2518 | Sea_sfc Temperature (SST) | I :: II | Murakami | | | | K | 0.2 K :: | | :: G | N/A :: Sfc |
| 2519 | Sea_sfc Temperature (SST) | I :: II | Rothrock | | | | K | 1 K :: 1 K | 1/(2 day) | 30 km :: G | N/A :: Sfc |
| 2520 | Sea_sfc Temperature (SST) | I :: II | Srokosz | | | | K | 0.3 K(IR) :: 0.1 K | 2/day | 0.1-1 km :: Ocean [South Atlan] | N/A :: Sfc |
| 2521 | Sea_sfc Temperature (SST) | I :: II | Wielicki | | | | K | 1 K :: 0.5 K | 1/wk | 1.25 dg :: Ocean | N/A :: Sfc |
| 2523 | *Sea_sfc Temperature (SST), Skin* | O :: FI | Chedin, Fleming, Revercomb, Smith, Susskind | AIRS | PM | GSFC | K | 0.5 - 1 K :: 0.4 - 0.5 K | 2/day [d,n] | 50 km :: Ocean | N/A :: Sfc |
| 2527 | *Sea_sfc Temperature (SST)* | O :: FI | Brown | MODIS | AM,PM | GSFC | K | 0.3-0.5 K :: 0.1-0.3 K | 1/day, 1/wk, 1/mo | 1 km :: Ocean/L | N/A :: Sfc |
| 2528 | Sea_sfc Temperature (SST) | O :: FI | Brown | MODIS | AM,PM | GSFC | K | 0.3-0.6K :: 0.1-0.3K | 1/day, 1/wk, 1/mo | 20 km :: Ocean/G,R | N/A :: Sfc |
| 2529 | Sea_sfc Temperature (SST) | O :: FI | Brown | MODIS | AM,PM | GSFC | K | 0.3-0.6K :: 0.1-0.3K | 1/day, 1/wk, 1/mo | 4 km :: Ocean/R,L | N/A :: Sfc |
| 2530 | Sea_sfc Temperature (SST) | O :: FI | Brown, Barton | MODIS | AM,PM | GSFC | K | 0.3-0.6K :: 0.1-0.3K | 1/day, 1/wk, 1/mo | 4 km :: Ocean/R,L | N/A :: Sfc |
| 2531 | Sea_sfc Temperature (SST) | O :: FI | Brown, Barton | MODIS | AM,PM | GSFC | K | 0.3-0.6K :: 0.1-0.3K | 1/day, 1/wk, 1/mo | 20 km :: Ocean/G,R | N/A :: Sfc |
| 2532 | Sea_sfc Temperature (SST) | O :: FI | Brown, Barton | MODIS | AM,PM | GSFC | K | 0.3-0.4K :: 0.1-0.6K | 1/day, 1/wk, 1/mo | 50 km :: Ocean | N/A :: Sfc |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2535 | Vegetation Temperature | I :: II | Moore | | | | K | | | | :: Sfc |
| 2537 | Land_sfc Temperature-Difference, Day-Night | O :: FI | Huete | MODIS | AM,PM | GSFC | K | 1 K :: 1 K | 1/day | 1 km :: Land/R | N/A :: Sfc |
| 2538 | Land_sfc Temperature-Difference, Day-Night | I :: II | Bates | | | | K | 0.5 K :: 0.25 K | 1/day | 50 km :: Land | N/A :: Sfc |
| 2539 | Land_sfc Temperature-Difference, Day-Night | O :: FI | Chedin, Fleming, Revercomb, Smith, Susskind | AIRS | PM | GSFC | K | 0.5 K :: 0.25 K | 2/day [d,n] | 50 km :: G | N/A :: Sfc |
| 2540 | Land_sfc Temperature-Difference, Day-Night | O :: FI | Kieffer et al | ASTER | AM1 | EDC | K | 1-2 K :: 0.3 K | | 90 m :: Land/R,L | N/A :: Sfc |
| 2541 | Land Thermal Inertia | I :: II | Kerr, Sorooshian | | | | cal/cm^2/K/s | .008 :: .004 | 1/(16 day) | 60 m :: Land/R | N/A :: Sfc |
| 2542 | Land Thermal Inertia | O :: FI | Kieffer et al | ASTER | AM1 | EDC | joule/m^2/K/s | 40% :: 20% | | 90 m :: Land/R,L | N/A :: Sfc |
| 2543 | Level-1B Transmission, SAGE-III | O :: PI | McCormick | SAGE-III | AERO,CHEM | LaRC | dimensionless | 0.05% :: 0.05% | 1/(2 min), 30/day | 200 x 2.5 km :: G | 1-2 km :: 0-90 km |
| 2544 | Cloud Transmissivity | I :: II | Rothrock | | | | | 0.1 :: 0.1 | 1/day | 100 km :: Polar | N/A :: Cloud |
| 2545 | Climatology Diagnostic Data | O :: II | Hansen | | | | | | 1/wk | 500 km :: G | :: Atmos |
| 2546 | Cloud Spectral Char | I :: II | Liu | | | | | | | :: G | N/A :: Cloud |
| 2547 | C Budget, Global | O :: II | Cihlar | | | | kg/ha/yr | :: 0.1 | 1/yr | 1 km :: Land/R | N/A :: Sfc |
| 2548 | C Flux, Global | O :: II | Hansen | | | | g-C/m^2/s | | 1/wk | 500 km :: | |
| 2549 | Soil N Turnover | O :: II | Moore | | | | kg/ha per t-step | 30% :: 1% | 1/mo, 1/yr | Mult :: Land/R,L | |
| 2550 | Soil N Turnover | O :: II | Moore | | | | kg/ha per t-step | 30% :: 1% | 1/mo, 1/yr | Mult :: Land | |
| 2551 | Soil N Turnover | O :: II | Schimel | | | | kg/ha | 25% :: 1% | 1/seas | Mult :: 6 sites/L | :: Sfc |
| 2552 | Soil N Turnover Time-deriv | O :: II | Schimel | | | | kg/ha | 25% :: 1% | 1/seas | Mult :: 6 sites/L | :: Sfc |
| 2553 | Land_sfc Biochemical Analysis | O :: II | Dozier | | | | N/A | | 1/day | 50 m :: L | |
| 2554 | C-Cycle Diagnostic Data | O :: II | Hansen | | | | | | 1/wk | 500 km :: G | :: Trop |
| 2555 | Phytoplankton Backscatter Coef | O :: FI | Gordon | MODIS | AM,PM | GSFC | soft, med, hard | | 1/day, 1/wk, 1/mo | 1 km :: Ocean/R | N/A :: TOO |
| 2556 | Coccolith Backscatter Coef | O :: FI | Gordon | MODIS | AM,PM | GSFC | /m | 25% :: 10% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/R | N/A :: TOO |
| 2557 | Coccolith Backscatter Coef | O :: FI | Gordon | MODIS | AM,PM | GSFC | /m | 25% :: 10% | 1/day, 1/wk, 1/mo | 20 km :: Ocean | N/A :: TOO |
| 2558 | Phytoplankton Backscatter Coef | O :: FI | Gordon | MODIS | AM,PM | GSFC | soft, med, hard | | 1/day, 1/wk, 1/mo | 20 km :: Ocean | N/A :: TOO |
| 2559 | Ocean Water Backscatter Coef, Total | O :: FI | Gordon | MODIS | AM,PM | GSFC | /m | 25% :: 10% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/R | N/A :: TOO |
| 2560 | Ocean Water Backscatter Coef, Total | O :: FI | Gordon | MODIS | AM,PM | GSFC | /m | 25% :: 10% | 1/day, 1/wk, 1/mo | 20 km :: Ocean | N/A :: TOO |
| 2561 | Organic Carbon Conc, Dissolved | I :: II | Brewer | | | | mol-C/m^3 | 100% :: 10% | 1/day, 1/seas | 20 km :: Ocean | N/A :: TOO |
| 2562 | Organic Carbon Conc, Dissolved | I :: II | Brewer | | | | mol-C/m^3 | 100% :: 10% | 1/day, 1/seas | 30 m :: Ocean/L | N/A :: TOO |
| 2563 | Chlorophyll Conc | I :: II | Srokosz | | | | ug/l | 10% :: 0.1mg | 1/day | km :: Ocean [South Atlan | N/A :: Sfc |
| 2564 | Chlorophyll_a Conc, Phytoplankton, Case-I Waters | O :: FI | Carder, Davis | HIRIS | AM2 | EDC | mg/m^3 | 50% :: 25% | 1/(2 day) [d] | 30-90 m :: Ocean-I/L | N/A :: TOO |
| 2565 | Chlorophyll_a Conc, Case-II Waters | O :: FI | Carder, Melack | HIRIS | AM2 | EDC | mg/m^3 | 100% :: 50% | 1/(2 day) [d] | 60-90 m :: Ocean-II/L | N/A :: TOO |
| 2566 | Chlorophyll_a Conc (via Fluorescence) | O :: FI | Abbott | MODIS | AM,PM | GSFC | mg/m^3 | 50-100% :: 35% | 1/day, 1/wk | 1 km :: Ocean/R,L | N/A :: TOO |
| 2567 | Chlorophyll_a Conc (via Fluorescence) | O :: FI | Abbott | MODIS | AM,PM | GSFC | mg/m^3 | 50-100% :: 35% | 1/day, 1/wk | 4 km :: Ocean/G,R | N/A :: TOO |
| 2569 | Chlorophyll_a Conc | O :: FI | Carder | MODIS | AM,PM | GSFC | mg/m^3 | 50% :: 10% | 1/day, 1/wk, 1/mo | 1 km :: Ocean-II/L | N/A :: TOO |
| 2570 | Chlorophyll_a Conc | O :: FI | Carder | MODIS | AM,PM | GSFC | mg/m^3 | 50% :: 10% | 1/day, 1/wk, 1/mo | 1 km :: Ocean-II/G,R | N/A :: TOO |
| 2571 | *Chlorophyll_a Conc* | O :: FI | Clark | MODIS | AM,PM | GSFC | mg/m^3 | 30% :: 10% | 1/day, 1/wk, 1/mo | 1 km :: Ocean-I/L | N/A :: TOO |
| 2572 | *Chlorophyll_a Conc* | O :: FI | Clark | MODIS | AM,PM | GSFC | mg/m^3 | 30% :: 10% | 1/day, 1/wk, 1/mo | 20 km :: Ocean-I/G,R | N/A :: TOO |
| 2573 | Chlorophyll Fluorescence Line Curv | O :: FI | Hoge | MODIS | AM,PM | GSFC | mW/cm^2/sr/um | 25% :: 8% | 1/day, 1/wk | 1 km :: Ocean/R | N/A :: TOO |
| 2574 | *Chlorophyll Fluorescence Line Curv* | O :: FI | Hoge | MODIS | AM,PM | GSFC | mW/cm^2/sr/um | 25% :: 8% | 1/day, 1/wk | 20 km :: Ocean | N/A :: TOO |
| 2575 | *Chlorophyll Fluorescence Line Height* | O :: FI | Abbott | MODIS | AM,PM | GSFC | mW/cm^2/sr/um | .004 :: .001 | 1/day, 1/wk | 4 km :: Ocean/G,R | N/A :: TOO |
| 2576 | Chlorophyll Fluorescence Line Height | O :: FI | Abbott | MODIS | AM,PM | GSFC | mW/cm^2/sr/um | .004 :: .001 | 1/day, 1/wk | 1 km :: Ocean/R,L | N/A :: TOO |
| 2577 | Coccolith Conc, Detached | O :: FI | Gordon, Clark | MODIS | AM,PM | GSFC | mg-CaCO3/m^3 | 30% :: 10% | 1/day, 1/wk, 1/mo | 20 km :: Ocean/G,R | N/A :: TOO |
| 2578 | Coccolith Conc, Detached | O :: FI | Gordon, Clark | MODIS | AM,PM | GSFC | mg-CaCO3/m^3 | 30% :: 10% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/L | N/A :: TOO |
| 2579 | Organic Matter Conc, Dissolved | I :: II | Abbott | | | | mmol/m^3 | 50% :: 20% | 1/(1-2 day) | 1-4 km :: Ocean [Southern | N/A :: TOO |
| 2580 | Organic Matter Conc, Dissolved | O :: FI | Carder | MODIS | AM,PM | GSFC | mg/m^3 | 150% :: 30% | 1/day, 1/wk, 1/mo | 20 km :: Ocean | N/A :: TOO |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2581 | Organic Matter Conc, Dissolved | O :: FI | Carder | MODIS | AM,PM | GSFC | mg/m^3 | 150% :: 30% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/R,L | N/A :: TOO |
| 2582 | Organic Matter Conc, Dissolved | O :: FI | Parslow et al | MODIS | AM,PM | GSFC | mg/m^3 | 150% :: 30% | 1/day, 1/wk, 1/mo | 20 km :: Ocean | N/A :: TOO |
| 2583 | Organic Matter Conc, Dissolved | O :: FI | Parslow et al | MODIS | AM,PM | GSFC | mg/m^3 | 150% :: 30% | 1/day, 1/wk, 1/mo | 1 km :: Ocean [Southern]R,L | N/A :: TOO |
| 2584 | Pigment Conc, Phycoerythrin | I :: II | Abbott | | | | mg/m^3 | 50% :: 20% | 1/(1-2 day) | 1-4 km :: Ocean [Southern | N/A :: TOO |
| 2587 | Pigment Conc, Phytoplankton | I :: II | Abbott | | | | mg/m^3 | 35% :: 10% | 1/(1-2 day) | 1-4 km :: Ocean [Southern | N/A :: TOO |
| 2588 | Pigment Conc, Phytoplankton | O :: PI | Diner | MISR | AM | LaRC | mg/m^3 | 30% :: 30% | 1/(1-2 day) [d] | 240 m :: Ocean/R | N/A :: TOO |
| 2589 | Pigment Conc, Phytoplankton | O :: PI | Diner | MISR | AM | LaRC | mg/m^3 | 30% :: 30% | 1/(1-2 day) [d] | 1.92 km :: Ocean/G,R | N/A :: TOO |
| 2590 | Pigment Conc, Phytoplankton | I :: II | Rothrock | | | | mg/m^3 | | 1/(2 day) | 10 km :: Polar | N/A :: TOO |
| 2591 | Pigment Conc | O :: FI | Gordon, Clark | MODIS | AM,PM | GSFC | mg/m^3 | 30% :: 10% | 1/day, 1/wk, 1/mo | 20 km :: Ocean/G,R | N/A :: TOO |
| 2592 | Pigment Conc | O :: FI | Gordon, Clark | MODIS | AM,PM | GSFC | mg/m^3 | 30% :: 10% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/R,L | N/A :: TOO |
| 2593 | Pigment Conc [via Spectral Curv] | O :: FI | Hoge, Esaias | MODIS | AM,PM | GSFC | mg/m^3 | 50% :: 15% | 1/day, 1/wk | 1 km :: Ocean/R | N/A :: TOO |
| 2594 | Pigment Conc [via Spectral Curv] | O :: FI | Hoge, Esaias | MODIS | AM,PM | GSFC | mg/m^3 | 50% :: 15% | 1/day, 1/wk | 20 km :: Ocean/R | N/A :: TOO |
| 2595 | Phytoplankton Type | O :: II | Brewer | | | | % | | 1/day | 30 m :: Ocean/L | N/A :: TOO |
| 2596 | Phytoplankton Type | O :: II | Brewer | | | | % | | 1/day | 20 km :: Ocean | N/A :: TOO |
| 2597 | Ocean Productivity, Primary, Total Column | I :: II | Abbott | | | | mg-C/m^2/day | | 1/(1-2 day) | 1-4 km :: Ocean [Southern | N/A :: TOO |
| 2598 | Ocean Productivity, Primary, Near sfc | I :: II | Abbott | | | | mg-C/m^3/day | | 1/(1-2 day) | 1-4 km :: Ocean [Southern | N/A :: Near_sfc |
| 2599 | Ocean Productivity, Primary | I :: II | Brewer | | | | mmol-C/m^2/day | 50% :: 5% | 1/day, 1/seas | 20 km :: Ocean | N/A :: TOO |
| 2600 | Ocean Productivity, Primary | I :: II | Brewer | | | | mmol-C/m^2/day | 50% :: 5% | 1/day, 1/seas | 30 m :: Ocean/L | N/A :: TOO |
| 2601 | Ocean Productivity, Primary, | O :: FI | Davis, Melack et al | HIRIS | AM2 | EDC | mg-C/m^2/hr | 100% :: 50% | 1/(>=2 day) | 30-90 m :: Ocean/L | N/A :: TOO |
| 2602 | Ocean Productivity, Primary, Near_sfc [via Fluorescence] | O :: FI | Abbott | MODIS | AM,PM | GSFC | mg-C/m^3/day | :: 50-100% | 1/day, 1/wk | 1 km :: Ocean-I/R,L | N/A :: TOO |
| 2603 | Ocean Productivity, Primary, Near_sfc [via Fluorescence] | O :: FI | Abbott | MODIS | AM,PM | GSFC | mg-C/m^3/day | :: 50-100% | 1/day, 1/wk | 4 km :: Ocean-I/G,R | N/A :: TOO |
| 2606 | Ocean Productivity, Primary | O :: FI | Esaias | MODIS | AM,PM | GSFC | mg/m^3 | <35% :: <20% | 1/wk, 1/mo, 1/yr | 20 km :: Ocean/G,R | N/A :: TOO |
| 2607 | Ocean Productivity, Primary | O :: II | Rothrock | | | | g-C/m^2/day | | 1/(3 day) | 100 km :: > 60 dgLAT | :: TOO |
| 2608 | Organic Matter Conc, Particulate | O :: FI | Clark | MODIS | AM,PM | GSFC | mg/m^3 | 50% :: 30% | 1/day, 1/wk | 20 km :: Ocean | N/A :: TOO |
| 2609 | Vegetation Biomass, Above_sfc | O :: II | Kerr, Sorooshian | | | | kg/m^2 | 20% :: | 1/seas | 60 m :: Land/R | :: Sfc |
| 2610 | Vegetation Biomass, Above_sfc | O :: II | Moore | | | | kg/ha | | 1/(1-3 yrs) [few yrs] | .030-1 km :: Land/R | |
| 2611 | Vegetation Biomass, Above_sfc | O :: II | Moore | | | | kg/ha | | 1/(1-3 yr) [few yr] | .030-1 km :: Land | |
| 2612 | Vegetation Biomass, Dead | I :: II | Barron | | | | kg/ha | 25% :: 15% | 1/mission | 30 m :: L | N/A :: Sfc |
| 2613 | Vegetation Biomass, Dead | I :: II | Barron | | | | kg/ha | 25% :: 15% | 1/mission | 10 km :: R | N/A :: Sfc |
| 2614 | Vegetation Biomass, Dead | O :: FI | Ustin, Wessman | HIRIS | AM2 | EDC | kg/ha | 30% :: 15% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2615 | Vegetation Biomass, Green | I :: II | Barron | | | | kg/ha | 25% :: 15% | 1/mission | 30 m :: L | N/A :: Sfc |
| 2616 | Vegetation Biomass, Green | I :: II | Barron | | | | kg/ha | 25% :: 15% | 1/mission | 10 km :: R | N/A :: Sfc |
| 2617 | Vegetation Biomass, Green | I :: II | Isacks | | | | kg/ha | 40% :: 15% | 1/mo | 30 m :: Land/L | N/A :: Sfc |
| 2618 | Vegetation Biomass, Green | I :: II | Moore | | | | g/ha | 40% :: 15% | 1/(2-16 day) | 500 m :: Land/R | :: Sfc |
| 2619 | Vegetation Biomass, Green | I :: II | Moore | | | | g/ha | 40% :: 15% | 1/(2-16 day) | 30 m :: Land/L | :: Sfc |
| 2620 | Vegetation Biomass, Green | O :: FI | Ustin, Wessman | HIRIS | AM2 | EDC | kg/ha | 30% :: 15% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2621 | Vegetation Litter Biomass | O :: II | Kerr, Sorooshian | | | | kg/km^2 | | | 30 m :: Land/R | :: Sfc |
| 2622 | Vegetation Litter Biomass | O :: II | Moore | | | | kg/ha | | 1/(1-3 yr) [few yr] | :: Land/R,L | |
| 2623 | Vegetation Litter Biomass | O :: II | Moore | | | | kg/ha | | 1/(1-3 yr) [few yr] | :: Land | |
| 2624 | Vegetation Biomass, Sub_sfc | I :: II | Kerr, Sorooshian | | | | kg/m^2 | | 1/(1-3 yr) [few yr] | 1120 m :: Land/R | :: Sub_sfc |
| 2625 | Vegetation Biomass, Sub_sfc | O :: II | Moore | | | | kg/ha | | 1/(1-3 yr) [few yr] | :: Land/R | |
| 2626 | Vegetation Biomass, Sub_sfc | O :: II | Moore | | | | kg/ha | | 1/(1-3 yr) [few yr] | :: Land | |
| 2627 | Vegetation Biomass | I :: II | Richey, Batista | | | | t/ha | 20% :: 20% | 1/seas | 1 km :: Land/R | N/A :: Sfc |
| 2628 | Vegetation Biomass | I :: II | Sellers | | | | | | | | |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2630 | Vegetation Biome Area | I :: II | Kerr, Sorooshian | | | | km^2 | 5% :: 5% | 1/seas | :: Land/R | N/A :: Sfc |
| 2631 | *Land_sfc Reflectance, Bi-directional,* | O :: PI | Diner | MISR | AM | LaRC | /sr | 5% :: 2% | 1/(5-16 day) [d] | 1.92 km :: G | N/A :: Sfc |
| 2632 | Land_sfc Reflectance, Bi-directional, (BRDF) | O :: PI | Diner | MISR | AM | LaRC | /sr | 5% :: 2% | 1/(5-16 day) [d] | 240 m :: R | N/A :: Sfc |
| 2633 | Fire Burning Index | O :: II | Moore | | | | ha | | 1/yr | 1 km :: Land | |
| 2634 | Vegetation Density | I :: II | Kerr, Sorooshian | | | | % | | | 60 m :: Land/R | :: Sfc |
| 2635 | Vegetation Extent | O :: II | Moore | | | | ha | 15% :: 15% | 1/yr | 1 km :: Land | |
| 2636 | Vegetation Height | I :: II | Kerr, Sorooshian | | | | m | 10% :: 10% | 1/seas | 30 m :: Land/R | :: Sfc |
| 2637 | Vegetation Height | O :: II | Schimel | | | | m | 20% :: 5% | 1/yr | 500 m :: 6 sites/L | :: Sfc |
| 2638 | Vegetation Spatial Density | I :: II | Kerr, Sorooshian | | | | #/km^2 | 20% :: 10% | | 60 m :: Land/R | :: Sfc |
| 2639 | Vegetation Structure | I :: II | Barron | | | | | | 1/seas | 30 m :: Land/L | N/A :: Sfc |
| 2640 | Vegetation Structure | I :: II | Barron | | | | | | 1/seas | 10 km :: Land/R | N/A :: Sfc |
| 2641 | Vegetation Structure | I :: II | Schimel | | | | geometric | :: 5% | 1/yr | 30 m :: 6 sites/L | N/A :: Sfc |
| 2642 | Vegetation Structure | I :: II | Schimel | | | | geometric | :: 5% | 1/yr | 500 m :: 6 sites/L | N/A :: Sfc |
| 2643 | Vegetation Structure | I :: II | Schimel | | | | geometric | :: 5% | [multiple] | [multiple] :: 6 sites/L | N/A :: Sfc |
| 2644 | Vegetation Type | O :: FI | Wessman | HIRIS | AM2 | EDC | ha | 10% :: 10% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2647 | Vegetation Cellulose Conc | I :: II | Moore | | | | % | 20% :: 20% | 1/(16 day) | 30 m :: Land/L | |
| 2648 | Vegetation Cellulose Conc | O :: FI | Wessman, Aber | HIRIS | AM2 | EDC | g/ha | 40% :: 20% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2649 | Vegetation Chlorophyll Conc | I :: II | Moore | | | | g/ha | 20% :: 10% | 1/day, 1/wk | 30 m :: Land/L | |
| 2650 | Vegetation Chlorophyll Conc | I :: II | Moore | | | | g/ha | 20% :: 10% | 1/day, 1/wk | 1 km :: Land/R | :: Sfc |
| 2651 | Vegetation Chlorophyll Conc | I :: II | Schimel | | | | kg/ha | 10% :: 1% | 1/wk | 30 m :: 6 sites/L | N/A :: Sfc |
| 2652 | Vegetation Chlorophyll Conc | I :: II | Schimel | | | | kg/ha | 10% :: 1% | [multiple] | [multiple] :: 6 sites/L | N/A :: Sfc |
| 2653 | Vegetation Chlorophyll Conc | O :: FI | Ustin, Wessman | HIRIS | AM2 | EDC | g/ha | 25% :: 10% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2654 | Lake Water Chlorophyll Conc | I :: II | Richey, Batista | | | | g/m^3 | 20% :: 10% | 1/wk | 1 km :: Land/R | N/A :: TOO |
| 2655 | River Water Chlorophyll Conc | I :: II | Richey, Batista | | | | g/m^3 | 20% :: 10% | 1/wk | 1 km :: Land/R | N/A :: TOO |
| 2656 | Vegetation Crown Height | O :: FI | Ustin | HIRIS | AM2 | EDC | m | 40% :: 20% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2657 | Vegetation Crown Spacing | O :: FI | Ustin | HIRIS | AM2 | EDC | m | 40% :: 20% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2658 | Forest Deforestation | I :: II | Hansen | | | | | 10% :: | 1/wk | 500 km :: Land | :: Sfc |
| 2659 | Vegetation Growing_Season Duration | O :: FI | Justice | MODIS | AM,PM | EDC | day | 10 day :: | 1/yr | 1 km :: Land | N/A :: Sfc |
| 2660 | Vegetation Growing_Season Duration | O :: FI | Justice | MODIS | AM,PM | EDC | day | 10 day :: | 1/yr | 10 km :: Land | N/A :: Sfc |
| 2661 | Vegetation Growing_Season Duration | O :: II | Cihlar | | | | day | 10 day :: 1day | 1/yr | 1 km :: Land/R | N/A :: Sfc |
| 2662 | Fires [Count, Extent, etc.] | I :: II | Hansen | | | | | 10% :: | 1/wk | 500 km :: Land | :: Sfc |
| 2663 | *Fire Count* | O :: FI | Kaufman, Justice | MODIS | AM,PM | EDC | | | 1/day, 1/wk | 1 km :: Land/R | N/A :: Sfc |
| 2664 | *Fire Count* | O :: FI | Kaufman, Justice | MODIS | AM,PM | EDC | | | 1/day, 1/wk | 10 km :: Land | N/A :: Sfc |
| 2665 | *Fire Extent* | O :: FI | Kaufman, Justice | MODIS | AM,PM | EDC | | | 1/day, 1/wk | 1 km :: Land/R | N/A :: Sfc |
| 2666 | *Fire Extent* | O :: FI | Kaufman, Justice | MODIS | AM,PM | EDC | | | 1/day, 1/wk | 1 dg :: Land | N/A :: Sfc |
| 2669 | *Land_Cover Type* | O :: FI | Strahler, Huete et al | MODIS | AM,PM | EDC | categorical | 10% :: 5% | 1/mo, 1/seas | 1 km :: Land | N/A :: Sfc |
| 2670 | *Land_Cover Type* | O :: FI | Strahler, Huete et al | MODIS | AM,PM | EDC | categorical | 10% :: 5% | 1/mo, 1/seas | 5 km :: Land | N/A :: Sfc |
| 2671 | *Land_Cover Type-Change* | O :: FI | Strahler, Huete et al | MODIS | AM,PM | EDC | categorical | 10% :: 7% | 1/seas | 1 km :: Land | N/A :: Sfc |
| 2672 | *Land_Cover Type-Change* | O :: FI | Strahler, Huete et al | MODIS | AM,PM | EDC | categorical | 10% :: 7% | 1/seas | 5 km :: Land | N/A :: Sfc |
| 2673 | Vegetation Index, Leaf Area, (LAI) | I :: II | Barron | | | | | 0.5 :: 0.2 | 1/day | 100 km :: Land | N/A :: Sfc |
| 2674 | Vegetation Index, Leaf Area, (LAI) | I :: II | Barron | | | | | 0.5 :: 0.2 | 1/day | 10 km :: Land/R | N/A :: Sfc |
| 2675 | Vegetation Index, Leaf Area, (LAI) | I :: II | Barron | | | | | 0.5 :: 0.2 | 1/day | 30 m :: Land/L | N/A :: Sfc |
| 2676 | Vegetation Index, Leaf Area, (LAI) | I :: II | Bates | | | | area fraction | | 1/mo | 60 m :: Land | N/A :: Sfc |
| 2677 | Vegetation Index, Leaf Area, (LAI) | I :: II | Lau | | | | % | 10% :: 10% | 1/seas | 1 km :: Land/R | N/A :: Sfc |
| 2678 | Vegetation Index, Leaf Area, (LAI) | I :: II | Schimel | | | | % | 10% :: 1% | 1/wk, 1/mo | 30 m :: 6 sites/L | N/A :: Sfc |
| 2679 | Vegetation Index, Leaf Area, (LAI) | I :: II | Schimel | | | | % | 10% :: 1% | [multiple] | [multiple] :: 6 sites/L | N/A :: Sfc |
| 2680 | *Vegetation Index, Leaf Area, (LAI)* | O :: FI | Running | MODIS | AM,PM | EDC | dimensionless | 0.1-0.25 :: 5-20% | 1/day, 1/wk | pixel_size :: Land/G,R,L | N/A :: N/A |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2682 | Vegetation Index, Leaf Area, (LAI) | O :: II | Kerr, Sorooshian | | | | % | 10% :: 5% | 1/mo | 30 m :: Land/R | :: Sfc |
| 2683 | Vegetation Index, Leaf Area, (LAI) | O :: II | Moore | | | | % | 10 :: 5 | 1/(1-3 mo) [few mo] | 30 m :: Land/L,R | |
| 2684 | Vegetation Lignin Conc | I :: II | Moore | | | | % | 20% :: 20% | 1/(16 day) | 30 m :: Land/L | |
| 2685 | Vegetation Lignin Conc | I :: II | Schimel | | | | % | 20% :: 1% | 1/seas | 30 m :: 6 sites/L | N/A :: Sfc |
| 2686 | Vegetation Lignin Conc | I :: II | Schimel | | | | % | 20% :: 1% | [multiple] | [multiple] :: 6 sites/L | N/A :: Sfc |
| 2687 | Vegetation Lignin Conc | O :: FI | Wessman, Aber | HIRIS | AM2 | EDC | g/ha | 40% :: 20% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2688 | Vegetation N Conc | I :: II | Moore | | | | % | 20% :: 20% | 1/(16 day) | 1 km :: Land/R | |
| 2689 | Vegetation N Conc | I :: II | Moore | | | | % | 20% :: 20% | 1/(16 day) | 30 m :: Land/L | |
| 2690 | Vegetation N Conc | I :: II | Schimel | | | | % | 20% :: 1% | 1/seas | 30 m :: 6 sites/L | N/A :: Sfc |
| 2691 | Vegetation N Conc | I :: II | Schimel | | | | % | 20% :: 1% | [multiple] | [multiple] :: 6 sites/L | N/A :: Sfc |
| 2693 | Vegetation Physiography | I :: II | Richey, Batista | | | | m | 10% :: 10% | 1/mo | 1 km :: Land/R | N/A :: Sfc |
| 2694 | Vegetation Phytomass | O :: II | Cihlar | | | | kg/ha | :: 10% | 1/yr | 1 km :: Land/R | N/A :: Sfc |
| 2695 | Pigment Conc, Non-photosynthetic | I :: II | Moore | | | | relative | 20% :: 20% | 1/(16 day) | 1 km :: Land/R | :: Sfc |
| 2696 | Pigment Conc, Non-photosynthetic | I :: II | Moore | | | | relative | 20% :: 20% | 1/(16 day) | 30 m :: Land/L | :: Sfc |
| 2697 | Vegetation Production, Net Ecosystem, | O :: II | Moore | | | | t/yr/km^2 | 25% :: 10% | 1/yr | km [?] :: Land | |
| 2698 | Vegetation Production, Net Primary, (NPP) | I :: II | Schimel | | | | kg/ha | 20% :: 5% | 1/yr | 500 m :: 6 sites/L | N/A :: Sfc |
| 2699 | Vegetation Production, Net Primary, (NPP) | O :: II | Kerr, Sorooshian | | | | t/yr | 20% :: 10% | 1/yr | 500 m :: Land | N/A :: Sfc |
| 2700 | Vegetation Production, Net Primary, (NPP) | O :: II | Moore | | | | t/yr/km^2 | 25% :: 10% | 1/yr | 1 km :: Land | |
| 2701 | Vegetation Production, Net Primary, (NPP) | O :: II | Schimel | | | | kg/ha | 20% :: 1% | 1/seas | [multiple] :: 6 sites/L | :: Sfc |
| 2702 | Vegetation Production Time-deriv, Net Primary, (dNPP/dt) | O :: II | Schimel | | | | kg/ha ? | 20% :: 1% | 1/seas | [multiple] :: 6 sites/L | :: Sfc |
| 2703 | *Vegetation Productivity, Primary* | O :: FI | Running | MODIS | AM,PM | EDC | Mg/km^2/yr | 100 :: 5-30% | 1/wk, 1/mo, 1/yr | 1 km :: Land/G,R | N/A :: N/A |
| 2704 | Vegetation Productivity | O :: II | Kerr, Sorooshian | | | | annual % | | | 30 m :: Land/R | :: Sfc |
| 2705 | Soil Proportion, Bare | O :: II | Moore | | | | % | 10% :: 10% | 1/mo | 1 km :: Land | |
| 2706 | Vegetation Index | O :: II | Cihlar | | | | various indices | .05 :: 0.001 | 1/(10 day) | 1 km :: Land/R | N/A :: Sfc |
| 2707 | Vegetation Rooting Depth | I :: II | Kerr, Sorooshian | | | | m | 20% :: 20% | 1/yr | 30 m :: Land/R | |
| 2708 | Vegetation Moisture, Root-zone | I :: II | Richey, Batista | | | | m | [20%],10% :: [10%],20% | 1/seas | 1 km :: Land/R | N/A :: Sfc |
| 2709 | Vegetation Stomatal Resistance | I :: II | Kerr, Sorooshian | | | | | | 1/seas | 30 m :: Land/R | |
| 2710 | Ground Water Sum Routing | O :: II | Richey, Batista | | | | g/ha/day | 20% :: 20% | 1/mo | 1 km :: Land/R | |
| 2711 | Fire Class | O :: FI | Kaufman, Justice | MODIS | AM,PM | EDC | C | 10 C :: 5 C | 1/day, 1/wk | 10 km :: Land | N/A :: Sfc |
| 2712 | Vegetation Phenologic State, AVHRR | O :: II | Sellers | | | | | | 1/mo | 20 km :: | |
| 2713 | Vegetation Change | O :: II | Cihlar | | | | veg change classes | 1 class | 1/yr | 1 km :: Land/R | N/A :: Scf |
| 2714 | Vegetation Condition | O :: II | Kerr, Sorooshian | | | | N/A | 10% :: 10% | 1/wk | 500 m :: Land/R | N/A :: Sfc |
| 2715 | Vegetation Extent | I :: II | Barron | | | | N/A | 5 ? :: 5 ? | 1/yr | 30 m :: Land/L | N/A :: Sfc |
| 2716 | Vegetation Extent | I :: II | Barron | | | | N/A | 5 ? :: 5 ? | 1/yr | 10 km :: Land/R | N/A :: Sfc |
| 2717 | Vegetation Extent | I :: II | Barron | | | | N/A | 5 ? :: 5 ? | 1/yr | 100 km :: Land | N/A :: Sfc |
| 2718 | Vegetation Extent | I :: II | Hansen | | | | | 5% :: | 1/wk | 500 km :: Land | :: Sfc |
| 2719 | Vegetation Extent | I :: II | Isacks | | | | | | 1/seas | 1 km :: Land/R | N/A :: Sfc |
| 2720 | Vegetation Extent | I :: II | Simard | | | | | 10% :: | | :: Canada/R | N/A :: Sfc |
| 2721 | Vegetation Extent | I :: II | Moore | | | | ha | 15% :: 15% | 1/yr | 1 km :: Land | :: Sfc |
| 2723 | Vegetation Stress | O :: FI | Runnng, Huete | MODIS | AM,PM | EDC | s/m | 200-1000 :: 5-30% | 1/day, 1/wk | pixel_size :: Land/G,R,L | N/A :: N/A |
| 2725 | Vegetation Stress Index, XXX | O :: II | Moore | | | | | | 1/mo | 30 m :: Land/R,L | |
| 2726 | Vegetation Structure | I :: II | Richey, Batista | | | | % | | 1/seas | 1 km :: Land/R | N/A :: Sfc |
| 2727 | Vegetation Succession | O :: II | Cihlar | | | | vegetation change | :: 1 class | 1/(2 yr) | 1 km :: Land/R | N/A :: Sfc |
| 2728 | Vegetation Type | I :: II | Barron | | | | N/A | 5 ? :: 5 ? | 1/yr | 10 km :: Land/R | N/A :: Sfc |
| 2729 | Vegetation Type | I :: II | Barron | | | | N/A | 5 ? :: 5 ? | 1/yr | 30 m :: Land/L | N/A :: Sfc |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2730 | Vegetation Type | I :: II | Barron | | | | N/A | 5 ? :: 5 ? | 1/yr | 100 km :: Land | N/A :: Sfc |
| 2731 | Vegetation Type | I :: II | Hansen | | | | | 5% :: | 1/wk | 500 km :: Land | :: Sfc |
| 2732 | Vegetation Type | I :: II | Isacks | | | | | | 1/seas | 1 km :: Land/R | N/A :: Sfc |
| 2733 | Vegetation Type | I :: II | Kerr, Sorooshian | | | | class | | 1/seas | 30 m :: Land/R | :: Sfc |
| 2734 | Vegetation Type | I :: II | Lau | | | | species | | 1/seas | 30 m :: Land/L | N/A :: Sfc |
| 2736 | Vegetation Type | I :: II | Moore | | | | ha | 15% :: 15% | 1/yr | 1 km :: Land | :: Sfc |
| 2737 | Vegetation Type | O :: II | Cihlar | | | | classes | [1 km] :: 1 class | 1/yr | 1 km :: Land/R | N/A :: Sfc |
| 2738 | Vegetation Type | O :: II | Moore | | | | classes | | 1/(3 yr) | 1 km :: Land | |
| 2739 | Vegetation Type Boundaries | I :: II | Barron | | | | m | 30 m :: | 1/(3 mo) | 30 m :: Land/L | N/A :: Sfc |
| 2740 | Vegetation Cover | I :: II | Sellers | | | | | | 1/(1-4 day) | 100 km :: | :: Sfc |
| 2741 | Vegetation Cover | O :: FI | Ustin, Wessman | HIRIS | AM2 | EDC | % | 20% :: 10% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2742 | Vegetation Index | I :: II | Hansen | | | | | 5% :: | 1/wk | 500 km :: Land | :: Sfc |
| 2743 | Vegetation Index | I :: II | Isacks | | | | | 1 :: 1 | 1/mo | 240-500 m :: Land/R | N/A :: Sfc |
| 2744 | Vegetation Index | I :: II | Isacks | | | | % | 1 :: 0.5 | 1/mo | 30-60 m :: Land/L | N/A :: Sfc |
| 2745 | Vegetation Index | I :: II | Murakami | | | | | | | :: Land | N/A :: Sfc |
| 2746 | Vegetation Index | O :: FI | Ustin et al | HIRIS | AM2 | EDC | dimensionless | 20% :: 10% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2747 | Vegetation Index (PVI) | O :: FI | Gillespie | ASTER | AM1 | EDC | dimensionless | | | 15 m :: Land/R,L | N/A :: Sfc |
| 2749 | *Vegetation Index* | O :: FI | Justice, Huete et al | MODIS | AM,PM | EDC | dimensionless | 0.01 :: 0.01 | 1/day, 1/wk, 1/mo | 10 km :: Land | N/A :: Sfc |
| 2750 | *Vegetation Index* | O :: FI | Justice, Huete et al | MODIS | AM,PM | EDC | dimensionless | 0.01 :: 0.01 | 1/day, 1/wk, 1/mo | 0.5 km :: Land/R | N/A :: Sfc |
| 2751 | *Vegetation Index* | O :: FI | Justice, Huete et al | MODIS | AM,PM | EDC | dimensionless | 0.01 :: 0.01 | 1/day, 1/wk, 1/mo | 1 km :: Land/R | N/A :: Sfc |
| 2752 | Vegetation Index | O :: II | Kerr, Sorooshian | | | | % | .01 :: .01 | 1/(2 wk) | 30 m :: Land/R | :: Sfc |
| 2753 | Vegetation Index | O :: II | Moore | | | | dimensionless | | 1/mo, 1/yr | .030-1 km :: Land/R,L | |
| 2754 | Vegetation Index | O :: II | Moore | | | | dimensionless | | 1/mo, 1/yr | 1 km :: Land | |
| 2756 | Vegetation Index, Normalized | O :: PI | Diner | MISR | AM | LaRC | dimensionless | 2% :: 2% | 1/(5-16 day) [d] | 1.92 km :: Land | N/A :: Sfc |
| 2757 | Vegetation Index, Normalized | O :: PI | Diner | MISR | AM | LaRC | dimensionless | 2% :: 2% | 1/(5-16 day) [d] | 240 m :: Land/R | N/A :: Sfc |
| 2758 | Vegetation Water Content, Integrated | I :: II | Kerr, Sorooshian | | | | % | 20% :: 20% | 2/wk | 500 m :: Land/R | N/A :: Sfc |
| 2760 | Vegetation Leaf Water Content | I :: II | Moore | | | | g/cm^3 | 20% :: 20% | 1/day, 1/wk | 30 m :: Land/L | :: Sfc |
| 2761 | Vegetation Leaf-tissue Water Content | O :: FI | Wessman, Goetz | HIRIS | AM2 | EDC | g/cm^3 | 50% :: 20% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2762 | Vegetation Water Content | I :: II | Moore | | | | g/cm^3 | 20% :: 20% | 1/day, 1/wk | 30 m :: Land/L | :: Sfc |
| 2764 | Wetlands Extent | I :: II | Hansen | | | | | 5% :: | 1/wk | 500 km :: Land | :: Sfc |
| 2766 | Mineral(CO3) Relative Abundance | O :: FI | Rowan, Clark | HIRIS | AM2 | EDC | dimensionless | 10% :: 5% | 1/seas | 30 m :: Land/L | N/A :: Sfc |
| 2767 | Snow Contaminant Conc | I :: II | Dozier | | | | mg/m^3 | 20% :: 20% | 1/wk, 1/mo | 50 m :: Snow/L | |
| 2768 | Snow Contaminant Conc | O :: FI | Dozier | HIRIS | AM2 | NSIDC | mg/m^3 | 20% :: 20% | 1/wk, 1/mo | 50 m :: Snow/L | N/A :: Sfc |
| 2769 | Sediment(C) Constituent Flux | O :: II | Moore | | | | kg/wk/TBD-area | | 1/wk | 1 km :: Sel_basins | N/A :: Sfc |
| 2770 | Erosion Chemical Denudation | O :: II | Barron | | | | mm/kyr | | 1/yr | 10 km :: Land/R | |
| 2771 | Erosion Chemical Denudation | O :: II | Barron | | | | mm/kyr | | 1/yr | 100 km :: Land | |
| 2772 | Mineral(Fe) Relative Abundance | O :: FI | Rowan, Clark | HIRIS | AM2 | EDC | dimensionless | 10% :: 5% | 1/seas | 30 m :: Land/L | N/A :: Sfc |
| 2773 | Mineral Index | O :: FI | Rowan,Kahle,Gillespie | ASTER | AM1 | EDC | dimensionless | 10% :: 5% | 15 scenes/yr | 15,30,90 m :: Land/R,L | N/A :: Sfc |
| 2774 | Mineral Thermal history | O :: FI | Rowan | HIRIS | AM2 | EDC | | | 1/seas | 30 m :: Land/L | N/A :: Sfc |
| 2775 | Sediment(N) Constituent Flux | O :: II | Moore | | | | kg/wk/TBD-area | | 1/wk | 1 km :: Sel_basins | N/A :: Sfc |
| 2776 | Mineral(OH) Relative Abundance | O :: FI | Rowan, Clark | HIRIS | AM2 | EDC | dimensionless | 10% :: 5% | 1/seas | 30 m :: Land/L | N/A :: Sfc |
| 2777 | Sediment(P) Constituent Flux | O :: II | Moore | | | | kg/wk/TBD-area | | 1/wk | 1 km :: Sel_basins | N/A :: Sfc |
| 2778 | Mineral Conc, Rock-Soil | I :: II | Isacks | | | | % | | 1/mission, 1/mo | 15-30 m :: Land/L | N/A :: Sfc |
| 2779 | Bedrock Lithology | O :: II | Barron | | | | | | ? 5000 yrs | 5 km :: 2 sites | |
| 2780 | Sand Depth | I :: II | Isacks | | | | m | 0.5 :: 0.5 | 1/seas | 50 m :: Land/L | N/A :: Sfc |
| 2782 | Erosion Sediment Yield | O :: II | Barron | | | | kg/km^2 | | ? 5000 yr | 5 km :: 2 sites | |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2784 | Mineral(SO4) Relative Abundance | O :: FI | Rowan, Clark | HIRIS | AM2 | EDC | dimensionless | 10% :: 5% | 1/seas | 30 m :: Land/L | N/A :: Sfc |
| 2785 | Soil Proportion, Bare | I :: II | Barron | | | | % | 5 :: 5 | 1/seas | 10 km :: Land/R | N/A :: Sfc |
| 2786 | Soil Proportion, Bare | I :: II | Barron | | | | % | 5 :: 5 | 1/seas | 100 km :: Land | N/A :: Sfc |
| 2787 | Soil Proportion, Bare | I :: II | Barron | | | | % | 5 :: 5 | 1/seas | 30 m :: Land/L | N/A :: Sfc |
| 2788 | Soil Proportion, Bare | I :: II | Simard | | | | | 10% :: | | :: Canada/R | N/A :: Sfc |
| 2789 | Soil Proportion, Bare | O :: II | Kerr, Sorooshian | | | | % | 10% :: 10% | 1/wk | 500 m :: Land | N/A :: Sfc |
| 2790 | Soil Proportion, Bare | O :: II | Schimel | | | | % | 15% :: 5% | 1/mo | 500 m :: 6 sites/L | :: Sfc |
| 2791 | Soil Bulk Density | I :: II | Kerr, Sorooshian | | | | g/cm^3 | 5% :: 5% | 1/yr | 1 km :: Land | N/A :: Sfc |
| 2792 | Soil Class | I :: II | Kerr, Sorooshian | | | | class | | 1/yr | 30 m :: Land/R | :: Sfc |
| 2793 | Soil Class | O :: II | Kerr, Sorooshian | | | | class | | 1/yr | 30 m :: Land/R | |
| 2794 | Soil Composition | I :: II | Barron | | | | | 10% :: 5% | 1/mission | 100 km :: Land | N/A :: Sfc |
| 2795 | Soil Composition | I :: II | Barron | | | | | 10% :: 5% | 1/mission | 30 m :: Land/L | N/A :: Sfc |
| 2796 | Soil Composition | I :: II | Barron | | | | | 10% :: 5% | 1/mission | 10 km :: Land/R | N/A :: Sfc |
| 2797 | Soil Extent | I :: II | Barron | | | | N/A | 5 ? :: 5 ? | 1/yr | 100 km :: Land | N/A :: Sfc |
| 2798 | Soil Extent | I :: II | Barron | | | | N/A | 5 ? :: 5 ? | 1/yr | 10 km :: Land/R | N/A :: Sfc |
| 2799 | Soil Extent | I :: II | Barron | | | | N/A | 5 ? :: 5 ? | 1/yr | 30 m :: Land/L | N/A :: Sfc |
| 2800 | Soil Extent | I :: II | Moore | | | | ha | 15% :: 15% | 1/yr | 1 km :: Land | :: Sfc |
| 2801 | Soil Index | O :: FI | Gillespie | ASTER | AM1 | EDC | dimensionless | | 50 scenes/mission | 15 m :: Land/R,L | N/A :: Sfc |
| 2802 | Soil Mineral Type | I :: II | Kerr, Sorooshian | | | | mineral type | | 1/yr | 30 m :: Land/R | :: Sfc |
| 2803 | Soil Maps, Level-4 [Class,Comp,Age,etc.] | O :: FI | Kahle, Gillespie | ASTER | AM1 | EDC | varies | | 50 maps/mission | 90 m :: Land/R,L | N/A :: Sfc |
| 2804 | Suspended-Solids Conc, Lake Water | I :: II | Barron | | | | | 25% :: | | 10 km :: Land/R-Lakes | N/A :: Sfc |
| 2805 | Suspended-Solids Conc, River Water | I :: II | Barron | | | | | 25% :: | | 10 km :: Land/R-Rivers | N/A :: Sfc |
| 2807 | Erosion Rock Weathering | I :: II | Barron | | | | | | 1/mission | 10 km :: Land/R | N/A :: Sfc |
| 2808 | Erosion Rock Weathering | I :: II | Barron | | | | | | 1/mission | 100 km :: Land | N/A :: Sfc |
| 2809 | River Water Chemistry | I :: II | Richey, Batista | | | | g/m^3 | [10%].5% :: [5%].10% | 1/wk | 1 km :: Land/R | N/A :: Sfc |
| 2810 | Soil Chemistry | I :: II | Richey, Batista | | | | kg/ha | 20% :: 20% | 1/seas | 1 km :: Land/R | N/A :: Sfc |
| 2811 | Land Geochemical Analysis | O :: II | Dozier | | | | N/A | | 1/day | 50 m :: L | |
| 2812 | Lake Water Chemistry, XXX | I :: II | Richey, Batista | | | | g/m^3 | [10%].5% :: [5%].10% | 1/wk | 1 km :: Land/R | N/A :: Sfc |
| 2813 | Mineral Flux, XXX Geochemical | O :: II | Barron | | | | eq/km^2/yr | | 1/day | 1 km :: Land/R | |
| 2814 | Mineral Flux, XXX Geochemical | O :: II | Barron | | | | eq/km^2/yr | | 1/day | 10 km :: Land | |
| 2815 | Bedrock Lithology | O :: II | Barron | | | | | | 1/mission | 10 km :: Land/R | |
| 2816 | Bedrock Lithology | O :: II | Barron | | | | | | 1/mission | 100 km :: Land | |
| 2817 | Mineral Maps | O :: FI | Gillespie, Rowan, Kahle | ASTER | AM1 | EDC | dimensionless | variable :: variable | 50/mission | 90 m :: Land/R,L | N/A :: Sfc |
| 2818 | Geodetic Baselines | O :: PI | Melbourne | GGI | ALT | JPL | km | :: 2:10^9 | 1/min | :: G | :: Sfc |
| 2819 | Geodetic Carrier Phase, GPS(L1,L2), | O :: PI | Melbourne | GGI | ALT | JPL | mm | :: 0.4 mm | 1/(0.1 s) [?] | :: G | |
| 2823 | Topographic Elevation, Land_sfc | I :: II | Barron | | | | m | | 1/mission | 10 km :: Land/R | 30 m :: Sfc |
| 2824 | Topographic Elevation, Land_sfc | I :: II | Barron | | | | m | | 1/mission | 30 m :: Land/L | 30 m :: Sfc |
| 2825 | Topographic Elevation, Land_sfc | I :: II | Dozier | | | | m | 10 m :: 1 m | | 20 m :: Land/L | :: Sfc |
| 2826 | Topographic Elevation, Land_sfc | I :: II | Kerr, Sorooshian | | | | m | 50 m :: 50 m | 1/mission | 500 m :: Land | N/A :: Sfc |
| 2827 | Topographic Elevation, Land_sfc | I :: II | Moore | | | | m | 1m :: | | | :: Sfc |
| 2828 | Topographic Elevation, Land_sfc, (DEM) | O :: FI | Kahle, Tsu | ASTER | AM1 | EDC | m | >50 m :: >30 m | 1/mission | 15 m :: Land/R,L | 30 m :: Sfc |
| 2830 | Topographic Slope (Azimuth), Land_sfc | I :: II | Kerr, Sorooshian | | | | dg | 10 :: 5 | 1/yr | 30 m :: Land/R | :: Sfc |
| 2831 | *Topographic Elevation-Change Rate, Land_sfc* | O :: FI | Cohen, Schutz et al | GLRS-A | ALT | GSFC | mm/day -mm/yr | 5 mm/yr :: | 1/yr | 100-900 km :: Land/R | :: Sfc |
| 2833 | Topographic Elevation, Land_sfc, (DEM) | I :: II | Isacks | | | | m | 30 :: 10 | 1/mission | 20 m :: Land/L | N/A :: Sfc |
| 2834 | Topographic Elevation, Land_sfc, (DEM) | I :: II | Kerr, Sorooshian | | | | m | 10 :: 10 | 1/yr | 30 m :: Land/R | :: Sfc |
| 2835 | Topographic Elevation, Land_sfc, (DEM) | I :: II | Lau | | | | m | 10 m :: 1 m | 1/mission | 10 m :: Land/L,R | N/A :: Sfc |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2837 | Topographic Elevation, Land_sfc, Control, (DEM) | I :: II | Isacks | | | | m | 1 m :: 1 m | 1/mission | point :: Land/L | N/A :: Sfc |
| 2838 | Topographic Elevation, Land_sfc, (DEM) | I :: II | Isacks | | | | m | :: 120 | 1/mission | 720 m :: Land/R | N/A :: Sfc |
| 2839 | Topographic Elevation, Land_sfc, (DEM) | I :: II | Isacks | | | | m | 100 m :: 50 m | 1/mission | 50 m :: Land/R | N/A :: Sfc |
| 2840 | Topographic Elevation, Land_sfc | O :: II | Barron | | | | km | | ? 5000 yr | 5 km :: 2 sites | |
| 2843 | Orography, Model | O :: II | Bates | | | | m | | | 50 km :: G | N/A :: Sfc |
| 2844 | Topographic Elevation, Land_sfc | I :: II | Isacks | | | | m | 0.1 :: 0.1 | 1/mission, 1/seas | 1 m :: Land/L | N/A :: Sfc |
| 2845 | Topographic Slope (Azimuth), Land_sfc | I :: II | Kerr, Sorooshian | | | | % | 5 :: 5 | 1/yr | 30 m :: Land/R | :: Sfc |
| 2846 | *Topographic Elevation, Land_sfc* | O :: PI | Diner | MISR | AM | LaRC | m | 100 m :: 100 m | 1/mission | 500 m :: Land | N/A :: Sfc |
| 2847 | Topographic Elevation, Land_sfc | I :: II | Wielicki | | | | km | 200 m :: 200 m | 1/mission | 10 km :: Land | N/A :: Sfc |
| 2849 | Landform Distribution | I :: II | Barron | | | | m | 30 m :: | 1/(3 mo) | 30 m :: Land/L | N/A :: Sfc |
| 2850 | Geodetic Geocenter | O :: PI | Melbourne | GGI | ALT | JPL | cm | :: 2 cm | 1/day | | |
| 2851 | Landform Feature Distribution | I :: II | Isacks | | | | feature recog. | | 1/mission | 15-30 m :: Land/R | N/A :: Sfc |
| 2852 | Geopotential Gravity Field | O :: II | Barron | | | | m^2/s^2 | | 2/day | 4.5 x 7.5 dg :: G | |
| 2853 | Geopotential Gravity Field | O :: II | Barron | | | | m^2/s^2 | | 2/day | 2.8 x 2.8 dg :: G | |
| 2854 | Lithosphere Gravity Field | O :: II | Tapley | | | | mgal | 10% :: | | 200 km :: Ocean | N/A :: Ocean |
| 2855 | Land Heat Capacity | I :: II | Kerr, Sorooshian | | | | | | | 30 m :: Land/R | N/A :: Sfc |
| 2856 | Landform Lineament / Slope Maps | O :: FI | Rowan | ASTER | AM1 | EDC | Orientation/length | variable :: variable | 25 scenes/yr | 50 m :: Land/R,L | N/A :: Sfc |
| 2857 | Geodetic Location, Reference | O :: II | Tapley | | | | cm | < 2 cm :: <1 cm | | N/A :: G | N/A :: Sfc |
| 2858 | *Landform Morphology* | O :: FI | Schutz et al | GLRS-A | ALT | GSFC | mm | 100-500mm :: | 1/wk, 1/yr | 0.1-10 km :: Land | 100-500 mm :: Sfc |
| 2860 | Geodetic Orientation | O :: II | Tapley | | | | mas (m-arc_sec),m | 1mas,0.1ms :: | 1/day | N/A :: G | N/A :: N/A |
| 2861 | Geodetic Orientation | O :: PI | Melbourne | GGI | ALT | JPL | arcsec | :: 0.001arc-s | 2/day | | |
| 2862 | *Geodetic EOS-platform Position* | O :: PI | Melbourne | GGI | ALT | JPL | cm | :: <3 cm | ? 1/s | | :: In_situ |
| 2863 | Geodetic Site Position, Horizontal | I :: II | Isacks | | | | mm | 3 mm :: 1 mm | 1/seas, 1/yr | point :: Land/R | N/A :: Sfc |
| 2865 | Geodetic Site Position, Vertical | I :: II | Isacks | | | | mm | 5 mm :: 2 mm | 1/seas, 1/yr | point :: Land/R | N/A :: Sfc |
| 2867 | Geodetic Pseudorange, GPS(L1,L2), | O :: PI | Melbourne | GGI | ALT | JPL | cm | :: 12 cm | ? 1/s | :: G | |
| 2868 | Land_sfc Rebound, Post-Glacial, | O :: II | Tapley | | | | /yr | 5% :: | 1/(~10 yr) | N/A :: G | ns [?] :: Global |
| 2869 | Landform Scarp-fault Elevation | I :: II | Isacks | | | | cm | 10 cm :: 5 cm | 1/mission | [2-D sect.] :: Land/L | N/A :: Sfc |
| 2875 | Torque, Mountain, | O :: II | Tapley | | | | kg m^2/s^2 | 5% :: | 4/day | 50 km :: Land | N/A :: Sfc |
| 2876 | Torque, Ocean-Land | O :: II | Tapley | | | | kg m^2/s^2 | 10% :: | 4/day | 50 km :: G | N/A :: Sfc |
| 2882 | Structure-Location, Significant Mappable | I :: II | Kerr, Sorooshian | | | | | | 1/yr | 30 m :: Land/R | :: Sfc |
| 2883 | Geologic Unit Maps (Geology Maps) | O :: FI | Gillespie, Rowan, Kieffer, Kahle | ASTER | AM1 | EDC | N/A | variable :: variable | 50/mission | 90 m :: Land/R,L | |
| 2884 | Landform Sfc units, Geologic | O :: FI | Kieffer, Clark | HIRIS | AM2 | EDC | dimensionless | :: 30% | | 30 m :: L | N/A :: Sfc |
| 2886 | Drainage_Basin Boundary | O :: II | Kerr, Sorooshian | | | | km^2 | 10000 [?] :: | 1/mission | 30 m :: Land/R | :: Sfc |
| 2887 | Bowen Ratio | O :: II | Schimel | | | | ratio | 20% :: 1% | 1/day | 500 m :: 6 sites/L | :: Sfc |
| 2888 | River Channel Geometry | I :: II | Barron | | | | m | 10% :: 10% | 1/seas | 1 m :: Land/L | N/A :: Sfc |
| 2889 | River Discharge | I :: II | Moore | | | | m^3/s | 5% :: 5% | 1/wk, 1/mo | few sites :: Land | :: Sfc |
| 2890 | River Discharge | O :: II | Barron | | | | m^3/s | | 1/event, 1/mo, 1/yr | 30-90 m :: R | |
| 2891 | River Discharge | O :: II | Barron | | | | m^3/s | | 1/event, 1/mo, 1/yr | 900 m :: R | |
| 2892 | River Discharge | O :: II | Barron | | | | m^3/s | | 1/event, 1/mo, 1/yr | 18 km :: R | |
| 2893 | River Discharge | O :: II | Moore | | | | m^3/s | | 1/wk | 1 km :: Land | |
| 2894 | Glacier Displacement | I :: II | Simard | | | | m | 10 cm :: | 1/yr, 1/seas | :: Canada/R | N/A :: Sfc |
| 2895 | Glacier Displacement | O :: FI | Kieffer | HIRIS | AM2 | NSIDC | km^2 | 1% :: 0.2% | 1/yr | 30 m :: Glacier/L | N/A :: Sfc |
| 2896 | Ice_Sheet Displacement | I :: II | Simard | | | | m | 10 cm :: | 1/yr, 1/seas | :: Canada/R | N/A :: Sfc |
| 2897 | *Ice_Sheet Displacement* | O :: FI | Bentley | GLRS-A | ALT | NSIDC | mm/day | 10 mm/day :: 10 mm/day | 1/mo | N/A :: Land/Cryo | N/A :: Sfc |
| 2899 | Ice_Sheet Displacement | O :: II | Simard | | | | cm | 10 cm :: | 1/yr | :: Canada/R | :: Sfc |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2901 | Runoff_Contributing-area | O :: II | Kerr, Sorooshian | | | | km^2 | 5 :: 5 | 1/mission | 500 m :: Land/R | N/A :: Sfc |
| 2902 | Drainage_Network Structure | I :: II | Isacks | | | | feature recog. | | 1/mission, 1/yr | 15-30 m :: Land/R | N/A :: Sfc |
| 2904 | Drainage_Basin Boundary | I :: II | Lau | | | | km^2 | 100m^2 :: 100m^2 | 1/mission | 10 m :: Land/L | N/A :: Sfc |
| 2905 | Drainage_Network Structure | I :: II | Barron | | | | m | 30 m :: | 1/(3 mo) | 30 m :: Land/L | N/A :: Sfc |
| 2906 | Ice_Sheet Elevation | I :: II | Barron | | | | mm | 100 :: | 1/(3 mo) | 10 km :: Land/Cryo | :: Sfc |
| 2907 | Ice_Sheet Elevation | I :: II | Barron | | | | mm | 100 :: | 1/(3 mo) | 100 km :: Land/Cryo | :: Sfc |
| 2908 | Ice_Sheet Elevation | I :: II | Isacks | | | | m | 0.1 :: | 2/yr | 10 m :: Land/Cyro | N/A :: Sfc |
| 2909 | Ice_Sheet Elevation | I :: II | Simard | | | | mm | 100 mm :: | 1/(3 mo) | 10 km :: Land/R | N/A :: Sfc |
| 2910 | Ice_Sheet Elevation | I :: II | Simard | | | | mm | 100 mm :: | 1/(3 mo) | 100 km :: Land | N/A :: Sfc |
| 2911 | *Ice_Sheet Elevation* | O :: FI | Zwally | ALT | ALT | NSIDC | m | .5m-5m :: | 1/yr | 15 km :: Land/Cryo | N/A :: Sfc |
| 2912 | *Ice_Sheet Elevation* | O :: FI | Bentley | GLRS-A | ALT | NSIDC | mm | 100 mm :: 100 mm | 1/mo | 75 m :: Land/Cryo | N/A :: Sfc |
| 2913 | River Floodplain Extent | I :: II | Richey, Batista | | | | m^2 | 10% :: 10% | 1/seas | 1 km :: Land/R | N/A :: Sfc |
| 2914 | River Floodplain Extent | I :: II | Lau | | | | m^2 | 10% :: 5% | 1/wk | 100 m :: Land/L | N/A :: Sfc |
| 2915 | River Floodplain Extent | I :: II | Moore | | | | ha/km^2 | 20% :: 20% | 1/wk | 1-25 km :: Land | |
| 2916 | Soil Hydraulic Properties | I :: II | Simard | | | | | 10% :: | | :: Canada/R | N/A :: Sfc |
| 2917 | Soil Hydraulic Conditions, Unsaturated | I :: II | Kerr, Sorooshian | | | | L/T | 0.05 :: | | 30 m :: Land/R | :: Sfc |
| 2918 | Ice_Sheet Cover | I :: II | Bates | | | | dimensionless | | 2/day [d,n] | 50 km :: Land/Cryo | N/A :: Sfc |
| 2919 | Sea_Ice Cover | I :: II | Wielicki | | | | fraction | 10% :: 5% | 1/day | 50 km :: Ocean/Cryo | N/A :: Sfc |
| 2921 | *Ice_Sheet Cover Index* | O :: FI | Staelin | AIRS | PM | GSFC | dimensionless | | 2/day [d,n] | 50 km :: Land/Cryo | N/A :: Sfc |
| 2922 | Glacier Cover, Bare_Ice | O :: FI | Dozier | HIRIS | AM2 | NSIDC | km^2 | 5% :: 2% | 1/wk, 1/mo | 50 m :: Glacier/L | N/A :: Sfc |
| 2923 | Glacier Cover | I :: II | Isacks | | | | km^2 | 5% :: 2% | 1/seas | 10-30 m :: Land/L | N/A :: Sfc |
| 2927 | Ice_Sheet Accumulation | O :: II | Simard | | | | | 20% :: | 1/yr | :: Canada/R | :: Sfc |
| 2928 | Ice_Sheet Boundary (Margin) | O :: II | Simard | | | | | 20% :: | 1/yr | :: Canada/R | :: Sfc |
| 2929 | Ice_Sheet Velocity | I :: II | Barron | | | | m/s | :: | | :: Land/Cryo | N/A :: Sfc |
| 2930 | Glacier Velocity | O :: FI | Kieffer | HIRIS | AM2 | NSIDC | m/s | 10^-6 :: variable | 1/yr | 100 m :: Land/Cryo | N/A :: Sfc |
| 2931 | Glacier Velocity | O :: FI | Kieffer | ASTER | AM1 | EDC | m/yr | 20 m/yr :: 10 m/yr | 1 yr | 15 m :: Land/Cryo | |
| 2932 | Ice_Sheet Velocity (Outflow), Polar | O :: FI | Kieffer | HIRIS | AM2 | NSIDC | m/s | 10^-6 :: variable | 1/yr | 100 m :: Cryo | N/A :: Sfc |
| 2933 | Infiltration | O :: II | Barron | | | | mm/s | | 1/event, 1/mo, 1/yr | 30-90 m :: R | |
| 2934 | Infiltration | O :: II | Barron | | | | mm/s | | 1/event, 1/mo, 1/yr | 900 m :: R | |
| 2935 | Infiltration | O :: II | Barron | | | | mm/s | | 1/event, 1/mo, 1/yr | 18 km :: R | |
| 2936 | Infiltration Capacity | I :: II | Kerr, Sorooshian | | | | L/T | | 1/yr | 30 m :: Land/R | |
| 2937 | Inundation Depth | O :: II | Moore | | | | m | | 1/wk | 1 km :: Land | |
| 2938 | Inundation Extent | I :: II | Lau | | | | m^2 | 10% :: 5% | 1/wk | 100 m :: Land/L | N/A :: Sfc |
| 2939 | Inundation Extent | I :: II | Moore | | | | ha/km^2 | 20% :: 20% | 1/wk, 1/mo | 1-25 km :: Land | :: Sfc |
| 2941 | Inundation Extent | O :: II | Moore | | | | ha/km^2 | | 1/wk | 1 km :: Land | |
| 2942 | Inundation Extent | I :: II | Moore | | | | ha/km^2 | 20% :: 20% | 1/wk | 1-25 km :: Land | |
| 2943 | Snow Liq-water Content | O :: FI | Dozier | HIRIS | AM2 | NSIDC | mass fraction | 100% :: 100% | 1/wk, 1/mo | 50 m :: Snow/L | N/A :: Sfc |
| 2945 | Ice_Sheet Mass balance | O :: II | Barron | | | | cm/yr | | 1/yr | 100 km :: Antarctica | |
| 2946 | Soil Moisture | I :: II | Barron | | | | cm^3/cm^3 | 0.05 :: 0.02 | 1/day | 10 km :: Land/R | N/A :: Sfc |
| 2947 | Soil Moisture | I :: II | Barron | | | | cm^3/cm^3 | 0.05 :: 0.02 | 1/day | 100 km :: Land | N/A :: Sfc |
| 2948 | Soil Moisture | I :: II | Barron | | | | cm^3/cm^3 | 0.05 :: 0.02 | 1/day | 30 m :: Land/L | N/A :: Sfc |
| 2949 | Soil Moisture | I :: II | Simard | | | | | 10% :: | | :: Canada/R | N/A :: Sfc |
| 2950 | Vegetation Moisture, Root-zone | I :: II | Barron | | | | cm^3/cm^3 | 0.1 :: 0.05 | 1/day | 100 km :: Land | N/A :: Sub_sfc |
| 2951 | Vegetation Moisture, Root-zone | I :: II | Barron | | | | cm^3/cm^3 | 0.1 :: 0.05 | 1/day | 10 km :: Land/R | N/A :: Sfc |
| 2952 | Vegetation Moisture, Root-zone | I :: II | Barron | | | | cm^3/cm^3 | 0.1 :: 0.05 | 1/day | 30 m :: Land/L | N/A :: Sub_sfc |
| 2953 | Vegetation Moisture, Root-zone | I :: II | Simard | | | | | 10% :: | | :: Canada/R | N/A :: Sfc |
| 2954 | Vegetation Moisture, Root-zone | O :: II | Bates | | | | g/cm^2 | | 1/(20 min) | 50 km :: Land | N/A :: |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2955 | Surface Water Saturated Area | O :: II | Barron | | | | | | 1/event, 1/mo, 1/yr | 30-90 m :: R | |
| 2956 | Surface Water Saturated Area | O :: II | Barron | | | | | | 1/event, 1/mo, 1/yr | 900 m :: R | |
| 2957 | Surface Water Saturated Area | O :: II | Barron | | | | | | 1/event, 1/mo, 1/yr | 18 km :: R | |
| 2958 | Soil Moisture | I :: II | Richey, Batista | | | | cm | | 1/mo | 1 km :: Land/R | N/A :: Sfc |
| 2959 | Soil Moisture | I :: II | Bates | | | | % vol | 10-25% :: 5-10% | 1/(3 day), 1/wk | 60-100 m :: Land | N/A :: Sfc |
| 2960 | Soil Moisture | I :: II | Bates | | | | | :: 40% | | 43 km :: Land | N/A :: Sfc |
| 2962 | Soil Moisture | I :: II | Hansen | | | | | 10% :: | 1/wk | 500 km :: Land | :: Sfc |
| 2963 | Soil Moisture | I :: II | Isacks | | | | % vol | 10% :: 5% | 1/mo, 1/yr | 60-100 m :: Land/L | N/A :: Sfc |
| 2964 | Soil Moisture | I :: II | Lau | | | | % vol | 10% :: 5% | 1/(3 day) | 50 m :: Land/L | N/A :: Sfc |
| 2965 | Soil Moisture | I :: II | Lau | | | | % vol | 10% :: 5% | 1/(3 day) | 3 km :: Land/R | N/A :: Sfc |
| 2966 | Soil Moisture | I :: II | Moore | | | | % saturated | 30% :: 30% | 1/wk, 1/mo | 1-25 km :: Land | :: Sfc |
| 2967 | Soil Moisture | I :: II | Sellers | | | | | | 1/(1-4 day) | 100 km :: | :: Sfc |
| 2969 | Soil Moisture | O :: II | Barron | | | | mm | | 1/event, 1/mo, 1/yr | 30-90 m :: R | |
| 2970 | Soil Moisture | O :: II | Barron | | | | mm | | 1/event, 1/mo, 1/yr | 900 m :: R | |
| 2971 | Soil Moisture | O :: II | Barron | | | | mm | | 1/event, 1/mo, 1/yr | 18 km :: R | |
| 2972 | Soil Moisture | O :: II | Bates | | | | g/cm^2 | | 1/(20 min) | 50 km :: Land | N/A :: |
| 2973 | Soil Moisture | O :: II | Kerr, Sorooshian | | | | % vol | 25% :: 15% | 1/day | 500 m :: Land/R | :: Sfc |
| 2974 | Soil Moisture | O :: II | Moore | | | | kg/m^2 | 20% :: 20% | 1/(1-2 wk) | .030-1 km :: Land/R,L | |
| 2975 | Soil Moisture | O :: II | Moore | | | | kg/m^2 | 20% :: 20% | 1/(1-2 wk) | 1 km :: Land | |
| 2976 | Soil Moisture | O :: II | Schimel | | | | cm | 25% :: 5% | 1/wk | 30 m :: 6 sites/L | :: Sfc |
| 2978 | Glacier Percolation Zone | O :: FI | Dozier | HIRIS | AM2 | NSIDC | km^2 | 5% :: 2% | 1/wk, 1/mo | 50 m :: Glacier/L | N/A :: Sfc |
| 2979 | Permafrost Distribution | O :: II | Simard | | | | km | 1 km :: | 1/(3 yr) | :: Canada/R | :: Sfc |
| 2980 | Permafrost Sensitivity | O :: II | Simard | | | | | 1 km :: | 1/(3 yr) | :: Canada/R | :: Sfc |
| 2981 | Precipitation Depth | I :: II | Lau | | | | mm | 10% :: 10% | 1/day | 1 km :: Land/R | N/A :: Sfc |
| 2982 | River Channel Patterns | I :: II | Isacks | | | | | | | 15-30 m :: Land/L | N/A :: Sfc |
| 2983 | River Stage (Flooding) | I :: II | Richey, Batista | | | | cm | 5 cm :: 5% | 1/seas | 100 m :: Land/R | N/A :: Sfc |
| 2984 | River Stage (Flooding) | I :: II | Moore | | | | m | | 1/wk, 1/mo | point :: Land | :: Sfc |
| 2985 | Runoff | I :: II | Lau | | | | m^3/s | 5% :: 5% | 1/day | :: Land/L,R | N/A :: Sfc |
| 2987 | Runoff | O :: II | Richey, Batista | | | | m^3/s | 5% :: 5% | 1/wk | 1 km :: Land/R | :: Sfc |
| 2988 | Runoff | O :: II | Richey, Batista | | | | m^3/s | 5% :: 5% | 1/wk | 1 km :: Land/R | |
| 2989 | Runoff | O :: II | Dozier | | | | m^3/km^2/s | 50% :: 50% | 1/day | 50 m :: L | |
| 2990 | Runoff | O :: II | Moore | | | | mm-H2O/wk | | 1/wk | 1 km :: Land | |
| 2991 | Runoff_Contributing-area | O :: II | Kerr, Sorooshian | | | | km^2 | 5 :: 5 | 1/mission | 500 m :: Land/R | |
| 2992 | Runoff, Soil Moisture | O :: II | Barron | | | | m/s | | 2/day | 4.5 x 7.5 dg :: G | |
| 2993 | Runoff, Soil Moisture | O :: II | Barron | | | | m/s | | 2/day | 2.8 x 2.8 dg :: G | |
| 2994 | Precipitation Amount, Snow | O :: II | Barron | | | | m | | 2/day | 4.5 x 7.5 dg :: G | |
| 2995 | Precipitation Amount, Snow | O :: II | Barron | | | | m | | 2/day | 2.8 x 2.8 dg :: G | |
| 2996 | Snow Water Equivalent | I :: II | Lau | | | | mm | 10 mm :: 10 mm | 1/wk | 30 m :: Land/L | N/A :: Sfc |
| 2997 | Snow Water Equivalent | I :: II | Lau | | | | mm | 10 mm :: 10 mm | 1/wk | 5 km :: Land/R | N/A :: Sfc |
| 2998 | Snow Water Equivalent | I :: II | Barron | | | | mm | 10% :: 10% | 1/day | 10 km :: Land/R | N/A :: Sfc |
| 2999 | Snow Water Equivalent | I :: II | Barron | | | | mm | 10% :: 10% | 1/day | 30 m :: Land/L | N/A :: Sfc |
| 3000 | Snow Water Equivalent | I :: II | Dozier | | | | m | 20% :: 20% | 1/wk, 1/mo | 50 m :: Land/L | N/A :: Sfc |
| 3001 | Snow Water Equivalent | O :: II | Simard | | | | mm | 10 mm/10% :: | 1/wk | 10 km :: Canada/R | :: Sfc |
| 3002 | Snow Chemistry | O :: II | Dozier | | | | m-eq/m^2 | 50% :: 50% | 1/wk, 1/mo | 50 m :: Snow/L | |
| 3003 | Snow Cover | I :: II | Barron | | | | m^2 | 5% :: 5% | 1/day | 100 km :: Land | N/A :: Sfc |
| 3004 | Snow Cover | I :: II | Barron | | | | m^2 | 5% :: 5% | 1/day | 30 m :: Land/L | N/A :: Sfc |
| 3005 | Snow Cover | I :: II | Barron | | | | m^2 | 5% :: 5% | 1/day | 10 km :: Land/R | N/A :: Sfc |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3006 | Snow Cover | I :: II | Bates | | | | dimensionless | | 2/day [d,n] | 50 km :: Land | N/A :: Sfc |
| 3007 | Snow Cover | I :: II | Bates | | | | km^2 | <=5% :: <=5% | 1/day, 1/wk | 10 km :: Land | N/A :: Sfc |
| 3008 | Snow Cover | I :: II | Dozier | | | | km^2 | 10% :: 10% | 1/wk, 1/mo | 50 x 50 m :: Land/L | N/A :: Sfc |
| 3009 | Snow Cover | I :: II | Hansen | | | | | 0.02 :: | 1/wk | 500 km :: Land | :: Sfc |
| 3010 | Snow Cover | I :: II | Isacks | | | | km^2 | 5% :: 2% | 1/mo | 1 km :: Land/R | N/A :: Sfc |
| 3011 | Snow Cover | I :: II | Isacks | | | | km^2 | 5% :: 2% | 1/seas | 15-30 m :: Land/L | N/A :: Sfc |
| 3012 | Snow Cover | I :: II | Lau | | | | m^2 | 50 :: 10 | 1/wk | 100 m :: Land/L | N/A :: Sfc |
| 3013 | Snow Cover | I :: II | Lau | | | | m^2 | 50 :: 10 | 1/wk | 1 km :: Land/L | N/A :: Sfc |
| 3014 | Snow Cover | I :: II | Murakami | | | | km^2 | 10% :: | | :: Land | N/A :: Sfc |
| 3015 | Snow Cover | I :: II | Sellers | | | | | | 1/(1-4 day) | 100 km :: | :: Sfc |
| 3016 | Snow Cover | I :: II | Wielicki | | | | fraction | 10% :: 5% | 1/day | 50 km :: Land | N/A :: Sfc |
| 3018 | *Snow Cover Index [combined with 2921]* | O :: FI | Staelin | AIRS | PM | GSFC | dimensionless | | 2/day [d,n] | 50 km :: Land | N/A :: Sfc |
| 3019 | Snow Cover | O :: FI | Dozier | HIRIS | AM2 | NSIDC | km^2 | 5% :: 2% | 1/wk, 1/mo | 50 m :: Cryo/L | N/A :: Sfc |
| 3020 | Snow Cover | O :: FI | Salomonson | MODIS | AM,PM | NSIDC | km^2 | <=5% :: <=5% | 1/day, 1/wk | 10 km :: Land | N/A :: Sfc |
| 3021 | Snow Cover | O :: FI | Salomonson | MODIS | AM,PM | NSIDC | km^2 | <=5% :: <=5% | 1/day, 1/wk | 1 km :: Land/R | N/A :: Sfc |
| 3023 | Snow Cover | O :: II | Simard | | | | km | 10 km :: | 1/wk | 10 km :: Canada/R | :: Sfc |
| 3025 | Snow Cover, Cold | O :: FI | Dozier | HIRIS | AM2 | NSIDC | km^2 | 5% :: 2% | 1/wk, 1/mo | 50 m :: Glacier/L | N/A :: Sfc |
| 3026 | Snow Cover | I :: II | Simard | | | | km | 10km :: | 1/(7 day) | 10 km :: Canada/R | N/A :: Sfc |
| 3027 | Snow Liq-water Content | I :: II | Moore | | | | | | 1/wk | 1 km :: Land | :: Sfc |
| 3028 | Snow Cover, Wet | I :: II | Dozier | | | | km^2 | 10% :: 10% | 1/wk, 1/mo | 50 m :: Snow/L | |
| 3029 | Snow Cover, Wet | O :: FI | Dozier | HIRIS | AM2 | NSIDC | km^2 | 5% :: 2% | 1/wk, 1/mo | 50 m :: Glacier/L | N/A :: Sfc |
| 3030 | Snow Cover, Wet | O :: FI | Dozier | HIRIS | AM2 | NSIDC | km^2 | 10% :: 10% | 1/wk, 1/mo | 50 m :: Cryo/L | N/A :: Sfc |
| 3031 | Snow Depth | I :: II | Isacks | | | | cm | 20% :: 20% | 1/seas | 30 m :: Land/L | N/A :: Sfc |
| 3032 | Snow Depth | I :: II | Lau | | | | cm | 5 cm :: 5 cm | 1/wk | 5 km :: Land/R | N/A :: Sfc |
| 3033 | Snow Depth | I :: II | Lau | | | | cm | 5 cm :: 5 cm | 1/wk | 30 m :: Land/R | N/A :: Sfc |
| 3034 | Snow Depth | I :: II | Simard | | | | cm | 5 cm/10% :: | 1/(7 day) | 10 km :: Canada/R | N/A :: Sfc |
| 3035 | Snow Depth | O :: II | Bates | | | | m | | 1/(20 min) | 50 km :: Land | N/A :: Sfc |
| 3036 | Snow Depth | O :: II | Simard | | | | cm | 5 cm/10% :: | 1/wk | 10 km :: Canada/R | :: Sfc |
| 3037 | Snow Grain Size | I :: II | Dozier | | | | mm | 200% :: 200% | 1/wk, 1/mo | 50 m :: Snow/L | |
| 3038 | Snow Grain Size | O :: FI | Dozier | HIRIS | AM2 | NSIDC | um | 200% :: 200% | 1/wk, 1/mo | 50 [km?] :: Snow/L | N/A :: Sfc |
| 3039 | Snow Liq-water Content | I :: II | Dozier | | | | N/A | 100% :: 100% | 1/wk, 1/mo | 50 m :: Snow/L | |
| 3040 | Snow Mass | I :: II | Murakami | | | | g/cm^2 | 10% :: | | :: Land | N/A :: Sfc |
| 3041 | Snow Melt Area, Distributed | O :: II | Dozier | | | | mm/hr | 50 :: 50 | 1/day | 50 m :: L | |
| 3042 | Snow Melt Chemistry | O :: II | Dozier | | | | m-eq/m^2 | 100% :: 100% | 1/1wk, 1/mo | 50 m :: L | |
| 3043 | Snow State | I :: II | Simard | | | | | | | :: Canada/R | N/A :: Sfc |
| 3044 | Snow State | O :: II | Simard | | | | wet or dry | | | :: Canada/R | :: Sfc |
| 3045 | Snow Water Equivalent | I :: II | Simard | | | | mm | 10 mm/10% :: | 1/(7 day) | 10 km :: Canada/R | N/A :: Sfc |
| 3046 | Snow Water Equivalent | I :: II | Moore | | | | mm | | 1/wk | 1 km :: Land | :: Sfc |
| 3048 | Ice_Sheet Strain Rate | O :: FI | Bentley | GLRS-A | ALT | NSIDC | u-strain/yr | 10^-6/yr :: 10^-6/yr | 1/(3 mo) | 10-100 km :: Land/Cryo | N/A :: Sfc |
| 3049 | River Channel Geometry, Major-stream | I :: II | Lau | | | | m^2 | 10 :: 10 | 1/mission | 30 m :: Land/R | N/A :: Sfc |
| 3050 | River Channel Geometry, Major-stream | O :: II | Kerr, Sorooshian | | | | m^2 | 10 :: 10 | 1/seas | 30 m :: Land/R | :: Sfc |
| 3051 | Ice_Sheet Temperature | I :: II | Barron | | | | K | 1 K :: | 1/wk | 10 km :: Land/Cryo | N/A :: Sfc |
| 3052 | Ice_Sheet Temperature | I :: II | Barron | | | | K | 1 K :: | 1/wk | 100 km :: Land/Cryo | N/A :: Sfc |
| 3053 | Ice_Sheet Thickness | I :: II | Barron | | | | mm | 100 :: | 1/(3 mo) | 10 km :: Land/Cryo | :: Sfc |
| 3054 | Ice_Sheet Thickness | I :: II | Barron | | | | mm | 100 :: | 1/(3 mo) | 100 km :: Land/Cryo | 30 m :: Sfc |
| 3055 | Ice_Sheet Thickness | I :: II | Simard | | | | mm | 100 mm :: | 1/(3 mo) | 10 km :: Land/R | N/A :: Sfc |
| 3056 | Ice_Sheet Thickness | I :: II | Simard | | | | mm | 100 mm :: | 1/(3 mo) | 100 km :: Land | N/A :: Sfc |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3057 | Vegetation Evapotrans | I :: II | Moore | | | | % | 20% :: 20% | 1/day, 1/wk | 500 m :: R | :: Sfc |
| 3058 | Vegetation Evapotrans | I :: II | Moore | | | | % | 20% :: 20% | 1/day, 1/wk | 30 m :: L | :: Sfc |
| 3059 | Lake Extent | I :: II | Isacks | | | | | :: | | 15-30 m :: Land/L | N/A :: Sfc |
| 3060 | Surface Water Area | I :: II | Lau | | | | m^2 | 100 :: | 1/wk | 30 m :: Land/L | N/A :: Sfc |
| 3061 | Surface Water Area | I :: II | Lau | | | | m^2 | 100 :: | 1/wk | 1 km :: Land/R | N/A :: Sfc |
| 3062 | Lake Extent | I :: II | Barron | | | | m^2 | 10% :: 10% | 1/day | :: Land/R | N/A :: Sfc |
| 3063 | River Extent | I :: II | Barron | | | | m^2 | 10% :: 10% | 1/day | 30 m :: Land/L | N/A :: Sfc |
| 3064 | River Extent | I :: II | Barron | | | | m^2 | 10% :: 10% | 1/day | 10 km :: Land/R | N/A :: Sfc |
| 3065 | Vegetation Stress Index, Water | O :: II | Kerr, Sorooshian | | | | %change | 5% :: 5% | 1/(2 mo) | 500 m :: Land/R | |
| 3066 | Soil Moisture | I :: II | Murakami | | | | cm | | | :: Land | N/A :: Sfc |
| 3067 | Soil Moisture | O :: II | Barron | | | | m | | 2/day | 4.5 x 7.5 dg :: Land | N/A :: Sfc |
| 3068 | Soil Moisture | O :: II | Barron | | | | m | | 2/day | 2.8 x 2.8 dg :: Land | N/A :: Sfc |
| 3069 | Hydrological Parameter, XXX | O :: II | Moore | | | | % saturation | | 1/wk | 1 km :: Land | |
| 3070 | Runoff_Chemistry | O :: II | Dozier | | | | eq/m^2/s | 100% :: 100% | 1/day | 50 m :: L | |
| 3072 | Pigment Conc, Accessory | O :: FI | Davis, Melack | HIRIS | AM2 | EDC | mg/m^3 | 100% :: 50% | 1/(>=2 day) | 60-90 m :: Ocean-l/L | N/A :: TOO |
| 3073 | Oil_Slick Cover | O :: II | Brewer | | | | % surface | | 1/day | 20 km :: Ocean | N/A :: TOO |
| 3074 | Oil_Slick Cover | O :: II | Brewer | | | | % surface | | 1/day | 30 m :: Ocean/L | N/A :: TOO |
| 3075 | CO2 Partial Pressure | I :: II | Hansen | | | | | 2% :: | 1/wk | 500 km :: Ocean | :: TOO |
| 3076 | Pigment Conc | O :: II | Rothrock | | | | mg/m^3 | | 1/(3 day) | 100 km :: > 60 dgLAT | :: TOO |
| 3077 | Pigment Conc | I :: II | Hansen | | | | | 2% :: | 1/wk | 500 km :: Ocean | :: TOO |
| 3078 | Ocean Water Salinity | O :: II | Bates | | | | o/oo | | | :: Ocean | 200 m :: 0-4500 m |
| 3079 | Ocean Water Salinity | I :: II | Hansen | | | | | 0.02% :: | 1/wk | 500 km :: Ocean | :: TOO |
| 3080 | Ocean Water Salinity | I :: II | Bates | | | | o/oo | | 1/(3 day) | 100 km :: > 60 dgLAT | :: TOO |
| 3081 | Ocean Water Salinity | I :: II | Lau | | | | % | 10% :: 10% | 1/wk | 500 km :: Ocean/Trop | |
| 3082 | Ocean Water Salinity | O :: II | Rothrock | | | | o/oo | | 1/(3 day) | 100 km :: > 60 dgLAT | :: TOO |
| 3083 | Ocean Water Salinity, Sub ice | I :: II | Rothrock | | | | o/oo | 0.02 o/oo :: 0.02 o/oo | 1/(3 day) | 500 km :: Polar | N/A :: TOO |
| 3084 | Ocean Water Salt Flux | O :: II | Rothrock | | | | kg/m^2/day | 20% :: 20% | 1/day | 100 km :: > 60 dgLAT | :: TOO |
| 3085 | Suspended-Solids Conc, Ocean Water | O :: FI | Clark | MODIS | AM,PM | GSFC | g/m^3 | 50% :: 35% | 1/day, 1/wk, 1/mo | 20 km :: Ocean | N/A :: TOO |
| 3086 | Suspended-Solids Conc, Ocean Water | O :: FI | Clark | MODIS | AM,PM | GSFC | g/m^3 | 50% :: 35% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/R,L | N/A :: TOO |
| 3088 | Trace Gas Transfer Coef | O :: II | Brewer | | | | m/s | | 1/day, 1/seas | 25 km :: Ocean/G,L | N/A :: TOO |
| 3089 | Ocean Angular Momentum | O :: II | Tapley | | | | kg m^2/s^2 | 10% :: | 1/day | :: Ocean | :: Ocean |
| 3090 | Ocean Current Circulation, Large-scale, | O :: II | Tapley | | | | m | 10% :: | 1/(1-3 mo) [few mo] | 4000 km :: Ocean | N/A :: Sfc |
| 3092 | Ocean Current Velocity | O :: II | Abbott | | | | cm/s | | 1/day | 10 km :: Ocean [Southern] | N/A :: Sfc |
| 3094 | Ocean Current Velocity, Geostrophic | O :: II | Abbott | | | | cm/s | | 1/mo | :: Ocean [Southern] | N/A :: TOO |
| 3096 | Ocean Current Velocity, Meridional | O :: II | Bates | | | | cm/s | | | :: Ocean | 200 m :: 0-4500 m |
| 3097 | Ocean Current Velocity, Zonal | O :: II | Bates | | | | cm/s | | | :: Ocean | 200 m :: 0-4500 m |
| 3100 | Heat Flux, Zonal_mean | O :: II | Barron | | | | W/m^2 | | 1/(5 day) | 2.5 dgZM :: G | 10 lvl :: |
| 3102 | Ocean Eddy Kinetic Energy | O :: II | Abbott | | | | g/cm^2/s^2 | | 1/(3 mo) | :: Ocean [Southern] | :: Sfc |
| 3103 | Sea_Ice Motion | I :: II | Rothrock | | | | km/day | 0.5 km :: 0.5 km | 1/(3 day) | 25 km :: Ocean/Cryo | N/A :: Sfc |
| 3105 | Sea_Level Height | I :: II | Abbott | | | | cm | 5 cm :: 3 cm | 1/(10-20 day) | 0-20 km :: Ocean [Southern | N/A :: Sfc |
| 3106 | Sea_Level Height | I :: II | Brewer | | | | m | 5% :: 1% | 1/day, 1/seas | 7 km :: Ocean | N/A :: Sfc |
| 3107 | Topographic Elevaton, Sea_sfc | I :: II | Srokosz | | | | m | 0.02m :: 0.01m | 1/(10 day) | 10 km :: Ocean/R | N/A :: Sfc |
| 3108 | *Topographic Elevaton, Sea_sfc* | O :: FI | Fu | ALT | ALT | JPL | cm | 5cm et al :: | 1/(16 day) | 25 km :: Ocean | N/A :: Sfc |
| 3109 | Sea_Level Height | O :: II | Bates | | | | cm | | | :: Ocean | N/A :: Sfc |
| 3110 | Sea_Level Height | O :: II | Tapley | | | | cm | 1-2 cm :: | 1/yr | 2 x 2 dg :: Ocean | N/A :: Sfc |
| 3111 | Sea_Level Height, Along-track | I :: II | Bates | | | | cm | 10 cm :: | | 7 km :: Ocean | N/A :: Sfc |
| 3112 | *Sea_Level Height, Along-track* | O :: FI | Fu | ALT | ALT | JPL | cm | 10 cm :: | | 7 km :: Ocean | N/A :: Sfc |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3113 | Sea_Level Height-Change | O :: II | Abbott | | | | cm RMS | 4-6cm RMS :: TBD | | :: Ocean [Southern] | :: Sfc |
| 3114 | Sea_Level Height-Change | O :: II | Barron | | | | m | | [ice response] | G ave :: G | N/A :: Sfc |
| 3115 | Ocean Water Temperature, Internal | I :: II | Bates | | | | K | | 1/(3 day) | 100 km :: > 60 dgLAT | :: lvl [?] |
| 3116 | Ocean Water Temperature, Internal | I :: II | Hansen | | | | K | | 1/wk | 500 km :: Ocean | :: Sub_sfc |
| 3117 | Ocean Water Temperature, Internal | I :: II | Rothrock | | | | K | 0.02 K :: 0.02 K | 1/(3 day) | 500 km :: Polar | -lvl :: |
| 3118 | Ocean Water Temperature, Internal | O :: II | Bates | | | | K | | | :: Ocean | 200 m :: 0-4500 m |
| 3119 | Ocean Water Temperature, Internal | O :: II | Rothrock | | | | K | | 1/(3 day) | 100 km :: > 60 dgLAT | lvl :: TOO |
| 3120 | Sea_Ice Temperature | I :: II | Simard | | | | K | 0.3 K :: | | :: Canada/R | N/A :: Sfc |
| 3121 | Ocean Tide, Model | O :: FI | Sanchez | ALT | ALT | JPL | cm | 2 cm :: | 1/mission | 100 km :: Ocean | N/A :: Sfc |
| 3122 | Topographic Elevaton, Sea_sfc | I :: II | Murakami | | | | m | 0.01 :: | | | N/A :: Sfc |
| 3123 | Topographic Elevaton, Sea_sfc | I :: II | Liu | | | | cm | 3 cm :: 3 cm | | :: Ocean | N/A :: Sfc |
| 3124 | Sea_Level Height | O :: II | Tapley | | | | mm | 10% :: | 1/mo | 2 x 2 dg :: Ocean | N/A :: Sfc |
| 3125 | Level-1B Backscatter Waveforms, ALT | I :: II | Srokosz | | | | dB | 0.02(bin) :: 0.1dB | 1/(10 day) | 0 km :: Ocean [South Atla | N/A :: Sfc |
| 3126 | Ocean Wave Height | I :: II | Bates | | | | m | 20% :: 20% | 1/day | 50-75 m :: Ocean | N/A :: Sfc |
| 3128 | Ocean Wave Height, Along-track | I :: II | Bates | | | | cm | >.5m,10% :: | | 7 km :: Ocean | N/A :: Sfc |
| 3129 | Ocean Wave Height, Along-track | O :: FI | Fu | ALT | ALT | JPL | cm | >.5m,10% :: | | 7 km :: Ocean | N/A :: Sfc |
| 3130 | Ocean Wave Height, Significant | I :: II | Abbott | | | | m | 10% :: 5% | 1/(10-20 day) | 0-20 km :: Ocean [Southern | N/A :: Sfc |
| 3131 | Ocean Wave Height, Significant | I :: II | Srokosz | | | | m | >(.5m,5%) :: 0.1m | 1/day | 10 km :: Ocean/R | N/A :: Sfc |
| 3132 | Wind Velocity | O :: II | Rothrock | | | | cm/s,dg | | 1/(3 day) | 100 km :: > 60 dgLAT | :: Trop |
| 3134 | Sea_sfc State | O :: II | Bates | | | | | | 1/hr | 25 km :: Ocean | N/A :: Sfc |
| 3135 | Sea_Ice Duration, Ice-free_Season | O :: II | Simard | | | | day | 1 km [?] :: | 1/yr [?] | :: Canada/R | :: Sfc |
| 3136 | Sea_Ice Conc | I :: II | Barron | | | | | 5% :: 5% | 1/day | 100 km :: Ocean/Cryo | N/A :: Sfc |
| 3137 | Sea_Ice Conc | I :: II | Barron | | | | | 5% :: 5% | 1/day | 10 km :: Ocean/Cryo | N/A :: Sfc |
| 3141 | Sea_Ice Conc | I :: II | Simard | | | | | 10km/10% :: | 1/(7 day) | 10 km :: Canada/R | N/A :: Sfc |
| 3142 | Sea_Ice Conc | I :: II | Srokosz | | | | % | 10% :: 1% | 1/day | 10 km :: Ocean/Cryo | N/A :: Sfc |
| 3143 | Sea_Ice Conc | O :: II | Barron | | | | % | | 1/day | 50 km :: Ocean/Cryo | |
| 3144 | Sea_Ice Conc | O :: II | Simard | | | | % cover | 10 km/10% :: | 1/(2 wk) | 10 km :: Canada/R | :: Sfc |
| 3146 | Sea_Ice Conc, GCM | O :: II | Barron | | | | % | | 1/day | 4.5 x 7.5 dg :: G | |
| 3147 | Sea_Ice Conc, GCM | O :: II | Barron | | | | % | | 1/day | 2.8 x 2.8 dg :: G | |
| 3148 | Sea_Ice Cover | I :: II | Bates | | | | fraction | 10% :: 10% | 2/day [d,n] | 50 km :: Ocean/Cryo | N/A :: Sfc |
| 3149 | Sea_Ice Conc | I :: II | Brewer | | | | % | 10% :: 1% | 1/day, 1/seas | 10 km :: Ocean/Cryo | N/A :: Sfc |
| 3150 | Sea_Ice Cover | I :: II | Hansen | | | | | 3% :: | 1/wk | 500 km :: Ocean/Cryo | :: Sfc |
| 3151 | *Sea_Ice Cover* | O :: FI | Chedin, Staelin | AIRS | PM | GSFC | fraction | 0.1 :: 0.1 | 2/day [d,n] | 50 km :: Ocean/Cryo | N/A :: Sfc |
| 3152 | Sea_Ice Fraction | O :: FI | Welch | ASTER | AM1 | EDC | fractional area | | | 90 m :: Ocean/Cryo | N/A :: Sfc |
| 3153 | Sea_Ice Max Extent | O :: FI | Salomonson | MODIS | AM,PM | NSIDC | km^2 | <=5% :: <=5% | 1/day, 1/wk, 1/mo | 10 km :: Ocean/Cryo | N/A :: Sfc |
| 3154 | Sea_Ice Max Extent | O :: FI | Salomonson | MODIS | AM,PM | NSIDC | km^2 | <=5% :: <=5% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/Cryo,R | N/A :: Sfc |
| 3156 | Sea_Ice Edge | I :: II | Abbott | | | | presence/absence | | 1/day | 25 km :: Ocean/Cryo | N/A :: Sfc |
| 3157 | Sea_Ice Edge | I :: II | Simard | | | | | 25km :: | 1/(7 day) | 25 km :: Canada/R | N/A :: Sfc |
| 3158 | Sea_Ice Edge | I :: II | Srokosz | | | | dg lat,lon | 0.1 dg :: 0.01 dg | 1/day | N/A :: Ocean/Cryo | N/A :: Sfc |
| 3159 | Sea_Ice Edge | O :: II | Simard | | | | km | 500 m :: | 1/(2 wk) | 500 m :: Canada/R | :: Sfc |
| 3160 | Sea_Ice Extent | I :: II | Barron | | | | | 5% :: 5% | 1/day | 100 km :: Ocean/Cryo | N/A :: Sfc |
| 3161 | Sea_Ice Extent | I :: II | Barron | | | | | 5% :: 5% | 1/day | 10 km :: Ocean/Cryo | N/A :: Sfc |
| 3162 | Sea_Ice Extent | I :: II | Simard | | | | | 25km :: | 1/(7 day) | 25 km :: Canada/R | N/A :: Sfc |
| 3163 | Wind Velocity | O :: II | Barron | | | | km | | [ice response] | [crit feat] :: [modern ice] | N/A :: Sfc |
| 3164 | Wind Velocity, Sea_sfc | O :: II | Simard | | | | km | 25 km :: | 1/wk | 25 km :: Canada/R | :: Sfc |
| 3165 | Sea_Ice Conc, First-year | I :: II | Rothrock | | | | fraction | 0.2 :: 0.2 | 1/(3 day) | 25 km :: Ocean/Cryo | N/A :: Sfc |
| 3166 | Sea_Ice Leads | I :: II | Barron | | | | | 5% :: 5% | 1/day | 100 km :: Ocean/Cryo | N/A :: Sfc |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3167 | Sea_Ice Conc | I :: II | Barron | | | | | 5% :: 5% | 1/day | 30 m :: Ocean/Cryo | N/A :: Sfc |
| 3168 | Sea_Ice Conc | I :: II | Barron | | | | | 5% :: 5% | 1/day | 10 km :: Ocean/Cryo | N/A :: Sfc |
| 3169 | Sea_Ice Conc | O :: II | Simard | | | | km | 500 m :: | 1/(2 wk) | 500 m :: Canada/R | :: Sfc |
| 3172 | Sea_Ice Conc | O :: II | Simard | | | | km/day | 500 m :: | 1/wk | 500 m :: Canada/R | :: Sfc |
| 3173 | Sea_Ice Conc, Multi-year | I :: II | Barron | | | | m^2 | | 1/day | 100 km :: Ocean/Cryo | N/A :: Sfc |
| 3174 | Sea_Ice Conc, Multi-year | I :: II | Barron | | | | m^2 | | 1/day | 10 km :: Ocean/Cryo | N/A :: Sfc |
| 3175 | Sea_Ice Conc, Multi-year | I :: II | Rothrock | | | | fraction | 0.2 :: 0.2 | 1/(3 day) | 25 km :: Ocean/Cryo | N/A :: Sfc |
| 3176 | Sea_Ice Conc, Multi-year | O :: II | Barron | | | | % | | 1/seas | 50 km :: | |
| 3178 | Sea_Ice Conc, GCM | I :: II | Rothrock | | | | fraction | 0.03 :: 0.03 | 1/(3 day) | 25 km :: Ocean/Cryo | N/A :: Sfc |
| 3179 | Sea_Ice Cover | O :: II | Barron | | | | % | | 1/day | 50 km :: Ocean/Cryo | |
| 3182 | Sea_Ice Conc | I :: II | Bates | | | | fractional cov | | 1/(3 day) | 100 km :: > 60 dgLAT | :: Sfc |
| 3183 | Sea_Ice Cover | I :: II | Simard | | | | m | 50 cm :: | | :: Canada/R | N/A :: Sfc |
| 3184 | Sea_Ice Fraction, Open-water | O :: II | Barron | | | | m | | [ice response] | [crit feat] :: [modern ice] | N/A :: Sfc |
| 3185 | Sea_Ice Cover | O :: II | Barron | | | | cm | | 1/day | 4.5 x 7.5 dg :: G | |
| 3186 | Sea_Ice Max Extent | O :: II | Barron | | | | cm | | 1/day | 2.8 x 2.8 dg :: G | |
| 3187 | Sea_Ice Max Extent | O :: II | Rothrock | | | | fraction | | 1/(3 day) | 100 km :: > 60 dgLAT | :: Sfc |
| 3188 | Sea_Ice Cover | I :: II | Rothrock | | | | fraction | 0.03 :: 0.03 | 1/(3 day) | 25 km :: Ocean/Cryo | N/A :: Sfc |
| 3189 | Sea_Ice Edge | I :: II | Rothrock | | | | fraction | 0.05 :: 0.05 | 1/(3 day) | 25 km :: Ocean/Cryo | N/A :: Sfc |
| 3190 | Sea_Ice Edge | I :: II | Simard | | | | | 10km/10% :: | 1/(7 day) | 10 km :: Canada/R | N/A :: Sfc |
| 3193 | Sea_Ice Extent | O :: II | Simard | | | | | 500 m :: | 1/(2 wk) | 500 m :: Canada/R | :: Sfc |
| 3194 | Sea_Ice Extent | O :: II | Rothrock | | | | fraction | 0.05 :: 0.05 | 1/(3 day) | 100 km :: > 60 dgLAT | :: Sfc |
| 3196 | Sea_Ice Motion, Regional | I :: II | Simard | | | | | 500 m :: | 1/(7 day) | 500 m :: Canada/R | N/A :: Sfc |
| 3198 | Ocean Water Attenuation Coef, Diffuse | O :: II | Rothrock | | | | /m | | 1/(3 day) | 100 km :: > 60 dgLAT | :: TOO |
| 3199 | Ocean Water Attenuation Coef@490nm | O :: FI | Gordon, Clark | MODIS | AM,PM | GSFC | /m | 25% :: 10% | 1/day, 1/wk, 1/mo | 20 km :: Ocean-I/ R,L | N/A :: TOO |
| 3200 | Ocean Water Attenuation Coef@490nm | O :: FI | Gordon, Clark | MODIS | AM,PM | GSFC | /m | 25% :: 10% | 1/day, 1/wk, 1/mo | 1 km :: Ocean-I/ R,L | N/A :: TOO |
| 3201 | Ocean Water Attenuation Coef, Diffuse | I :: II | Brewer | | | | /m | 25% :: TBD | 1/day, 1/seas | 30 m :: Ocean/L | N/A :: Sfc |
| 3202 | Ocean Water Attenuation Coef, Diffuse | I :: II | Brewer | | | | /m | 25% :: TBD | 1/day, 1/seas | 20 km :: Ocean | N/A :: Sfc |
| 3203 | Lake Water Attenuation Coef | I :: II | Richey, Batista | | | | /m | 10% :: 10% | 1/wk | 1 km :: Land/R | N/A :: TOO |
| 3204 | Ocean Water Attenuation Coef | I :: II | Abbott | | | | /m | 20% :: 5% | 1/(1-2 day) | 1-4 km :: Ocean [Southern | N/A :: TOO |
| 3205 | River Water Attenuation Coef | I :: II | Richey, Batista | | | | /m | 10% :: 10% | 1/wk | 1 km :: Land/R | N/A :: TOO |
| 3206 | Ocean Water Attenuation Coef@520nm, | O :: FI | Clark | MODIS | AM,PM | GSFC | /m | 35% :: 10% | 1/day, 1/wk | 1 km :: Ocean | N/A :: TOO |
| 3207 | Ocean Water Attenuation Coef@520nm, | O :: FI | Clark | MODIS | AM,PM | GSFC | /m | 35% :: 10% | 1/day, 1/wk | 20 km :: Ocean | N/A :: TOO |
| 3209 | Phytoplankton Backscatter | I :: II | Abbott | | | | mw/cm^2/sr/um | 50% :: 20% | 1/day | 1-4 km :: Ocean | N/A :: N/A |
| 3210 | Ocean Water Backscatter Coef@565nm | O :: FI | Carder, Melack | HIRIS | AM2 | EDC | /m | 50% :: 25% | 1/(2 day) [d] | 30-90 m :: Ocean/L | N/A :: Sfc |
| 3211 | *Chlorophyll Fluorescence Efficiency* | O :: FI | Abbott | MODIS | AM,PM | GSFC | mW/cm^2/sr/um/ mg-Chl/m^3 | 15% :: 5% | 1/day, 1/wk | 1 km :: Ocean/R,L | N/A :: TOO |
| 3212 | *Chlorophyll Fluorescence Efficiency* | O :: FI | Abbott | MODIS | AM,PM | GSFC | mW/cm^2/sr/um/ mg-Chl/m^3 | 15% :: 5% | 1/day, 1/wk | 4 km :: Ocean/G,R | N/A :: TOO |
| 3213 | Gelbstoff Absorption Coef@300nm | I :: II | Brewer | | | | /m | 50% :: 10% | 1/day, 1/seas | 30 m :: Ocean/L | N/A :: TOO |
| 3214 | Gelbstoff Absorption Coef@300nm | I :: II | Brewer | | | | /m | 50% :: 10% | 1/day, 1/seas | 20 km :: Ocean | N/A :: TOO |
| 3215 | Gelbstoff Absorption Coef@410nm | O :: FI | Carder, Melack | HIRIS | AM2 | EDC | /m | 50% :: 25% | 1/(2 day) [d] | 30-90 m :: Ocean-I/L | N/A :: TOO |
| 3216 | Particulate Backscatter Coef | O :: FI | Parslow | MODIS | AM,PM | GSFC | /m | :: 30% | 1/day | 1 km :: Ocean | N/A :: TOO |
| 3217 | Particulate Backscatter Coef | O :: FI | Parslow | MODIS | AM,PM | GSFC | /m | :: 30% | 1/day | 20 km :: Ocean | N/A :: TOO |
| 3218 | Ocean Water Temperature, Internal | I :: II | Lau | | | | K | 0.5 K :: | 1/day | 10 km :: Ocean/R | 10 m :: Sub_sfc |
| 3226 | Electron Energy Spectra | I :: II | Schoeberl | | | | electrn/cm^2/s/ke | 20% :: 15% | 1/day | 5 dgLAT :: G | N/A :: 50-700 km |
| 3228 | *Electron Content-Difference, Total, (TEC-difference)* | O :: PI | Melbourne | GGI | ALT | JPL | | :: 0.1% | 1/s [?] | various :: G | mult :: 0-20000 km |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3229 | *Electron Content, Total, (TEC)* | O :: PI | Melbourne | GGI | ALT | JPL | | :: 0.1% | 1/s [?] | multiple :: G | mult :: 0-20000 km |
| 3247 | Magnetic Field Strength, DC | O :: PI | Waters | MLS | MO | GSFC | G | :: 2x10-3G | 2/day [d,n] | 2.5 x 0.2 dg :: 82N-82S | 2.5 km :: 80-100 km |
| 3255 | Proton Energy Spectra | I :: II | Schoeberl | | | | proton/cm^2/s/Me | 20% :: 15% | 1/day | 5 dgLAT :: G | N/A :: 50-700 km |
| 3258 | X-Ray Energy Spectra | I :: II | Schoeberl | | | | photon/cm^2/s/A | 20% :: 15% | 1/day | 5 dgLAT :: G | N/A :: 15-110 km |
| 3262 | Lava-Flow Advance Rate | I :: II | Mouginis-Mark | | | | m/day | 30 m(hor) :: | 2/day [d,n] | 30 m :: Land/L | N/A :: Sfc |
| 3263 | Aerosol Conc, Stratospheric | I :: II | Mouginis-Mark | | | | | | 1/wk | :: G | :: Strat |
| 3264 | Aerosol Conc, Tropospheric | I :: II | Mouginis-Mark | | | | | | 1/wk | :: G | :: Trop |
| 3265 | Aerosol Dispersal, Eruption_Plume | O :: II | Mouginis-Mark | | | | kg-sulfate/day | | 1/event | 1 km :: G | :: Plume_col |
| 3266 | Lava-Flow Areal Change | I :: II | Mouginis-Mark | | | | m^2 | (30m)^2 :: | 2/day [d,n] | 30 m :: Land/L | N/A :: Sfc |
| 3267 | Eruption-Plume Dispersal | O :: II | Mouginis-Mark | | | | km/day | | 1/event | 1 km :: R | N/A :: Sfc |
| 3268 | Lava-Flow Cooling Rate | O :: II | Mouginis-Mark | | | | C/day | 5 C/day :: | 1/event | 30 m :: Land/L | N/A :: Sfc |
| 3269 | Volcano Deformation | I :: II | Mouginis-Mark | | | | cm | 1 cm(ver) :: | 1/day | cm [?] :: [30 km^2/10] | N/A :: Sfc |
| 3270 | Volcano Deformation(Inflation-Deflation) | O :: FI | Schutz et al | GLRS-A | ALT | GSFC | mm/day - mm/yr | 5 mm/yr :: | 1/day, 1/yr | 100 km :: Land/R | :: Sfc |
| 3271 | *Volcano Deformation(Inflation-Deflation)* | O :: FI | Schutz et al | GLRS-A | ALT | GSFC | mm/day - mm/yr | 5/yr-100/d :: | 1/day, 1/yr | 1 km :: Land/L | :: Sfc |
| 3272 | Volcano Cone Deformation | O :: II | Mouginis-Mark | | | | cm/mo | 1 cm (ver) :: | (~10)/event | 30 m :: Land/L | cm :: Sfc |
| 3273 | Eruption-Plume Dispersal | I :: II | Mouginis-Mark | | | | km/day | 1 km :: | 1/orbit, 1/day | 1 km :: Land/L | N/A :: Plume_col |
| 3274 | Volcano Elevation Change | I :: II | Mouginis-Mark | | | | cm | 1-5 (ver) :: | 2/day [d,n] | 30 m :: Land/L | N/A :: Sfc |
| 3275 | Volcano Elevation | O :: II | Mouginis-Mark | | | | cm | 10 m (ver) :: | 1/mission | 30 m :: Land/L | N/A :: Sfc |
| 3276 | Volcano Elevation, Reference | I :: II | Mouginis-Mark | | | | m | 10 m(ver) :: | 1/mission | 30 m :: Land/L | N/A :: Sfc |
| 3277 | Volcano Elevation, Reference | O :: II | Mouginis-Mark | | | | cm | 10 m (ver) :: | 1/mission | 30 m :: Land/L | N/A :: Sfc |
| 3278 | Volcano Elevation Change | I :: II | Mouginis-Mark | | | | m | 10 m(ver) :: | 1/event | 30 m :: Land/L | N/A :: Sfc |
| 3279 | Volcano Emissions, Eruption | O :: II | Mouginis-Mark | | | | SO2 rlse in kton | | 1/yr | 20 km :: G | N/A :: Plume_top |
| 3280 | Lava-Flow Eruption Rate, Mass, | O :: II | Mouginis-Mark | | | | kg/day | 10^5 kg :: | 1/day, 1/wk | 30 m :: Land/L | N/A :: Sfc |
| 3281 | Eruption_Plume SO2 Eruption Rate, Mass | O :: II | Mouginis-Mark | | | | kg/day | | 1/day, 1/wk | 1 km :: G | N/A :: Sfc |
| 3282 | Eruption-Plume Fallout Rate | I :: II | Mouginis-Mark | | | | | | 1/day | 1 km :: Land/R | N/A :: Plume_col |
| 3283 | Eruption-Plume HCl Content (Mass Eruption Rate) | I :: II | Mouginis-Mark | | | | kton/day | | 1/day | :: G | N/A :: Plume_col |
| 3284 | Volcano Morphology | I :: II | Mouginis-Mark | | | | m | | 4/yr | 30 m :: Land/L | N/A :: Sfc |
| 3285 | Eruption-Plume Height | I :: II | Mouginis-Mark | | | | km | 200m(ver) :: | 1/day | 1 km :: Land/R | N/A :: Plume_col |
| 3286 | Eruption-Plume Height | O :: PI | Diner | MISR | AM | LaRC | m | 100 m :: 100 m | [variable] [d] | 500 m :: Land/L | N/A :: Plume_top |
| 3287 | Volcano Roughness | I :: II | Mouginis-Mark | | | | cm | 3-24 cm :: | 1/yr | 30 m :: Land/L | N/A :: Sfc |
| 3288 | Eruption_Plume SO2 Conc Spike | I :: II | Mouginis-Mark | | | | kton/day | | [near-real time ?] | 1 km :: G | N/A :: Plume_col |
| 3289 | Eruption_Plume SO2 Content (Mass Eruption Rate) | I :: II | Mouginis-Mark | | | | kton/day | | 1/day | 1 km :: G | N/A :: Plume_col |
| 3290 | Volcano Temperature, Eruption Spike | I :: II | Mouginis-Mark | | | | C | 10 C :: | [near-real time ?] | 1 km :: G | N/A :: Sfc |
| 3291 | Lake Water Temperature, Volcano Summit | I :: II | Mouginis-Mark | | | | C | 2 C :: | 1/(3 mo) | 100 m :: Land/L | N/A :: Sfc |
| 3292 | Lava-Flow Temperature | I :: II | Mouginis-Mark | | | | C | 10 C :: | 2/day [d,n] | 30 m :: Land/L | N/A :: Sfc |
| 3293 | Eruption-Plume Temperature | I :: II | Mouginis-Mark | | | | C | 10 C :: | 2/day [d,n] | 100 m :: R | N/A :: Plume_col |
| 3294 | Volcano-Activity Temperature | O :: FI | Rowan, Goetz | HIRIS | AM2 | EDC | C | 10 C :: 5 C | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 3295 | Volcano Temperature-Change | I :: II | Mouginis-Mark | | | | C/yr | 1 C :: | 1/yr | 30 m :: Land/L | N/A :: Sfc |
| 3296 | Volcano Temperature-Change | O :: II | Mouginis-Mark | | | | C/yr | 1 C :: | 1/yr | 30 m :: Land/L | N/A :: Sfc |
| 3297 | Lava-Flow Thickness | I :: II | Mouginis-Mark | | | | cm | 5 cm(ver) :: | 1/event | 30 m :: Land/L | N/A :: Sfc |
| 3298 | Volcano Age | O :: FI | Pieri, Kahle | ASTER | AM1 | EDC | KA | variable :: variable | | 15,30,90 m :: Land/R,L | N/A :: |
| 3299 | Volcano-Activity Extent | O :: FI | Rowan, Goetz | HIRIS | AM2 | EDC | m^2 | | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 3300 | Volcano Volume-Change | O :: II | Mouginis-Mark | | | | m^3 | 1000 m^3 :: | 1/event | 30 m :: Land/L | N/A :: Sfc |
| 3301 | Eruption-Plume Characteristics | O :: FI | Pieri | ASTER | AM1 | EDC | variable | variable :: variable | | 15,30,90 m :: R/L | |
| 3302 | Temperature, PBL | I :: II | Mouginis-Mark | | | | | | 1/day | 30 m :: Land/R | N/A :: Plume_col |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3303 | Calibration Data, MODIS | O :: FI | Evans | MODIS | AM,PM | GSFC | variable | | 1/day, 1/wk, 1/mo | N/A :: Ocean/G,R,L | N/A :: Sfc |
| 3304 | Data Characteristics, MODIS | O :: FI | Justice, Strahler | MODIS | AM,PM | GSFC | dimensionless | 30,10, 5% :: | 1/day | 1 km :: G | N/A :: Sfc |
| 3305 | Data Characteristics, MODIS | O :: FI | Justice, Strahler | MODIS | AM,PM | GSFC | dimensionless | 30,10, 5% :: | 1/day | 10 km :: G | N/A :: Sfc |
| 3306 | Data Characteristics, MODIS | O :: FI | Justice, Strahler | MODIS | AM,PM | GSFC | dimensionless | 30,10, 5% :: | 1/day | 50 km :: G | N/A :: Sfc |
| 3307 | Cloud XXX, PSC | I :: II | Grose | | | | no/cm^3 | 20% :: 10% | 2/day | 15 x 4 dg :: G | 2 km :: Strat |
| 3310 | Level-1B Radiance, MODIS | I :: II | Srokosz | | | | W/m^2/sr/um | 0.05% :: | 1/day | 1 km :: R | N/A :: Atmos |
| 3311 | Soil Temperaturee | I :: II | Simard | | | | K | 0.5 :: 1.0 | 2/day | 100 m :: R/Canada | N/A :: Sfc |
| 3312 | Land_sfc Temperature | I :: II | Simard | | | | K | 1.3 :: 1.0 ? | 2/day | 1 km :: R/Canada | N/A :: Sfc |
| 3313 | Land_sfc Temperature | I :: II | Simard | | | | K | 1.3 :: 1.0 ? | 2/day | 10 km :: R/Canada | N/A :: Sfc |
| 3314 | Organic Matter Conc, Dissolved | O :: FI | Carder, Melack | HIRIS | AM2 | EDC | mg/m^3 | 100% :: 50% | (>=2)/day | 90 m :: Ocean/L+Land/La | N/A :: TOO |
| 3315 | Suspended-Solids Conc, Ocean Water | O :: FI | Carder, Melack | HIRIS | AM2 | EDC | mg/m^3 | 100% :: 50% | (>=2)/day | 90 m :: Ocean/L+Land/La | N/A :: TOO |
| 3316 | Phytoplankton Type | O :: FI | Davis, Melack | HIRIS | AM2 | EDC | mg/m^3 | 100% :: 50% | (>=2)/day | 90 m :: Ocean/L+Land/La | N/A :: TOO |
| 3317 | *Organic Matter Fluorescence Efficiency, Colored Dissolved [CDOM = Gelbstoff]* | O :: FI | Hoge | MODIS | AM,PM | GSFC | dimensionless | 100% :: 50% | 1 day,wk,mo | 20 km :: Ocean/GR | N/A :: TOO |
| 3318 | *Organic Matter Fluorescence Efficiency, Colored Dissolved [CDOM = Gelbstoff]* | O :: FI | Hoge | MODIS | AM,PM | GSFC | dimensionless | 100% :: 50% | 1 day,wk,mo | 1 km :: Ocean/RL | N/A :: TOO |
| 3319 | Pigment Conc, Phycobillin [Phycoerythrin, etc.] | O :: FI | Hoge | MODIS | AM,PM | GSFC | mg/m^3 | 50% :: 15% | 1 day,wk,mo | 20 km :: Ocean/GR | N/A :: TOO |
| 3320 | Pigment Conc, Phycobillin [Phycoerythrin, etc.] | O :: FI | Hoge | MODIS | AM,PM | GSFC | mg/m^3 | 50% :: 15% | 1 day,wk,mo | 1 km :: Ocean/RL | N/A :: TOO |
| 3321 | Precipitable Water | O :: FI | Kaufman, Tanre | MODIS | AM,PM | GSFC | dimensionless ? | 12% :: 8% | 1 day, mo | 1 km :: Land | N/A :: Atmos |
| 3322 | Precipitable Water | O :: FI | Kaufman, Tanre | MODIS | AM,PM | GSFC | dimensionless ? | 5% :: 3% | 1 day, mo | 1 dg :: Land | N/A :: Atmos |
| 3323 | Land_sfc Emissivity | O :: FI | Wan | MODIS | AM,PM | EDC | dimensionless | 0.05 :: 0.02 | 1 day, 1 wk | 1 km :: Land/R | N/A :: Sfc |
| 3324 | Land_sfc Emissivity | O :: FI | Wan | MODIS | AM,PM | EDC | dimensionless | 0.05 :: 0.02 | 1 day, 1 wk | 10 km :: Land | N/A :: Sfc |
| 3325 | CO Conc | I :: II | Dickinson | | | | | | | | |
| 3326 | Heating, Diabatic, | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3327 | Heat Flux, Latent | I :: II | Dickinson | | | | | | | <0.5-1 deg :: Ocean | |
| 3328 | Heat Flux, Sensible | I :: II | Dickinson | | | | | | | <0.5-1 deg :: Ocean | |
| 3329 | PBL Height | I :: II | Dickinson | | | | | | | | |
| 3330 | Cloud Pressure, Top | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3331 | Soil Roughness | I :: II | Dickinson | | | | | | | High_res :: Land | |
| 3332 | Soil Roughness | I :: II | Dickinson | | | | | | | Low_res :: Land | |
| 3333 | Temperature | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3334 | Temperature, Near_sfc | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3335 | Wind Velocity | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3336 | Wind Velocity, Divergent Horizontal | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3337 | Wind Velocity, Rotational Horizontal | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3338 | Wind Velocity, Sea_sfc | I :: II | Dickinson | | | | | | | <0.5-1 deg :: Ocean | |
| 3339 | Wind Speed, Land_sfc | I :: II | Dickinson | | | | | | | <0.5-1 deg :: Land | |
| 3340 | Lightning Intensity | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3341 | Lightning Rate | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3342 | Cloud Height, Base | I :: II | Dickinson | | | | | | | | |
| 3343 | Cloud Cover | I :: II | Dickinson | | | | | | | High_res :: G | |
| 3344 | Cloud Cover | I :: II | Dickinson | | | | | | | Med_res :: G | |
| 3345 | Cloud Cover | I :: II | Dickinson | | | | | | | Low_res :: G | |
| 3346 | Cloud Drop Phase | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3347 | Cloud Drop Size | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |

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| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3348 | Cloud Drop Size-distribution | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3349 | Cloud Height, Top | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3350 | Evaporation, Land_sfc | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3351 | Vegetation Evapotrans | I :: II | Dickinson | | | | | | | High_res :: Land | |
| 3352 | Vegetation Evapotrans | I :: II | Dickinson | | | | | | | Med_res :: Land | |
| 3353 | Humidity Profile | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3354 | Humidity, Near_sfc | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | N/A :: Near_sfc |
| 3355 | Precipitable Water | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3356 | Moisture Flux, Horizontal, | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | N/A : Trop |
| 3357 | Cloud Liq-water Content | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3358 | Cloud Liq-water Content | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3359 | Precipitation Rate, Rain | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3360 | Precipitation Rate, Snow | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3361 | Albedo, Cloud | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3362 | Albedo, Sea_Ice | I :: II | Dickinson | | | | | | | <0.5-1 deg :: Ocean/Cryo | |
| 3363 | Albedo, Land_sfc | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3364 | Albedo, Snow | I :: II | Dickinson | | | | | | | High_res :: Land | |
| 3365 | Albedo, TOA | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3366 | Albedo, Vegetation | I :: II | Dickinson | | | | | | | High_res :: Land | |
| 3367 | Albedo, Vegetation | I :: II | Dickinson | | | | | | | High_res :: Land | |
| 3368 | Aerosol Backscatter | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3369 | Land_sfc Reflectance, Bi-directional, (BRDF) | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3370 | Soil Reflectance, Bi-directional, (BRDF) | I :: II | Dickinson | | | | | | | <0.5-1 deg :: Land | |
| 3371 | Vegetation Reflectance, Bi-directional, (BRDF) | I :: II | Dickinson | | | | | | | <0.5-1 deg :: Land | |
| 3372 | Cloud Emissivity | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3373 | Land_sfc Emissivity | I :: II | Dickinson | | | | | | | <0.5-1 deg :: Land | |
| 3374 | Aerosol Extinction | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3375 | Radiative Flux, LW, Down | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | N/A :: Sfc ? |
| 3376 | Radiative Flux, LW, Net | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | N/A :: Sfc ? |
| 3377 | Radiative Flux, LW, TOA | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | N/A :: TOA |
| 3378 | Radiative Flux, LW, Up | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | N/A :: Sfc ? |
| 3379 | Radiative Flux, SW, Net | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | N/A :: Sfc |
| 3380 | Radiative Flux, SW, TOA | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | N/A :: Sfc |
| 3381 | Cloud Optical Depth, LW | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3382 | Cloud Optical Depth, SW | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3383 | Optical Depth, Total | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3384 | Irradiance, Incident, Sfc | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3385 | Radiation Budget | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3386 | Cloud Temperature, Emission | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3387 | Cloud Temperature, Top | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3388 | Ice_Sheet Temperature | I :: II | Dickinson | | | | | | | <0.5-1 deg :: Land/Cryo | |
| 3389 | Land_sfc Temperature | I :: II | Dickinson | | | | | | | High_res :: Land | |
| 3390 | Land_sfc Temperature | I :: II | Dickinson | | | | | | | Low_res :: Land | |
| 3391 | Land_sfc Temperature | I :: II | Dickinson | | | | | | | Med_res :: Land | |
| 3392 | Sea_sfc Temperature (SST) | I :: II | Dickinson | | | | | | | <0.5-1 deg :: Ocean | |
| 3393 | Sea_sfc Temperature (SST) | I :: II | Dickinson | | | | | | | <0.5-1 deg :: Ocean | |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3394 | Vegetation Temperature | I :: II | Dickinson | | | | | | | <0.5-1 deg :: Land | |
| 3395 | Land_sfc Temperature-Difference, Day-Night | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3396 | Cloud Transmissivity | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3397 | Vegetation Biomass, Green | I :: II | Dickinson | | | | | | | <0.5-1 deg :: Land | |
| 3398 | Fire Extent | I :: II | Dickinson | | | | | | | <0.5-1 deg :: Land | |
| 3399 | Vegetation Moisture, Root-zone | I :: II | Dickinson | | | | | | | <0.5-1 deg :: Land | |
| 3400 | Vegetation Extent | I :: II | Dickinson | | | | | | | High_res :: Land | |
| 3401 | Vegetation Extent | I :: II | Dickinson | | | | | | | Med-low_res :: Land | |
| 3402 | Vegetation Height | I :: II | Dickinson | | | | | | | Med-low_res :: Land | |
| 3403 | Vegetation Rooting Depth | I :: II | Dickinson | | | | | | | <0.5-1 deg :: Land | |
| 3404 | Vegetation Roughness | I :: II | Dickinson | | | | | | | Med-low_res :: Land | |
| 3405 | Vegetation Type | I :: II | Dickinson | | | | | | | <0.5-1 deg :: Land | |
| 3406 | Vegetation Index, Leaf Area, (LAI) | I :: II | Dickinson | | | | | | | Low_res :: Land | |
| 3407 | Vegetation Water Potential | I :: II | Dickinson | | | | | | | Low_res :: Land | |
| 3408 | Wetlands Extent | I :: II | Dickinson | | | | | | | Low_res :: Land | |
| 3409 | Soil Extent | I :: II | Dickinson | | | | | | | Low_res :: Land | |
| 3410 | Topographic Elevation, Land_sfc | I :: II | Dickinson | | | | | | | Low_res :: Land | |
| 3411 | Soil Moisture | I :: II | Dickinson | | | | | | | Low_res :: Land | |
| 3412 | Soil Moisture | I :: II | Dickinson | | | | | | | Med_res :: Land | |
| 3413 | Soil Moisture | I :: II | Dickinson | | | | | | | High_res :: Land | |
| 3414 | Snow Depth | I :: II | Dickinson | | | | | | | Med_res :: Land | |
| 3415 | Snow Extent | I :: II | Dickinson | | | | | | | Low_res :: Land | |
| 3416 | Snow Extent | I :: II | Dickinson | | | | | | | Med_res :: Land | |
| 3417 | Sea_Ice Cover | I :: II | Dickinson | | | | | | | <0.5-1 deg :: Ocean/Cryo | |
| 3418 | Sea_Ice Thickness | I :: II | Dickinson | | | | | | | <0.5-1 deg :: Ocean/Cryo | |
| 3419 | Electric Conductivity | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3420 | Electric Field Strength, DC | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3421 | X-Ray Images | I :: II | Dickinson | | | | | | | <0.5-1 deg :: G | |
| 3423 | Aerosol Size-distribution (Radius-Dispersion) | I :: II | Harris | | | | um | 0.1 :: 0.05 | 1/day | 50 km :: Ocean/R | |
| 3424 | Aerosol Mass Loading | I :: II | Harris | | | | g/m^2 | 1% :: 1% | 1/day | 50 km :: Ocean/R | |
| 3425 | Sea_sfc Feature position | I :: II | Harris | | | | deg long,lat | 120 m :: 60 m | 1 wk | 0.25-1 km:: Ocean/R | |
| 3426 | Sea_sfc Feature velocity | I :: II | Harris | | | | km/day | 20% :: 10% | 1 wk | 0.25-1 km:: Ocean/R | |
| 3427 | Sea_Level Height, Along-track | I :: II | Harris | | | | cm | 2% :: 1% | 1-10 days | 7-25 km :: Ocean/R | |
| 3428 | Temperature | I :: II | Harris | | | | K | 1 :: 0.5 | 2/day | 10-50 km :: Ocean/R | 1 km :: Atmos |
| 3429 | Sea_sfc Topographic Height | I :: II | Harris | | | | cm | 2% :: 1% | 1-10 days | 7-25 km :: Ocean/R | |
| 3430 | Ocean Wave Direction | I :: II | Harris | | | | deg | 10 :: 10 | 1/day | 10 deg :: Ocean/R | |
| 3431 | Ocean Wave Height | I :: II | Harris | | | | m | 10-20% :: 5-20% | 1-10 days | 7-25 km :: Ocean/R | |
| 3432 | Ocean Wave Length | I :: II | Harris | | | | km | 10% :: 10% | 1/day | 1-10 km :: Ocean/R | |
| 3433 | Wind Velocity | I :: II | Harris | | | | m/s, deg | 10%,20% :: 5%,10% | 1 day | 25 km :: Ocran/R | N/A :: Sfc |
| 3434 | Wind Velocity | I :: II | Harris | | | | m/s, deg | 7%,14% :: 5%,10% | 2 days | 100 km :: Ocean/R | N/A :: Sfc |
| 3435 | Wind Speed, Sea_sfc | I :: II | Harris | | | | m/s | 5-10% :: 2-10% | 1-10 days | 1-25 km :: Ocean/R | N/A :: Sfc |
| 3436 | Cloud Cover | I :: II | Harris | | | | % | 5-10% :: 2-5% | 2/day | 5-50 km :: Ocean/R | |
| 3437 | Cloud Height, Top | I :: II | Harris | | | | km | 0.5 :: 0.3 | 2/day | 20-50 km :: Ocean/R | |
| 3438 | Humidity Profile | I :: II | Harris | | | | g/kg | 10% :: 5% | 2/day | 10-50 km :: Ocean/R | 1 km :: Atmos |
| 3439 | Precipitable Water | I :: II | Harris | | | | | | 1/day | 10-25 km :: Ocean/R | |
| 3440 | Precipitable Water | I :: II | Harris | | | | mm | 5% :: 3% | 2/day | 20-50 km :: Ocean/R | |
| 3441 | Precipitation Amount | I :: II | Harris | | | | mm/day | 2 :: 1 | 2/day | 20-50 km :: Ocean/R | |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3442 | Aerosol Angstrom Exponent | I :: II | Harris | | | | | 15% :: 5% | 1/day | 1-20 km :: Ocean/R | |
| 3443 | Radiative Flux, Sea_sfc | I :: II | Harris | | | | W/m^2 | 5% :: 2% | 2/day | 20-50 km :: Ocean/R | |
| 3444 | Aerosol Optical Depth | I :: II | Harris | | | | eq.atm | 10%,0.05 :: 5%,0.02 | 2/day-1/day | 20-50 km :: Ocean/R | |
| 3445 | Cloud Optical Depth | I :: II | Harris | | | | none | 10-20% :: 5-10% | 2/day-1/day | 5-50 km :: Ocean/R | |
| 3446 | Aerosol Radiance, Single_scattering | I :: II | Harris | | | | mW/(cm^2-sr-um) | 10% :: 5% | 1/day | 1-20 km :: Ocean/R | |
| 3447 | Level-2 Radiance, Water-leaving | I :: II | Harris | | | | mW/(cm^2-sr-um) | 10% :: 5% | 1/day | 1-20 km :: Ocean/R | |
| 3448 | Level-1B Backscatter Coef, HIRIS | I :: II | Harris | | | | /m | 20% :: 10% | 2-10 days | 0.25-1 km :: Ocean/R | |
| 3449 | Cloud Temperature, Top | I :: II | Harris | | | | K | 1-2 K :: 0.5-1 K | 2/day-1/day | 5-50 km :: Ocean/R | |
| 3450 | Land_sfc Temperature, Skin | I :: II | Harris | | | | K | 0.5 :: 0.2 | 2/day | 20-50 km :: Ocean/R | |
| 3451 | Sea_sfc Temperature (SST) | I :: II | Harris | | | | K | 0.5-1 K :: 0.2-0.3 K | 1/day | 0.25-1 km :: Ocean/R | |
| 3452 | Sea_sfc Temperature (SST) | I :: II | Harris | | | | K | 0.5-1 K :: 0.2-0.3 K | 1/day | 20 km :: Ocean/R | |
| 3453 | Gelbstoff Absorption Coef | I :: II | Harris | | | | /m | 20% :: 10% | 2-10 days | 0.25-1 km:: Ocean/R | |
| 3454 | Chlorophyll_a Conc | I :: II | Harris | | | | mg/m^3 | 40% :: 20% | 2-10 days | 0.25-1 km:: Ocean/R | |
| 3455 | Chlorophyll_a Conc | I :: II | Harris | | | | mg/m^3 | 20-30% :: 10-15% | 1/day | 1-20 km :: Ocean/R | |
| 3456 | Chlorophyll_a Conc | I :: II | Harris | | | | mg/m^3 | 20-30% :: 10-15% | 2-10 days | 0.25-1 km :: Ocean/R | |
| 3457 | Organic Matter Conc, Dissolved | I :: II | Harris | | | | mg/m^3 | 100% :: 30% | 1/day | 1-20 km :: Ocean/R | |
| 3458 | Pigment Conc | I :: II | Harris | | | | mg/m^3 | 30% :: 10% | 1/day | 1-20 km :: Ocean/R | |
| 3459 | Pigment Conc, Accessory | I :: II | Harris | | | | mg/m^3 | 20% :: 10% | 2-10 days | 0.25-1 km:: Ocean/R | |
| 3460 | Ocean Productivity, Primary | I :: II | Harris | | | | mg/m^3/day | 30% :: 5% | 1/day | 1-20 km :: Ocean/R | |
| 3461 | Ocean Water Attenuation Coef@490nm | I :: II | Harris | | | | /m | 25% :: 10% | 1/day | 1-20 km :: Ocean/R | |
| 3462 | Chlorophyll Fluorescence | I :: II | Harris | | | | mW/(cm^2-sr-um) | 25% :: 5% | 1/day | 1-20 km :: Ocean/R | |
| 3463 | Ocean Wave Power Spectrum, 2-D | I :: II | Bates | | | | | | | :: Ocean | N/A :: Sfc |
| 3464 | Level-1B Backscatter, ALT | O :: FI | Fu | ALT | ALT | JPL | dB | | | | |
| 3485 | Level-1B Radiance, MODIS-T | I :: II | Sellers | | | | W/m^2/sr/um | | | | |
| 3487 | Land_sfc Emissivity, LW (8-12u) | I :: II | Cihlar | | | | fraction | 0.025 :: 0.025 | 10 day | 1.25 deg :: Canada/R | N/A :: Sfc |
| 3488 | Precipitation Amount | I :: II | Cihlar | | | | mm | 0.1 mm :: 0.1 mm | 1 day | 500m :: Canada/R | N/A :: Sfc |
| 3489 | Precipitation Amount, Snow | I :: II | Cihlar | | | | mm/wk | 10% :: 10% | 1 wk | 1 km :: Canada/R | N/A :: Sfc |
| 3490 | Radiative Flux | I :: II | Cihlar | | | | W/m^2 | | 1 wk | 1 km^2 :: | N/A :: Sfc |
| 3491 | Snow Water Equivalent | I :: II | Cihlar | | | | mm | 10% :: 10% | 1 wk | 1 km :: Canada/R | N/A :: Sfc |
| 3492 | Soil Hydraulic Properties | I :: II | Cihlar | | | | | 5-10% :: 5% | once | 1 km :: Canada/R | N/A :: Sfc |
| 3493 | Soil Moisture | I :: II | Cihlar | | | | % saturation | 10% :: 20% | | 1 km :: Canada/R | N/A :: Sfc |
| 3494 | Soil Spectral-characteristics | I :: II | Cihlar | | | | % | 5% :: 10% | once | 250-1000 m :: Canada/R | N/A :: Sfc |
| 3495 | Topographic Elevation, Land_sfc | I :: II | Cihlar | | | | m | 5-10 m :: | once | 30 m :: Canada/R | 10 m :: Sfc |
| 3496 | Vegetation Reflectance, Bi-directional, (BRDF) | I :: II | Cihlar | | | | | 0.05 :: 0.001 | 1 wk (for 1 yr) | :: Canada/R | N/A :: Sfc |
| 3497 | Vegetation Evapotrans | I :: II | Cihlar | | | | cm | 20% :: 5-20% | 1 day, 1 wk | 500 m :: Canada/R | N/A :: Sfc |
| 3498 | PAR, Intercepted, Vegetation, (IPAR) | I :: II | Cihlar | | | | % | 10% :: 1% | 1 day | 250-1000 m :: Canada/R | N/A :: Sfc |
| 3499 | Vegetation Index, Leaf Area, (LAI) | I :: II | Cihlar | | | | % | 10% :: 1% | 1 wk | 1 km :: Canada/R | N/A :: Sfc |
| 3500 | Vegetation Reflectance Factor | I :: II | Cihlar | | | | dimensionless | 0.05 :: 0.001 | 1 day | 250-1000 m :: Canada/R | N/A :: Sfc |
| 3501 | Vegetation Moisture, Root-zone | I :: II | Cihlar | | | | m | 10% :: 20% | 1 wk (in grow. seas) | 1 km :: Canada/R | N/A :: Sub_sfc |
| 3502 | Vegetation Structure | I :: II | Cihlar | | | | geometric | | | 1 km :: Canada/R | N/A :: Sfc |
| 3503 | Vegetation Temperature | I :: II | Cihlar | | | | K | 0.5 K :: 1.0 K | 1 day | 250-1000 m :: Canada/R | N/A :: Sfc |
| 3504 | Vegetation Type | I :: II | Cihlar | | | | ha | 15% :: 15% | once | 100 m :: Canada/R | N/A :: Sfc |
| 3505 | Precipitation Amount, Rain | O :: II | Lau | | | MSFC | | | 1/mo | :: Land/R(Andes) | N/A :: Sfc |
| 3506 | Precipitable Water | O :: II | Lau | | | MSFC | | | | :: G | N/A :: Sfc |
| 3507 | Evaporation, Land_sfc | O :: II | Lau | | | MSFC | | | | :: G | N/A :: Sfc |
| 3508 | Soil Moisture | O :: II | Lau | | | MSFC | | | | :: G | N/A :: Sfc |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3509 | Vegetation Evapotrans | O :: II | Lau | | | MSFC | | | | :: G | N/A :: Sfc |
| 3510 | Vegetation Index | O :: II | Lau | | | MSFC | | | | :: G | N/A :: Sfc |
| 3511 | Heating, Latent | O :: II | Lau | | | MSFC | | | | | :: Atmos |
| 3512 | Moisture Transport Statistics | O :: II | Lau | | | MSFC | | | | :: G | :: Atmos |
| 3513 | Moisture Budget | O :: II | Lau | | | MSFC | | | | :: R | :: Upper_atmos |
| 3514 | Precipitation Sampling statistics, Rain | O :: II | Lau | | | MSFC | | | | | N/A :: Sfc |
| 3515 | Radiative Flux Divergence, Clear-sky | O :: II | Lau | | | MSFC | | | | | |
| 3516 | Radiative Flux Divergence, Cloudy-sky | O :: II | Lau | | | MSFC | | | | | |
| 3517 | Heat Flux, Latent | O :: II | Liu | | | JPL | | | 3 day | 1 x 1 dg :: Ocean | N/A :: Sfc |
| 3518 | Heat Flux, Sensible | O :: II | Liu | | | JPL | | | 3 day | 1 x 1 dg :: Ocean | N/A :: Sfc |
| 3519 | Ocean Circulation, Model Eddy-Resolving | O :: II | Liu | | | JPL | | | 3 day | 1/3 dg :: Ocean | 30 level :: |
| 3520 | Sea_Level Height | O :: II | Liu | | | JPL | | | 10 day | 1/3 dg :: Ocean | N/A :: Sfc |
| 3521 | Cloud Cover | O :: II | Dickinson | | | GSFC | | | | 0.5-1 dg :: G | |
| 3522 | Cloud Temperature, Top | O :: II | Dickinson | | | GSFC | | | | 0.5-1 dg :: G | |
| 3523 | Cloud Pressure | O :: II | Dickinson | | | GSFC | | | | 0.5-1 dg :: G | |
| 3524 | Cloud Phase | O :: II | Dickinson | | | GSFC | | | | 0.5-1 dg :: G | |
| 3525 | Albedo, Cloud | O :: II | Dickinson | | | GSFC | | | | 0.5-1 dg :: G | |
| 3526 | Cloud Optical Depth | O :: II | Dickinson | | | GSFC | | | | 0.5-1 dg :: G | |
| 3527 | Cloud Liq_Water Content | O :: II | Dickinson | | | GSFC | | | | 0.5-1 dg :: G | |
| 3528 | Cloud Drop Size | O :: II | Dickinson | | | GSFC | | | | 0.5-1 dg :: G | |
| 3529 | Vegetation Reflectance, Bi-directional, (BRDF) | O :: II | Dickinson | | | GSFC | | | | | |
| 3530 | Heat Flux, Sensible | O :: II | Dickinson | | | GSFC | | | 1/mo | 1 x 1 dg :: | |
| 3531 | Heat Flux, Latent | O :: II | Dickinson | | | GSFC | | | 1/mo | 1 x 1 dg :: | |
| 3532 | Radiative Flux, Solar | O :: II | Dickinson | | | GSFC | | | 1/mo | 1 x 1 dg :: | |
| 3533 | Radiative Flux, LW | O :: II | Dickinson | | | GSFC | | | 1/mo | 1 x 1 dg :: | |
| 3534 | Heat Transport | O :: II | Dickinson | | | GSFC | | | 1/mo | 1 x 1 dg :: | |
| 3535 | Moisture Transport | O :: II | Dickinson | | | GSFC | | | 1/mo | 1 x 1 dg :: | |
| 3536 | Momentum Transport | O :: II | Dickinson | | | GSFC | | | 1/mo | 1 x 1 dg :: | |
| 3537 | Energy Flux, Net | O :: II | Dickinson | | | GSFC | | | 1/mo | 1 x 1 dg :: | |
| 3538 | Momentum | O :: II | Srokocz | | | JPL | | | 1/mo | >= 1 dg (Select) :: | |
| 3539 | Heat Flux, Latent | O :: II | Srokocz | | | JPL | | | 1/mo | >= 1 dg (Select) :: | |
| 3540 | Heat Flux, Sensible | O :: II | Srokocz | | | JPL | | | 1/mo | >= 1 dg (Select) :: | |
| 3541 | Moisture Flux, Net | O :: II | Srokocz | | | JPL | | | 1/mo | >= 1 dg (Select) :: | |
| 3542 | Radiative Flux, Solar | O :: II | Srokocz | | | JPL | | | 1/mo | >= 1 dg (Select) :: | |
| 3543 | Radiative Flux, LW | O :: II | Srokocz | | | JPL | | | 1/mo | >= 1 dg (Select) :: | |
| 3544 | Momentum-Change Statistics | O :: II | Srokocz | | | JPL | | | 1/mo | >= 1 dg (Select) :: | |
| 3545 | Heat Flux-Change Statistics, Latent | O :: II | Srokocz | | | JPL | | | 1/mo | >= 1 dg (Select) :: | |
| 3546 | Heat Flux-Change Statistics, Sensible | O :: II | Srokocz | | | JPL | | | 1/mo | >= 1 dg (Select) :: | |
| 3547 | Moisture Flux-Change Statistics , Net | O :: II | Srokocz | | | JPL | | | 1/mo | >= 1 dg (Select) :: | |
| 3548 | Radiative Flux-Change Statistics , Solar | O :: II | Srokocz | | | JPL | | | 1/mo | >= 1 dg (Select) :: | |
| 3549 | Radiative Flux-Change Statistics , LW | O :: II | Srokocz | | | JPL | | | 1/mo | >= 1 dg (Select) :: | |
| 3550 | Sea_Level Height-Variability, RMS | O :: II | Srokocz | | | JPL | | | 1/seas | 1 x 1 dg :: | |
| 3551 | Sea_Level Height-Change Statistics | O :: II | Srokocz | | | JPL | | | 5 yr (yr,seas,<seas) | 1 x 1 dg :: Ocean /R | |
| 3552 | Sea_sfc Temperature Statistics | O :: II | Srokocz | | | JPL | | | 1/mo | 1 km :: | |
| 3553 | Sea_sfc Temperature-Change Statistics | O :: II | Srokocz | | | JPL | | | 1/5yr | 1 x 1 dg :: | |
| 3554 | Sea_sfc Feature-Occurence Statistics | O :: II | Srokocz | | | JPL | | | occasional | 1 km :: | |

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| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3555 | Sea_sfc Gradient-Changes Statistics | O :: II | Srokocz | | | JPL | | | occasional | 1 km :: | |
| 3556 | O3 Conc | O :: II | Murakami | | | GSFC | | | | 5 dg :: G | 2 km :: Atmos |
| 3557 | Trace Gas Total Burden, Greenhouse | O :: II | Murakami | | | GSFC | | | | 5 dg :: G | NA :: Atmos |
| 3558 | Precipitation Amount | O :: II | Murakami | | | GSFC | | | | :: Ocean/R(-Pacific) | |
| 3559 | Precipitable Water | O :: II | Murakami | | | GSFC | | | | :: Ocean/R(-Pacific) | |
| 3560 | Wind Velocity, Tropospheric 3-D | O :: II | Murakami | | | GSFC | | | | :: Ocean/R(-Pacific) | |
| 3561 | Sea_Level Height | O :: II | Murakami | | | GSFC | | | | :: Ocean/R(-Pacific) | |
| 3562 | Wind Velocity, Sea_sfc | O :: II | Murakami | | | GSFC | | | | :: Ocean/R(-Pacific) | |
| 3563 | Heat Flux, Latent | O :: II | Murakami | | | GSFC | | | | :: Ocean/R(-Pacific) | |
| 3564 | Sea_sfc Temperature (SST) | O :: II | Murakami | | | GSFC | | | | :: Ocean/R(-Pacific) | |
| 3565 | Ocean Color/Temperature Maps, Composite | O :: II | Harris | | | GSFC | | | | :: Ocean / R(Australia-STC) | |
| 3566 | Phytoplankton Biomass | O :: II | Harris | | | GSFC | | | | :: Ocean / R(Australia-STC) | |
| 3567 | Phytoplankton Species Composition | O :: II | Harris | | | GSFC | | | | :: Ocean / R(Australia-STC) | |
| 3568 | Temperature, Dry-bulb, Tropopause | O :: II | Harris | | | GSFC | | | | :: Ocean / R(Australia-STC) | |
| 3569 | Ocean Productivity-Variability | O :: II | Harris | | | GSFC | | | seas, yr | : Ocean / R(Australia-STC) | |
| 3570 | Fish-stock Abundance | O :: II | Harris | | | GSFC | | | seas, yr | : Ocean / R(Australia-STC) | |
| 3571 | C Flux | O :: II | Harris | | | GSFC | | | | :: Ocean | |
| 3572 | Precipitation Amount, Average | O :: II | Isacks | | | GSFC | | | | :: Land/R(Andes) | |
| 3573 | Precipitation Variability(&Extrema) | O :: II | Isacks | | | GSFC | | | | :: Land/R(Andes) | |
| 3574 | Snow&Ice Content | O :: II | Isacks | | | GSFC | | | | :: Land/R(Andes) | |
| 3575 | Surface Water Content (Soil Moisture+Lakes+Rivers) | O :: II | Isacks | | | GSFC | | | | :: Land/R(Andes) | |
| 3576 | Sediment Conc | O :: II | Isacks | | | GSFC | | | | :: Land/R(Andes) | |
| 3577 | Land_sfc Temperature, Average | O :: II | Isacks | | | GSFC | | | | :: Land/R(Andes) | |
| 3578 | Land_sfc Temperature- | O :: II | Isacks | | | GSFC | | | | :: Land/R(Andes) | |
| 3579 | Wind Velocity, Prevailing | O :: II | Isacks | | | GSFC | | | | :: Land/R(Andes) | |
| 3580 | Dust Conc | O :: II | Isacks | | | GSFC | | | | :: Land/R(Andes) | |
| 3581 | Dust Spatial Distribution | O :: II | Isacks | | | GSFC | | | | :: Land/R(Andes) | |
| 3582 | Dust Source | O :: II | Isacks | | | GSFC | | | | :: Land/R(Andes) | |
| 3583 | Dust Size | O :: II | Isacks | | | GSFC | | | | :: Land/R(Andes) | |
| 3584 | Dust Composition | O :: II | Isacks | | | GSFC | | | | :: Land/R(Andes) | |
| 3585 | Vegetation Density | O :: II | Isacks | | | GSFC | | | | :: Land/R(Andes) | |
| 3586 | Vegetation Class(Type) | O :: II | Isacks | | | GSFC | | | | :: Land/R(Andes) | |
| 3587 | Land_sfc Roughness | O :: II | Isacks | | | GSFC | | | | :: Land/R(Andes) | |
| 3588 | Crustal Motion | O :: II | Isacks | | | GSFC | | | | :: Land/R(Andes) | |
| 3589 | Erosion-Deposition Events | O :: II | Isacks | | | GSFC | | | | :: Land/R(Andes) | |
| 3590 | Landform Face Freshness | O :: II | Isacks | | | GSFC | | | | :: Land/R(Andes) | |
| 3591 | Landform Stratigraphy | O :: II | Isacks | | | GSFC | | | | :: Land/R(Andes) | |
| 3592 | Landform Structures(Relief/Lithology- | O :: II | Isacks | | | GSFC | | | | :: Land/R(Andes) | |
| 3593 | Level-2 Data Comparisons, EOS_Instrument | O :: II | Le Marshall | | | GSFC | | | | :: R (Tropics,So.Hemis) | |
| 3594 | Wind Stress, Sea_sfc | O :: PI | TBD | MIMR | PM | MSFC | m/s | | | 39 km :: Ocean | N/A :: Sfc |
| 3595 | *Wind Stress, Sea_sfc* | O :: PI | TBD | MIMR | PM | MSFC | m/s | | 1 mo | 1 dg :: Ocean | N/A :: Sfc |
| 3596 | Precipitable Water | O :: PI | TBD | MIMR | PM | MSFC | g/km^3 | | | 22 km :: Ocean | Column :: Trop |
| 3597 | *Precipitable Water* | O :: PI | TBD | MIMR | PM | MSFC | g/km^3 | 0.16 cm :: | 1 mo | 1 dg :: Ocean | Column :: Trop |
| 3598 | Cloud Liq_water Total Column | O :: PI | TBD | MIMR | PM | MSFC | mg/cm^2 | | | 22 km :: Ocean | N/A :: Trop |
| 3599 | *Cloud Liq_water Total Column* | O :: PI | TBD | MIMR | PM | MSFC | mg/cm^2 | 0.005 cm :: | 1 mo | 1 dg :: Ocean | N/A :: Trop |
| 3600 | Precipitation Rate | O :: PI | TBD | MIMR | PM | MSFC | mm/hr? | | | 22 km :: Global | N/A :: Sfc |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3601 | *Precipitation Index* | O :: PI | TBD | MIMR | PM | MSFC | | | 1 mo | 1 dg :: Global | N/A :: Sfc |
| 3602 | Level-1B Radiance, MIMR | O :: PI | TBD | MIMR | PM | MSFC | K | | 1 day | 1 dg :: Global | N/A :: |
| 3603 | Sea_sfc Temperature (SST) | O :: PI | TBD | MIMR | PM | MSFC | K | | | 60 km :: Ocean | N/A :: Sfc |
| 3604 | *Sea_sfc Temperature (SST)* | O :: PI | TBD | MIMR | PM | MSFC | K | 1 K :: | 1 mo | 1 dg :: Ocean | N/A :: Sfc |
| 3605 | Soil Moisture | O :: PI | TBD | MIMR | PM | MSFC | | | | 60 km :: Land | N/A :: Sfc |
| 3606 | *Soil Moisture* | O :: PI | TBD | MIMR | PM | MSFC | | | 1 mo | 1 dg :: Land | N/A :: Sfc |
| 3607 | Snow Cover | O :: PI | TBD | MIMR | PM | NSIDC | | | | 22 km :: Land | N/A :: Sfc |
| 3608 | *Snow Cover* | O :: PI | TBD | MIMR | PM | NSIDC | | | 1 mo | 1 dg :: Land | N/A :: Sfc |
| 3609 | Sea_Ice Age | O :: PI | TBD | MIMR | PM | NSIDC | | | | 22 km :: Ocean/Cryo | :: Sfc |
| 3610 | *Sea_Ice Age* | O :: PI | TBD | MIMR | PM | NSIDC | | | 1 mo | 1 dg :: Ocean/Cryo | :: Sfc |
| 3611 | Sea_Ice Conc | O :: PI | TBD | MIMR | PM | NSIDC | | | | 22 km :: Ocean/Cryo | N/A :: Sfc |
| 3612 | *Sea_Ice Conc* | O :: PI | TBD | MIMR | PM | NSIDC | | | 1 mo | 1 dg :: Ocean/Cryo | N/A :: Sfc |
| 3613 | Sea_Ice Extent | O :: PI | TBD | MIMR | PM | NSIDC | | | | 22 km :: Ocean/Cryo | N/A :: Sfc |
| 3614 | *Sea_Ice Extent* | O :: PI | TBD | MIMR | PM | NSIDC | | | 1 mo | 1 dg :: Ocean/Cryo | N/A :: Sfc |
| 3615 | Cloud Reflectance, Bi-directional (BRDF) | I :: II | Wielicki | | | | | 5% :: 2% | TBD | 10 dg [Angle] :: G | N/A :: Cld |
| 3616 | Sea_Ice Meltpond Fraction | O :: FI | Welch | ASTER | AM1 | EDC | dimensionless | | | 90 m :: Ocean/Cryo | N/A :: Sfc |
| 3617 | Sea_Ice Lead (Open-Water) Fraction | O :: FI | Welch | ASTER | AM1 | EDC | dimensionless | | | 90 m :: Ocean/Cryo | N/A :: Sfc |
| 3618 | Sea_Ice Fraction, New (First-Year) | O :: FI | Welch | ASTER | AM1 | EDC | dimensionless | | | 90 m :: Ocean/Cryo | N/A :: Sfc |
| 3619 | Sea_Ice Temperature | O :: FI | Welch | ASTER | AM1 | EDC | K | | | 90 m :: Ocean/Cryo | N/A :: Sfc |
| 3620 | Sea_sfc Temperature (SST) | O :: FI | Welch | ASTER | AM1 | EDC | K | | | 90 m :: Ocean/Cryo | N/A :: Sfc |
| 3621 | Sea_Ice Size-distribution | O :: FI | Welch | ASTER | AM1 | EDC | | | | 90 m :: Ocean/Cryo | N/A :: Sfc |
| 3622 | Sea_Ice Lead (Open Water) Size-distribution | O :: FI | Welch | ASTER | AM1 | EDC | | | | 90 m :: Ocean/Cryo | N/A :: Sfc |
| 3623 | Sea_Ice Thickness | O :: FI | Welch | ASTER | AM1 | EDC | m | | | 90 m-1 km :: Ocean/Cryo | N/A :: Sfc |
| 3624 | Sea_Ice Albedo | O :: FI | Welch | ASTER | AM1 | EDC | | | | 90 m :: Ocean/Cryo | N/A :: Sfc |
| 3625 | Cloud Thickness | O :: FI | Welch | ASTER | AM1 | EDC | | | 1/(16 day) | 100 m :: L | N/A :: Cloud |
| 3626 | Cloud Liquid_Water Content | O :: FI | Welch | ASTER | AM1 | EDC | | | 1/(16 day) | 90 m :: L | N/A :: Cloud |
| 3627 | Cloud Drop Size_distribution | O :: FI | Welch | ASTER | AM1 | EDC | | | 1/(16 day) | 90 m :: L | N/A :: Cloud |
| 3628 | Cloud Field Scales_of_Organization | O :: FI | Welch | ASTER | AM1 | EDC | | | 1/(16 day) | 90 m :: L | N/A :: Cloud |
| 3629 | Land_sfc Thermal Anomalies | O :: FI | Tsu | ASTER | AM1 | EDC | | TBD :: TBD | TBD | TBD :: Land/TBD | TBD :: TBD |
| 3630 | Sea_Ice Area | O :: FI | Tsu | ASTER | AM1 | EDC | | TBD :: TBD | TBD | TBD :: Ocean/TBD | TBD :: TBD |
| 3631 | Coral Reef Maps | O :: FI | Tsu | ASTER | AM1 | EDC | | TBD :: TBD | TBD | TBD :: Ocean/TBD | TBD :: TBD |
| 3632 | Ocean_Water Turbidity | O :: FI | Tsu | ASTER | AM1 | EDC | | TBD :: TBD | TBD | TBD :: Ocean/TBD | TBD :: TBD |
| 3633 | Land_sfc Water Area | O :: FI | Tsu | ASTER | AM1 | EDC | | TBD :: TBD | TBD | TBD :: Land/TBD | TBD :: TBD |
| 3634 | Snow Area | O :: FI | Tsu | ASTER | AM1 | EDC | | TBD :: TBD | TBD | TBD :: Land/TBD | TBD :: TBD |
| 3635 | Sea_sfc Temperature (SST) | O :: FI | Tsu | ASTER | AM1 | EDC | | TBD :: TBD | TBD | TBD :: Ocean/TBD | TBD :: TBD |
| 3636 | Ocean_Water Temperature-Pattern | O :: FI | Tsu | ASTER | AM1 | EDC | | TBD :: TBD | TBD | TBD :: Ocean/TBD | TBD :: TBD |
| 3637 | *CO2 Conc* | O :: PI | Beer | TES | CHEM | LaRC | ppb | | 1/(16 day) | 16 x 5 km :: L | |
| 3638 | *HCl Conc* | O :: PI | Beer | TES | CHEM | LaRC | | | 1/(16 day) | 16 x 5 km :: L | |
| 3639 | *HFl Conc* | O :: PI | Beer | TES | CHEM | LaRC | ppb | | 1/(16 day) | 16 x 5 km :: L | |
| 3640 | *Spectra, UV Stellar Comparison [0.1 nm res.?]* | O :: PI | Rottman | SOLSTICE | MO | GSFC | photons/cm^2/s/nm | <5% :: <1% | | N/A :: N/A | N/A :: NA |
| 3641 | *Cloud Cover* | O :: FI | Salomonson? | MODIS | AM,PM | GSFC | % | 10% :: 5% | 1/mo (day & night) | 0.25 km :: G | N/A :: Cloud |
| 3642 | *Lightning Occurrence (Location,Time)* | O :: PI | Christian | LIS | TRM | MSFC | | 10 km (in 1100km FOV) :: | | .07 dg :: G | N/A :: Atmos |
| 3643 | *Lightning Radiant Energy* | O :: PI | Christian | LIS | TRM | MSFC | | | | .07 dg :: G | N/A :: Atmos |
| 3644 | *Reflectance, Bi-directional (BRDF)* | O :: PI | Travis | EOSP | AERO,AM2 | LaRC | | 5% :: | 2 day [d] | 10 km :: G | NA :: Cloud, Sfc |
| 3645 | Instrument Characteristics, MODIS Level-1 | O :: FI | Salomonson, Barker | MODIS | AM,PM | GSFC | | | | | |
| 3646 | Radiance, At-Satellite, MODIS Level-1 | O :: FI | Salomonson, Barker | MODIS | AM,PM | GSFC | | | | | |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3647 | Reflectance, Exoatmospheric, MODIS Level- | O :: FI | Salomonson, Barker | MODIS | AM,PM | GSFC | | | | | |
| 3648 | Instrument Model, MODIS Level-1 | O :: FI | Salomonson, Barker | MODIS | AM,PM | GSFC | | | | | |
| 3649 | Radiance, Solar Diffuser, MODIS Level-1 | O :: FI | Salomonson, Barker | MODIS | AM,PM | GSFC | | | | | |
| 3650 | Radiance, Lunar Reference, MODIS Level-1 | O :: FI | Salomonson, Barker | MODIS | AM,PM | GSFC | | | | | |
| 3651 | Irradiance, Solar, MODIS Level-2 | O :: FI | Salomonson, Barker | MODIS | AM,PM | GSFC | | | | | |
| 3652 | Irradiance, Lunar, MODIS Level-2 | O :: FI | Salomonson, Barker | MODIS | AM,PM | GSFC | | | | | |
| 3653 | Reflectance, Lunar, MODIS Level-2 | O :: FI | Salomonson, Barker | MODIS | AM,PM | GSFC | | | | | |
| 3654 | Radiance Error, MODIS Level-2 | O :: FI | Salomonson, Barker | MODIS | AM,PM | GSFC | | | | | |
| 3655 | Reflectance Error, MODIS Level-2 | O :: FI | Salomonson, Barker | MODIS | AM,PM | GSFC | | | | | |
| 3656 | Geometric Error, MODIS Level-2 | O :: FI | Salomonson, Barker | MODIS | AM,PM | GSFC | | | | | |
| 3657 | Geometric Error, MODIS Level-3 | O :: FI | Salomonson, Barker | MODIS | AM,PM | GSFC | | | | | |
| 3658 | Texture, MODIS Level-2 | O :: FI | Salomonson, Barker | MODIS | AM,PM | GSFC | | | | | |
| 3659 | Texture, MODIS Level-3 | O :: FI | Salomonson, Barker | MODIS | AM,PM | GSFC | | | | | |
| 3660 | Classification Masks, Clouds/Snow/Land/Water, MODIS Level-2 | O :: FI | Salomonson, Barker (with Hall) | MODIS | AM,PM | GSFC | | | | | |
| 3661 | Classification Masks, Clouds/Snow/Land/Water, MODIS Level-3 | O :: FI | Salomonson, Barker (with Hall) | MODIS | AM,PM | GSFC | | | | | |
| 3662 | Organic Matter Degradation_Product Absorption Coef@415nm (DOM+Detritus) | O :: FI | Carder | MODIS | AM,PM | GSFC | /m | 40% :: 15% | 1/day, 1/wk, 1/mo | 20 km :: Ocean | N/A :: TOO |
| 3663 | Organic Matter Degradation_Product Absorption Coef@415nm (DOM+Detritus) | O :: FI | Carder | MODIS | AM,PM | GSFC | /m | 40% :: 15% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/R,L | N/A :: TOO |
| 3664 | Organic Matter Conc, Particulate | O :: FI | Clark | MODIS | AM,PM | GSFC | mg/m^3 | 50% :: 30% | 1/day, 1/wk | 1 km :: Ocean-I/L | N/A :: TOO |
| 3665 | Albedo, Spectral, Land_sfc | O :: FI | Muller, Strahler, Tanre | MODIS | AM,PM | EDC | fraction | 5% :: 3% | 1/day | 1 km :: Land/R | N/A :: Sfc |
| 3666 | Albedo, Total [SW], Land_sfc | O :: FI | Muller, Strahler, Tanre | MODIS | AM,PM | EDC | fraction | 5% :: 3% | 1/day | 1 km :: Land/R | N/A :: Sfc |
| 3667 | Albedo, Total [SW], TOA | O :: FI | Muller, Strahler, Tanre | MODIS | AM,PM | GSFC | fraction | 5% :: 3% | 1/day | 1 km :: Land/R | N/A :: TOA |
| 3668 | Ground Control Points, Potential | O :: FI | Muller | MODIS | AM,PM | GSFC | | 0.3 pixels :: | | 0.3 pixels :: Land/L | N/A :: Sfc |
| 3669 | Land_sfc Reflectance, Bidirectional (BRDF) | O :: FI | Muller, Strahler, Tanre | MODIS | AM,PM | EDC | fraction | 5% :: 3% | 1/day | 1 km :: Land/R | N/A :: Sfc |
| 3670 | Land_sfc Roughness | O :: FI | Muller, Tanre | MODIS | AM,PM | EDC | | 5% :: 3% | 1/day | 1 km :: Land/R | N/A :: Sfc |
| 3671 | Photogrammetric Camera Model | O :: FI | Muller | MODIS | AM,PM | GSFC | | | | N/A :: N/A | N/A :: N/A |
| 3672 | Simulated Data Sets, MODIS | O :: FI | Muller | MODIS | AM,PM | GSFC | | | | 0.25-1 km :: L(test sites) | N/A :: Sfc |
| 3673 | Simulated Scenes, MODIS, Monte Carlo Ray-Tracing | O :: FI | Muller | MODIS | AM,PM | GSFC | | | | 0.25-1 km :: L(test sites) | N/A :: Sfc |
| 3674 | Land_sfc Emissivity [2] | O :: FI | Kahle, Becker, Christensen | ASTER | AM1 | EDC | emissivity units | 0.05-0.1 :: 0.005 | 1/(0.5-16 day) | 90 m :: L | N/A :: Sfc |
| 3675 | Land_sfc Emissivity [3] | O :: FI | Kahle, Becker, Christensen | ASTER | AM1 | EDC | emissivity units | 0.05-0.1 :: 0.005 | 1/(0.5-16 day) | 90 m :: L | N/A :: Sfc |
| 3676 | *Aerosol Optical Depth* | O :: PI | Diner | MISR | AM | LaRC | dimensionless | 0.05/10% :: 0.05/10% | 9,16 day; mo; seas; yr | 15.4 km ? :: G | Column :: Atmos |
| 3677 | Aerosol Phase Function, Asymmetric | O :: PI | Diner | MISR | AM | LaRC | dimensionless | 0.05 :: 0.05 | 9,16 day; mo; seas; yr | 15.4 km ? :: G | Column :: Atmos |
| 3678 | Aerosol Size-distribution | O :: PI | Diner | MISR | AM | LaRC | dimensionless | 15% :: 10% | 9,16 day; mo; seas; yr | 15.4 km ? :: G | Column :: Atmos |
| 3679 | *Albedo, Planetary Spectral, TOA* | O :: PI | Diner | MISR | AM | LaRC | dimensionless | <=0.03 :: 0.01 | 9,16 day; mo; seas; yr | 1.92 km ? :: G | N/A :: TOA |
| 3680 | *Albedo, Spectral, Land_sfc* | O :: PI | Diner | MISR | AM | LaRC | dimensionless | <=0.03 :: 0.01 | 9,16 day; mo; seas; yr | 1.92 km ? :: G | N/A :: Sfc |
| 3681 | Pigment Conc, Phytoplankton | O :: PI | Diner | MISR | AM | LaRC | mg/m^3 | 30% :: 30% | 9,16 day; mo; seas; yr | 1.92 km ? :: Ocean/G,R | N/A :: TOO |
| 3682 | Vegetation Index, Normalized | O :: PI | Diner | MISR | AM | LaRC | dimensionless | 2% :: 2% | 9,16 day; mo; seas; yr | 1.92 km ? :: Land | N/A :: Sfc |
| 3683 | Radiance, Cloud Cleared, Level-2 | O :: FI | Chedin, McMillin, Rizzi, Smith, Susskind | AIRS | PM | GSFC | | | | | |
| 3684 | Cloud Optical Thickness | O :: FI | Smith, Gautier ?? | AIRS | PM | GSFC | dimensionless | TBD :: TBD | 1/day | 15 x 15 - 15 x 45 km :: G | N/A :: Cloud |
| 3685 | Cloud Transmissivity, Spectral | O :: FI | Chahine | AIRS | PM | GSFC | dimensionless | TBD :: TBD | 2/day [d,n] | 15 x 45 km :: G | N/A :: Cloud |
| 3686 | Cloud Reflectivity, Spectral | O :: FI | Chahine | AIRS | PM | GSFC | dimensionless | TBD :: TBD | 2/day [d,n] | 15 x 45 km :: G | N/A :: Cloud |

## Appendix C: Output/Input Data Products Listed by Product Number (Master Product List)

| Prod # | Product Name | Type | Investigator | Instrument | Platform | DAAC | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3687 | Radiative Flux, LW, Up (OLR) | O :: FI | Chedin, Revercomb, Susskind | AIRS | PM | GSFC | W/m^2 | 5 - TBD :: 3 - TBD | 2/day [d,n] | 50 km :: G | N/A :: TOA |
| 3688 | Tropopause Height | O :: FI | Smith, Susskind | AIRS | PM | GSFC | km | 1 km :: 0.5 km | 2/day [d,n] | 50 x 50 km :: G | N/A :: Atmos |
| 3689 | Cloud Radiative Forcing, LW | O :: FI | Susskind | AIRS | PM | GSFC | W/m^2 | 5 :: 3 | | | |
| 3690 | O3 Conc | O :: FI | Susskind | AIRS | PM | GSFC | Dobson unit | 10% :: 5% | 2/day [d,n] | 50 km :: G | variable :: Atmos |
| 3691 | Temperature Profile, Microwave [see also 1588] | O :: FI | Rosenkranz | AIRS[AMSU-A, MHS only] | PM | GSFC | K | 2-4 K :: 2-4 K | 2/day [d,n] | 50 km :: G | 1 km :: Atmos |
| 3692 | Humidity Profile, Microwave [see also 1828] | O :: FI | Rosenkranz | AIRS[AMSU-A, MHS only] | PM | GSFC | g/kg | 20% :: 20% | 2/day [d,n] | 50 km :: G | 2 km :: Atmos |
| 3693 | Precipitable Water, Microwave [see also 1869] | O :: FI | Rosenkranz | AIRS[AMSU-A, MHS only] | PM | GSFC | mm | 2 mm :: 1 mm | 2/day [d,n] | 50 km :: G | N/A :: Trop |
| 3694 | Precipitation Index, Microwave [see also 1969] | O :: FI | Staelin | AIRS[AMSU-A, MHS only] | PM | GSFC | mm | 2mm/hr :: 1mm/hr | 2/day [d,n] | 50 km :: G | N/A :: Trop |
| 3695 | Land_sfc Emissivity, Spectral (Microwave) [see also 2113] | O :: FI | Rosenkranz | AIRS[AMSU-A, MHS only] | PM | GSFC | dimensionless | 0.05 :: 0.025 | 2/day [d,n] | 15 x 45 km :: Land | N/A :: Sfc |
| 3696 | Land_sfc BRDF, AM-PM Asymmetry | O :: FI | Vanderbilt | MODIS | AM,PM | GSFC | 1/sr | 5% :: 30% | 1 day | 250 m, 1 km :: Land | N/A :: Sfc |
| 3697 | Land_sfc BRDF, AM-PM Degree_of_Asymmetry | O :: FI | Vanderbilt | MODIS | AM,PM | GSFC | % | 30% :: 30% | 1 day | 250 m, 1 km :: Land | N/A :: Sfc |
| 3698 | Cloud Reflectance, Bi-directional, SW_Broadband, (BRDF) | O :: PI | Barkstrom | CERES | TRM,AM,PM | LaRC | fraction | 5% :: 1% | | 10 dg [Angle] :: G | N/A :: Atmos |
| 3699 | Vegetation Index-Directional Reflectances, Atmosphere-Corrected [O3 & molecular scattering] | O :: FI | Huete, Justice | MODIS | AM,PM | EDC | dimensionless | 0.02 :: 0.01 [if low aerosols] | 1/day | 500 m :: Land/R | N/A :: TOA |
| 3700 | Vegetation Index, Hemispherical, Sfc | O :: FI | Huete, Justice | MODIS | AM,PM | EDC | dimensionless | 0.02 :: 0.01 | 1 wk, 1 mo | 1 km :: Land/R | N/A :: Sfc |
| 3701 | Vegetation Index, Composited, Sfc | O :: FI | Huete, Justice | MODIS | AM,PM | EDC | dimensionless | 0.02 :: 0.01 | 1/wk | 1 km :: Land/R | N/A :: Sfc |
| 3702 | Vegetation Index, Integrated Annual | O :: FI | Huete, Justice | MODIS | AM,PM | EDC | dimensionless | 0.02 :: 0.01 | 1/yr | 1 km :: Land/R | N/A :: Sfc |
| 3703 | Vegetation Index Temporal Signal | O :: FI | Huete, Justice | MODIS | AM,PM | EDC | dimensionless | 0.02 :: 0.01 | 1/yr (weekly points) | 1 km :: Land/R | N/A :: Sfc |
| 3704 | Vegetation Index [Self_Atmospheric-Correcting, TOA] | O :: FI | Huete, Justice, Kaufman, Tanre | MODIS | AM,PM | EDC | dimensionless | 0.02 :: 0.01 | 1/day | 1 km :: Land/R | N/A :: TOA |

# List of Data Product Groups

Appendix D

**Science Processing Support Office (SPSO)**

**Goddard Space Flight Center**

**August 1992**

## Appendix D : List of Data Product Groups

The attribute ranges encompass the requirements of the investigators for the indicated type.

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Domain keywords are described in Table A-3. Acronyms and abbreviations are described in Table A-1.

| *Product Name* | *Type* | *Investigator or Instrument Name* | *Units* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Coverage* | *Vertical Resol. :: Coverage* |
|---|---|---|---|---|---|---|---|
| Cloud Cover | I :: II | Barron; Hansen; Bates; Harris; Dickinson; Isacks; Kerr/Sorooshian; Lau; Liu; Moore; Murakami; Rothrock; Sellers; Simard; Srokosz; Wielicki | % | 2% - 10% :: 1% - 10% | 6/day [d,n] - 1/mo | 30 m - 500 km :: L/R/G | N/A; 0.5 km :: Trop-Atmos |
| | O :: FP | AIRS/AMSU; GLRS; HIRIS; ASTER; MODIS; CERES | dimensionless; % | 0.05; 1% -10% :: 0.025; 0.5% - 5%; | 1/(1-3 min); 1/mo | 30 m-200 km; 1 x 1 dg :: L-G | N/A :: Cloud |
| | O :: II | Barron; Wielicki; Dickinson | %; fraction | 5% :: 1% | 1/(5 min) - 2/day | 2 km - 4.5 x 7.5 dg :: | :: Atmos |

II's needing "Cloud Cover" as input data

Instruments producing "Cloud Cover"

II's generating the output product "Cloud Cover"

The II's and Instrument Teams present "Cloud Cover" as a percentage, or as a dimensionless areal fraction.

The absolute accuracies of the measured "Cloud Cover" percentage range from 1 to 5%, depending on the instrument, whereas the corresponding relative accuracies range from 0.5 to 5%. One instrument team gives the absolute accuracy as the fraction 0.05, with a relative accuracy 0.025

## Legend for Appendix D: List of Data Product Groups

## Appendix D: List of Data Product Groups

| *Product Name* | *Type* | *Investigator or Instrument Team Name* | *Units* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* |
|---|---|---|---|---|---|---|---|
| Acceleration, Diffusive_Meridional | O :: II | Bates (1377) | m/s^2 | | 1/(4-6 hr) | 50 km :: G | 25 lyr :: 1000-0.1 mb |
| Acceleration, Diffusive_Zonal | O :: II | Bates (1376) | m/s^2 | | 1/(4-6 hr) | 50 km :: G | 25 lyr :: 1000-0.1 mb |
| Aerosol Angstrom Exponent | I :: II | Harris (3442) | | 15% :: 5% | 1/day | 1-20 km :: Ocean/R | |
| | O :: FP | MODIS (2295/2296) | dimensionless | 15% :: 5% | 1/day-1/mo | 1 km - 20 km :: Ocean/R - L | N/A :: Atmos |
| Aerosol Backscatter | I :: II | Dickinson (3368); Murakami (2105) | | | | <0.5-1 deg :: G | |
| Aerosol Conc | I :: II | Grose (1006); Kerr-Sorooshian (1007); Moore (1008); Schoeberl (1010) | no/cm^3; mg/cm^3 | 5% - 50% :: 5% - 10% | 2/day - 1/(2 day) | 30m - 15 x 4 dg | 1 km - 3 km :: Atmos |
| Aerosol Conc, Stratospheric | I :: II | Mouginis-Mark (3263) | | | 1/wk | :: G | :: Strat |
| Aerosol Conc, Tropospheric | I :: II | Mouginis-Mark (3264) | | | 1/wk | :: G | :: Trop |
| Aerosol Dispersal, Eruption_Plume | O :: II | Mouginis-Mark (3265) | kg-sulfate/day | | 1/event | 1 km :: G | :: Plume_col |
| Aerosol Extinction | I :: II | Dickinson (3374); Murakami (2327) | /km | 5-10% :: | | <0.5-1 deg :: G | N/A :: Atmos |
| Aerosol Extinction Coef | O :: FP | HIRDLS (1992); SAGE-III (1012) | /km | 5-10% :: 0.05; 1-10% | 1/(2 min)- 2/day [d, n] | <2 x <1 dg ; 1 - 4 dg :: G | 1 km :: 0-40 km |
| Aerosol Layer Boundary Height | I :: II | Bates (1013); Isacks (1015) | m | 75m | 1/event - 1/mo | 2km - 200km | 75 m :: Atmos |
| | O :: FP | GLRS-A (1014) | m | 150 m :: | 1/(2-16 day) | 2-200 km :: G | 75 m :: Atmos |
| Aerosol Mass Loading | I :: II | Harris (3424) | g/m^2 | 1% :: 1% | 1/day | 50 km :: Ocean/R | |
| | I :: II | Isacks (1016) | g/m^2 | 30% :: 10% | 1/wk | 1-10 km :: Land/R | N/A :: Atmos |
| | O :: FP | MODIS (1017) | g/m^2 | 30% :: 10% | 1/day-1/mo | 0.5 dg :: R - G | N/A :: Atmos |
| Aerosol Optical Depth | I :: II | Hansen (1001/2287); Harris (3444); Hartmann (1002); Sellers (2288); Wielicki (2289) | dimensionless; eq.atm | tau=0.02; 10%,0.05 (eq. atm); 0.10 :: 5%,0.02 (eq. atm.); 0.10 | 2/day - 1/wk | 20 km - 500 km :: G; Ocean/R | 0 - 3 km :: Atmos |
| | O :: FP | EOSP (2297); GLRS-A (2291); HIRIS (2292); MISR (2298/2299/3676) | dimensionless | 0.20 - .05; 0.05/10% - 20% :: 0.01; 0.05/10% | 1/day [d]-1/(2-16 day) [d];mo; seas; yr | 2-200 km :: L - G | Column :: Atmos |
| Aerosol Optical Depth, Spectral | O :: FP | MODIS (2293/2294) | dimensionless | 0.05 - 0.1 :: 0.02 - 0.05 | 1/day- 1/mo | 0.5 dg :: Land - Ocean | N/A :: Atmos |
| Aerosol Phase Function, Asymmetric | O :: FP | MISR (2334/2335/3677) | dimensionless | 0.05 :: 0.05 | 1(5-16) day [d]; mo; seas; yr | 1.9 km - 15.4 km :: G | Column :: Atmos |
| Aerosol Radiance | O :: FP | MODIS (2344/2345) | mW/cm^2/sr/um | 10% :: 5% | 1/day- 1/mo | 1 km - 20 km :: Ocean/L - G | N/A :: Atmos |
| Aerosol Radiance, Single_scattering | I :: II | Harris (3446) | mW/(cm^2-sr-um) | 10% :: 5% | 1/day | 1-20 km :: Ocean/R | |
| Aerosol Size-distribution | I :: II | Bates (1019); Hartman (1020); Isacks (1024); Schoeberl (1021) | dimensionless; um; no/cm^3/um | 5% - 20% | 1/day - 1/(5 - 16 day) | 2 - 200 km | 0 - 15 km :: Atmos |
| | O :: FP | MISR (1993/1994/3678) | dimensionless | 15% :: 10 - 20% | 1/(5-16 day); mo; seas; yr | 1.9 - 15.4 km :: R - G | Column :: Atmos |
| Ocean Wave Length | I :: II | Harris (3432) | km | 10% :: 10% | 1/day | 1-10 km :: Ocean/R | |
| *Aerosol Size-distribution (Radius-Dispersion)* | O :: FI | MODIS (1022) | um, dimensionless | 10-30% :: 10% | 1/day,1/mo | 0.5 dg :: G,R | N/A :: Atmos |
| Aerosol XXX | I :: II | Bates (1005); Pyle (1003); Sellers (1004) | /m/sr | | 2/day - 1/(1-3 day) [few day] | 100 km :: G | 1 km :: Atmos; Strat |
| Albedo, Aerosol | O :: FP | MODIS (2003) | dimensionless | 0.06 :: 0.03 | 1/day-1/mo | 0.5 dg :: R - G | N/A :: Atmos |
| | I :: II | Dickinson (3361); Kerr-Sorooshian (2006); Sellers (2007) | dimensionless | 5% :: 5% | 1/hr - TBD | 500 m - 1dg :: R, G | :: Cloud |
| | O :: FP | HIRIS (2008) | % | 5% :: 5% | | 90 m :: R | :: Cloud |
| | O :: II | Dickinson (3525) | | | | 0.5-1 dg :: G | |
| Albedo, Land_sfc | I :: II | Barron (2013); Bates (1995); Dickinson (3363); Hartmann (1997); Issacks (1998); Kerr-Sorooshian (2014); Sellers (1999) | dimensionless | 1% - 10% :: 0.5% - 10% | 1/day - 1/wk | 250 m - 100 km :: Land/R,G | N/A :: Sfc |
| | O :: FP | AIRS (2000) ; MODIS (2015) | dimensionless | 15% :: 5 - 8% | 1/day-1/wk | 2.5 km - 50 km :: Land/ R - G | N/A :: Sfc |
| | O :: II | Schimel (2002) | % | 10% :: 1% | 1/day, 1/wk | [multiple] :: 6 sites/L | |
| Albedo, Planetary Spectral, TOA | I :: II | Kerr, Sorooshian (2009) | % | 3% - 10% :: 10% | 1/day | 25 km - 100 km | N/A :: TOA |
| | O :: FP | MISR (2010/2011/3679) | dimensionless | <=0.03 :: 0.01 | 1/(5-16 day) [d]; mo; seas; yr | 240 m ; 1.92 km :: Land/R - G | N/A :: TOA |
| | O :: II | Barron (2004/2005) | fraction | | 2/day | 2.8 x 2.8 dg - 4.5 x 7.5 dg :: | :: TOA |
| Albedo, Sea_ice | I :: II | Dickinson (3362); Rothrock (2012) | fraction | 0.05 :: 0.05 | 1/(3 day) - TBD | 25 km - 1 dg :: Polar; G | N/A :: Sfc |
| Albedo, Snow | I :: II | Dickinson (3364); Hansen (2017); Lau (2018); Simard (2019) | % | 2 - 10% :: 10% | 1/wk | 100 m - 500 km :: Land/R,G | N/A :: Sfc |
| Albedo, Spectral, Land_sfc | I :: II | Dozier (2020) | dimensionless | 5% :: 1% | 1/wk, 1/mo | 50m :: Land/L | |
| | O :: FP | MISR (2021/2022/3680), MODIS (3665) | fraction;dimensionless | <=0.03;.05 :: 0.01 - .03 | 1/day - 1/(5-16 day) [d]; mo; seas; yr | 240 m ; 1 km; 1.92 km :: R; G | N/A :: Sfc |
| Albedo, Spectral, TOA | O :: FP | MODIS (2001) | fraction | 10% :: 5% | 1/(3-8 day) | 1 km :: Land/R | N/A :: TOA |
| Albedo, TOA | I :: II | Barron (2023); Dickinson (3365) | % | 3 :: | 1/day | 100 km :: G | N/A :: TOA |
| Albedo, Total [SW], Land_sfc | O :: FP | MODIS (3666) | fraction | 5% :: 3% | 1/day | 1 km :: Land/R | N/A :: Sfc |

## Appendix D: List of Data Product Groups

| *Product Name* | *Type* | *Investigator or Instrument Team Name* | *Units* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* |
|---|---|---|---|---|---|---|---|
| Albedo, Total [SW], TOA | O :: FP | MODIS (3667) | fraction | 5% :: 3% | 1/day | 1 km :: Land/R | N/A :: TOA |
| Albedo, Vegetation | I :: II | Dickinson (3366/3367); Hansen (2024) | | 0.02 :: | 1/wk | Hi_res - 500km :: Land | :: Sfc |
| Angular Momentum | I :: II | Bates (1378) | kg m^2/s | 1% :: | | :: G | :: Atmos |
| | O :: II | Tapley (1379) | kg m^2/s | 1% :: | 4/day | :: G | :: Atmos |
| Anisotropy, LW_broadband, | O :: FP | CERES (2027) | fraction | 2% :: 0.005 | | 10 dg :: G | N/A :: Sfc - Atmos |
| Anisotropy, LW_broadband, Clear-sky | I :: II | Wielicki (2025/2026) | fraction | 2% :: 1% | | 10 dg :: G/clr | :: Sfc,Atmos |
| Bedrock Lithology | O :: II | Barron (2779/2815/2816) | | | 1/mission - 5000 yrs | 5 km - 100 km :: Land | |
| Bowen Ratio | O :: II | Schimel (2887) | ratio | 20% :: 1% | 1/day | 500 m :: 6 sites/L | :: Sfc |
| Br Conc | O :: II | Schoeberl (1025) | ppt | 20% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| Brightness Temperature (at Sensor) | O :: FP | ASTER (2452) | K | .5NEdT :: .2NEdT | 1/(2-16 day) | 90 m :: G | N/A :: at sensor |
| BrO Conc | I :: II | Grose (1026); Pyle (1027); Schoeberl (1028) | mix ratio | 20% - 25% :: 1 -15% | 2/day - 1/wk | 15 x 4 km - 30 x 4 dg | 2-3 km :: Strat |
| | O :: II | Schoeberl (1029) | ppt | 20% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| BrO(Br^81-O) Conc | O :: FP | MLS (1030) | mix ratio | :: 1x10-12 | 1/mo. [z. mean] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: 15-50 km |
| BrONO2 Conc | I :: II | Pyle (1031) | mix ratio (-log10) | 25% :: 10% | 2/day | 15 x 4 km :: G | 3 km :: Strat |
| | O :: II | Schoeberl (1032) | ppt | 20% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| BrOy Conc | O :: II | Pyle (1033) | | | | | |
| C Budget, Global | O :: II | Cihlar (2547) | kg/ha/yr | :: 0.1 | 1/yr | 1 km :: Land/R | N/A :: Sfc |
| C Flux | O :: II | Harris (3571) | | | | :: Ocean | |
| C Flux, Global | O :: II | Hansen (2548) | g-C/m^2/s | | 1/wk | 500 km :: | |
| C-Cycle Diagnostic Data | O :: II | Hansen (2554) | | | 1/wk | 500 km :: G | :: Trop |
| C2H6 Conc | I :: II | Schoeberl (1037) | ppb | 20% :: 0.2 | 1/wk | 8 x 10 dg :: G | 3 km :: Strat |
| Calibration Data, MODIS | O :: FP | MODIS (3303) | variable | | 1/day- 1/mo | N/A :: Ocean/R - G | N/A :: Sfc |
| CBrClF2 Conc | O :: II | Schoeberl (1038) | ppt | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| CCl4 Conc | O :: II | Schoeberl (1039/1041) | ppt | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| CFC-11(CFCl3) Conc | I :: II | Grose (1050); Pyle (1051); Schoeberl (1052) | mix ratio (-log10), ppt | 15% :: 5% - 10% | 2/day - 1/wk | 15 x 4 km - 30 x 4 dg | 1.5 - 3 km :: Strat |
| | O :: FP | HIRDLS (1055) | mix ratio | 5-10% :: 1-10% | 2/day [d, n] | 4 x 4 dg :: G | 1 km :: 7-30 km |
| | O :: II | Schoeberl (1053/1054) | ppb | 15% - 25% :: | 1/day - 1/mo | 2 x 3 dg - 10 dgZM :: G | 2 km :: 0 - 90 km |
| CFC-113(C2Cl3F3) Conc | O :: II | Schoeberl (1035) | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| CFC-114(C2Cl2F4) Conc | O :: II | Schoeberl (1034) | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| CFC-115(C2ClF5) Conc | O :: II | Schoeberl (1036) | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| CFC-12(CF2Cl2) Conc | I :: II | Grose (1042); Pyle (1043); Schoeberl (1044) | mix ratio | 15% :: 5% - 10% | 2/day - 1/wk | 15 x 4 km - 30 x 4 dg | 1.5 - 3 km :: Strat |
| | O :: FP | HIRDLS (1047) | mix ratio | 5-10% :: 1-10% | 2/day [d, n] | 4 x 4 dg :: G | 1 km :: 7-30 km |
| | O :: II | Schoeberl (1045/1046) | ppb | 15% - 25% :: | 1/day - 1/mo | 2 x 3 dg - 10 dgZM :: G | 2 km :: 0-90 km |
| CFC-XXX (HCFCs) Conc | O :: II | Pyle (1181) | | | | | |
| CFC-XXX Conc | O :: II | Hansen (1057) | | | | | |
| | O :: II | Pyle (1058) | | | | | |
| CFClO Conc | O :: II | Schoeberl (1056) | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| CH3 Conc | O :: II | Schoeberl (1060) | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| CH3Br Conc | I :: II | Pyle (1061), Schoeberl (1062) | mix ratio (-log10), ppt | 20% - 25% :: 2 -10% | 2/day - 1/wk | 15 x 4 km - 8 x 10 dg | 3 km :: Strat |
| | O :: II | Schoeberl (1063) | ppt | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| CH3CCl3 Conc | O :: II | Schoeberl (1064) | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| CH3Cl Conc | I :: II | Grose (1065); Pyle (1066); Schoeberl (1067) | mix ratio (-log10), ppt | 15% :: 5% | 1/wk | 30 x 4 dg :: G | 3 km :: Strat |
| | O :: FP | MLS (1070) | mix ratio | :: 1x10-11 | 2/day [d, n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: TPSE;40 km |
| | O :: II | Grose (1068); Schoeberl (1069) | mix ratio; ppb | 25% :: | 1/mo | ~6 x 6 dg - 10 dgZM :: G | 24 lvl; 2 km :: 0-90 km |
| CH3O Conc | O :: II | Schoeberl (1071/1072) | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| CH3O2 Conc | O :: II | Schoeberl (1072) | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| CH3OOH Conc | O :: II | Schoeberl (1073) | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| CH4 Budget | O :: II | Grose (1090) | | | 1/mo | ~6 x 6 dg :: G | |
| CH4 Conc | I :: II | Grose (1074); Hansen (1075/1076); Pyle (1077); Schoeberl (1078) | mix ratio (-log10), ppm | 0.1% - 15% :: 0.05% - 5% | 2/day - 1/wk | 15 x 4 km - 30 x 4 dg | 1.5 - 3 km :: Atmos |
| | O :: FP | HIRDLS (1085) ; SAFIRE (1086) ; TES (1087/1088/1089) | mix ratio; ppmv; ppb | 5-10% :: 1-10%; 14 ppb - 40 ppb | 1/(18-72 s) [?]-1/(16 day) | 4 x 4 dg ; 25 x 1-5 dg; 160 x 23 km :: G; 86S-86N | 1 km - 6 km :: 7-65 km |

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| *Product Name* | *Type* | *Investigator or Instrument Team Name* | *Units* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* |
|---|---|---|---|---|---|---|---|
| CH4 Conc | O :: II | Grose (1080); Pyle (1081); Schoeberl (1082/1083/1084) | mix ratio; ppm | 10% - 15% :: 10% | 1/day - 1/mo | ~6 x 6 dg - 10 dgZM :: R , G | 24 lvl; 1 km - 2 km :: 0 - 90 km |
| CH4 Emission | O :: II | Moore (1091/1092) | g/ha/timestep | 30%? :: 5-10%? | 1/mo | .030-1 km :: Land/R,L,G | :: Sfc |
| CH4 Flux | O :: II | Richey, Batista (1093/1094) | g/ha/day | 20% :: 20% | 1/day | 1 km :: Land/R | :: Sfc |
| CH4 Total Burden | O :: FP | AIRS (1095); MOPITT (1096) | ppb; ppbv | 175 :: 150; 1% | 1/(12 s) [?] -2/day [d, n] | 120 km - 250 km :: G | Column :: Atmos |
| CH4 Uptake | O :: II | Schimel (1098/1099) | g/ha/mo | 30% :: 5% | 1/seas | 30 m :: 6 sites/L | :: Sfc |
| CH4 Uptake Time-derivative | O :: II | Schimel (1100) | g/ha/mo^2 | 30% :: 1% | 1/seas | [multiple] :: 6 sites/L | :: Sfc |
| Chemistry Diagnostics, Seasonal | O :: II | Grose (1371) | | | 1/mo | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| Chlorophyll Conc | I :: II | Srokosz (2563) | ug/l | 10% :: 0.1mg | 1/day | 1 km :: Ocean [S. Atlan] | N/A :: Sfc |
| Chlorophyll Fluorescence | I :: II | Harris (3462) | mW/(cm^2-sr-um) | 25% :: 5% | 1/day | 1-20 km :: Ocean/R | |
| Chlorophyll Fluorescence Efficiency | O :: FP | MODIS (3211/3212) | dimensionless | 15% :: 5% | 1/day- 1/wk | 1 km - 20 km :: Ocean/R | N/A :: TOO |
| Chlorophyll Fluorescence Line Curv | O :: FP | MODIS (2573/2574) | mW/cm^2/sr/um | 25% :: 8% | 1/day- 1/wk | 1 km - 20 km :: Ocean/R - G | N/A :: TOO |
| Chlorophyll Fluorescence Line Height | O :: FP | MODIS (2575/2576) | mW/cm^2/sr/um | 0.004 :: 0.001 | 1/day-1/mo | 1 km - 20 km :: Ocean/L - G | N/A :: TOO |
| Chlorophyll_a Conc | I :: II | Harris (3454/3455/3456) | mg/m^3 | 20-40% :: 10-20% | 1-10 days | 0.25-20 km :: Ocean/R | |
| | O :: FP | MODIS (2569/2570/2571/2572) | mg/m^3 | 50-100% :: 10%- 35% | 1/day-1/mo | 1 km - 20 km :: Ocean/L - G | N/A :: TOO |
| Chlorophyll_a Conc (via Fluorescence) | O :: FP | MODIS (2566/2567) | mg/m^3 | 50-100% :: 35% | 1/day, 1/wk | 1 - 4 km :: Ocean/R,L | N/A :: TOO |
| Chlorophyll_a Conc, Case-II Waters | O :: FP | HIRIS (2565) | mg/m^3 | 100% :: 50% | 1/(2 day) [d] | 60-90 m :: Ocean-II/L | N/A :: TOO |
| Chlorophyll_a Conc, Case-I Waters, Phytoplankton | O :: FP | HIRIS (2564) | mg/m^3 | 50% :: 25% | 1/(2 day) [d] | 30-90 m :: Ocean-I/L | N/A :: TOO |
| CHO Conc | O :: II | Schoeberl (1101) | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| Cl Conc | O :: II | Schoeberl (1102) | ppb | 20% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| Classification Masks, Clouds/Snow/Land/Water, MODIS Level-2 | O :: FP | MODIS (3660) | | | | | |
| Classification Masks, Clouds/Snow/Land/Water, MODIS Level-3 | O :: FP | MODIS (3661) | | | | | |
| Climatology Diagnostic Data | O :: II | Hansen (2545) | | | 1/wk | 500 km :: G | :: Atmos |
| ClO Conc | I :: II | Grose (1103); Pyle (1104); Schoeberl (1105) | mix ratio (-log10), ppb | 10% - 20% :: 5 - 10% | 2/day - 1/day | 15 x 4 km - 30 x 4 dg | 3 km :: Strat; Mid-atmos |
| | O :: FP | MLS (1107) | mix ratio | <=5% :: 0.3-3x10-10 | 2/day [d, n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: TPSE, 70 km |
| | O :: II | Schoeberl (1106) | ppb | 20% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| ClONO2 Conc | I :: II | Grose (1108); Pyle (1109); Schoeberl (1110) | mix ratio (-log10), ppb | 15 - 20% :: 5 -10% | 2/day - 1/day | 15 x 4 km - 30 x 4 dg | 3 km :: Strat |
| | O :: II | Schoeberl (1111) | ppb | 20% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| Cloud Condensation Rate, Total | O :: II | Barron (1786/1787) | kg/m^2/s | | 2/day | 2.8 x 2.8 dg - 4.5 x 7.5 dg :: G | |
| Cloud Cover | I :: II | Barron(2049/2050/2051);Bates(2073/2074);Dickinson(3343);Hansen(2052);Harris(3436);Isacks(2053);Kerr-Sorooshian(2075); Lau(2054); Liu (2055); Moore(2057); Murakami(2058); Rothrock(2076);Sellers(2059); Simard(2056); | % | 2% - 10% ::1% - 10% | 6/day [d,n] - 1/mo | 30 m - 500 km :: L-G | N/A; 0.5 km :: Trop-Atmos |
| | O :: FP | AIRS (2062); GLRS-A(2078) ; HIRIS (2079) ; ASTER (2080) ; MODIS (2081/2082/3641) | dimensionless; % | 0.05; 1% -10% :: 0.025; 0.5% - 5% | 1/(1-3 min); 1/mo | 30 m; 10-200 km; 1 x 1 dg :: G; L | N/A :: Cloud |
| | O :: II | Barron (2064/2065/2066); Wielicki (2067); Dickinson (3521) | %; fraction | 5% :: 1% | 1/(5 min) - 2/day | 2 km - 4.5 x 7.5 dg | :: Atmos |
| Cloud Cover, Cirrus | I :: II | Bates (2069/2072); Lau (2070) | /m/sr; % | 5% :: 5% | 1/day | 100 km :: G | N/A; 0.5 km :: Trop |
| | O :: II | Bates (2083) | dimensionless | | 1/(20 min) | 50 km :: G | N/A :: High_cloud |
| Cloud Cover, Low-level | O :: II | Bates (2085) | dimensionless | | 1/(20 min) | 50 km :: G | N/A :: Low_Cloud |
| Cloud Cover, Mid-level | O :: II | Bates (2084) | dimensionless | | 1/(20 min) | 50 km :: G | N/A :: Mid_Cloud |
| Cloud Drop Phase | I :: II | Bates (1759); Dickinson (3346); Wielicki (1760/1761) | water/ice | 25%; 90% Conf ::10%; 90% Conf | 6/day [d,n] - 1/mo | .03 - 100 km :: R/G | N/A :: Atmos |
| | O :: FP | HIRIS (1762) ; ASTER (1763) ; MODIS (1764/1765); CERES (1767/1768/1769) | water/ice; dimensionless | water/ice ;90% Conf :: 90%-95% Conf | 1/day - 1/mo | 30 m-100 km; 1 x 1 dg :: L-G | N/A :: Cloud; Atmos |
| | O :: II | Wielicki (1766) | water/ice | 90% Conf :: 90% Conf | 18/day [d,n] | 25 km :: R | N/A :: Atmos |
| Cloud Drop Size | I :: II | Dickinson (3347); Wielicki (1771/1772) | um | 25%-30% :: 10% | 1/(16 day) - 6/day [d,n] | .03-100 km :: R,G | N/A :: Atmos |
| | O :: FP | BOSP (1774) | um | 25% :: 25% | 1/day [d] | 100 km :: G | N/A :: Cloud |
| | O :: II | Dickinson (3528); Wielicki (1773) | um | 30% :: 10% | 18/day [d,n] | 25 km; 0.5-1 dg :: R,G | N/A :: Atmos |

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| *Product Name* | *Type* | *Investigator or Instrument Team Name* | *Units* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* |
|---|---|---|---|---|---|---|---|
| Cloud Drop Size(Effective Radius) | I :: II | Bates (1777) | um | 0-40% :: 5% | 1/day, 1/mo | 1 dg :: G | N/A :: Cloud |
| | O :: FP | HIRIS (1778) ; ASTER (1779) ; CERES (1782/1783/1784); MODIS (1780/1781) | um | 10 um; 0-40% :: 5- 10% | 6/day [d,n] - 1/mo | 30 m-100 km; 1 - 1.25 dg :: L;G | N/A :: Cloud; Atmos |
| Cloud Drop Size-distribution | I :: II | Dickinson (3348); Hartmann (1775) | um | 20% :: 20% | 1/day | 10 km; <0.5-1 deg :: G | 0-15 km :: Cloud |
| | O :: FP | HIRIS (1776); ASTER (3627) | no/cm^2/um | 20% :: 10% | 1/(2-16 day) | 30 m - 25 km; 1 x 1 dg :: L - G | N/A :: Cloud; Atmos |
| Cloud Emissivity | I :: II | Dickinson (3372) | | | | <0.5-1 deg :: G | |
| | O :: FP | GLRS-A (2114); ASTER (2115); MODIS (2126/2127) | dimensionless | 5% - 10%; 0.1 :: 0.05 | 2/day -1/mo | 90 m; 1-100 km; 1 dg :: L - G | 150 m :: Cloud |
| | O :: II | Barron (2117/2118) | fraction | | 2/day | 2.8 x 2.8 dg - 4.5 x 7.5 dg :: G | |
| Cloud Emissivity, IR Spectral (3-16um) | O :: FP | AIRS (2128) | dimensionless | 0.05 :: 0.025 | 2/day [d, n] | 15 x 45 km :: G | N/A :: Cloud |
| Cloud Field Area | O :: FP | MODIS (2068) | km^2 | | 1/mo | 1 dg :: G | N/A :: Sfc |
| Cloud Field Organization scale | O :: FP | HIRIS (1509) | | | | :: L | |
| Cloud Field Perimeter | O :: FP | MODIS (2092) | km | | 1/mo | 1 dg :: G | N/A :: Sfc |
| Cloud Field Size-distribution | O :: FP | ASTER (2093) | dimensionless | | 1/(16 day) | 15-90 m :: L | N/A :: Cloud |
| Cloud Field Structure | O :: FP | HIRIS (1503) | | | | :: L | |
| Cloud Height | I :: II | Hansen (1399) | km (m) | 50 m :: | 1/wk | 500 km :: G | :: Cloud |
| | O :: FP | GLRS-A (1400) | m | 75 m :: | 1/(2-16 day) | 2-10 km :: G | 75 m :: |
| Cloud Height, Base | I :: II | Dickinson (3342); Kerr-Sorooshian (1385); Barron (1380/1381/1382); Bates (1384); Wielicki (1386/1387/1388) | m; km; mb | 100 m - 1 km :: 50 m - 100 m | 6/day [d,n] - 1/[16 day] | 30 m - 100 km :: L/R/G | 100 m; 100 mb :: Trop-Atmos |
| | O :: FP | GLRS-A (1389); HIRIS (1390); ASTER (1391); CERES (1394/1395) | m; km | 50 m - 1.0 km :: 50 m - 100 m | 6/day [d, n] - 1/mo | 30 m-100 km; 1 x 1 dg :: L-G | 75 m - 0.1 km :: Atmos |
| | O :: II | Wielicki (1392) | km | 1.0 km :: 0.1 km | 18/day [d,n] | 25 km :: R | 0.1 km :: Atmos |
| Cloud Height, Base, Cirrus | O :: II | Bates (1396) | mb | | 1/(20 min) | 50 km :: G | N/A :: High_cloud |
| Cloud Height, Base, Low-level | O :: II | Bates (1397) | mb | | 1/(20 min) | 50 km :: G | N/A :: Low_Cloud |
| Cloud Height, Base, Mid-level | O :: II | Bates (1398) | mb | | 1/(20 min) | 50 km :: G | N/A :: Mid_Cloud |
| Cloud Height, Cirrus | I :: II | Bates (1401); Lau (1402) | m | 100 m - 500 m :: | 2/day | 50 km :: G | N/A :: Cloud; Atmos |
| Cloud Height, PSC | I :: II | Pyle (1404) | | | 2/day | :: G | :: Strat |
| | O :: FP | GLRS-A (1405); HIRDLS (1408) | m; km | 150 m - 0.4 km :: 0.4 km | 2/day [d,n] -1/(2-16 day) | 2-200 km; 4 x 4 dg :: Polar; G | 75 m - 0.4 km :: Strat |
| Cloud Height, Stratoform | I :: II | Bates (1406) | m | 50 m :: | 2/day | 50 km :: G | N/A :: Cloud |
| Cloud Height, Top | I :: II | Barron (1412/1413/1414); Bates (1415/1416); Dickinson (3349); Harris (3437); Kerr-Sorooshian (1417); Murakami (1418); Wielicki (1422) | m, km | 100m - 1 km :: 25 m - 500 m | 6/day [d,n] :: 1/(16day ) | :30 m - 100 km :: L/R/G | N/A; 100 m :: Cloud; Atmos |
| | O :: FP | AIRS (1423); GLRS-A (1425); HIRIS (1426); ASTER (1427); CERES (1429/1430/1431); MISR (1432/1433) | km; m | 75 m - 1.0 km :: 250 - 300 m | 6/day [d,n] -1/(5-16 day) [d]; 1/mo | 15 x 45 km; 90 m - 200 m; 1 x 1 dg :: L - G | N/A ; 75 m ; 0.1 km :: Cloud; Atmos; Strat/Trop |
| | O :: II | Wielicki (1428) | km | 0.5 km :: 0.1 km | 18/day [d,n] | 25 km :: R | 0.1 km :: Atmos |
| Cloud Height, Top, Cirrus | O :: II | Bates (1434) | mb | | 1/(20 min) | 50 km :: G | N/A :: High_cloud |
| Cloud Height, Top, Low-level | O :: II | Bates (1435) | mb | | 1/(20 min) | 50 km :: G | N/A :: Low_Cloud |
| Cloud Height, Top, Mid-level | O :: II | Bates (1436) | mb | | 1/(20 min) | 50 km :: G | N/A :: Mid_Cloud |
| Cloud Height, Top, PSC | O :: FP | SAGE-III (1437) | km | 0.2 km :: 5% | 1/(2 min)-30/day | <2 x <1 dg :: G | 1 km :: Strat/Trop |
| Cloud Ice Content | I :: II | Bates (1890); Hartman (1785) | kg/m^2 | 0.02 :: 0.02 | 1/day | 10 km :: G, Ocean | N/A :: Cloud |
| | O :: II | Hartmann (1891) | kg/m^2 | 0.02 :: 0.02 | 1/day | 10 km :: G | |
| Cloud Ice Index | I :: II | Bates (1892) | dimensionless | | 2/day [d,n] | 50 km :: G | N/A :: Cloud |
| | O :: FP | AIRS (1893) | dimensionless | | 2/day [d, n] | 50 km :: G | N/A :: Cloud |
| Cloud JPDF | O :: FP | MODIS (2094) | dimensionless | | 1/day-1/mo | 1 dg :: G | N/A :: N/A |
| Cloud Liq_water Content | I :: II | Barron (1902/1903); Bates (1894/1904); Dickinson (3357/3358); Kerr-Sorooshian (1905); Wielicki (1906/1907) | mm; g/m^2 | 10% - 20% :: 5% - 10% | 6/day [d,n] - 1/day | 30 m -100 km ; 1 x 1 dg :: G | 1 km -30 km :: Cloud; Atmos |
| | O :: FP | AIRS (1908); CERES (1895/1896/1897); MLS (1898); HIRIS (2281); ASTER (3626) | g/m^3 | 0.1; 30% - 75% :: 0.1; 5% - 10% | - 1/(16 day) | 90 m - :: | NA :: Cloud |
| | O :: II | Barron (1912/1913); Dickinson (1914); Wielicki (1916) | g/cm^3; g/km; g/m^2 | 30% :: 10% | 1/hr - 1/(6 hr) | 1 -100 km :: R,G | 15-20 lvl :: Atmos |

## Appendix D: List of Data Product Groups

| *Product Name* | *Type* | *Investigator or Instrument Team Name* | *Units* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* |
|---|---|---|---|---|---|---|---|
| Cloud Liq_water Total Column | I :: II | Abbott (1918); Hartman (1919); Lau (1920); Sellers (1921); Srokosz (1922) | kg/m^2 | 10% :: 5%; 0.1 kg/m^2 | 1/day - 1/2 day | 10 km - 100 km :: Ocean-G | Column :: Trop |
| | O :: FP | CERES (1899/1900/1901); MIMR (3598, 3599) | kg/m^2 | 50% :: 10% | 6/day [d, n] -1/mo | 25 km - 1.25 x 1.25 dg :: G | Column :: Atmos |
| | O :: II | Hartmann (1923) | kg/m^2 | 0.05 :: 0.05 | 1/day | 10 km :: G | Column :: Trop |
| Cloud Masking-shadowing | O :: FP | MODIS (2282/2283/2284) | dimensionless | 5% - 30% :: | 1/day | .25 km - 1km :: G | N/A :: Sfc |
| Cloud Optical Depth | I :: II | Barron (2301/2302/2303); Bates (2304); Harris (3445); Hartmann (2306) | dimensionless | 3% - 25% :: 3% - 10%; 0.25 | 2/day - 1/mo | 30 m-100 km :: Ocean/GRL; G | N/A :: Cloud |
| | O :: FP | GLRS-A (2308); HIRIS (2309); ASTER (2310); MODIS (2311/2312) | dimensionless | 0.1; 3% - 20% :: 1.50% - 10% | 1/(1-3 min)- 1/mo | 30 m - 200 km :: L - G | Column :: Cloud |
| | O :: II | Dickinson (3526) | dimensionless | 25% :: 10% | 18/day [d,n] | 25 km -1 dg :: R,G | :: Atmos |
| Cloud Optical Depth, Cirrus | O :: FP | GLRS-A (2300) | | 20% :: | 1/(2-16 day) | 1-100 km :: G | |
| Cloud Optical Depth, LW | I :: II | Dickinson (3381); Wielicki (2314) | dimensionless | 25% :: 10% | 6/day [d,n] | 25-100 km :: G | N/A :: Atmos |
| | O :: FP | CERES (2316/2317/2318) | dimensionless | 10% - 25% :: 5% - 10% | 6/day [d, n]; 1/day, 1/mo [Aug] | 25 km - 1.25 dg :: G | N/A :: Atmos |
| | O :: II | Wielicki (2315) | | | | | |
| Cloud Optical Depth, PSC | O :: FP | GLRS-A (2324) | dimensionless | 0.1 :: | | 200 m :: Polar | N/A :: Strat |
| Cloud Optical Depth, SW | I :: II | Dickinson (3382); Wielicki (2319) | dimensionless | 25% :: 10% | 6/day [d,n] | 25-100 km :: G | N/A :: Atmos |
| | O :: FP | CERES (2321/2322/2323) | dimensionless | 10% - 25% :: 5% - 10% | 1/(6 hr) - 3/day [d, n] | 25 km ; 1.25 dg :: G | N/A :: Atmos |
| | O :: II | Wielicki (2320) | | | | | |
| Cloud Optical Thickness | O :: FP | AIRS (3684) | | | | | |
| Cloud Phase | O :: II | Dickinson (3524) | | | | 0.5-1 dg :: G | |
| Cloud Pressure | O :: II | Dickinson (3523) | | | | 0.5-1 dg :: G | |
| Cloud Pressure, Top | I :: II | Bates (1527); Dickinson (3330) | mb | 50 mb :: 20 -100 mb | 1/(6 hr) - 2/day | 5 km - 1 dg :: G | N/A;100 mb :: Cloud |
| | O :: FP | EOSP (1530); HIRDLS (1531); MODIS (1528/1529) | mb | 30 mb - 50 mb ; 5-10% :: 20 mb - 30 mb; 5-10% | 2/day-1/mo | 5 km - 4 x 4 dg :: G | 30 mb; 0.4 km :: Trop |
| Cloud Radiation | I :: II | Moore (2360) | cal/cm^2/day | 10% :: 10% | 1/wk | 1 km :: G | :: Cloud |
| Cloud Radiative Forcing | I :: II | Bates (2421) | W/m^2 | | 1/wk | 500 km :: G | :: Atmos |
| | O :: II | Hansen (2422) | W/m^2 | | 1/wk | 500 km :: G | :: Atmos |
| Cloud Radiative Forcing, LW | | AIRS (3689) | | | | | |
| Cloud Reflectance, Bi-directional, (BRDF) | I :: II | Wielicki (3615/2423) | | 5% :: 2% | | <0.5-1 deg; 10 dg [Angle] :: G | N/A :: Cloud |
| | O :: FP | CERES (3698); HIRIS (2037); MISR (2038/2039) | /sr | 3%-5% :: 1% | [variable] [d] | 30 m - 240 m; 1.92 :: R-G | N/A :: Cloud; Trop |
| Cloud Reflectance, Bi-directional, SW_Broadband, (BRDF) | O :: FP | CERES (3698) | fraction | 5% :: 1% | | 10 dg [Angle] :: G | N/A :: Atmos |
| Cloud Reflectivity, Spectral | | Chahine (3686) | | | | | |
| Cloud Spectral Char | I :: II | Liu (2546) | | | | :: G | N/A :: Cloud |
| Cloud Structure, 3-D | O :: FP | ASTER (1409) | | | 1/(16 day) | 15-90 m :: L | 15-90 m :: Cloud |
| Cloud Structure, Cirrus | O :: FP | GLRS-A (1410) | /m | 0.2 :: | 1/(2-16 day) | 1-10 km :: G | 75 m :: |
| Cloud Structure, Mesoscale | O :: II | Hartmann (1411) | | | 1/day | 100 km :: Sites | |
| Cloud Temperature | I :: II | Sellers (2457) | | | | | |
| Cloud Temperature, Emission | I :: II | Barron (2458/2459); Dickinson (3386) | K | 1 - 2; 5% :: 0.5K -1K; 5% | 1/hr - 1/wk | 500 m - 500 km :: R/G | N/A :: Cloud |
| Cloud Temperature, Top | I :: II | Bates (2460); Dickinson (3387); Hansen (2461); Harris (3449); Kerr-Sorooshian | K | 1-2 K; 5% :: 0.5 K - 2K; 5% | 1/hr - 1/wk | 500 m - 500 km :: R, G | N/A :: Cloud |
| | O :: FP | AIRS (2463); ASTER (2465); MODIS (2466/2467) | K;C | 1K - 2 K (C) :: 0.5 K - 2 K (C) | 2/day [d, n]-1/mo | 90 m - 15 x 45 km; 1 dg :: L-G | N/A :: Cloud |
| | O :: II | Bates (2468/2469/2470); Dickinson (3522) | K | | 1/(20 min) | 50 km - 1 dg :: G | N/A :: Low - High Cloud |
| Cloud Thickness | O :: FP | ASTER (3625) | | | 1/(16 day) | 100 m :: L | N/A :: Cloud |
| Cloud Transmissivity | I :: II | Dickinson (3396); Rothrock (2544) | | 0.1 :: 0.1 | 1/day | <0.5-1 deg :: G; Polar | N/A :: Cloud |
| Cloud Transmissivity, Spectral | | AIRS (3685) | | | | | |
| Cloud XXX, PSC | I :: II | Grose (3307) | no/cm^3 | 20% :: 10% | 2/day | 15 x 4 dg :: G | 2 km :: Strat |
| ClOy Conc | O :: II | Grose (1112/1113/1114); Pyle (1115) | mix ratio | | 1/mo - 48/day [for 10 day] | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |

## Appendix D: List of Data Product Groups

| *Product Name* | *Type* | *Investigator or Instrument Team Name* | *Units* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* |
|---|---|---|---|---|---|---|---|
| CO Conc | I :: II | Dickinson (3325); Grose (1116); Hansen (1117); Moore (1118); Pyle (1119); Schoeberl (1120/1121) | mix ratio; ppmv; ppb | 0.1%-25% :: 5%-10% | 2/day - 1/wk | 15 x 4 km - 30 x 4 dg :: G | 2 km - 10 km :: Atmos |
| | O :: FP | MLS (1124/1125) ; MOPITT (1126) ; TES (1127/1128/1129) | mix ratio; ppb | <=5% :: 3x10-8 - 1x10-5; 10%; 3 ppb - 15 ppb | 1/(0.4 s) [?]-1/(16 day) | 0.1 x 2.5 dg ; 160 x 23 km - 16 x 5 km :: 82N-82S; G | 2.5 km - 6 km :: TPSE; 60-100 km; 0-30 km |
| | O :: II | Brewer (1134/1135); Schoeberl (1123) | ppb | 20% :: | 1/(3 mo) | 6 regions :: R | 1 km :: 0-15 km |
| CO Flux | O :: II | Brewer (1134/1135) | mol-CO/m^2/s | 30% :: 20% | 1/day | 30 m - 20 km :: Ocean/L,G | N/A :: Sfc |
| CO Total Burden | O :: FP | AIRS (1136) ; MOPITT (1137) | ppb | 20 :: 15; 10% | 1/(4 s) [?] - 2/day [d, n] | 66 km - 250 km :: G | Column :: Atmos |
| CO2 Conc | I :: II | Grose (1138); Hansen (1139); Sellers (1141); Kerr-Sorooshian (1140) | mix ratio; ppm | 1% - 15%; 0.2 ppm :: 0.5% - 15% | 1/day - 1/mo | 50 km - 500 km; ZM :: G | 1 km -10 km :: Atmos |
| | O :: FP | TES (3637) | ppb | | 1/(16 day) | 16 x 5 km :: L | |
| CO2 Exchange | O :: II | Moore (1143/1144); Schimel (1145) | various; g/ha/hr | 25% :: 1% | 1/day | Mult :: Land/R, G,6 sites/L | :: Sfc |
| CO2 Exchange Time-deriv | O :: II | Schimel (1146) | g/ha/hr^2 | 25% :: 1% | 1/day | Mult :: 6 sites/L | :: Sfc |
| CO2 Flux | O :: II | Brewer (1148/1149); Richey-Batista (1147); Sellers (1150) | mol-CO2/m^2/s; kg/ha/hr; mmol/m^2/s | 20% :: 20% | 1/hr - 1/day | 30 m-1 dg :: Ocean/L,R,G | N/A :: TOO; Sfc |
| CO2 Partial Pressure | I :: II | Hansen (3075) | | 2% :: | 1/wk | 500 km :: Ocean | :: TOO |
| CO2 Total Burden (Mixing Ratio) | O :: FP | AIRS (1151) | ppm | 25 :: 20 | 2/day [d, n] | 50 km :: G | Column :: Atmos |
| Coccolith Backscatter Coef | O :: FP | MODIS (2556/2557) | /m | 25% :: 10% | 1/day -1/mo | 1 km - 20 km :: Ocean/R - G | N/A :: TOO |
| Coccolith Conc, Detached | O :: FP | MODIS (2577/2578) | mg-CaCO3/m^3 | 30% :: 10% | 1/day -1/mo | 1 km - 20 km :: Ocean/L - G | N/A :: TOO |
| COF2 Conc | O :: II | Brewer (1153); Schoeberl (1152) | mix ratio; ppb | 25% - 30% :: 20% | 1/day - 1/mo | TBD - 10 dgZM :: L,G | 2 km :: 0-90 km |
| Coral Reef Maps | O :: FP | ASTER (3631) | | | | :: Ocean/TBD | |
| COS Conc | O :: II | Brewer (1154) | mix ratio | 30% :: 20% | 1/day | :: G | :: PBL |
| COS Flux | O :: II | Richey, Batista (1155) | kg/ha/hr | 20% :: 20% | 1/day | 1 km :: Land/R | |
| Crustal Motion | O :: II | Isacks (3588) | | | | :: Land/R(Andes) | |
| CS2 Conc | O :: II | Brewer (1156/1157) | mix ratio | 30% :: 20% | 1/day | :: L,G | :: PBL |
| Data Characteristics, MODIS | O :: FP | MODIS (3304/3305/3306) | dimensionless | 30,10, 5% :: | 1/day | 1 km - 50 km :: G | N/A :: Sfc |
| DMS Conc | I :: II | Schoeberl (1158) | ppb | 20% :: 0.1 | 1/wk | 8 x 10 dg :: G | 3 km :: Trop |
| | O :: II | Brewer (1159/1160) | mix ratio | 30% :: 20% | 1/day | :: L,G | :: PBL |
| DMS Flux | O :: II | Brewer (1161/1162) | mol/m^2/s | 30% :: 20% | 1/day | 30 m - 20 km :: Ocean/L,G | N/A :: Sfc |
| Drainage_Basin Boundary | I :: II | Lau (2904) | km^2 | 100m^2 :: 100m^2 | 1/mission | 10 m :: Land/L | N/A :: Sfc |
| | O :: II | Kerr, Sorooshian (2886) | km^2 | 10000 km^2 :: | 1/mission | 30 m :: Land/R | :: Sfc |
| Drainage_Network Structure | I :: II | Isacks (2902); Barron (2905) | feature recog.; m | 30 m :: | 1/3mo; 1/yr; 1/mission | 15-30 m :: Land/L, R | N/A :: Sfc |
| Dust Composition | O :: II | Isacks (3584) | | | | :: Land/R(Andes) | |
| Dust Conc | O :: II | Isacks (3580) | | | | :: Land/R(Andes) | |
| Dust Size | O :: II | Isacks (3583) | | | | :: Land/R(Andes) | |
| Dust Source | O :: II | Isacks (3582) | | | | :: Land/R(Andes) | |
| Dust Spatial Distribution | O :: II | Isacks (3581) | | | | :: Land/R(Andes) | |
| Electric Conductivity | I :: II | Dickinson (3419) | | | | <0.5-1 deg :: G | |
| Electric Field Strength, DC | I :: II | Dickinson (3420) | | | | <0.5-1 deg :: G | |
| Electron Content, Total, (TEC) | O :: FP | GGI (3229) | | :: 0.10% | 1/s [?] | multiple :: G | mult :: 0-20000 km |
| Electron Content-Difference, Total, (TEC-difference) | O :: FP | GGI (3228) | | :: 0.10% | 1/s [?] | various :: G | mult :: 0-20000 km |
| Electron Energy Spectra | I :: II | Schoeberl (3226) | electrn/cm^2/s/keV | 20% :: 15% | 1/day | 5 dgLAT :: G | N/A :: 50-700 km |
| Energy Flux, Net | O :: II | Dickinson (3537) | | | 1/mo | 1 x 1 dg :: | |
| Erosion Chemical Denudation | O :: II | Barron (2770/2771) | mm/kyr | | 1/yr | 10 km - 100 km :: Land/R,G | |
| Erosion Rock Weathering | I :: II | Barron (2807/2808) | | | 1/mission | 10 km - 100 km :: Land/R,G | N/A :: Sfc |
| Erosion Sediment Yield | O :: II | Barron (2782) | kg/km^2 | | ? 5000 yr | 5 km :: 2 sites | |
| Erosion-Deposition Events | O :: II | Isacks (3589) | | | | :: Land/R(Andes) | |
| Eruption-Plume Characteristics | O :: FP | ASTER (3301) | variable | variable :: variable | | 15,30,90 m :: R/L | |

## Appendix D: List of Data Product Groups

| *Product Name* | *Type* | *Investigator or Instrument Team Name* | *Units* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* |
|---|---|---|---|---|---|---|---|
| Eruption-Plume Dispersal | I :: II | Mouginis-Mark (3273) | km/day | 1 km :: | 1/orbit, 1/day | 1 km :: Land/L | N/A :: Plume_col |
| | O :: II | Mouginis-Mark (3267) | km/day | | 1/event | 1 km :: R | N/A :: Sfc |
| Eruption-Plume Fallout Rate | I :: II | Mouginis-Mark (3282) | | | 1/day | 1 km :: Land/R | N/A :: Plume_col |
| Eruption-Plume HCl Content (Mass Eruption Rate) | I :: II | Mouginis-Mark (3283) | kton/day | | 1/day | :: G | N/A :: Plume_col |
| Eruption-Plume Height | I :: II | Mouginis-Mark (3285) | km | 200m(ver) :: | 1/day | 1 km :: Land/R | N/A :: Plume_col |
| | O :: FP | MISR (3286) | m | 100 m :: 100 m | [variable] [d] | 500 m :: Land/L | N/A :: Plume_top |
| Eruption-Plume Temperature | I :: II | Mouginis-Mark (3293) | C | 10 C :: | 2/day [d,n] | 100 m :: R | N/A :: Plume_col |
| Eruption_Plume SO2 Conc Spike | I :: II | Mouginis-Mark (3288) | kton/day | | [near-real time ?] | 1 km :: G | N/A :: Plume_col |
| Eruption_Plume SO2 Content (Mass Eruption Rate) | I :: II | Mouginis-Mark (3289) | kton/day | | 1/day | 1 km :: G | N/A :: Plume_col |
| Eruption_Plume SO2 Eruption Rate, Mass | O :: II | Mouginis-Mark (3281) | kg/day | | 1/day, 1/wk | 1 km :: G | N/A :: Sfc |
| Evaporation, Land_sfc | I :: II | Dickinson (3350) | | | | <0.5-1 deg :: G | |
| | O :: II | Lau (3507) | | | | :: G | N/A :: Sfc |
| Fire Burning Index | O :: II | Moore (2633) | ha | | 1/yr | 1 km :: Land | |
| Fire Class | O :: FP | MODIS (2711) | C | 10 C :: 5 C | 1/day - 1/wk | 10 km :: Land | N/A :: Sfc |
| Fire Count | O :: FP | MODIS (2663/2664) | | | 1/day - 1/wk | 1 km - 10 km :: Land/R - G | N/A :: Sfc |
| Fire Extent | I :: II | Dickinson (3398) | | 10% :: | 1/wk | <0.5 deg - 500 km::Land | |
| | O :: FP | MODIS (2665/2666) | | | 1/day - 1/wk | 1 km; 1 dg :: Land/R,G | N/A :: Sfc |
| Fire Temperature | O :: FP | MODIS (2471) | C | 10 C :: 5 C | 1/day - 1/wk | 1 km :: Land/R | N/A :: Sfc |
| Fires [Count, Extent, etc.] | I :: II | Hansen (2662) | | 10% :: | 1/wk | 500 km :: Land | :: Sfc |
| Fish-stock Abundance | O :: II | Harris (3570) | | | 1/seas - 1/yr | :: Ocean / R(Australia-STC) | |
| Forest Deforestation | I :: II | Hansen (2658) | | 10% :: | 1/wk | 500 km :: Land | :: Sfc |
| Gelbstoff Absorption Coef | I :: II | Harris (3453) | /m | 20% - 50% :: 10% | 1/day - 1/seas | 30m - 20 km :: Ocean | N/A :: Ocean |
| Gelbstoff Absorption Coef@300nm | I :: II | Brewer (3213/3214) | /m | 50% :: 10% | 1/day, 1/seas | 30 m :: Ocean/L | N/A :: TOO |
| Gelbstoff Absorption Coef@410nm | O :: FP | HIRIS (3215) | /m | 50% :: 0.25 | 1/(2 day) [d] | 30-90 m :: Ocean-I/L | N/A :: TOO |
| Geodetic Baselines | O :: FP | GGI (2818) | km | :: 2:10^9 | 1/min | :: G | :: Sfc |
| Geodetic Carrier Phase, GPS(L1,L2), | O :: FP | GGI (2819) | mm | :: 0.4 mm | 1/(0.1 s) | :: G | |
| Geodetic EOS-platform Position | O :: FP | GGI (2862) | cm | :: <3 cm | 1/s | | :: In_situ |
| Geodetic Geocenter | O :: FP | GGI (2850) | cm | :: 2 cm | 1/day | | |
| Geodetic Location, Reference | O :: II | Tapley (2857) | cm | < 2 cm :: <1 cm | | N/A :: G | N/A :: Sfc |
| Geodetic Orientation | O :: FP | GGI (2861) | arcsec | :: 0.001arc-s | 2/day | | |
| | O :: II | Tapley (2860) | mas (m-arc_sec),ms | 1mas,0.1ms :: | 1/day | N/A :: G | N/A :: N/A |
| Geodetic Pseudorange, GPS(L1,L2) | O :: FP | GGI (2867) | cm | :: 12 cm | ? 1/s | :: G | |
| Geodetic Site Position, Horizontal | I :: II | Isacks (2863) | mm | 3-5 mm :: 1-2 mm | 1/seas, 1/yr | point :: Land/R | N/A :: Sfc |
| Geodetic Site Position, Vertical | I :: II | Isacks (2865) | mm | 5 mm :: 2 mm | 1/seas, 1/yr | point :: Land/R | N/A :: Sfc |
| Geologic Unit Maps (Geology Maps) | O :: FP | ASTER (2883) | N/A | variable :: variable | 50/mission | 90 m :: Land/R,L | |
| Geometric Error, MODIS Level-2 | O :: FP | MODIS (3656) | | | | | |
| Geometric Error, MODIS Level-3 | O :: FP | MODIS (3657) | | | | | |
| Geopotential Gravity Field | O :: II | Barron (2852/2853) | m^2/s^2 | | 2/day | 2.8 x 2.8 dg - 4.5 x 7.5 dg :: G | |
| Geopotential Height | O :: II | Bates (1498) | m | | 1/(20 min) | 50 km :: G | 50 lvl :: 1000-0.1 mb |
| Geopotential Height Gradient | I :: II | Bates (1499) | m/km | 0.04m/km :: | 2/day | 4 x 4 dg :: G | 1-1.5 km :: Atmos |
| | O :: FP | HIRDLS (1500) | m/km | 0.04m/km :: 0.04m/km | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 15-80 km |
| Geopotential Height RMSE | O :: II | Bates (1540) | m | | 1/(20 min) | 100 km :: G | 25 lvl :: 1000-0.1 mb |
| Glacier Cover | I :: II | Isacks (2923) | km^2 | 5% :: 2% | 1/seas | 10-30 m :: Land/L | N/A :: Sfc |
| Glacier Cover, Bare_Ice | O :: FP | HIRIS (2922) | km^2 | 5% :: 2% | 1/wk-1/mo | 50 m :: Glacier/L | N/A :: Sfc |

## Appendix D: List of Data Product Groups

| *Product Name* | *Type* | *Investigator or Instrument Team Name* | *Units* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* |
|---|---|---|---|---|---|---|---|
| Glacier Displacement | I :: II | Simard (2894) | m | 10 cm :: | 1/yr, 1/seas | :: Canada/R | N/A :: Sfc |
| | O :: FP | HIRIS (2895) | km^2 | 1% :: 0.20% | 1/yr | 30 m :: Glacier/L | N/A :: Sfc |
| Glacier Percolation Zone | O :: FP | HIRIS (2978) | km^2 | 5% :: 2% | 1/wk-1/mo | 50 m :: Glacier/L | N/A :: Sfc |
| Glacier Velocity | O :: FP | HIRIS (2930) ; ASTER (2931) | m/s | 10^-6 :: variable | 1/yr | 15 -100 m :: Land/Cryo | N/A :: Sfc |
| Glint Field | O :: FP | MODIS (2254) | dimensionless | | 1/orbit [d] | 1 km :: Ocean/R | N/A :: Sfc |
| Ground Control Points, Potential | O :: FP | MODIS (3668) | | 0.3 pixels :: | | 0.3 pixels :: Land/L | N/A :: Sfc |
| Ground Water Sum Routing | O :: II | Richey, Batista (2710) | g/ha/day | 20% :: 20% | 1/mo | 1 km :: Land/R | |
| H Conc | O :: II | Schoeberl (1163) | ppb | 30% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| H2 Conc | O :: II | Schoeberl (1164) | ppm | 15% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| H2CO Conc | O :: FP | MLS (1165) | mix ratio | :: 2x10-11 | 1/day [z. mean] | 0.1 x 2.5 dg :: 82N-82S | 2.5 - 3 km :: 30 - 50 km |
| | O :: II | Schoeberl (1059) | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| H2O (H2^17O) Conc | O :: FP | SAFIRE (1852) ; MLS (1854) | ppbv | :: 2%<50km - 10% (20-40 km) | 1/(36-72 s) [?] - 2/day [d, n] | 25 x 2.5-5 dg :: 86S-86N | 2.5 - 3 km :: 20-90 km; TPSE |
| H2O (H2^18O) Conc | O :: FP | SAFIRE (1853) ; MLS (1855) | ppmv | :: 2%<50km - 10% (20-50 km) | 1/(36-72 s) [?] - 2/day [d, n] | 25 x 2.5-5 dg :: 86S-86N | 2.5 - 3 km :: 20-80 km; TPSE |
| H2O (HDO) Conc | I :: II | Schoeberl (1856) | ratio to H2O | 10% :: 10% | 1/day | 8 x 10 dg :: G | 3 km :: Strat |
| | O :: FP | SAFIRE (1857) | ppmv | :: 7% (20-50 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 10-60 km |
| H2O Conc | I :: II | Bates (1808); Grose (1811); Pyle (1819); Schoeberl (1821/1822) | g/m^3; mix ratio; mix ratio (-log10); ppm | 5-15% :: 1-5%; 5%t;0.05s | 2/day - 1/day | 15 x 4 km - 30 x 4 dg :: G | 1-3 km :: 10-80 km; Trop/Meso/Strat |
| | O :: FP | HIRDLS (1837) ; MLS (1838) ; SAFIRE (1839) ; SAGE-III (1840/1841) ; TES (1844) | mix ratio; /cm^3 & ppmv; ppm | 5-10% :: 1-15%; 0.05 - 50 ppm | 1/(36-72 s) [?] - 1/(16 day) | <2 x <1 dg - 25 x 2.5-5 dg; 16 x 5 km :: G; 82N-82S; Polar | 1 km - 6 km :: 7-100 km; TPSE |
| | O :: II | Grose (1832); Pyle (1833); Schoeberl (1834/1835) | mix ratio; ppm | 15% - 30% :: 10% | 48/day [for 10 day] | ~6 x 6 dg :: G | 2 km; 24 lvl |
| H2O Conc, Stratospheric | I :: II | Hansen (1864) | | 3% :: | 1/wk | 500 km :: G | Column :: Strat |
| | O :: FP | TES (1842/1843) | ppm | :: 0.5 ppm | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 13-30 km |
| H2O2 Conc | I :: II | Grose (1166); Pyle (1167); Schoeberl (1168) | mix ratio (-log10); mix ratio; ppb | 20% - 25% :: 10%; 0.1t,.05s (ppb) | 2/day - 1/wk | 15 x 4 km - 30 x 10 dg | 2 km - 3 km :: Strat |
| | O :: FP | MLS (1171) ; SAFIRE (1172) | mix ratio; ppbv | :: 1x10-10; 7% (30-35 km) | 1/(36-72 s) - 1/day [z. mean] | 0.1 x 2.5 dg - 25 x 2.5-5 dg :: 82N-82S | 2.5 km - 3 km :: 20-50 km |
| | O :: II | Schoeberl (1169/1170) | ppb | 30% :: | 1/mo - 1/(3 mo) | 10 dgZM :: G, 6Regions | 1 - 2 km :: 0-90 km |
| H2S Conc | O :: II | Brewer (1173/1174) | mix ratio | 30% :: 20% | 1/day | :: L,G | :: PBL |
| Halons Conc | O :: II | Pyle (1175) | | | | | |
| HBr Conc | I :: II | Grose (1176); Pyle (1177); Schoeberl (1178) | mix ratio | 25% :: 10% | 1/day | 30 x 4 dg :: G | 3 km :: Strat |
| | O :: FP | SAFIRE (1180) | ppbv | :: 10% (25-35 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 15-40 km |
| | O :: II | Schoeberl (1179) | ppt | 20% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| HCl Conc | I :: II | Grose (1182); Pyle (1183); Schoeberl (1184) | mix ratio (-log10); mix ratio; ppb | 15% :: 5% - 10% | 2/day - 1/day | 4 x 5 dg - 30 x 4 dg :: G | 2-3 km :: Strat-Mid-atmos |
| | O :: FP | SAFIRE (1187); TES (3638) | ppbv | :: 5% (25-55 km) | 1 scan/(36-72 s); 1/(16 days) | 25 x 2.5-5 dg; 15 x 5 km :: 86S-86N | 3 km :: 10-65 km |
| | O :: II | Grose (1185); Schoeberl (1186) | mix ratio; ppb | 20% :: | 1/mo - 1/seas | ~6 x 6 dg - 10 dgZM :: G | 24 lvl; 2km :: 0-90 km |
| HCl(H_Cl^35) Conc | O :: FP | MLS (1188) | mix ratio | <=5% :: 0.1-10x10-10 | 2/day [d, n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: TPSE, 90 km |
| HCl(H_Cl^37) Conc | O :: FP | MLS (1189) | mix ratio | <=5% :: 0.1-10x10-10 | 2/day [d, n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: TPSE, 80 km |
| HCN Conc | I :: II | Schoeberl (1190) | ppb | 20% :: 0.01 | 1/wk | 8 x 10 dg :: G | 3 km :: Strat |
| | O :: FP | MLS (1191); SAFIRE (1192) | mix ratio; ppbv | <=5% :: 4x10-11; 35% (25-30 km) | 1/(36-72 s) - 2/day [d, n] | 0.1 x 2.5 dg - 25 x 2.5-5 dg :: 82N-82S | 2.5 km - 3 km :: 20-65 km |
| Heat Flux | O :: II | Barron (2130) | W/m^2 | | 1/day | 200 km :: R | |
| Heat Flux Convergence, Eddy | O :: II | Barron (1494) | W/m^2 | | 1/(5 day) | 2.5 dg :: G | 10 lvl :: |
| Heat Flux Rate, Latent | O :: II | Barron (1495/1496) | m/s ? | | 2/day | 2.8 x 2.8 dg - 4.5 x 7.5 dg :: G | |
| Heat Flux, Feedback | O :: II | Hansen (2135) | W/m^2 | | 1/wk | 500 km :: G | :: Atmos |
| Heat Flux, Horizontal | O :: II | Kerr, Sorooshian (2136) | W/m^2/um | | | 10 km :: Land/R | :: Trop |
| Heat Flux, Latent | I :: II | Bates (1464/1465); Brewer (1467); Dickinson (3327); Lau (1468) | W/m^2 or mm/day | 10 (W/m^2 or mm/day); 10% :: 10; 10% - 20% | 1/hr - 1/seas | 30 m - 100 km :: Ocean; >60 dgLAT; Land/L | N/A :: Sfc |

## Appendix D: List of Data Product Groups

| *Product Name* | *Type* | *Investigator or Instrument Team Name* | *Units* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* |
|---|---|---|---|---|---|---|---|
| Heat Flux, Latent | O :: II | Abbott (1469); Barron (1470); Bates (1471); Dickinson (3531); Hartman (1472); Kerr-Sorooshian (1473); Liu (3517); Murakami (3563); Rothrock (1474); Srokocz (3539) | W/m^2 | 10% - 20% :: 10% - 20% | 1/(20 min) - 1/mo | 500 m - 2.5 dg :: R/G; Land; Ocean; Select; >60 dgLat; -Pacific | Sfc; 10 lvl :: Sfc |
| Heat Flux, Net | I :: II | Murakami (1475) | W/m^2 | 5% :: | | | |
| Heat Flux, Sensible | I :: II | Bates (1476); Brewer (1477); Dickinson (3328); Lau (1479) | W/m^2 | 10% :: 10% - 20% | 1/hr - 1/seas | 30 m - 100 km:: Ocean; >60 dgLAT; Land/L | |
| | O :: II | Barron (1480/1481/1482); Bates (1483); Dickinson (3530); Kerr-Sorooshian (1484/1485); Liu (3518); Rothrock (1486); Sellers (1487); Srokocz (3540) | W/m^2 | | 1/(20 min) - 1/mo | 500 m - 4.5 x 7.5 dg :: R/G; Land | N/A :: Sfc |
| Heat Flux, Sfc | I :: II | Dozier (2131) | W/m^2 | | 1/wk | 50 m :: Land/L | N/A :: Sfc |
| | O :: II | Barron (1488/1489/1490/1491/2132) | W/m^2 | | 1/ (5 min) - 1/(5 day) | 500 m - 2.5 dg :: G/R | Sfc; 10 lvl :: Sfc |
| Heat Flux, Zonal_mean | O :: II | Barron (3100) | W/m^2 | | 1/(5 day) | 2.5 dgZM :: G | 10 lvl :: |
| Heat Flux-Change Statistics, Latent | O :: II | Srokocz (3545) | | | 1/mo | >= 1 dg (Select) :: | |
| Heat Flux-Change Statistics, Sensible | O :: II | Srokocz (3546) | | | 1/mo | >= 1 dg (Select) :: | |
| Heat Transport | O :: II | Dickinson (3534) | | | 1/mo | 1 x 1 dg :: | |
| Heating Rate, Convective | O :: II | Bates (1441) | K/s | | 1/(4-6 hr) | 50 km :: G | 25 lyr :: 1000-0.1 mb |
| Heating Rate, Diffusive | O :: II | Bates (1442) | K/s | | 1/(4-6 hr) | 50 km :: G | 25 lyr :: 1000-0.1 mb |
| Heating Rate, Latent | I :: II | Lau (1501/1502) | C/day | 0.5 - 1 C/dy :: 5% | 1/day - 1/mo | 50 km - 500 km :: R/G | 1 - 2 km :: Trop |
| Heating Rate, LW_Radiative | O :: II | Barron (1450/1451); Bates (1452) | K/s | | 1/(4-6 hr) - 2/day | 50 km - 4.5 x 7.5 dg :: G | |
| Heating Rate, SW Radiative | O :: II | Barron (1453/1454) | K/s | | 2/day | 2.8 x 2.8 dg - 4.5 x 7.5 dg :: G | :: Sfc |
| Heating Rate, U-horizontal_Diffusive | O :: II | Barron (1455/1456/1457/1458) | K/s | | 2/day | 2.8 x 2.8 dg - 4.5 x 7.5 dg :: G | |
| Heating Rate, V-horizontal_Diffusive | O :: II | Barron (1459/1460/1461/1462) | K/s | | 2/day | 2.8 x 2.8 dg - 4.5 x 7.5 dg :: G | |
| Heating, Convective | O :: II | Barron (1443/1444) | W/m^3 | | 1/hr | 1-100 km :: R | |
| Heating, Diabatic | I :: II | Dickinson (3326) | | | | <0.5-1 deg :: G | |
| Heating, East-West Sfc-stress | O :: II | Barron (1445/1446) | J/m^2/s | | 2/day | 2.8 x 2.8 dg - 4.5 x 7.5 dg :: G | |
| Heating, Latent | I :: II | Bates (1463) | | | | 25 km :: G | 10 lvl :: Trop |
| | O :: II | Lau (3511) | | | | | :: Atmos |
| Heating, Net_Diabatic | O :: II | Barron (1449) | W/m^2 | | 1/(5 day) | 2.5 dg :: G | 10 lvl :: |
| Heating, North-South Sfc-stress | O :: II | Barron (1447/1448) | J/m^2/s | | 2/day | 2.8 x 2.8 dg - 4.5 x 7.5 dg :: G | |
| HF Conc | I :: II | Grose (1193); Pyle (1194); Schoeberl (1195) | mix ratio; ppb | 15% - 25% :: 5% - 10% | 2/day - 1/day | 4 x 5 dg - 30 x 4 dg :: G | 2 km - 3 km :: Strat |
| | O :: FP | SAFIRE (1197) | ppbv | :: 15% (40-60 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 40-60 km |
| | O :: II | Schoeberl (1196) | ppb | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| HFl Conc | O :: FP | TES (3639) | ppb | | 1/(16 day) | 16 x 5 km :: L | |
| HNO3 Conc | I :: II | Grose (1198); Pyle (1199); Schoeberl (1200) | mix ratio; ppb | 15% - 20% :: 5%; 0.1ppb | 2/day - 1/day | 2 x 3 dg - 30 x 4 dg :: G | 2-3 km :: Strat-Mid-atmos |
| | O :: FP | HIRDLS (1202) ; MLS (1203) ; SAFIRE (1204) ; TES (1206) | mix ratio; ppbv; ppt | <=5% -10% :: 1-10%; 5x10-10; 3 ppt | 2/day [d, n] | 0.1 x 2.5 dg -0.1 x 2.5 dg :: 82N-82S | 2.5 km :: TPSE - 80 km |
| | O :: II | Schoeberl (1201) | ppm | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| HNO4 Conc | I :: II | Grose (1207); Schoeberl (1208) | mix ratio; ppb | 20% - 50% :: 2% -10% | 2/day - 1/wk | 8 x 10 dg - 30 x 4 dg :: G | 3 km :: Mid-atmos |
| | O :: II | Schoeberl (1209) | ppm | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| HNOx Conc | I :: II | Pyle (1210) | mix ratio (-log10) | 25% :: 10% | 2/day | 15 x 4 km :: G | 3 km :: Strat |
| HO2 Conc | I :: II | Grose (1212); Pyle (1213); Schoeberl (1214) | mix ratio; ppb | 15% - 25% :: 10%; 0.02ppb | 2/day - 1/day [d] | 15 x 4 km - 30 x 10 dg :: G | 2-3 km :: Strat-Mid-atmos |
| | O :: FP | MLS (1216); SAFIRE (1217) | mix ratio; ppbv | :: 3-20x10-10; 7% (30-60 km) | 1/(36-72 s) [?] - 2/day [d, n] | 0.1 x 2.5 dg -25 x 2.5-5 dg :: 82N-82S | 2.5 km - 3 km :: 20 km- 80 km |
| | O :: II | Schoeberl (1215) | ppb | 30% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| HOCl Conc | I :: II | Grose (1218); Pyle (1219); Schoeberl (1220) | mix ratio; ppb | 20% - 25% :: 2% - 10% | 2/day - 1/wk | 15 x 4 km - 30 x 4 dg :: G | 3 km :: Strat |
| | O :: FP | MLS (1222) ; SAFIRE (1223) | mix ratio; ppbv | :: 3x10-11; 7% (35-40 km) | 1/(36-72 s) [?] - 1/day | 0.1 x 2.5 dg -25 x 2.5-5 dg :: 82N-82S | 2.5 km - 3 km :: 20km - 45 km |
| | O :: II | Schoeberl (1221) | ppb | 20% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| HOy Conc | O :: II | Grose (1224/1225/1226); Pyle (1227) | mix ratio | | 48/day [for 10 day] - 1/mo | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| Humidity | I :: II | Murakami (1818) | g/kg | 10% :: | | | |
| | O :: II | Barron (1829/1830) | g/kg | | 1/hr | 1-100 km :: R | |

## Appendix D: List of Data Product Groups

| *Product Name* | *Type* | *Investigator or Instrument Team Name* | *Units* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* |
|---|---|---|---|---|---|---|---|
| Humidity Profile | I :: II | Abbott (1805); Barron (1806/1807); Bates (1809); Dickinson (3353); Hansen (1812); Harris (1813); Hartman (1814); Isacks (1815); Kerr-Sorooshian (1816); Liu (1817); Sellers (1823); Tapley (1825); Wielicki (1826) | mix ratio; g/kg; g/m^3; ppm; Pa | 3% - 20%; TBD ::1% - 10%; TBD | 4/day [d,n] - 1/wk | 10 km - 500 km :: R;G Land/Ocean/Polar | 0 - 3 km :: 0 - 80 km |
| | O :: FP | AIRS (1828/3692) | g/kg | 10% :: 5% | 2/day [d,n] | 50 km :: G | 2 km :: Atmos |
| | O :: II | Barron (1831) | g/cm^3; g/kg | | 1/(6 hr) - 1/day | 10 km - 1 dg :: R/G | 15-20 lvl :: PBL |
| Humidity Profile, PBL | O :: II | Barron (1880) | g/kg | | 1/day | 10 km :: R | :: PBL |
| Humidity Profile, Specific | I :: II | Srokosz (1824) | g/kg | 0.3g/kg :: 0.1g/kg | 2/day | 10 km :: Ocean [South Atlan] | |
| | O :: II | Bates (1879) | g/kg | | 1/(20 min) | 50 km :: G | 50 lyr :: 1000-0.1 mb |
| Humidity, Near_sfc | I :: II | Dickinson (3354); Rothrock (1820) | g/cm^3 | | 1/day | <0.5-1 deg :: G; Polar | N/A :: Near_sfc |
| Humidity, Relative, Near_sfc | I :: II | Kerr, Sorooshian (1881) | % | 10% :: 10% | 1/hr | 1 km :: Land/R | N/A :: Sfc |
| Humidity, Specific | O :: II | Barron (1439/1440/1882/1883) | g/kg; kg/kg | | 1/(5 min) - 2/day | 500 m - 4.5 x 7.5 dg :: [East U.S.]; G | |
| Humidity, Specific, Near_sfc | O :: II | Bates (1884/1885) | g/kg | | 1/(20 min) | 25 km - 50 km :: G | N/A :: Near_sfc |
| Humidity-Change, Specific, Convective_Adjusted | O :: II | Barron (1886/1887) | kg/kg/s | | 2/day | 2.8 x 2.8 dg - 4.5 x 7.5 dg :: G | |
| Humidity-RMSE, Specific | O :: II | Bates (1982) | g/kg | | 1/(20 min) | 100 km :: G | 25 lyr :: 1000-0.1 mb |
| Humidity-Tendency, Specific | O :: II | Barron (1888/1889) | kg/kg/s | | 2/day | 2.8 x 2.8 dg - 4.5 x 7.5 dg :: G | |
| Hydrological Parameter, XXX | O :: II | Moore (3069) | % saturation | | 1/wk | 1 km :: Land | |
| Ice_Sheet Accumulation | O :: II | Simard (2927) | | 20% :: | 1/yr | :: Canada/R | :: Sfc |
| Ice_Sheet Boundary (Margin) | O :: II | Simard (2928) | | 20% :: | 1/yr | :: Canada/R | :: Sfc |
| Ice_Sheet Cover | I :: II | Bates (2918) | dimensionless | | 2/day [d,n] | 50 km :: Land/Cryo | N/A :: Sfc |
| Ice_Sheet Cover Index | O :: FP | AIRS (2921) | dimensionless | | 2/day [d, n] | 50 km :: Land/Cryo | N/A :: Sfc |
| Ice_Sheet Displacement | I :: II | Simard (2896) | m | 10 cm :: | 1/yr, 1/seas | :: Canada/R | N/A :: Sfc |
| | O :: FP | GLRS-A (2897) | mm/day;m/yr | 10 mm/dy ; 0.5 km/dy :: 10 mm/dy; 0.5 km/dy | 1/wk -1/yr | 30 m - 15 km :: Land/Cryo | N/A :: Sfc |
| | O :: II | Simard (2899) | cm | 10 cm :: | 1/yr | :: Canada/R | :: Sfc |
| Ice_Sheet Elevation | I :: II | Barron (2906/2907); Isacks (2908); Simard (2909/2910) | mm; m | 100 :: | 1/(3 mo) - 2/yr | 10 m - 100 km :: Land/Cryo,R | N/A :: Sfc |
| | O :: FP | ALT (2911); GLRS-A (2912) | m;mm | .1m-5m :: 100 mm | 1/mo - 1/yr | 75 m - 15 km :: Land/Cryo | N/A :: Sfc |
| Ice_Sheet Mass balance | O :: II | Barron (2945) | cm/yr | | 1/yr | 100 km :: Antarctica | |
| Ice_Sheet Roughness | O :: FP | GLRS-A (1554) | mm | 100 mm :: 100 mm | 1/(3 mo) | 75 m :: Cryo | :: Sfc |
| Ice_Sheet Strain Rate | O :: FP | GLRS-A (3048) | u-strain/yr | 10^-6/yr :: 10^-6/yr | 1/(3 mo) | 10-100 km :: Land/Cryo | N/A :: Sfc |
| Ice_Sheet Temperature | I :: II | Barron (3051/3052); Dickinson (3388) | K | 1 K :: | 1/wk | 10 km - 100 km :: Land/Cryo | N/A :: Sfc |
| Ice_Sheet Thickness | I :: II | Barron (3053/3054); Simard (3055/3056) | mm | 100 :: | 1/(3 mo) | 10 km-100 km :: Land/Cryo,R | 0 - 30m :: Sfc |
| Ice_Sheet Velocity | I :: II | Barron (2929) | m/s | | | :: Land/Cryo | N/A :: Sfc |
| Ice_Sheet Velocity (Outflow), Polar | O :: FP | HIRIS (2932) | m/s | 10^-6 :: variable | 1/yr | 100 m :: Cryo | N/A :: Sfc |
| Industrial_Emissions Conc | I :: II | Hansen (1372) | mix ratio | 2% :: | 1/wk | 500 km :: G | :: Trop |
| Infiltration | O :: II | Barron (2933/2934/2935) | mm/s | | 1/event, 1/mo, 1/yr | 30 m -18km :: R | |
| Infiltration Capacity | I :: II | Kerr, Sorooshian (2936) | L/T | | 1/yr | 30 m :: Land/R | |
| Instrument Characteristics, MODIS Level-1 | O :: FP | MODIS (3645) | | | | | |
| Instrument Model, MODIS Level-1 | O :: FI | MODIS (3648) | | | | | |
| Inundation Depth | O :: II | Moore (2937) | m | | 1/wk | 1 km :: Land | |
| Inundation Extent | I :: II | Lau (2938); Moore (2939/2942) | m^2; ha/km^2 | 10% - 20% :: 5% - 20% | 1/wk; 1/mo | 100 m - 25 km :: Land/L,G | N/A :: Sfc |
| | O :: II | Moore (2941) | ha/km^2 | | 1/wk | 1 km :: Land | |
| Irradiance, Incident, Sfc | I :: II | Dickinson (3384) | | | | <0.5-1 deg :: G | |
| Irradiance, Lunar, MODIS Level-2 | O :: FP | MODIS (3652) | | | | | |
| Irradiance, Solar | I :: II | Abbott (2269); Grose (2271); Hansen (2272); Pyle (2273) | W/m^2; W/m^2/nm | 0.05% - 5% :: 1% | 2/day - 1/wk | 4 km - 500 km; 15 x 4 dg :: Ocean [Southern]; G | 0 - 3 km :: Sfc-TOA |
| Irradiance, Solar, MODIS Level-2 | O :: FP | MODIS (3651) | | | | | |
| Irradiance, Solar, Total | O :: FP | ACRIM (2274) | W/m^2 | 0.10% :: 0.00% | 1/(2 min) | N/A :: N/A | N/A :: TOA |
| Irradiance, Total | O :: II | Kerr, Sorooshian (2270) | | | | | |
| Irradiance, UV Solar | I :: II | Brewer (2275/2276) | E/m^2/s/Hz | 20% :: 5% | 1/day, 1/seas | 30 m - 20 km :: Ocean/L,R | |
| Irradiance, UV Solar [0.0015 nm res.] | O :: FP | SOLSTICE (2277) | photons/cm^2/s/nm | <5% :: <1% | 1/hr | N/A :: N/A | N/A :: NA |

## Appendix D: List of Data Product Groups

| *Product Name* | *Type* | *Investigator or Instrument Team Name* | *Units* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* |
|---|---|---|---|---|---|---|---|
| Irradiance, UV Solar [0.1 nm res.] | O :: FP | SOLSTICE (2278) | photons/cm^2/s/nm | <5% :: <1% | 1/hr | N/A :: N/A | N/A :: NA |
| Irradiance, Visible Solar | I :: II | Brewer (2279/2280) | E/m^2/s/Hz | 20% :: 5% | 1/day, 1/seas | 30 m - 20 km :: Ocean/L,R | |
| Lake Extent | I :: II | Barron (3062); Isacks (3059) | m^2 | 10% :: 10% | 1/day | 15 m -30 m; TBD :: Land/L,R | N/A :: Sfc |
| Lake Water Attenuation Coef | I :: II | Richey, Batista (3203) | /m | 10% :: 10% | 1/wk | 1 km :: Land/R | N/A :: TOO |
| Lake Water Chemistry, XXX | I :: II | Richey, Batista (2812) | g/m^3; kg/ha | 5 - 20% :: 5 - 20% | 1/wk - 1/seas | 1 km :: Land/R | N/A :: Sfc |
| Lake Water Chlorophyll Conc | I :: II | Richey, Batista (2654) | g/m^3 | 20% :: 10% | 1/wk | 1 km :: Land/R | N/A :: TOO |
| Lake Water Temperature, Volcano Summit | I :: II | Mouginis-Mark (3291) | C | 2 C :: | 1/(3 mo) | 100 m :: Land/L | N/A :: Sfc |
| Land Geochemical Analysis | O :: II | Dozier (2811) | N/A | | 1/day | 50 m :: L | |
| Land Heat Capacity | I :: II | Kerr, Sorooshian (2855) | | | | 30 m :: Land/R | N/A :: Sfc |
| Land Thermal inertia | I :: II | Kerr, Sorooshian (2541) | cal/cm^2/K/s | .008 :: .004 | 1/(16 day) | 60 m :: Land/R | N/A :: Sfc |
| | O :: FP | ASTER (2542) | cal/cm^2/K/s | 0.008 :: 0.004 | | 15-90 m :: Land/R,L | N/A :: Sfc |
| Landform Distribution | I :: II | Barron (2849) | m | 30 m :: | 1/(3 mo) | 30 m :: Land/L | N/A :: Sfc |
| Landform Face Freshness | O :: II | Isacks (3590) | | | | :: Land/R(Andes) | |
| Landform Feature Distribution | I :: II | Isacks (2851) | feature recog. | | 1/mission | 15-30 m :: Land/R | N/A :: Sfc |
| Landform Lineament / Slope Maps | O :: FP | ASTER (2856) | Orientation/length | 10% :: 5% | 1/seas | 15-30 m :: Land/R,L | N/A :: Sfc |
| Landform Morphology | O :: FP | GLRS-A (2858) | mm | 100-500mm :: | 1/wk-1/yr | 0.1-10 km :: Land | 100-500 mm :: Sfc |
| Landform Scarp-fault Elevation | I :: II | Isacks (2869) | cm | 10 cm :: 5 cm | 1/mission | [2-D sect.] :: Land/L | N/A :: Sfc |
| Landform Sfc units, Geologic | O :: FP | HIRIS (2884) | dimensionless | :: 30% | | 30 m :: L | N/A :: Sfc |
| Landform Stratigraphy | O :: II | Isacks (3591) | | | | :: Land/R(Andes) | |
| Landform Structures(Relief/Lithology-Change) | O :: II | Isacks (3592) | | | | :: Land/R(Andes) | |
| Land_Cover Type | O :: FP | MODIS (2669/2670) | categorical fraction | 0.1 :: 0.05 | 1/mo -1/seas | 1 km - 5 km :: Land | N/A :: Sfc |
| Land_Cover Type-Change | O :: FP | MODIS (2671/2672) | categorical fraction | 0.1 :: 0.07 | 1/seas | 1 km - 5 km :: Land | N/A :: Sfc |
| Land_sfc Biochemical Analysis | O :: II | Dozier (2553) | N/A | | 1/day | 50 m :: L | |
| Land_sfc BRDF, AM-PM Asymmetry | O :: FP | MODIS (3696) | 1/sr | 5% :: 30% | 1 day | 250 m, 1 km :: Land | N/A :: Sfc |
| Land_sfc BRDF, AM-PM Degree_of_Asymmetry | O :: FP | MODIS (3697) | % | 30% :: 30% | 1 day | 250 m, 1 km :: Land | N/A :: Sfc |
| Land_sfc Brightness Temperature (Radiance) | O :: FP | ASTER (2453), TES (2455) | K | 1-2 K :: 0.3 - 1 K | 1/(2-16 day) | 90 m - 16 x 5 km :: G | N/A :: Sfc |
| Land_sfc Emissivity | I :: II | Bates (2112); Dickinson (3373); Kerr-Sorooshian (2123); Wielicki (2120) | fraction; % | 0.025 - .05 :: 0.025 - .05 | 2/day [d,n]; 1/yr | 90 m - 1.25 dg :: Land/R-G | N/A :: Sfc |
| | O :: FP | MODIS (2110/2111/3323/3324) | dimensionless | 0.01 - 0.05 :: 0.01 - 0.02 | 1/day, 1/wk | 1 km - 50 km :: Land/R - G | N/A :: Sfc |
| | O :: FP | ASTER (2124/3674/3675) | emissivity units | 0.05-0.1 :: 0.005 | 1/(0.5-16 day) | 90 m :: L | N/A :: Sfc |
| Land_sfc Emissivity, LW (8-12u) | I :: II | Cihlar (3487) | fraction | 0.025 :: 0.025 | 10 day | 1.25 deg :: Canada/R | N/A :: Sfc |
| Land_sfc Emissivity, Relative Spectral | O :: FP | ASTER (2129) | dimensionless | :: 0.02 | 1/(0.5-16 day) | 15-30 m :: Land/R,L | N/A :: Sfc |
| Land_sfc Emissivity, Spectral | I :: II | Isacks (2125) | | | 1/yr | 15-90 m :: Land/L | N/A :: Sfc |
| | O :: FP | AIRS (2113/3695) | dimensionless | 0.05 :: 0.025 | 2/day [d, n] | 15 x 45 km :: Land | N/A :: Sfc |
| Land_sfc Radiance-Corection, Topographic | O :: FP | MODIS (2404/2405) | | | 1/day | 1 km - 10 km :: Land/R - G | N/A :: Sfc |
| Land_sfc Rebound, Post-Glacial, | O :: II | Tapley (2868) | /yr | 5% :: | 1/(~10 yr) | N/A :: G | ns [?] :: Global |
| Land_sfc Reflectance Factor, MODIS | I :: II | Cihlar (2437) | | 0.05 :: 0.001 | 1/(3 mo) | 0.25 km :: Canada/R | N/A :: Atmos |
| Land_sfc Reflectance, Bi-directional Spectral, (BRDF) | I :: II | Sellers (2041) | | | | 250-500 m :: Land | |
| | I :: II | Dickinson (3369); Sellers (2034) | | | | <0.5-1 deg :: G | |
| | O :: FP | HIRIS (2035); MISR (2631/2632); MODIS (2424/2425) | dimensionless; %;fraction;/sr | 5% - 15% :: 2% - 8% | 1/(5-16 day) -1/wk | 30 m - 10 km :: Land/L - R | N/A :: Sfc |
| Land_sfc Reflectance, Bi-directional, SW_Broadband, (BRDF) | I :: II | Wielicki (2043/2044) | fraction | 5% :: 2% | | 10 dg :: G | N/A :: Sfc; Cloud |
| | O :: FP | CERES (2045) | fraction | 5% :: 1% | | 10 dg :: G | N/A :: Sfc,Atmos |
| Land_sfc Reflectance, Bidirectional (BRDF) | O :: FP | MODIS (3669) | fraction | 5% :: 3% | 1/day | 1 km :: Land/R | N/A :: Sfc |
| Land_sfc Reflectance, Directional | I :: II | Brewer (2426/2427); Kerr-Sorooshian (2428) | %; fraction | 3% - 5% :: 2% - 5% | 1/day - 1/seas | 30 m - 2 km :: L,R; Land/Ocean | N/A :: Sfc; Cloud |
| | O :: FP | ASTER (2433); HIRIS (2432); MODIS (2429/2430/2431/2434) | dimensionless;fraction | 0.01; 3% - 10% :: 0.005; 1% - 5% | 1/day - 1/mo | 30 m - 1.1 km :: Land/R - G | N/A :: Sfc |
| Land_sfc Reflectance, Relative Spectral | O :: FP | ASTER (2435) | dimensionless | 4% :: 0.5-1.3% | 1/(2-16 day) | 15 - 30 m :: Land/R,L | N/A :: Sfc |
| Land_sfc Roughness | I :: II | Isacks (1553); Barron (1545/1546/1547) | cm; m | 2 cm; 10% :: 1 cm; 0.1 | 1/mo - 1/mission | 30 m - 100 km :: Land/L,R | N/A :: Sfc |
| | O :: FP | MODIS (1556/1557) | dimensionless | 5% - 15% :: 3 - 8% | 1/day - 1/wk | 1 km - 10 km :: Land/R - G | N/A :: Sfc |
| | O :: II | Isacks (3587) | | | | :: Land/R(Andes) | |

## Appendix D: List of Data Product Groups

| *Product Name* | *Type* | *Investigator or Instrument Team Name* | *Units* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* |
|---|---|---|---|---|---|---|---|
| Land_sfc Roughness, Aerodynamic | I :: II | Kerr-Sorooshian (1549); Lau (1550/1551) | cm | 0.1 m; 10% :: 0.2 m; 10% | 1/hr - 1/seas | 30 m - 25 km :: Land | N/A :: Sfc |
| Land_sfc Roughness, Geometric, | I :: II | Kerr, Sorooshian (1552) | cm | 0.1 cm :: 0.2 cm | 2/mo | 25 km :: Land | N/A :: Sfc |
| Land_sfc Temperature | I :: II | Dickinson (3389/3390/3391); Hansen (2477); Richey-Batista (2476); Sellers (2478); Simard (3312/3313) | K | 0.2 K - 1.3 C :: 1 C ? | 2/day - 1/wk | High Res - 500 km :: Land/L,R,G; Canada/R | N/A :: Sfc |
| | O :: FP | MODIS (2484/2485) | K;C | 1-6 K ;1-3 C :: 0.3 K; 1 C | 1/day - 1/(2-16 day) | 90 m -10 km :: Land/L - G | N/A :: Sfc |
| | O :: II | Barron (2486/2487/2494/2495) | C; K | | 1/(5 min) - 2/day | 500 m - 4.5 x 7.5 dg :: [East. U.S.]; G | N/A :: Sfc |
| Land_sfc Temperature (3-products) | O :: FP | ASTER (2483) | K | 1-6 K :: 0.3 K | 1/(2-16 day) | 90 m :: Land | N/A :: Sfc |
| Land_sfc Temperature, Average | O :: II | Isacks (3577) | | | | :: Land/R(Andes) | |
| Land_sfc Temperature, Skin | I :: II | Barron (2472/2473/2474/2475); Harris (3450); Isacks (2496/2497); Wielicki (2479) | K | 0.5 - 6 :: 0.2 - 1 | 2/day - 1/wk | 90m-50 km :: Ocean/L,R | N/A :: Sfc |
| | O :: FP | AIRS (2481) | K | 1.0K :: 0.5 K | 2/day [d, n] | 50 km :: Land | N/A :: Sfc |
| | O :: II | Bates (2499) | K | | 1/(20 min) | 50 km :: Land | N/A :: Sfc |
| Land_sfc Temperature-Difference, Day-Night | I :: II | Bates (2538); Dickinson (3395) | K | 0.5 K :: 0.25 K | 1/day | 50 km - 100 km :: Land; G | N/A :: Sfc |
| | O :: FP | AIRS (2539); ASTER (2540); MODIS (2537) | K | 0.5 K - 2K :: 0.25 K - 1 K | 1/day - 2/day [d, n] | 90 m - 50 km :: Land/L - G | N/A :: Sfc |
| Land_sfc Temperature-Variability(&Extrema) | O :: II | Isacks (3578) | | | | :: Land/R(Andes) | |
| Land_sfc Thermal Anomalies | O :: FP | ASTER (3629) | | TBD :: TBD | TBD | TBD :: Land/TBD | TBD :: TBD |
| Land_sfc Thermal Change | O :: FP | ASTER (2447) | dimensionless | 1-2 K :: 0.5 K | | 90 m :: Land/R,L | N/A :: Sfc |
| Land_sfc Water Area | O :: FP | ASTER (3633) | | TBD :: TBD | TBD | TBD :: Land/TBD | TBD :: TBD |
| Lava-Flow Advance Rate | I :: II | Mouginis-Mark (3262) | m/day | 30m (hor) :: | 2/day | 30m :: Land/L | N/A :: Sfc |
| Lava-Flow Areal Change | I :: II | Mouginis-Mark (3266) | m^2 | (30m)^2 :: | 2/day [d,n] | 30 m :: Land/L | N/A :: Sfc |
| Lava-Flow Cooling Rate | O :: II | Mouginis-Mark (3268) | C/day | 5 C/dy :: | 1/event | 30 m :: Land/L | N/A :: Sfc |
| Lava-Flow Eruption Rate, Mass, | O :: II | Mouginis-Mark (3280) | kg/day | 10^5 kg :: | 1/day, 1/wk | 30 m :: Land/L | N/A :: Sfc |
| Lava-Flow Temperature | I :: II | Mouginis-Mark (3292) | C | 10 C :: | 2/day [d,n] | 30 m :: Land/L | N/A :: Sfc |
| Lava-Flow Thickness | I :: II | Mouginis-Mark (3297) | cm | 5 cm(ver) :: | 1/event | 30 m :: Land/L | N/A :: Sfc |
| Level-1B Backscatter Coef | O :: PI | STIKSCAT (2108) | dB | :: 0.25 dB | | 25 km :: G | N/A :: Sfc |
| Level-1B Backscatter Coef, ALT | I :: II | Srokosz (2096) | dB | 0.2dB :: 0.1dB | 1/(10 day) | 10 km :: Ocean [S. Atl] | N/A :: Sfc |
| Level-1B Backscatter Coef, GLRS | O :: FP | GLRS-A (2104) | /m | 10% :: | 1/(2-16 day) | 1 - 100 km :: G | 75 m :: |
| Level-1B Backscatter Coef, HIRIS | I :: II | Harris (3448) | /m | 20% :: 10% | 2-10 days | 0.25-1 km :: Ocean/R | |
| Level-1B Backscatter Coef, SAR_EOS | I :: II | Cihlar (2102) | | 2 dB :: 1 dB | 1/(3 mo) | 25 m :: Canada/R | N/A :: Sfc |
| Level-1B Backscatter Coef, STIKSCAT | I :: II | Srokosz (2109) | dB | 0.3 dB :: 0.1 dB | 1/day | 25 km :: Ocean [South Atlan] | N/A :: Sfc |
| Level-1B Backscatter Coef Waveforms, ALT | I :: II | Srokosz (3125) | dB | 0.02(bin) :: 0.1dB | 1/(10 day) | 10 km ::Ocean[S. Atl] | N/A :: Sfc |
| Level-1B Backscatter, ALT | O :: FP | ALT (3464) | dB | | | | |
| Level-1B Backscatter, SAR | I :: II | Srokosz (2106) | dB | 0.2 dB :: TBD | [occasional] | 25 m :: Ocean [S. Atl] | N/A :: Sfc |
| Level-1B Backscatter, STIKSCAT | I :: II | Brewer (2097) | dB | 10% :: TBD | 1/day, 1/seas | 25 km :: Ocean | N/A :: Sfc |
| Level-1B Irradiance, SOLSTICE | O :: FP | SOLSTICE (2398) | W/m^2 | | 1/hr | 2 dg :: G | 1 km :: Mid_atm |
| Level-1B Polarization, EOSP | O :: FP | EOSP (2336) | dimensionless | 0.20% :: 0.10% | 1/day [d] | 10 - 70 km :: G | N/A :: N/A |
| Level-1B Radiance Mixture-Model, MODIS Spectral-spatial | O :: FP | MODIS (2286) | dimensionless | 5-10% :: 0.05 | 1/day | pixel_size :: G | N/A :: Sfc |
| Level-1B Radiance, AIRS | I :: II | Bates (2346) | | | | | |
| | O :: FP | AIRS[AIRS] (2347) | W/m^2/sr/um | 0.2dg NEdT :: 0.2dg NEdT | 2/day [d,n] | 15 x 15 km :: G | N/A :: N/A |
| Level-1B Radiance, AMSU-A | I :: II | Bates (2349) | K | 0.2dg NEdT :: 0.2dg NEdT | 2/day [d,n] | 40 x 40 km :: G | N/A :: N/A |
| | O :: FP | AIRS[AMSU-A] (2350) | K | 0.2dg NEdT :: 0.2dg NEdT | 2/day [d, n] | 40 x 40 km :: G | N/A :: N/A |
| Level-1B Radiance, ASTER | O :: FP | ASTER (2375) | | | | | |
| Level-1B Radiance, CERES | I :: II | Wielicki (2358) | W/m^2/sr/um | SW2%, LW1% :: SW2%,LW1% | 6/day [d,n] | 25 km :: R | N/A :: Atmos |
| | O :: FP | CERES (2359) | W/m^2/sr/um | SW 2%,LW 1% :: 0.005 | 6/day [d, n] | 25 km :: G | N/A :: N/A |
| Level-1B Radiance, EOSP | O :: FP | EOSP (2362) | W/m^2/sr/um | 5% :: 2% | 1/day [d] | 10-70 km :: G | N/A :: N/A |
| Level-1B Radiance, GGI | O :: FP | GGI (2364) | | | | | |
| Level-1B Radiance, HIRDLS | O :: FP | HIRDLS (2369) | W/m^2/sr/um | | | | |
| Level-1B Radiance, HIRIS | O :: FP | HIRIS (2370) | W/m^2/sr/um | | | | |
| Level-1B Radiance, LIS | O :: FP | LIS (2384) | W/m^2/sr/um | | | | |

## Appendix D: List of Data Product Groups

| *Product Name* | *Type* | *Investigator or Instrument Team Name* | *Units* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* |
|---|---|---|---|---|---|---|---|
| Level-1B Radiance, MHS | I :: II | Bates (2351) | K | 0.2dg NEdT :: 0.2dg NEdT | 2/day [d,n] | 15 x 15 km :: G | N/A :: N/A |
| | O :: FP | AIRS [MHS] (2352) | K | 0.2dg NEdT :: 0.2dg NEdT | 2/day [d, n] | 15 x 15 km :: G | N/A :: N/A |
| Level-1B Radiance, MIMR | O :: FP | MIMR (3602) | K | | 1/day | | |
| Level-1B Radiance, MISR | O :: FP | MISR (2386/2387) | W/m^2/sr/um | 3% :: 1% | 1/(5-16 day) [d] | 1.92 km :: G | N/A :: TOA |
| Level-1B Radiance, MLS | O :: FP | MLS (2388) | K | | 2/day [d, n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: Trop-150 km |
| Level-1B Radiance, MODIS | I :: II | Sellers (2389); Srokosz (3310); Wielicki (2390) | W/m^2/sr/um | SW 5%,LW .1K :: SW 2%; LW .1K | 1/day - 2/day [d,n] | 0.25-1.0 km :: R,G | N/A :: Atmos |
| | I :: II | Sellers (3485) | W/m^2/sr/um | | | | |
| Level-1B Radiance, MODIS<3um | O :: FI | MODIS (2338/2339/2392) | W/m^2/sr/um | 5%(1Σ) :: RMS<NEdL | 1/day | 0.25 km - 1 km :: G | N/A :: N/A |
| Level-1B Radiance, MODIS>3um | O :: FP | MODIS (2340) | W/m^2/sr/um | 1%(1Σ) :: RMS<NEdL | 1/day | 214 m - 856 m :: G | N/A :: N/A |
| Level-1B Radiance, MOPITT | O :: FP | MOPITT (2394) | W/m^2/sr/um | 2% :: | 1/(0.4 s) [?] | 22 km :: G | Column :: Atmos |
| Level-1B Radiance, SAFIRE | O :: FP | SAFIRE (2396) | | | | | |
| Level-1B Radiance, TES | O :: FP | TES (2402) | | | | | |
| Level-1B Transmission, SAGE-III | O :: FP | SAGE-III (2543) | dimensionless | 0.05% :: 0.05% | 1/(2 min), 30/day | 200 x 2.5 km :: G | 1-2 km :: 0-90 km |
| Level-2 Data Comparisons, EOS_Instrument | O :: II | Le Marshall (3593) | | | | :: R (Tropics,So.Hemis) | |
| Level-2 Radiance, Atmos_corrected, BOSP | O :: FP | BOSP (2353) | W/m^2/sr/um | 25% :: 15% | 1/day [d] | 40 km :: G | N/A :: N/A |
| Level-2 Radiance, Land_leaving | O :: FP | ASTER (2378); MODIS (2379/2380/2381) | W/m^2/sr/um | 5% - 10%; 2 K :: 3% - 6%; 0.3 K | 1/day - 1/(2-16 day) | 15 m - 0.5 km :: Land/L - R | N/A :: Sfc |
| Level-2 Radiance, Water-leaving | I :: II | Brewer (2414/2415); Harris (3447) | E/m^2/s/Hz; mW/(cm^2-sr- | 10% :: 5%; TBD | 1/day, 1/seas | 30 m - 20 km :: Ocean/L,R,G | N/A :: TOO |
| | O :: FP | MODIS (2416/2417) | mW/cm^2/sr/um | 10% :: 5% | 1/day -1/mo | 1 km - 20 km :: Ocean/L - G | N/A :: Sfc |
| Lightning Intensity | I :: II | Dickinson (3340) | | | | <0.5-1 deg :: G | |
| Lightning Occurrence (Location,Time) | O :: FP | LIS (3642) | | 10 km (in 1100km FOV) :: | | .07 dg :: G | N/A :: Atmos |
| Lightning Radiant Energy | O :: FP | LIS (3643) | | | | .07 dg :: G | N/A :: Atmos |
| Lightning Rate | I :: II | Barron (1757); Dickinson (3341); Kerr-Sorooshian (1758) | /s; #/hr | 10%; 1 :: 10%; 1 | 1/(10 min) - 1/day | 1 km - 1 dg :: G; Land | N/A :: Atmos; Trop |
| | O :: FP | LIS (1756) | | :: 5% | | .07 dg :: G | N/A :: Atmos |
| Lithosphere Gravity Field | O :: II | Tapley (2854) | mgal | 10% :: | | 200 km :: Ocean | N/A :: Ocean |
| Magnetic Field Strength, DC | O :: FP | MLS (3247) | G | :: 2x10-3G | 2/day [d,n] | 2.5 x 0.2 dg :: 82N-82S | 2.5 km :: 80-100 km |
| Mineral Conc, Rock-Soil | I :: II | Isacks (2778) | % | | 1/mission, 1/mo | 15-30 m :: Land/L | N/A :: Sfc |
| Mineral Flux, XXX Geochemical | O :: II | Barron (2813/2814) | eq/km^2/yr | | 1/day | 1 km - 10 km :: Land/R,G | |
| Mineral Index | O :: FP | ASTER (2773) | dimensionless | 10% :: 5% | 1/seas | 15-90 m :: Land/R,L | N/A :: Sfc |
| Mineral Maps | O :: FP | ASTER (2817) | dimensionless | variable :: variable | 50/mission | 90 m :: Land/R,L | N/A :: Sfc |
| Mineral Thermal history | O :: FP | HIRIS (2774) | | :: | 1/seas | 30 m :: Land/L | N/A :: Sfc |
| Mineral(CO3) Relative Abundance | O :: FP | HIRIS (2766) | dimensionless | 10% :: 5% | 1/seas | 30 m :: Land/L | N/A :: Sfc |
| Mineral(Fe) Relative Abundance | O :: FP | HIRIS (2772) | dimensionless | 10% :: 5% | 1/seas | 30 m :: Land/L | N/A :: Sfc |
| Mineral(OH) Relative Abundance | O :: FP | HIRIS (2776) | dimensionless | 10% :: 5% | 1/seas | 30 m :: Land/L | N/A :: Sfc |
| Mineral(SO4) Relative Abundance | O :: FP | HIRIS (2784) | dimensionless | 10% :: 5% | 1/seas | 30 m :: Land/L | N/A :: Sfc |
| Moistening, Convective | O :: II | Bates (1924) | g/kg/s | | 1/(4-6 hr) | 50 km :: G | 25 lyr :: 1000-0.1 mb |
| Moistening, Diffusive | O :: II | Bates (1925) | g/kg/s | | 1/(4-6 hr) | 50 km :: G | 25 lyr :: 1000-0.1 mb |
| Moisture Budget | O :: II | Grose (1845); Lau (3513) | | | 1/mo | -6 x 6 dg :: G,R | :: Upper_atmos |
| Moisture Flux | O :: II | Barron (1847); Sellers (1846) | kg (H2O)/m^2 :: kg/m^2/s | | 4/day - 1/mo | 10 km - 1 dg :: N. Atlantic | |
| Moisture Flux, Horizontal, | I :: II | Dickinson (3356) | | | | <0.5-1 deg :: G | N/A : Trop |
| Moisture Flux, Net | O :: II | Srokocz (3541) | | | 1/mo | >= 1 dg (Select) :: | |
| Moisture Flux, Sfc | O :: II | Barron (1848/1849/1850/1851) | W/m^2; g/m^2/s | | 1/(5 min) - 1/day | 500 m - 100 km :: R | N/A :: Sfc |
| Moisture Flux-Change Statistics , Net | O :: II | Srokocz (3547) | | | 1/mo | >= 1 dg (Select) :: | |
| Moisture Transport | O :: II | Dickinson (3535) | | | 1/mo | 1 x 1 dg :: | |
| Moisture Transport Statistics | O :: II | Lau (3512) | | | | :: G | :: Atmos |
| Momentum | O :: II | Srokocz (3538) | | | 1/mo | >= 1 dg (Select) :: | |
| Momentum Transport | O :: II | Dickinson (3536) | | | 1/mo | 1 x 1 dg :: | |
| Momentum-Change Statistics | O :: II | Srokocz (3544) | | | 1/mo | >= 1 dg (Select) :: | |
| N Conc | O :: II | Schoeberl (1228) | ppm | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| N2O Budget | O :: II | Grose (1244) | | | 1/mo | -6 x 6 dg :: G | |

## Appendix D: List of Data Product Groups

| *Product Name* | *Type* | *Investigator or Instrument Team Name* | *Units* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* |
|---|---|---|---|---|---|---|---|
| N2O Conc | I :: II | Grose (1229); Hansen (1230); Pyle (1231); Schoeberl (1232) | mix ratio; ppb | 15% :: 5% - 10% | 1/day - 1/wk | 15 x 4 km-30 x 4 dg :: G | 2 km - 3 km :: Atmos |
| | O :: FP | HIRDLS (1239) ; MLS (1240) ; SAFIRE (1241); TES (1243) | mix ratio; ppmv; ppt | <=5%-10% :: 1-15%; 1-10x10-8; 10 ppt | 1/(18-72 s) [?] - 1/(16 day) | 0.1 x 2.5 dg - 25 x 1-5 dg :: G; 82N-82S | 1 km - 3 km :: 7-65 km; TPSE |
| | O :: II | Grose (1234/1235); Pyle (1236); Schoeberl (1238) | mix ratio; ppb | 15% - 25% :: 10% | (1-4)/day - 1/mo | 2 x 3 dg - 10 dgZM :: G | 2 kg; 24 lvl :: 0-90 km |
| N2O Emission | O :: II | Moore (1245/1246); Schimel (1247) | g/ha/mo | 25% - 30% :: 1% - 10% | 1/mo - 1/yr | .030-1 km :: Land/L,R,G | :: Sfc |
| N2O Emission Time-deriv | O :: II | Schimel (1248) | g/ha/mo^2 | 50% :: 1% | 1/seas | [multiple] :: 6 sites/L | :: Sfc |
| N2O Total Burden | O :: FP | AIRS (1249) | ppb | 40 :: 30 | 2/day [d, n] | Zonal_ave :: G | Column :: Atmos |
| N2O5 Conc | I :: II | Grose (1250); Pyle (1251); Schoeberl (1252) | mix ratio; ppb | 15% - 20% :: 10% - 20% | 2/day - 1/day | 15 x 4 km - 30 x 4 dg :: G | 3 km :: Mid-atmos-Strat |
| | O :: FP | HIRDLS (1254) ; SAFIRE (1255) | mix ratio; ppbv | 5-10% :: 1-10% (20-40 km) | 1/(18-72 s) [?]-1/(16 day) | 25 x 1-5 dg -160 x 23 km :: 86S-86N; G | 1.5-3 km :: 10-45 km |
| | O :: II | Schoeberl (1253) | ppm | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| NH3 Conc | O :: FP | TES (1256) | ppt | :: 300 ppt | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 4-12 km |
| NH4 Exchange | O :: II | Schimel (1257) | g/ha/mo | 25% :: 1% | 1/seas | [multiple] :: 6 sites/L | :: Sfc |
| NH4 Exchange Time-deriv | O :: II | Schimel (1258) | g/ha/mo^2 | 25% :: 1% | 1/seas | [multiple] :: 6 sites/L | :: Sfc |
| NMHC Flux | O :: II | Schimel (1259/1260) | g/ha/mo | 50% :: 1 - 5% | 1/seas | [multiple]; 30 m :: 6 sites/L | :: Sfc |
| NMHC Flux Time-deriv | O :: II | Schimel (1261) | g/ha/mo^2 | 50% :: 1% | 1/seas | 30 m :: 6 sites/L | :: Sfc |
| NO Conc | I :: II | Grose (1262); Pyle (1263); Schoeberl (1264) | mix ratio; ppb | 15% :: 5%; .2s,1.0m | 2/day; 1/day [d] | 15 x 4 km - 30 x 4 dg :: G | 2 - 3 km :: Mid-atmos-Strat |
| | O :: FP | MLS (1266) ;TES (1267/1268) | mix ratio; ppt | :: 0.1-10x10-7; 15 ppt - 25 ppt | 2/day [d, n]-1/(16 day) | 0.1 x 2.5 dg -160 x 23 km :: 82N-82S; G | 2-3 km :: 13-120 km |
| | O :: II | Schoeberl (1265) | ppm | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| NO2 Conc | I :: II | Grose (1269); Pyle (1270); Schoeberl (1271) | mix ratio; ppb | 10% - 15% :: 5% | 2/day - 1/day | 15 x 4 km - 30 x 4 dg :: G | 2 - 3 km :: Mid-atmos-Strat |
| | O :: FP | HIRDLS (1273) ; MLS (1274) ; SAFIRE (1275) ; SAGE-III (1276) ; TES (1278) | mix ratio; ppbv;/cm^3&ppbv; ppt | 5-10% :: 3-15%; 1-8x10-8; 500 ppt | 2/day [d, n]-1/(16 day) | 4 x 4 dg -160 x 23 km :: G | 1 km - 3 km :: 10-55 km |
| | O :: II | Schoeberl (1272) | ppm | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| NO3 Conc | I :: II | Grose (1279); Pyle (1280) | mix ratio | 20% - 25% :: 10% | 1/day [n] | 15 x 4 km - 30 x 4 dg :: G | 2 - 3 km :: Mid-atmos; Strat |
| | O :: FP | SAGE-III (1282) | /cm^3&ppbv | 10% :: 10% | 1/(2 min) - 30/day | <2 x <1 dg :: G | 1 km :: 20-55 km |
| | O :: II | Schoeberl (1281) | ppm | 25% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| NOx Conc | O :: II | Schoeberl (1283) | ppt | 30% :: | 1/(3 mo) | 6 regions :: R | 1 km :: 0-15 km |
| NOx Emission | O :: II | Schimel (1284/1285) | g/ha/mo | 25% :: 1% - 5% | 1/seas | [multiple]; 30 m :: 6 sites/L | :: Sfc |
| NOx Emission Time-deriv | O :: II | Schimel (1286) | g/ha/mo^2 | 25% :: 1% | 1/seas | 30 m :: 6 sites/L | :: Sfc |
| NOy Budget | O :: II | Grose (1291) | | | 1/mo | ~6 x 6 dg :: G | |
| NOy Conc | O :: II | Grose (1287/1288/1289/1292); Pyle (1290) | mix ratio | | 48/day [for 10 day] - 1/mo | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| O(1D) Conc | O :: II | Schoeberl (1293) | ppm | 20% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| O(3P) Conc | I :: II | Grose (1294); Pyle (1295); Schoeberl (1296) | mix ratio | 15% - 30% :: 5% - 10% | 1/wk - 1/wk [d] | 15 x 4 km - 30 x 4 dg :: G | 2-3 km :: Mid-atmos; Strat |
| | O :: FP | SAFIRE (1298) | % | :: 15%(110-180 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 90-180 km |
| | O :: II | Schoeberl (1297) | ppm | 20% :: | 1/mo | 10 dgZM :: G | 2 km :: 0-90 km |
| O2 Conc | O :: FP | MLS (1299) ; SAFIRE (1300) | %;/cm^3 | 2% - <=5% :: 1% - <2%(10-65 km) | 1/(2 min) - 2/day [d, n] | 0.1 x 2.5 dg -<2 x <1 dg :: 82N-82S | 1 km - 2.5 km [6.5] :: TPSE, 6 km - 120 km |
| O2(NUI) Conc | O :: FP | MLS (1303) | | :: 10% | 2/day [d, n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [6.5] :: 20-80 km |
| O3 Budget | O :: II | Grose (1330) | | | 1/mo | ~6 x 6 dg :: G | |
| O3 Conc | I :: II | Bates (1305); Grose (1306); Hansen (1307); Moore (1309); Murakami (1310/1331); Pyle (1311); Schoeberl (1312/1313) | /m^3; mix ratio; ppmv; ppm | 2%-25% :: 1%-10% | 2/day - 1/wk | 15 x 4 km - 30 x 4 dg :: G | 1 - 3 km ::10 - 80 km |
| | O :: FP | AIRS (3690); HIRDLS (1318) ; MLS (1319/1328) ; SAFIRE (1320) ; SAGE-III (1321) ; TES (1323/1324) | mix ratio;/cm^3&ppmv; ppb | <= 3% -10% :: 1-10%; 3 ppb - 20 ppb | 2/day [d, n]-1/(16 day) | 4 x 4 dg -16 x 5 km ; 0.1 x 2.5 dg :: G; 82N-82S | 1 km - 6 km :: 7-80 km; TPSE |
| | O :: II | Murakami (3556); Schoeberl (1315/1316/1317) | ppm; ppb | 10% - 20% :: 10% | (1-4)/day - 1/(3 mo) | 2 x 3 dg - 10 dgZM; 6 Regions :: R,G | 1 - 2 km :: 0-90 km |
| O3 Conc, SBUV-2_Corrected | O :: II | Schoeberl (1346) | ppm | 0.5 :: 0.2 | 1/day | 8 x 10 dg :: G | 5 km :: Atmos |
| | O :: II | Schoeberl (1347) | ppm | 0.5 :: 0.2 | 1/day | 8 x 10 dg :: G | 5 km :: Atmos |
| | O :: II | Schoeberl (1348) | ppm | 0.5 :: 0.2 | 1/day | 8 x 10 dg :: R | 5 km :: Atmos |
| O3 Total Burden | I :: II | Kerr, Sorooshian (1308) | ppm | 5% :: 5% | 1/day | 25 km :: G | Column :: Atmos |

## Appendix D: List of Data Product Groups

| *Product Name* | *Type* | *Investigator or Instrument Team Name* | *Units* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* |
|---|---|---|---|---|---|---|---|
| O3 Total Burden | O :: FP | AIRS (1332) ; MODIS (1333/1334) | DU | 15%; 15-20DU :: 10%; 10DU | 2/day [d, n] - 1/mo | 50 km :: G | Column :: Atmos |
| O3 Total Burden, TOMS_Follow-on | O :: II | Schoeberl (1335) | DU | 5 :: 2 | 1/day | 1 x 1 dg :: G | Column :: Atmos |
| O3 Total Burden, TOMS_Version-6 | O :: II | Schoeberl (1336) | DU | 5 DU :: 2 | 1/day | 1 x 1 dg :: R | Column :: Atmos |
| O3(17^OOO) Conc | O :: FP | MLS (1339); SAFIRE (1341) | ppbv | :: 15% (20-35 km); 50% | 1/(36-72 s) [?]; 2/day [d,n] | 0.1 x 2.5 dg - 25 x 2.5-5 dg :: 86S-86N | 2.5 km [1.2]; 3 km :: 20-50 km |
| O3(18^OOO) Conc | I :: II | Schoeberl (1342) | ratio to ^ (48)O3 | 10% :: 10% | 1/wk | 8 x 10 dg :: G | 5 km :: Strat |
| O3(NU2) Conc | O :: FP | SAFIRE (1329) | ppbv | :: 10% (20-40 km) | 1/(36-72 s) | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-50 km |
| O3(O17^OO) Conc | O :: PI | SAFIRE (1340) | ppbv | :: 40% (20-30 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-35 km |
| O3(OO^17_O) Conc | O :: PI | MLS (1337) | | :: 100% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 25-45 km |
| O3(OO^18) Conc | O :: PI | MLS (1304) | | :: 10% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 30-80 km |
| O3(OO^18_O) Conc | O :: PI | MLS (1338) | | :: 50% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 20-60 km |
| O3(O^18_OO) Conc | O :: PI | SAFIRE (1344) | ppbv | :: 15% (20-30 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-35 km |
| O3(^18OOO) Conc | O :: FP | MLS (1343); SAFIRE (1345) | ppbv | :: 15% - 20% (20-35 km) | 1/(36-72 s) [?]; 2/day [d,n] | 0.1 x 2.5 dg - 25 x 2.5-5 dg :: 86S-86N | 2.5 km [1.2] :: 20-60 km |
| O3(NU1,3) Conc | O :: FP | MLS (1326) ; SAFIRE (1327) | ppbv | :: 15% (20-30 km) - 50% | 1/(36-72 s) - 2/day [d, n] | 0.1 x 2.5 dg - 25 x 2.5-5 dg :: 82N-82S | 2.5 km [1.2] -3 km :: 20-60 km |
| Ocean Angular Momentum | O :: II | Tapley (3089) | kg m^2/s^2 | 10% :: | 1/day | :: Ocean | :: Ocean |
| Ocean Circulation, Model Eddy-Resolving | O :: II | Liu (3519) | | | 3 day | 1/3 dg :: Ocean | 30 level :: |
| Ocean Color/Temperature Maps, Composite | O :: II | Harris (3565) | | | | :: Ocean/R(Austra.-STC) | |
| Ocean Current Circulation, Large-scale | O :: II | Tapley (3090) | m | 10% :: | 1/(1-3 mo) [few mo] | 4000 km :: Ocean | N/A :: Sfc |
| Ocean Current Velocity | O :: II | Abbott (3092) | cm/s | | 1/day | 10 km :: Ocean [Southern] | N/A :: Sfc |
| Ocean Current Velocity, Geostrophic | O :: II | Abbott (3094) | cm/s | | 1/mo | :: Ocean [Southern] | N/A :: TOO |
| Ocean Current Velocity, Meridional | O :: II | Bates (3096) | cm/s | | | :: Ocean | 200 m :: 0-4500 m |
| Ocean Current Velocity, Zonal | O :: II | Bates (3097) | cm/s | | | :: Ocean | 200 m :: 0-4500 m |
| Ocean Eddy Kinetic Energy | O :: II | Abbott (3102) | g/cm^2/s^2 | | 1/(3 mo) | :: Ocean [Southern] | :: Sfc |
| Ocean Productivity, Primary | I :: II | Brewer (2599/2600); Harris (3460) | mmol-C/m^2/day; mg/m^3/day | 30% - 50% :: 5% | 1/day, 1/seas | 30 m - 20 km :: Ocean/L,R | N/A :: TOO |
| | O :: FP | HIRIS (2601) ; MODIS (2606) | mg-C/m^2/hr;mg C/m^2/day;mg/m^3 | <35% - 100% :: <20% -100% | 1/day - 1/yr | 30m - 50 km :: Ocean/R - G; Ocean-I | N/A :: TOO; Sfc |
| | O :: II | Rothrock (2607) | g-C/m^2/day | | 1/(3 day) | 100 km :: > 60 dgLAT | :: TOO |
| Ocean Productivity, Primary, Near sfc | I :: II | Abbott (2598) | mg-C/m^3/day | | 1/(1-2 day) | 1-4 km :: Ocean [Southern] | N/A :: Near_sfc |
| | O :: FP | MODIS (2602/2603) | mg-C/m^3/day | :: 50-100% | 1/day, 1/wk | 1 km - 4 km :: Ocean-I/R,L | N/A :: TOO |
| Ocean Productivity, Primary, Total Column | I :: II | Abbott (2597) | mg-C/m^2/day | | 1/(1-2 day) | 1-4 km :: Ocean [Southern] | N/A :: TOO |
| Ocean Productivity-Variability | O :: II | Harris (3569) | | | seas, yr | :: Ocean / R(Australia-STC) | |
| Ocean Tide, Model | O :: FP | ALT (3121) | cm | 2 cm :: | 1/mission | 100 km :: Ocean | N/A :: Sfc |
| Ocean Water Attenuation Coef | I :: II | Abbott (3204) | /m | 20%-25% :: 5% - 10% | 1/day - 1/seas | 30m - 20 km :: Ocean | N/A :: TOO |
| Ocean Water Attenuation Coef, Diffuse | I :: II | Brewer (3201/3202) | /m | 25% :: TBD | 1/day, 1/seas | 30 m - 20 km :: Ocean/L | N/A :: Sfc |
| | O :: II | Rothrock (3198) | /m | | 1/(3 day) | 100 km :: > 60 dgLAT | :: TOO |
| Ocean Water Attenuation Coef, PAR | O :: FP | MODIS (2031/2032) | /m | 35% :: 10% | 1/day - 1/wk | 1 km - 20 km :: G | N/A :: TOO |
| Ocean Water Attenuation Coef@490nm | I :: II | Harris (3461) | /m | 25% :: 10% | 1/day | 1-20 km :: Ocean/R | |
| | O :: FP | MODIS (3199/3200) | /m | 25% :: 10% | 1/day -1/mo | 1 km - 20 km :: Ocean-I/ R,L | N/A :: TOO |
| Ocean Water Attenuation Coef@520nm, Beam | O :: FP | MODIS (3206/3207) | /m | :: 35% | 1/day - 1/wk | 1 km - 20 km :: Ocean | N/A :: TOO |
| Ocean Water Backscatter Coef, Total | O :: FP | MODIS (2559/2560) | /m | 25% :: 10% | 1/day -1/mo | 1 km - 20 km :: Ocean/R-G | N/A :: TOO |
| Ocean Water Backscatter Coef@565nm | O :: FP | HIRIS (3210) | /m | :: | | :: | :: |
| Ocean Water Salinity | I :: II | Hansen (3079); Bates (3080); Lau (3081) | o/oo; % | 0.02% - 10% :: TBD; 10% | 1/(3 day) - 1/wk | 100 - 500 km :: > 60 dgLAT; Ocean/Trop,G | :: TOO |
| | O :: II | Bates (3078); Rothrock (3082) | o/oo | | 1/(3 day) | 100 km :: > 60 dgLAT; Ocean | 200 m :: 0-4500 m |
| Ocean Water Salinity, Sub ice | I :: II | Rothrock (3083) | o/oo | 0.02 o/oo :: 0.02 o/oo | 1/(3 day) | 500 km :: Polar | N/A :: TOO |
| Ocean Water Salt Flux | O :: II | Rothrock (3084) | kg/m^2/day | 20% :: 20% | 1/day | 100 km :: > 60 dgLAT | :: TOO |
| Ocean Water Temperature, Internal | I :: II | Bates (3115); Hansen (3116); Lau (3218); Rothrock (3117) | K | 0.02 K - 0.5K :: 0.02 K | 1/day - 1/wk | 10 km -500 km :: Ocean; >60 dgLAT; Polar | 10m; TBD :: lvl [?]; Sub_sfc |
| | O :: II | Bates (3118); Rothrock (3119) | K | | 1/(3 day) | 100 km :: > 60 dgLAT; Ocean | 200 m; lvl :: 0 - 4500 m; TOO |
| Ocean Wave Direction | I :: II | Harris (3430) | deg | 10 :: 10 | 1/day | 10 deg :: Ocean/R | |

## Appendix D: List of Data Product Groups

| *Product Name* | *Type* | *Investigator or Instrument Team Name* | *Units* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* |
|---|---|---|---|---|---|---|---|
| Ocean Wave Height | I :: II | Harris (3431); Bates (3126) | m | 10-20% :: 5-20% | 1-10 days | 50m-25 km :: Ocean/L,R | N/A :: Sfc |
| Ocean Wave Height, Along-track | I :: II | Bates (3128) | cm | >.5m,10% :: | | 7 km :: Ocean | N/A :: Sfc |
| | O :: FP | ALT (3129) | cm | >.5m,10% :: | | 7 km :: Ocean | N/A :: Sfc |
| Ocean Wave Height, Significant | I :: II | Abbott (3130); Srokosz (3131) | m | >(.5m,5%); 10% | 1/day - 1/(10-20 day) | 10-20 km :: Ocean/Southern,R | N/A :: Sfc |
| Ocean Wave Length | I :: II | Harris (3432) | km | 10% :: 10% | 1/day | 1-10 km :: Ocean/R | |
| Ocean Wave Power Spectrum, 2-D | I :: II | Bates (3463) | | | | :: Ocean | N/A :: Sfc |
| Ocean_Water Temperature-Pattern | O :: FP | ASTER (3636) | | TBD :: TBD | TBD | TBD :: Ocean/TBD | TBD :: TBD |
| Ocean_Water Turbidity | O :: FP | ASTER (3632) | | TBD :: TBD | TBD | TBD :: Ocean/TBD | TBD :: TBD |
| OClO Conc | I :: II | Grose (1349); Pyle (1350); Schoeberl (1351) | mix ratio; ppb | 20% - 25% ::10%; 0.01 | 2/day - 1/wk [n] | 15 x 4 km - 30 x 4 dg :: G | 3 km :: Strat |
| | O :: FP | MLS (1352) ; SAGE-III (1353) | mix ratio;/cm^3&ppbv | 20% :: 3x10-11; 20% | 1/(2 min) - 1/mo. [z. mean] | 0.1 x 2.5 dg -<2 x <1 dg :: 82N-82S; G | 2 km - 2.5 km [1.2] :: TPSE; 15-25 km |
| OCS Conc | I :: II | Schoeberl (1354) | ppb | 20% :: 0.1 | 1/wk | 8 x 10 dg :: G | 3 km :: Strat |
| OH Conc | I :: II | Grose (1355); Pyle (1211); Schoeberl (1356) | mix ratio; ppb | 10 - 25% :: 10% | 2/day | 15 x 4 km - 30 x 4 dg :: G | 2 - 3 km :: Mid-atmos; Strat |
| | O :: FP | SAFIRE (1360) | ppbv | :: 7% (30-75 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-90 km |
| | O :: II | Schoeberl (1357/1358/1359) | no/cm^3; ppb | 15% - 30% :: 10% | 1/mo - 1/(3 mo) | 2 x 3 dg - 10 dgZM; 6 Regions :: R,G | 1 km - 2 km :: 0-90 km |
| Oil_Slick Cover | O :: II | Brewer (3073/3074) | % surface | | 1/day | 30 m - 20 km :: Ocean/L,G | N/A :: TOO |
| Optical Depth, Total | I :: II | Dickinson (3383); Kerr-Sorooshian (2325); Isacks (2326) | eq.atm | 5% -15% :: 1 - 10% | 1/(5-16 day) | 10 km - 1 dg :: Land/R; G | :: Atmos |
| Organic Matter Conc, Dissolved | I :: II | Abbott (2579); Brewer (2561/2562); Harris (3457) | mmol/m^3; mg/m^3; mol-C/m^3 | 50% - 100% :: 10% - 30% | 1/(1-2 day); 1/seas | 30 m - 20 km :: Ocean/L,R | N/A :: TOO |
| | O :: FP | HIRIS (3314); MODIS (2580/2581/2582/2583) | mg/m^3 | 100% -150% :: 30% - 50% | 1/day - 1/mo | 30m - 20 km :: Ocean [Southern]R,L; Ocean/L+Land/Lakes | N/A :: TOO |
| Organic Matter Conc, Particulate | O :: FP | MODIS (2608/3664) | mg/m^3 | 50% :: 30% | 1/day, 1/wk | 1 - 20 km :: Ocean; I/L | N/A :: TOO |
| Organic Matter Degradation_Product Absorption Coef@415nm (DOM+Detritus) | O :: FP | MODIS (3662/3663) | /m | 40% :: 15% | 1/day, 1/wk, 1/mo | 1 km - 20 km :: Ocean/R,L | N/A :: TOO |
| Organic Matter Fluorescence Efficiency, Colored Dissolved [CDOM = Gelbstoff] | O :: FP | MODIS (3317/3318) | dimensionless | 100% :: 50% | 1 dy,wk,mo | 1 km - 20 km :: Ocean/L,R,G | N/A :: TOO |
| Orography, Model | O :: II | Bates (2843) | m | | | 50 km :: G | N/A :: Sfc |
| Ox Conc | O :: II | Grose (1361/1362/1363); Pyle (1364) | mix ratio | | 48/day [for 10 day] - 1/mo | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| PAN Conc | I :: II | Schoeberl (1365) | ppb | 20% :: 0.01 | 1/day | 8 x 10 dg :: G | 3 km :: Strat |
| PAR | I :: II | Moore (2328/2329) | W/m^2/sr | 20% :: 10% | 1/day - 1/wk | 30 m - 500 m :: Land/L,R | |
| | O :: FP | MODIS (2330) | quanta/m^2/s | TBD :: TBD | 1/day | N/A :: G | N/A :: Atmos |
| | O :: II | Kerr-Sorooshian (2331); Moore (2332/2333) | W/m^2 | 100 :: 100 | 1/day | .030-1 km :: Land/R,L | N/A :: Sfc |
| PAR, Absorbed, Non-vegetative, (APAR) | O :: FP | HIRIS (2029) | W/m^2 | 25% :: 10% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| PAR, Absorbed, Vegetative, (APAR) | O :: FP | HIRIS (2030) | W/m^2 | 25% :: 10% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| PAR, Incident, (IPAR) | O :: FP | MODIS (2268) | MJ/m^2 | 200 :: 5 - 20% | 1/day - 1/wk | 1 km :: G,R | N/A :: Atmos |
| PAR, Intercepted, (IPAR) | I :: II | Schimel (2263/2264/2265) | 5E, % :: | 10% :: 1% | 1/day - 1/wk; [multiple] | 30 m - 500 m; [multiple] :: 6 sites/L | N/A :: Sfc |
| PAR, Intercepted, Vegetation, (IPAR) | I :: II | Cihlar (3498) | % | 10% :: 1% | 1 day | 250-1000 m :: Canada/R | N/A :: Sfc |
| PAR, Sfc (IPAR) | O :: FP | MODIS (2266/2267) | quanta/m^2/s | 10% :: 5% | 1/day [d] | 1 km :: Ocean/L - G | N/A :: Sfc |
| Particulate Backscatter Coef | O :: FP | MODIS (3216/3217) | /m;/m | :: 30% | 1/day | 1 km - 20 km :: Ocean | N/A :: TOO |
| PBL Height | I :: II | Barron (1510/1511); Bates (1512); Dickinson (3329); Sellers (1513) | m | TBD; 75 m :: TBD | TBD; 1/day | 2 - 200 km :: Land; R,G | 75 - 100 m :: PBL; Mixed-layer |
| | O :: FP | GLRS-A (1514) | m | 150 m :: | 1/(2-16 day) | 2 - 200 km :: G | 75 m :: Trop |
| PBL Thickness | O :: II | Bates (1638/1639) | m | | 1/(20 min) | 25 km - 50 km :: G | N/A :: PBL |
| Permafrost Distribution | O :: II | Simard (2979) | km | 1 km :: | 1/(3 yr) | :: Canada/R | :: Sfc |
| Permafrost Sensitivity | O :: II | Simard (2980) | | 1 km :: | 1/(3 yr) | :: Canada/R | :: Sfc |
| Photogrammetric Camera Model | O :: FP | MODIS (3671) | | | | N/A :: N/A | N/A :: N/A |
| Phytoplankton Backscatter | I :: II | Abbott (3209) | mw/cm^2/sr/um | 50% :: 20% | 1/day | 1-4 km :: Ocean | N/A :: N/A |
| Phytoplankton Backscatter Coef | O :: FP | MODIS (2555/2558) | soft; med; hard | | 1/day - 1/mo | 1 km - 20 km :: Ocean/R - G | N/A :: TOO |
| Phytoplankton Biomass | O :: II | Harris (3566) | | | | :: Ocean / R(Australia-STC) | |
| Phytoplankton Species Composition | O :: II | Harris (3567) | | | | :: Ocean / R(Australia-STC) | |
| Phytoplankton Type | O :: FP | HIRIS (3316) | mg/m^3 | 100% :: 50% | (>=2)/day | 60 - 90 m :: Ocean/L;Land/Lakes | N/A :: TOO |
| | O :: II | Brewer (2595/2596) | % | | 1/day | 30 m - 20 km :: Ocean/L,G | N/A :: TOO |

## Appendix D: List of Data Product Groups

| *Product Name* | *Type* | *Investigator or Instrument Team Name* | *Units* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* |
|---|---|---|---|---|---|---|---|
| Pigment Conc | I :: II | Harris (3458); Hansen (3077) | mg/m^3 | 2% - 30% :: 10% | 1/day - 1/wk | 1-500 km :: Ocean/R,G | |
| | O :: FP | MODIS (2591/2592) | mg/m^3 | 30% :: 10% | 1/day - 1/mo | 1 km - 20 km :: Ocean/R - G | N/A :: TOO |
| | O :: II | Rothrock (3076) | mg/m^3 | | 1/(3 day) | 100 km :: > 60 dgLAT | :: TOO |
| Pigment Conc [via Spectral Curv] | O :: FP | MODIS (2593/2594) | mg/m^3 | 35% :: 15% | 1/day - 1/wk | 1 km - 20 km :: Ocean/R | N/A :: TOO |
| Pigment Conc, Accessory | I :: II | Harris (3459) | mg/m^3 | 20% :: 10% | 2-10 days | 0.25-1 km:: Ocean/R | |
| | O :: FP | HIRIS (3072) | mg/m^3 | 100% :: 50% | 1/(>=2 day) | 60 - 90 m :: Ocean-I/L | N/A :: TOO |
| Pigment Conc, Non-photosynthetic | I :: II | Moore (2695/2696) | relative | 20% :: 20% | 1/(16 day) | 30 m -1 km :: Land/L,R | :: Sfc |
| Pigment Conc, Phycobillin [Phycoerythrin, etc.] | O :: FP | MODIS (3319/3320) | mg/m^3 | 200% :: 50% | 1/day - 1/mo | 1 km - 20 km :: Ocean/R -G | N/A :: TOO |
| Pigment Conc, Phycoerythrin | I :: II | Abbott (2584) | mg/m^3 | 50% :: 15% | 1/day - 1/mo | 1 km - 20 km :: Ocean/R -G | N/A :: TOO |
| Pigment Conc, Phytoplankton | I :: II | Abbott (2587); Rothrock (2590) | mg/m^3 | 35% :: 10% | 1/(1-2 day) | 1-10 km :: Ocean [South]; Polar | N/A :: TOO |
| | O :: FP | MISR (2588/2589/3681) | mg/m^3 | 30% :: 30% | 1/(1-2 day) [d]; 9,16 day; mo; seas; yr | 240 m - 1.92 km :: Ocean/R - G | N/A :: TOO |
| Planetary Wave Structure | O :: II | Grose (1515) | | | 1/day | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| Precipitable Water | I :: II | Abbott (1858); Barron (1859/1860/1861); Bates (1862); Dickinson (3355); Harris (3439/3440); Kerr-Sorooshian (1865); Liu (1866); Murakami (1867); Richey-Batista (1810/1863); Srokosz (1868) | kg/m^2; mm; cm; g/cm^2; mm/mo?; % | 10% :: 5% | 2/day [d,n] - 1/wk | 30 m - 500 km :: L,R,G; Land/Ocean | Column :: Atmos |
| | O :: FP | AIRS (1869/3693) ; HIRIS (1872/1873) ; MIMR (3596/3597); MODIS (1874/1875/3321/3322) | dimensionless; mm; cm | 5% - 12%; 10 mm :: 3% - 8%; 5 mm | 1/(1-3 min) - 1/mo | 30 m - 50 km; 1 dg :: L - G | Column :: Trop; Atmos; 7-80 km |
| | O :: II | Barron (1876/1877); Lau (3506); Murakami (3559) | g/kg | | 1/hr | 1-100 km :: R,G; Ocean/R(~Pacific) | N/A :: Sfc |
| Precipitation Amount | I :: II | Barron (1926/1927); Brewer (1928/1929); Cihlar (3448); Hansen (1930); Harris (3441); Hartmann (1931); Isacks (1932); Lau (1935/1936); Murakami (1938); Sellers (1939); Wielicki (1940) | mm/day; mm/wk; mm | 0.1 - 10 mm/day; 10% - 50% :: 0.1 - 10 mm/day; 25% | 4/day - 1/ seas | 10 - 500 km :: G; Ocean & Land/L,R | N/A :: Sfc-Trop |
| | O :: II | Bates (1942); Hartmann (1945); Murakami (3558); Richey-Batista (1943/1944) | mm/day; mm/mo; mm | 10 mm/day; 10% :: 10 mm/day; 10% | (4 - 6)/day - 1/ wk | 1- 50 km :: G; Ocean & Land/L,R | N/A :: Sfc-Trop |
| Precipitation Amount, Average | O :: II | Isacks (3572) | | | | :: Land/R(Andes) | |
| Precipitation Amount, Convective | O :: II | Barron (1946/1947); Bates (1948) | m/s ?; mm | | 1/(4-6 hr) - 2/day | 50 km - 4.5 x 7.5 dg :: G | N/A :: Sfc |
| Precipitation Amount, Daily | I :: II | Kerr, Sorooshian (1934) | mm | 1 mm :: 1 mm | 1/day | 1 km :: Land/R | N/A :: Sfc |
| Precipitation Amount, Large-scale_stable | O :: II | Barron (1952/1953) | m/s ? | | 2/day | 4.5 x 7.5 dg :: G | |
| Precipitation Amount, Rain | I :: II | Liu (1973); Moore (1974) | mm/day; mm/wk | 1 - 10%; TBD :: 1 - 10%; TBD | 2/day - 1/wk | 1 km - 0.5 dg :: G | NA :: Sfc; Trop |
| | O :: II | Barron (1956); Lau (3505) | g/cm^3 | | 1/(6 hr) - 1/mo | 1 dg :: Land/R(Andes); G | N/A; 15-20 lvl :: Sfc |
| Precipitation Amount, Rain, Monthly | I :: II | Kerr, Sorooshian (1957) | mm | 10% :: 10% | 1/mo | 500 m :: Land/L | N/A :: Sfc |
| Precipitation Amount, Snow | I :: II | Cihlar (3489); Moore (1983); Sellers (1984) | mm/wk | 10% :: 10% | 1/wk | 1 km :: G; Canada/R | N/A :: Sfc |
| | O :: II | Barron (2994/2995) | m | | 2/day | 2.8 x 2.8 dg - 4.5 x 7.5 dg :: G | |
| Precipitation Amount, Snow, Convective | O :: II | Barron (1985/1986) | m/s | | 2/day | 2.8 x 2.8 dg - 4.5 x 7.5 dg :: G | |
| Precipitation Amount, Snow, Large-scale_Stable | O :: II | Barron (1987/1988) | m/s | | 2/day | 2.8 x 2.8 dg - 4.5 x 7.5 dg :: G | |
| Precipitation Conc, Ice | I :: II | Bates (1949) | g/m^3 | | | 10 km :: G | 7 lvl :: Trop |
| | O :: II | Barron (1951) | g/cm^3 | | 1/(6 hr) | 1 dg :: G | 15-20 lvl :: |
| Precipitation Depth | I :: II | Lau (2981) | mm | 10% :: 10% | 1/day | 1 km :: Land/R | N/A :: Sfc |
| Precipitation Index | I :: II | Bates (1968) | mm | 2mm/hr :: 1mm/hr | 2/day [d,n] | 50 km :: G | N/A :: Trop |
| | O :: FP | AIRS (1969) ; MIMR (3601) | mm | 2mm/hr :: 1mm/hr;30% | 2/day [d, n] | 50 km :: G | N/A :: Trop |
| Precipitation Index, Antecedent | I :: II | Bates (1970) | dimensionless | | 1/day | 26-52 km :: Land | N/A :: Sfc |
| Precipitation Index, Microwave [see also 1969] | O :: FP | AIRS[AMSU-A, MHS only] (3694) | mm | 2mm/hr :: 1mm/hr | 2/day [d,n] | 50 km :: G | N/A :: Trop |
| Precipitation Rate | I :: II | Bates (1958); Isacks (1933); Lau (1960); Simard (1937) | mm/hr | 20% - 25% :: 10% | 1/hr; 1/event; 1/mo; 1/hr | 100 m - 50 km :: Land/L,R; G; Canada/R | N/A; 1 lvl :: Sfc; Trop |
| | O :: FP | MIMR (3600) | mm/hr?;mb | :: 20% | -2/day [d, n] | 8 km -4 x 4 dg :: Ocean- G | N/A :: Sfc; 7-80 km |
| | O :: II | Barron (1962) | cm/hr | | 1/hr | 20-100 km :: R | |

## Appendix D: List of Data Product Groups

| *Product Name* | *Type* | *Investigator or Instrument Team Name* | *Units* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* |
|---|---|---|---|---|---|---|---|
| Precipitation Rate, Rain | I :: II | Abbott (1972); Bates (1954); Dickinson (3359); Kerr-Sorooshian (1959); Srokosz (1975) | g/m^3; mm/hr | 5% - 20% :: 1% - 20%; 1 mm/hr | 1/day - 1/(2day) | 500 m - 100 km :: Ocean [Southern]; G | N/A; 7 lvl :: Trop |
| | O :: II | Barron (1980/1981) | cm/hr | | 1/(5 min) [?] | 500 m - 30 km :: [East. U.S.] | |
| Precipitation Rate, Snow | I :: II | Dickinson (3360) | | | | <0.5-1 deg :: G | |
| Precipitation Sampling statistics, Rain | O :: II | Lau (3514) | | | | | N/A :: Sfc |
| Precipitation Storm Depth (Precip-thickness) | I :: II | Lau (1965) | mm | 10% :: 10% | 1/hr | 100 m :: Land/L | N/A :: Sfc |
| Precipitation Variability(&Extrema) | O :: II | Isacks (3573) | | | | :: Land/R(Andes) | |
| Precipitation_Drop Phase, Sfc | I :: II | Bates (1966) | type (snow,water) | | | 10 km :: G | N/A :: Sfc |
| Pressure | I :: II | Grose (1516); Kerr-Sorooshian (1518) | mb | 5% :: 2% - 5% | 1/hr - 2/day | 25 km - 15 x 4 dg :: G | 3 km :: Trop; Mid-atmos |
| Pressure | O :: FP | HIRDLS (1524) ; MLS (1525) ; SAFIRE (1526); SAGE-III (1301/1302) | mb; /cm^3 | 0.1% - 2% :: 0.10%; 1%(30-50km); <2% (16-70 km) | 1/(18-120 s) - 2/day [d, n]; 30/day (Lun., Sol.) | 0.1 x 2.5 dg-4 x 4 dg :: G; 82N-82S | 0.2 - 2.5 km :: 7 - 110 km; TPSE |
| | O :: II | Barron (1521/1522) | mb | | 1/hr | 1 km -100 km :: R | |
| Pressure, Sfc | I :: II | Isacks (1517); Lau (1533); Rothrock (1519); Tapley (1520) | mb | 5%; 1 - 5 mb :: 1 mb | 1/day - 4/day | 50 - 500 km :: Land/R; G; Polar | N/A :: Sfc |
| | O :: II | Barron (1534/1535); Bates (1532/1536); Rothrock (1523) | Pa; mb | 1 :: 0.5 | 1/(20 min) - 1/(3 day) | 50 km - 4.5 x 7.5 dg :: G; > 60 dgLAT | N/A :: Sfc; [Sea_lvl] |
| Pressure, Tropopause | O :: II | Bates (1537) | mb | | 1/(20 min) | 50 km :: G | N/A :: Tropopause |
| Pressure-RMSE, Sfc | O :: II | Bates (1541) | mb | | 1/(20 min) | 100 km :: G | N/A :: Sfc |
| Pressure-Tendency, Sfc | O :: II | Barron (1538/1539) | Pa/s | | 2/day | 2.8 x 2.8 dg - 4.5 x 7.5 dg :: G | N/A :: Sfc |
| Proton Energy Spectra | I :: II | Schoeberl (3255) | proton/cm^2/s/MeV | 20% :: 15% | 1/day | 5 dgLAT :: G | N/A :: 50-700 km |
| Radiance Error, MODIS Level-2 | O :: FP | MODIS (3654) | | | | | |
| Radiance, At-Satellite, MODIS Level-1 | O :: FP | MODIS (3646) | | | | | |
| Radiance, Cloud Cleared, Level-2 | O :: FP | AIRS (3683) | | | | | |
| Radiance, Lunar Reference, MODIS Level-1 | O :: FP | MODIS (3650) | | | | | |
| Radiance, Solar Diffuser, MODIS Level-1 | O :: FP | MODIS (3649) | | | | | |
| Radiance, Total | O :: II | Rothrock (2406) | mW/m^2 | | 1/(3 day) | 100 km :: > 60 dgLAT | |
| Radiation Budget | I :: II | Dickinson (3385); Hansen (2357) | | | 1/wk | 50 - 500 km :: G | |
| Radiation Intensity, IR | I :: II | Schoeberl (2374) | photons/cm^2/s/cm | 1%(~1K) :: 0.5% | 1/day | 100 km :: G | 1.5 km :: Strat |
| Radiation Intensity, UV | I :: II | Schoeberl (2411) | photons/cm^2/s/nm | 5% :: 2% | 1/day | :: G | :: Strat |
| | O :: II | Schoeberl (2412) | photons/cm^2/s/nm | 20% :: 15% | 1/day | 2 x 3 dg :: G | 2 km :: Trop |
| Radiation Intensity, Visible | I :: II | Schoeberl (2413) | photons/cm^2/s/nm | 5% :: 2% | 1/day | :: G | :: Strat |
| Radiative Flux | I :: II | Cihlar (3490) | W/m^2 | | 1 wk | 1 km^2 :: | N/A :: Sfc |
| Radiative Flux Convergence | O :: II | Barron (2143) | W/m^2/km | | 1/(5 day) | 2.5 dg :: G | 10 lvl :: |
| Radiative Flux Divergence, Clear-sky | O :: FP | CERES (2144/2145/2146) | W/m^2/km | 10% :: 5% | 1/(6 hr) - 1/mo | 1.25 x 1.25 dg :: G | lyr :: Atmos |
| | O :: II | Lau (3515) | | | | | |
| Radiative Flux Divergence, Cloudy-sky | O :: II | Lau (3516) | | | | | |
| | O :: FP | CERES (2147/2148/2149) | W/m^2/km | 25% - 50% :: 10% | 6/day [d, n] - 1/mo | 1.25 x 1.25 dg :: G | lyr :: Atmos |
| Radiative Flux Divergence, LW | I :: II | Wielicki (2150) | W/m^2/km | 10%clr/25% :: 5%clr/10% | 6/day [d,n] | 1.25 dg :: G | :: Atmos |
| | O :: II | Wielicki (2151) | W/m^2/km | 10%clr,25% :: 5%clr,10% | 18/day [d,n] | 25 km :: R | :: Atmos |
| Radiative Flux Divergence, SW | I :: II | Wielicki (2152) | W/m^2/km | 10%clr/25% :: 5%clr/10% | 6/day [d,n] | 1.25 dg :: G | :: Atmos |
| | O :: II | Wielicki (2153) | W/m^2/km | 10%clr,25% :: 5%clr,10% | 9/day [d,n] | 25 km :: R | :: Atmos |
| Radiative Flux, Broadband | I :: II | Richey, Batista (2141) | W/m^2 | | 2/day | :: Land/R | |
| Radiative Flux, Broadband, Down | I :: II | Kerr, Sorooshian (2142) | W/m^2 | 1 W/m^2 :: 1 W/m^2 | 1/hr | 8 km :: Land/R | N/A :: TOA |
| Radiative Flux, LW | I :: II | Barron (2185/2186/2187/2189); Brewer (2255/2256); Hartmann (2188/2190); Lau (2154); Srokosz (2385) | W/m^2 | 5% - 10%; 10W/m^2 :: 2% - 10%; 1W/m^2 | 2/day - 1/seas | 30 m - 500 km :: L,R,G; Ocean/L,G | N/A :: Sfc; TOA |
| | O :: II | Dickinson (3533); Srokocz (3543) | | | 1/mo | 1 dg - >= 1 dg (Select) :: | |
| Radiative Flux, LW Spectral | O :: FP | AIRS (2209/2210) | W/m^2 | <10 -<10 :: <5 | 2/day [d, n] | 50 km :: Land; Ocean | N/A :: Sfc |
| Radiative Flux, LW, Average_Net | O :: II | Barron (2155/2156) | W/m^2 | | 2/day | 4.5 x 7.5 dg :: G | :: TOA |
| Radiative Flux, LW, Clear-sky | O :: II | Barron (2155/2156/2159/2160/2161/2162) | W/m^2 | | 2/day | 2.8 x 2.8 dg - 4.5 x 7.5 dg :: G | :: Sfc; TOA |
| Radiative Flux, LW, Down | I :: II | Dickinson (3375); Kerr-Sorooshian (2163); Sellers (2164); Wielicki (2165) | W/m^2 | 10% - 20%; 7W/m^2 :: 10%-20%; 2W/m^2 | 6/day [d,n] :: [diurnal] | 100 m - 1.25 dg :: G; L,R | N/A; 0.5km :: Sfc |

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| *Product Name* | *Type* | *Investigator or Instrument Team Name* | *Units* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* |
|---|---|---|---|---|---|---|---|
| Radiative Flux, LW, Down | O :: FP | CERES (2168/2169/2170) | W/m^2 | 5 W/m^2 -7 W/m^2 :: 2 W/m^2 | 1/(6 hr) - 1/mo | 1 - 1.25 dg :: G | N/A :: Sfc |
| | O :: II | Bates (2166); Wielicki (2167) | W/m^2 | 7 W/m^2 :: 2 W/m^2 | 1/(20 min) - 18/day [d,n] | 25 km - 50 km :: Land; R | N/A :: Sfc |
| Radiative Flux, LW, Net | I :: II | Bates (2173/2174); Dickinson (3376); Wielicki (2175) | W/m^2 | 7 W/m^2 :: 2 W/m^2 | 2/day [d,n] :: 6/day [d,n] | 50 km - 1.25 dg :: Land; G | N/A :: Sfc |
| | O :: FP | AIRS (2176/2177) ; CERES (2180/2181/2182) | W/m^2 | <15; 5 - 7 W/m^2 :: 2 W/m^2 | 6/day [d, n] - 1/mo | 50 km - 1.25 dg :: Land; G | N/A :: Sfc |
| | O :: II | Rothrock (2178); Wielicki (2179) | W/m^2 | 7 W/m^2; 10% :: 2 W/m^2; 10% | 18/day [d,n] - 1/day | 100 km :: > 60 dgLAT | N/A :: Sfc |
| Radiative Flux, LW, Net Up | I :: II | Murakami (2183) | W/m^2 | 2% :: | | | N/A :: Atmos |
| Radiative Flux, LW, TOA | I :: II | Dickinson (3377) | W/m^2 | | | <0.5-1 deg :: G | N/A; TOA |
| Radiative Flux, LW, Up | I :: II | Bates (2191); Dickinson (3378); Kerr-Sorooshian (2192); Murakami (2395); Sellers (2193); Wielicki (2194/2195) | mW/m^2/sr/cm | 10% - 20%; 5 - 7 W/m^2 :: 15% - 20%; 2W/m^2 | 6/day [d,n] - 2/day [d,n] | 50 km - 1.25 dg | N/A; 0.5 km |
| | O :: FP | CERES (2200/2201/2202/2203/2204/2205) | W/m^2 | 3 - 7 W/m^2 :: 1 - <7 W/m^2 | 6/day [d, n] - 1/mo | 90 m - 25 km; 1.25 dg :: G; L | N/A :: TOA; Sfc |
| | O :: II | Bates (2184/2197); Wielicki (2198/2199) | W/m^2 | 5 - 7 W/m^2 :: 2 W/m^2 | 1/(20 min) - 18/day [d,n] | 25 km - 50 km :: Land; R | N/A :: Sfc; TOA |
| | O :: FP | AIRS (3687) | | | | | |
| Radiative Flux, Net | I :: II | Simard (2137) | | 10% :: | | :: Canada/R | |
| | O :: II | Kerr, Sorooshian (2138) | W/m^2 | 15% :: 15% | [diurnal] | 1 km :: Land/R | N/A :: Sfc |
| Radiative Flux, Net_Down | O :: II | Barron (2139/2140) | W/m^2 | | 2/day | 2.8 x 2.8 dg - 4.5 x 7.5 dg :: G | |
| Radiative Flux, Sea_sfc | I :: II | Harris (3443) | W/m^2 | 5% :: 2% | 2/day | 20-50 km :: Ocean/R | |
| Radiative Flux, Solar | O :: II | Dickinson (3532); Srokocz (3542) | | | 1/mo | 1 x 1 dg - >= 1 dg (Select) | |
| Radiative Flux, Solar, Ave-absorbed | O :: II | Barron (2441/2442) | W/m^2 | | 2/day | 2.8 x 2.8 dg - 4.5 x 7.5 dg :: G | |
| Radiative Flux, Solar, Net_Down | O :: II | Barron (2133/2134) | W/m^2 | | 2/day | 2.8 x 2.8 dg - 4.5 x 7.5 dg :: G | :: Sfc |
| Radiative Flux, Solar, Sfc Clear-sky | O :: II | Barron (2444/2446) | W/m^2 | | 2/day | 2.8 x 2.8 dg - 4.5 x 7.5 dg :: G | :: Sfc |
| Radiative Flux, Solar, TOA Clear-sky | O :: II | Barron (2443/2445) | W/m^2 | | 2/day | 2.8 x 2.8 dg - 4.5 x 7.5 dg :: G | :: TOA |
| Radiative Flux, SW | I :: II | Barron (2236/2237/2238/2239); Brewer (1492/1493); Hartmann (2213/2214); Lau (2215); Srokosz (2400) | W/m^2 | 0.5%; 1-10W/m^2 :: 0.5% - 10% | 2/day - 1/day | 30 m - 500 km | N/A :: Sfc; TOA |
| Radiative Flux, SW, Down | I :: II | Kerr-Sorooshian (2216); Sellers (2217); Wielicki (2218) | W/m^2 | 10% - 20%; 15 W/m^2 :: 10%-20%; 2W/m^2 | 1/hr - 3/day [d]; diurnal | 500 m - 100 km :: Land/R | N/A :: Sfc |
| | O :: FP | CERES (2221/2222/2223) | W/m^2 | 10 -15 W/m^2 :: 2 W/m^2 | 6/day [d, n]-1/(6 hr) | 1 dg - 1.25 dg :: G | N/A :: Sfc |
| | O :: II | Bates (2219); Wielicki (2220) | W/m^2 | 15 W/m^2 :: 2 W/m^2 | 1/(20 min) - 9/day [d,n] | 25 - 50 km :: Land; R | N/A :: Sfc |
| Radiative Flux, SW, Net | I :: II | Dickinson (3379); Wielicki (2226) | W/m^2 | 15 W/m^2 :: 2 W/m^2 | 3/day [d,n] | <0.5-1.25 deg :: G | N/A :: Sfc |
| | O :: FP | AIRS (2232/2233); CERES (2229/2230/2231) | W/m^2 | <10 -15 W/m^2 :: 2 - <5 W/m^2 | 3/day [d, n]-1/day | 50 km; 1.25 dg :: G; Ocean | N/A :: Sfc |
| | O :: II | Rothrock (2227); Wielicki (2228) | W/m^2 | 15 W/m^2; 15% :: 2 W/m^2; 15% | 1/day - 1/wk | 25 - 100 km :: >60 dgLAT; R | N/A :: Sfc |
| Radiative Flux, SW, Net, Down | I :: II | Murakami (2234) | W/m^2 | 2% :: | | | N/A :: Atmos |
| Radiative Flux, SW, TOA | I :: II | Dickinson (3380) | | | | <0.5-1 deg :: G | N/A :: Sfc |
| Radiative Flux, SW, Up | I :: II | Kerr-Sorooshian (2240); Wielicki (2241/2242) | W/m^2 | 15%;10 -15 W/m^ ::15%; 2W/m^2 | [diurnal] :: 3/day [d] | 500 m - 1.25 dg :: Land/R; G | N/A :: Sfc :: TOA |
| | O :: FP | CERES (2246/2247/2248/2249/2250/2251) | W/m^2 | 7 W/m^2 -15 W/m^2 :: 2 W/m^2 | 3/day [d, n] - 1/mo | 1 dg -1.25 x 1.25 dg ; 15-30 m :: G; L | N/A :: TOA; Sfc |
| | O :: II | Bates (2235/2243); Wielicki (2244/2245) | W/m^2 | 10 W/m^2 - 15 W/m^2 :: 2 W/m^2 | 1/(20 min) - 9/day [d,n] | 25 km - 50 km :: Land; R | N/A :: Sfc; TOA |
| Radiative Flux-Change Statistics , LW | O :: II | Srokocz (3549) | | | 1/mo | >= 1 dg (Select) | |
| Radiative Flux-Change Statistics , Solar | O :: II | Srokocz (3548) | | | 1/mo | >= 1 dg (Select) | |
| Reflectance Error, MODIS Level-2 | O :: FP | MODIS (3655) | | | | | |
| Reflectance, Bi-directional Spectral | O :: FP | EOSP (3644) | | 5% :: | 2 day [d] | 10 km :: G | NA :: Cloud + Sfc mixed |
| Reflectance, Exoatmospheric, MODIS Level-2 | O :: FP | MODIS (3647) | | | | | |
| Reflectance, Lunar, MODIS Level-2 | O :: FP | MODIS (3653) | | | | | |
| River Channel Geometry | I :: II | Barron (2888) | m | 10% :: 10% | 1/seas | 1 m :: Land/L | N/A :: Sfc |
| River Channel Geometry, Major-stream | I :: II | Lau (3049) | m^2 | 10 :: 10 | 1/mission | 30 m :: Land/R | N/A :: Sfc |
| | O :: II | Kerr, Sorooshian (3050) | m^2 | 10 :: 10 | 1/seas | 30 m :: Land/R | :: Sfc |

## Appendix D: List of Data Product Groups

| *Product Name* | *Type* | *Investigator or Instrument Team Name* | *Units* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* |
|---|---|---|---|---|---|---|---|
| River Channel Patterns | I :: II | Isacks (2982) | | | | 15-30 m :: Land/L | N/A :: Sfc |
| River Discharge | I :: II | Moore (2889) | m^3/s | 5% :: 5% | 1/wk, 1/mo | few sites :: Land | :: Sfc |
| | O :: II | Barron (2890/2891/2892); Moore (2893) | m^3/s | | 1/event;1/wk -1/yr | 30 m - 18 km :: R; Land | |
| River Extent | I :: II | Barron (3063/3064) | m^2 | 10% :: 10% | 1/day | 30 m - 10 km :: Land/L,R | N/A :: Sfc |
| River Floodplain Extent | I :: II | Lau (2914); Moore (2915); Richey-Batista (2913) | m^2; ha/km^2 | 10% - 20% :: 5% - 20% | 1/wk; 1/seas | 100 m - 25 km :: Land/L,R | N/A :: Sfc |
| River Stage (Flooding) | I :: II | Richey-Batista (2983); Moore (2984) | cm; m | 5 cm :: 5% | 1/wk - 1/seas | 100 m :: Land/R | N/A :: Sfc |
| River Water Attenuation Coef | I :: II | Richey, Batista (3205) | /m | 10% :: 10% | 1/wk | 1 km :: Land/R | N/A :: TOO |
| River Water Chemistry | I :: II | Richey, Batista (2809) | g/m^3 | [10%],5% :: [5%].10% | 1/wk | 1 km :: Land/R | N/A :: Sfc |
| River Water Chlorophyll Conc | I :: II | Richey, Batista (2655) | g/m^3 | 20% :: 10% | 1/wk | 1 km :: Land/R | N/A :: TOO |
| Runoff | I :: II | Lau (2985) | m^3/s | 5% :: 5% | 1/day | < 0.5 deg :: Land/L,R,G | NA :: Sfc |
| | O :: II | Dozier (2989); Moore (2990); Richey-Batista (2987/2988) | m^3/km^2/s; m^3/s; mm-H2O/wk | 5% - 50% :: 5% - 50% | 1/day - 1/wk | 50 m -1 km :: L; R; G | |
| Runoff, Soil Moisture | O :: II | Barron (2992/2993) | m/s | | 2/day | 2.8 x 2.8 dg - 4.5 x 7.5 dg :: G | |
| Runoff_Chemistry | O :: II | Dozier (3070) | eq/m^2/s | 100% :: 100% | 1/day | 50 m :: L | |
| Runoff_Contributing-area | O :: II | Kerr-Sorooshian (2901/2991) | km^2 | 5 :: 5 | 1/mission | 500 m :: Land/R | N/A :: Sfc |
| Sand Depth | I :: II | Isacks (2780) | m | 0.5 :: 0.5 | 1/seas | 50 m :: Land/L | N/A :: Sfc |
| Sea_Ice Age | O :: FP | MIMR (3609/3610) | | | 1/mo | 22 km - 1dg :: Ocean/Cryo | :: Sfc |
| Sea_Ice Albedo | O :: FP | ASTER (3624) | | | | 90 m :: Ocean/Cryo | |
| Sea_Ice Area | O :: FP | ASTER (3630) | | | | | |
| Sea_Ice Conc | I :: II | Barron (3136/3137/3167/3168); Bates (3182); Brewer (3149); Simard (3141); Srokosz | %; fraction | 5% - 20% :: 1% - 20% | 1/day - 1/seas | 10 - 100 km :: Ocean/Cryo; Canada/R | N/A :: Sfc |
| | O :: FP | MIMR (3611/3612) | | | 1/mo | 22 km - 1dg :: Ocean/Cryo | N/A :: Sfc |
| | O :: II | Barron (3143); Simard (3144/3169/3172) | % cover; km; km/day | 500 m -10 km; 10% :: | 1/day - 1/(2 wk) | 500 m - 50 km :: Ocean/Cryo; Canada/R | :: Sfc |
| Sea_Ice Conc, First-year | I :: II | Rothrock (3165) | fraction | 0.2 :: 0.2 | 1/(3 day) | 25 km :: Ocean/Cryo | N/A :: Sfc |
| Sea_Ice Conc, GCM | I :: II | Rothrock (3178) | fraction | 0.03 :: 0.03 | 1/(3 day) | 25 km :: Ocean/Cryo | N/A :: Sfc |
| | O :: II | Barron (3146/3147) | % | | 1/day | 2.8 x 2.8 dg - 4.5 x 7.5 dg :: G | |
| Sea_Ice Conc, Multi-year | I :: II | Barron (3173/3174); Rothrock (3175) | m^2; fraction | | 1/day - 1/(3 day) | 10-100 km::Ocean/Cryo | N/A :: Sfc |
| | O :: II | Barron (3176) | % | | 1/seas | 50 km :: | |
| Sea_Ice Cover | I :: II | Bates (3148); Dickinson (3417); Hansen (3150); Rothrock (3188); Wielicki (2919) | fraction | 3 -10% :: 3 -10% | 2/day [d,n] - 1/wk | 25 km - 500 km :: Ocean/Cryo | N/A :: Sfc |
| | O :: FP | AIRS (3151) | fraction | 0.1 :: 0.1 | 2/day [d,n] | 50 km :: Ocean/Cryo | N/A :: Sfc |
| | O :: II | Barron (3179/3185) | %; cm | | 1/day | 50 km - 4.5 x 7.5 dg :: G; Ocean/Cryo | |
| Sea_Ice Duration, Ice-free_Season | O :: II | Simard (3135) | day | 1 km [?] :: | 1/yr [?] | :: Canada/R | :: Sfc |
| Sea_Ice Edge | I :: II | Abbott (3156); Rothrock (3189); Simard (3157/3190); Srokosz (3158) | presence/absence; dg (lat,lon); fraction | 10 km - 25 km; 0.03 - 0.1 | 1/day - 1/(7 day) | 10 km - 25 km :: Ocean/Cryo; Canada/R | N/A :: Sfc |
| | O :: II | Simard (3159) | km | 500 m :: | 1/(2 wk) | 500 m :: Canada/R | :: Sfc |
| Sea_Ice Emissivity | I :: II | Bates (2121) | dimensionless | | 1/day | 10 km :: Polar | N/A :: Sfc |
| Sea_Ice Extent | I :: II | Barron (3160/3161); Simard (3162) | | 5%; 25 km :: 5% | 1/day - 1/(7day) | 10-100 km :: Ocean/Cryo;Canada/R | N/A :: Sfc |
| | O :: FP | MIMR (3613/3614) | | | | 17 km :: Ocean/Cryo | N/A :: Sfc |
| | O :: II | Rothrock (3194); Simard (3193) | fraction | 500 m; 0.05 :: 0.05 | 1/(3 day) - 1/(2 wk) | 500 m -100 km :: >60 dgLAT; Canada/R | :: Sfc |
| Sea_Ice Fraction | O :: FP | ASTER (3152) | fractional area | | | 90 m :: Ocean/Cryo | N/A :: Sfc |
| Sea_Ice Fraction, New (First-Year) | O :: FP | ASTER (3618) | dimensionless | | | 90 m :: Ocean/Cryo | |
| Sea_Ice Fraction, Open-water | O :: II | Barron (3184) | m | | [ice response] | [crit feat] :: [modern ice] | N/A :: Sfc |
| Sea_Ice Lead (Open Water) Size-distribution | O :: FP | ASTER (3622) | | | | 90 m :: Ocean/Cryo | |
| Sea_Ice Lead (Open-Water) Fraction | O :: FP | ASTER (3617) | dimensionless | | | 90 m :: Ocean/Cryo | |
| Sea_Ice Leads | I :: II | Barron (3166) | | 5% :: 5% | 1/day | 30 m -100 km :: Ocean/Cryo | N/A :: Sfc |
| Sea_Ice Max Extent | O :: FP | MODIS (3153/3154) | km^2 | <=5% :: <=5% | 1/day - 1/mo | 1 km -10 km :: Ocean/Cryo- R | N/A :: Sfc |
| | O :: II | Barron (3186); Rothrock (3187) | cm; fraction | | 1/day - 1/(3 day) | 100 km - 2.8 x 2.8 dg :: >60 dgLAT; G | :: Sfc |
| Sea_Ice Meltpond Fraction | O :: FP | ASTER (3616) | dimensionless | | | 90 m :: Ocean/Cryo | |

## Appendix D: List of Data Product Groups

| *Product Name* | *Type* | *Investigator or Instrument Team Name* | *Units* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* |
|---|---|---|---|---|---|---|---|
| Sea_Ice Motion | I :: II | Rothrock (3103) | km/day | 0.5 km :: 0.5 km | 1/(3 day) | 25 km :: Ocean/Cryo | N/A :: Sfc |
| Sea_Ice Motion, Regional | I :: II | Simard (3196) | | 500 m :: | 1/(7 day) | 500 m :: Canada/R | N/A :: Sfc |
| Sea_Ice Roughness | I :: II | Bates (1555) | mm | 100 mm :: | 1/(3 mo) | :: Polar | N/A :: Sfc |
| Sea_Ice Size-distribution | O :: FP | ASTER (3621) | | | | 90 m :: Ocean/Cryo | |
| Sea_Ice Temperature | I :: II | Bates (2489); Rothrock (2490); Simard (3120) | K | 0.3 - 2 K :: 2 K | 1/day - 1/(3 day) | 10 km - 25 km :: Polar; Canada/R | N/A :: Sfc |
| | O :: FP | ASTER (3619) | K | | | 90 m :: Ocean/Cryo | N/A :: Sfc |
| Sea_Ice Thickness | I :: II | Dickinson (3418) | cm; m | 5%; 5cm :: 1%; 3 cm | 1/(10-20 day); 1/day; 1/seas | 90 m - 1 dg :: Ocean/Cryo; | :: Sfc |
| | O :: FP | ASTER (3623) | m | | | 90 m-1 km :: Ocean/Cryo | N/A :: Sfc |
| Sea_Level Height | I :: II | Abbott (3105); Brewer (3106) | cm; m | 5 cm; 5% :: 3 cm; 1% | 1/day - 1/seas | 7-20 km :: Ocean | N/A :: Sfc |
| Sea_Level Height | O :: II | Bates (3109); Liu (3520); Murakami (3561); Tapley (3110/3124) | cm; mm | | 10 day - 1/yr | 1/3 dg - 2 x 2 dg :: Ocean; Ocean/R(-Pacific) | N/A :: Sfc |
| Sea_Level Height, Along-track | I :: II | Bates (3111); Harris (3427) | cm | 10 cm; 2% :: 1% | 1-10 days | 7-25 km :: Ocean; /R | N/A :: Sfc |
| | O :: FP | ALT (3112) | cm | 10 cm :: | | 7 km :: Ocean | N/A :: Sfc |
| Sea_Level Height-Change | O :: II | Abbott (3113); Barron (3114) | cm RMS; m | 4-6cm RMS :: TBD | [ice response] | G ave :: Ocean [Southern]; G | N/A :: Sfc |
| Sea_Level Height-Change Statistics | O :: II | Srokosz (3551) | | | 5 yr (yr,seas,<seas) | 1 x 1 dg :: Ocean /R | |
| Sea_Level Height-Variability, RMS | O :: II | Srokosz (3550) | | | 1/seas | 1 x 1 dg :: | |
| Sea_sfc Brightness Temperature (Radiance) | O :: II | Barron (2454) | K | | 1/(5 day) | 2.5 dg :: G | |
| Sea_sfc Feature position | I :: II | Harris (3425) | deg long,lat | 120 m :: 60 m | 1 wk | 0.25-1 km:: Ocean/R | |
| Sea_sfc Feature velocity | I :: II | Harris (3426) | km/day | 20% :: 10% | 1 wk | 0.25-1 km:: Ocean/R | |
| Sea_sfc Feature-Occurence Statistics | O :: II | Srokosz (3554) | | | occasional | 1 km :: | |
| Sea_sfc Gradient-Changes Statistics | O :: II | Srokosz (3555) | | | occasional | 1 km :: | |
| Sea_sfc Reflectance Factor, MODIS-T | I :: II | Cihlar (2438) | | 0.05 :: 0.001 | 1/(3 mo) | 0.5 km :: Canada/R | |
| Sea_sfc State | O :: II | Bates (3134) | | | 1/hr | 25 km :: Ocean | N/A :: Sfc |
| Sea_sfc Temperature (SST) | I :: II | Abbott (2504/2505); Barron (2506); Bates (2508/2509); Brewer (2510/2511); Dickinson (3392/3393); Hansen (2512); Harris (3451/3452); Hartman (2513); Lau (2514/2515/2516); Liu (2517); Murakami (2518); Rothrock (2519); Srokosz (2520); Wielicki (2521) | K | 0.2 -1 K :: 0.05 - 1 K | 2/day [d,n] :: 1/seas | 30 m - 500 km :: Ocean/L,R,G | N/A :: Sfc |
| | O :: FP | ASTER (3620/3635); MIMR (3603/3604); MODIS (2527/2528/2529/2530/2531/2532) | K | 0.3-0.6K :: 0.4K-0.6K | 2/day [d, n] - 1/mo | 90 m - 50 km :: Ocean/L - G | N/A :: Sfc |
| | O :: II | Murakami (3564) | | | | :: Ocean/R(-Pacific) | |
| Sea_sfc Temperature (SST), Skin | O :: FP | AIRS (2523) | K | 0.5 K :: 0.4 K | 2/day [d,n] | 50 km :: Ocean | N/A :: Sfc |
| Sea_sfc Temperature Statistics | O :: II | Srokosz (3552) | | | 1/mo | 1 km :: | |
| Sea_sfc Temperature-Change Statistics | O :: II | Srokosz (3553) | | | 1/5yr | 1 x 1 dg :: | |
| Sea_sfc Topographic Height | I :: II | Harris (3429) | cm | 2% :: 1% | 1-10 days | 7-25 km :: Ocean/R | |
| Sediment Conc | O :: II | Isacks (3576) | | | | :: Land/R(Andes) | |
| Sediment(C) Constituent Flux | O :: II | Moore (2769) | kg/wk/TBD-area | | 1/wk | 1 km :: Sel_basins | N/A :: Sfc |
| Sediment(N) Constituent Flux | O :: II | Moore (2775) | kg/wk/TBD-area | | 1/wk | 1 km :: Sel_basins | N/A :: Sfc |
| Sediment(P) Constituent Flux | O :: II | Moore (2777) | kg/wk/TBD-area | | 1/wk | 1 km :: Sel_basins | N/A :: Sfc |
| Simulated Data Sets, MODIS | O :: FP | MODIS (3672) | | | | 0.25-1 km :: L(test sites) | N/A :: Sfc |
| Simulated Scenes, MODIS, Monte Carlo Ray-Tracing | O :: FP | MODIS (3673) | | | | 0.25-1 km :: L(test sites) | N/A :: Sfc |
| Snow Area | O :: FP | ASTER (3634) | | | | | |
| Snow Chemistry | O :: II | Dozier (3002) | m-eq/m^2 | 50% :: 50% | 1/wk, 1/mo | 50 m :: Snow/L | |
| Snow Contaminant Conc | I :: II | Dozier (2767) | mg/m^3 | 20% :: 20% | 1/wk, 1/mo | 50 m :: Snow/L | |
| | O :: FP | HIRIS (2768) | mg/m^3 | 20% :: 20% | 1/wk -1/mo | 50 m :: Snow/L | N/A :: Sfc |
| Snow Cover | I :: II | Barron (3003/3004/3005); Bates (3006/3007); Dozier (3008); Hansen (3009); Isacks (3010/3011); Lau (3012); Murakami (3014); Sellers (3015); Simard (3026); Wielicki | km; fraction; m^2; dimensionless; km^2 | 2% - 10%; 50 m^2 :: 2% - 10%; 10 m^2 | 2/day [d,n] - 1/seas | 15 m - 500 km :: Land/G,R,L | N/A :: Sfc |
| | O :: FP | HIRIS (3019); MIMR (3607/3608); MODIS (3020/3021) | km^2 | <=5% :: 2% - 5% | 1/day -1/mo | 50 m - 1 dg :: Cryo/L; Land/L- G | N/A :: Sfc |

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| *Product Name* | *Type* | *Investigator or Instrument Team Name* | *Units* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* |
|---|---|---|---|---|---|---|---|
| Snow Cover | O :: II | Simard (3023) | km | 10 km :: | 1/wk | 10 km :: Canada/R | :: Sfc |
| Snow Cover Index [combined with 2921] | O :: FP | AIRS (3018) | dimensionless | | 2/day [d,n] | 50 km :: Land | N/A :: Sfc |
| Snow Cover, Cold | O :: FP | HIRIS (3025) | km^2 | 5% :: 2% | 1/wk -1/mo | 50 m :: Glacier/L | N/A :: Sfc |
| Snow Cover, Wet | I :: II | Dozier (3028) | km^2 | 10% :: 10% | 1/wk, 1/mo | 50 m :: Snow/L | |
| | O :: FP | HIRIS (3029/3030) | km^2 | 5% - 10% :: 2% - 10% | 1/wk -1/mo | 50 m :: Glacier/L; Cryo/L | N/A :: Sfc |
| Snow Depth | I :: II | Dickinson (3414); Isacks (3031); Lau (3032); Simard (3034) | cm | 10% - 20% :: 10% - 20% | 1/wk - 1/seas | 30 m - 10 km :: Land/L,R; Canada/R | N/A :: Sfc |
| | O :: II | Bates (3035); Simard (3036) | m;cm | 5 cm/10% :: | 1/(20 min) - 1/wk | 10 km - 50 km :: Land | N/A :: Sfc |
| Snow Extent | I :: II | Dickinson (3415/3416) | | | | Low_res; Med_res :: Land | |
| Snow Grain Size | I :: II | Dozier (3037) | mm | 200% :: 200% | 1/wk, 1/mo | 50 m :: Snow/L | |
| | O :: FP | HIRIS (3038) | um | 200% :: 200% | 1/wk -1/mo | 50 [km?] :: Snow/L | N/A :: Sfc |
| Snow Liq-water Content | I :: II | Dozier (3039); Moore (3027) | N/A | 100% :: 100% | 1/wk - 1/mo | 50 m - 1 km :: Snow/L | |
| | O :: FP | HIRIS (2943) | mass fraction | 100% :: 100% | 1/wk -1/mo | 50 m :: Snow/L | N/A :: Sfc |
| Snow Mass | I :: II | Murakami (3040) | g/cm^2 | 10% :: | | :: Land | N/A :: Sfc |
| Snow Melt Area, Distributed | O :: II | Dozier (3041) | mm/hr | 50 :: 50 | 1/day | 50 m :: L | |
| Snow Melt Chemistry | O :: II | Dozier (3042) | m-eq/m^2 | 100% :: 100% | 1/1wk, 1/mo | 50 m :: L | |
| Snow Reflectance, Spectral | O :: FP | HIRIS (2440) | dimensionless | 5% :: 1% | 1/wk -1/mo | 50 m :: Land/L | N/A :: Sfc |
| Snow State | I :: II | Simard (3043) | | | | :: Canada/R | N/A :: Sfc |
| | O :: II | Simard (3044) | wet or dry | | | :: Canada/R | :: Sfc |
| Snow Temperature, Sfc | I :: II | Dozier (2500) | K | 1 K :: 0.3 K | 1/wk | 500 m :: Snow/L | |
| Snow Water Equivalent | I :: II | Barron (2998/2999); Cihlar (3491); Dozier (3000); Lau (2996/2997); Moore (3046); Simard (3045) | mm; m | 10% - 20%; 10 mm | 1/day - 1/mo | 30 m -10 km :: Land/L,R; Canada/R | N/A :: Sfc |
| | O :: II | Simard (3001) | mm | 10 mm/10% :: | 1/wk | 10 km :: Canada/R | :: Sfc |
| Snow&Ice Content | O :: II | Isacks (3574) | | | | :: Land/R(Andes) | |
| SO2 Conc | I :: II | Schoeberl (1366) | ppb | 20% :: | 1/wk | 8 x 10 dg :: G | 3 km :: Strat |
| | O :: FP | MLS (1369); TES (1370) | mix ratio; ppt | :: 5x10-10; 600 ppt | 2/day [d, n] - 1/(16 day) | 160 x 23 km; 0.1 x 2.5 dg :: 82N-82S; G | 2-3 km :: TPSE; 4-30 km |
| SO2 Conc | O :: II | Brewer (1367/1368) | mix ratio | 30% :: 20% | 1/day | :: L; G | :: PBL |
| Soil Brightness Index | O :: FP | MODIS (2047) | % | 5% :: 5% | 1/mo | 1 km :: Land/R | N/A :: Sfc |
| | O :: II | Kerr, Sorooshian (2048) | % | 5% :: 10% | 1/(2 mo) | 30 m :: Land/R | |
| Soil Bulk Density | I :: II | Kerr, Sorooshian (2791) | g/cm^3 | 5% :: 5% | 1/yr | 1 km :: Land | N/A :: Sfc |
| Soil Chemistry | I :: II | Richey, Batista (2810) | kg/ha | 20% :: 20% | 1/seas | 1 km :: Land/R | N/A :: Sfc |
| Soil Class | I :: II | Kerr, Sorooshian (2792) | class | | 1/yr | 30 m :: Land/R | :: Sfc |
| | O :: II | Kerr, Sorooshian (2793) | class | | 1/yr | 30 m :: Land/R | |
| Soil Color Index | O :: FP | MODIS (2095) | class | 10% :: 5% | 1/mo | 1 km :: Land/R | N/A :: Sfc |
| Soil Composition | I :: II | Barron (2794/2795/2796) | | 10% :: 5% | 1/mission | 30 m - 100 km :: Land/L,R | N/A :: Sfc |
| Soil Extent | I :: II | Barron (2797/2795/2796/2797/2798); Dickinson (3409); Moore (2800) | N/A; ha | 5 ? - 15% :: 5 ? - 15% | 1/yr | 30 m - 100 km :: Land/L,R | N/A :: Sfc |
| Soil Hydraulic Conditions, Unsaturated | I :: II | Kerr, Sorooshian (2917) | L/T | 0.05 :: | | 30 m :: Land/R | :: Sfc |
| Soil Hydraulic Properties | I :: II | Cihlar (3492); Simard (2916) | | 5 -10% :: 5% | once | 1 km :: Canada/R | N/A :: Sfc |
| Soil Index | O :: FP | ASTER (2801) | dimensionless | | 1/seas | 15-90 m :: Land/R,L | N/A :: Sfc |
| Soil Maps, Level-4 [Class,Comp,Age,etc.] | O :: FP | ASTER (2803) | varies | | 1/seas | 15-30 m :: Land/R,L | N/A :: Sfc |
| Soil Mineral Type | I :: II | Kerr, Sorooshian (2802) | mineral type | | 1/yr | 30 m :: Land/R | :: Sfc |
| Soil Moisture | I :: II | Barron (2946/2947/2948); Bates (2959/2960); Cihlar (3493); Dickinson (3411); Hansen (2962); Isacks (2963); Lau (2964/2965); Moore (2966); Murakami (3066); Richey-Batista (2958); Sellers (2967); Simard (2949) | cm^3/cm^3; cm; % vol; % saturated | 5% - 30% :: 2% - 40% | 1/day - 1/yr | 30 m - 500 km :: Land/L,R,G; Canada/R | N/A :: Sfc |
| | O :: FP | MIMR (3605/3606) | | 10-25% ; 1.0K :: 5- 40% | 1/mo | 60 km - 1dg :: Land | N/A :: Sfc |
| | O :: II | Barron (2969/2970/2971/3067/3068); Bates (2972); Kerr-Sorooshian (2973); Lau (3508); Moore (2974/2975); Schimel (2976) | mm; m; g/cm^2; % vol; kg/m^2; cm | 20% - 25% :: 5% - 20% | 1/(20 min) - 1/yr; 1/event | 30 m - 4.5 x 7.5 dg | N/A :: Sfc |
| Soil N Turnover | O :: II | Moore (2549/2550); Schimel (2551) | kg/ha per t-step; kg/ha | 25% - 30% :: 1% | 1/mo - 1/yr | Mult :: Land/L-G | |

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| *Product Name* | *Type* | *Investigator or Instrument Team Name* | *Units* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* |
|---|---|---|---|---|---|---|---|
| Soil N Turnover Time-deriv | O :: II | Schimel (2552) | kg/ha | 25% :: 1% | 1/seas | Mult :: 6 sites/L | :: Sfc |
| Soil Proportion, Bare | I :: II | Barron (2785/2786/2787); Simard (2788) | % | 5% - 10% :: 5 | 1/seas | 30 m - 100 km :: Land/L,R; Canada/R | N/A :: Sfc |
| | O :: II | Kerr-Sorooshian (2789); Moore (2705); Schimel (2790) | % | 10% - 15% :: 5% - 10% | 1/wk - 1/mo | 500 m - 1 km :: Land; 6 sites/L | N/A :: Sfc |
| Soil Reflectance, Bi-directional, (BRDF) | I :: II | Kerr-Sorooshian (2042); Dickinson (3370) | dimensionless | 10% :: 10% | 1/seas | <0.5-1 deg :: Land | N/A :: Sfc |
| Soil Roughness | I :: II | Dickinson (3331/3332) | | | | Hi_res; Low_res :: Land | |
| Soil Spectral-characteristics | I :: II | Cihlar (3494) | % | 5% :: 10% | once | 250-1000 m :: Canada/R | N/A :: Sfc |
| Soil Temperature | I :: II | Lau (2501/2502); Simard (3311) | K | 0.5 - 1 K :: 0.5 - 1 K | 2/day - 1/(3 day) | 100 m - 1 km :: Land/L,R; Canada/R | N/A :: Sfc |
| Soil Temperature | O :: II | Kerr, Sorooshian (2503) | K | 0.5 K :: 0.5 | 2/day [d,n] | 500 m :: Land/R | :: Sfc |
| Spectra, UV Stellar Comparison | O :: FP | SOLSTICE (3640) | photons/cm^2/s/nm | <5% :: <1% | | | |
| Stability (Lifted Index), Atmospheric | O :: FP | MODIS (1559/1560) | C | 2 C :: 1 C | 2/day - 1/mo | 5 km ; 0.5 dg :: G | N/A :: Atmos |
| Stratopause Height | I :: II | Bates (1561) | km | 1 km :: 0.5 km | 2/day [d,n] | 50 km :: G | N/A :: Mid-atmos |
| | O :: FP | AIRS (1562) | km | 1 km :: 0.5 km | 2/day [d, n] | 50 km :: G | N/A :: Mid-atmos |
| Structure-Location, Significant Mappable | I :: II | Kerr, Sorooshian (2882) | | | 1/yr | 30 m :: Land/R | :: Sfc |
| Surface Water Area | I :: II | Lau (3060/3061) | m^2 | 100 :: | 1/wk | 30 m - 1 km :: Land/L,R | N/A :: Sfc |
| Surface Water Content (Soil Moisture+Lakes+Rivers) | O :: II | Isacks (3575) | | | | :: Land/R(Andes) | |
| Surface Water Saturated Area | O :: II | Barron (2955/2956/2957) | | | 1/event, 1/mo, 1/yr | 30 m - 18 km :: R | |
| Suspended-Solids Conc, Lake Water | I :: II | Barron (2804) | | 25% :: | | 10 km | N/A :: Sfc |
| Suspended-Solids Conc, Ocean Water | O :: FP | HIRIS (3315); MODIS (3085/3086) | g/m^3 | 50% - 100% :: 35% - 50% | (>=2)/day - 1/mo | 30-90 m; 1 km - 20 km :: Ocean; Ocean/R,L; Ocean/L+Land/Lakes | N/A :: TOO |
| Temperature Profile | I :: II | Abbott; Barkstrom; Barron (1565); Bates (1569/1570); Grose (1572); Hansen (1573/1754); Hartman (1575); Isacks (1576); | K; C | 0.5 K - 2 K; 10% :: 0.3 K - 2 K; 5% | 4/day [d,n] - 1/wk | 10 km - 15 x 4 dg | 0.5 - 3 km :: 0 - 80 km |
| | | Kerr/Sorooshian (1577); Lau (1578); Liu (1589); Murakami (1580); Pyle (1581); Schoeberl (1582); Sellers (1583); Srokosz (1584); Wielicki (1585) | | | | | |
| | O :: FP | AIRS (1588/3691); GGI (1605/1606); HIRDLS (1608); MLS (1609) ; SAFIRE (1610); SAGE-III (1611/1612); TES (1614/1615/1616) | K | 0.5 K - 2 K :: 0.4 K- 2K | 2/day [d, n] -1/yr | 1 km - 50 km :: G- Land | 300 m - 1 km :: Atmos; Trop- Sfc |
| | O :: II | Barron (1589/1590/1591/1592/1593/1594); Bates (1626); Grose (1595/1596/1597); Pyle (1598); Schoeberl (1599/1600/1601/1602/1603/1604/1624/1625) | K; C | 0.8 K - 2 K :: 1 K - 2 K | 1/(5 min) - 1/mo; 2/day | 500 m - 4.5 x 7.5 dg :: R/[East. U.S.]; G,R; 1-3 sites | 24 - 50 lyr; 2-3.8 km; 110 mb ::1000-0.1mb; 0 - 90 km |
| Temperature, Dry-bulb, Near_sfc | O :: II | Bates (1617/1619/1620/1623) | K | | 1/(20 min) | 25 km - 50 km :: G | N/A :: 10 m; Near_sfc |
| Temperature, Dry-bulb, PBL | O :: II | Barron (1628); Bates (1618) | K | | 1/(20 min) - 1/day | 10 km - 50 km :: R | N/A :: PBL |
| Temperature, Dry-bulb, Tropopause | O :: II | Harris (3658) | | | | :: Ocean / R(Australia-STC) | |
| Temperature, Near_sfc | I :: II | Barron (1566/1568); Dickinson (3334); Hansen (1629/1630); Kerr/Sorooshian (1631); Rothrock (1627); Schimel (1632/1633) | K; C | 0.2 K - 1K; 10% :: 1K - 2K; 1% | 2/day [d,n] - 1/wk | 30 m - 500 km :: Land/L,R,G; Ocean/R,G; Polar | N/A :: Near_sfc |
| Temperature, PBL | I :: II | Mouginis-Mark (3302) | | | 1/day | 30 m :: Land/R | N/A :: Plume_col |
| Temperature, Stratospheric | O :: II | Bates (1621) | K | | 1/(20 min) | 25 km :: G | N/A :: PBL [Top of] |
| Temperature, Tropospheric | O :: II | Bates (1622) | K | | 1/(20 min) | 50 km :: G | N/A :: Tropopause |
| Temperature-Change, Convective_Adjustment | O :: II | Barron (1634/1635) | K/s | | 2/day | 2.8 x 2.8 dg - 4.5 x 7.5 dg :: G | |
| Temperature-RMSE | O :: II | Bates (1542) | K | | 1/(20 min) | 100 km :: G | 25 lyr :: 1000-0.1 mb |
| Temperature-Tendency | O :: II | Barron (1636/1637) | K/s | | 2/day | 2.8 x 2.8 dg - 4.5 x 7.5 dg :: G | |
| Texture, MODIS Level-2 | O :: FP | MODIS (3658) | | | | | |
| Texture, MODIS Level-3 | O :: FP | MODIS (3659) | | | | | |

## Appendix D: List of Data Product Groups

| *Product Name* | *Type* | *Investigator or Instrument Team Name* | *Units* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* |
|---|---|---|---|---|---|---|---|
| Topographic Elevation, Land_sfc | I :: II | Barron (2823/2824); Cihlar(3495); Dickinson (3410); Dozier (2825); Isacks (2844); Kerr, Sorooshian (2826); Moore (2827); Wielicki (2847) | | | | | |
| | O :: FP | MISR (2846) | m | 100 m :: 100 m | 1/mission | 15-30 m :: Land/R,L | N/A :: Sfc |
| | O :: II | Barron (2840) | km | | ? 5000 yr | 5 km :: 2 sites | |
| Topographic Elevation, Land_sfc, (DEM) | I :: II | Isacks (2833/2838/2839); Kerr/Sorooshian (2834); Lau (2835) | m; cm; km | 2% - 30%; 1 m - 200 m :: 1% - 10% | (1-10 days) - 1/mission | 1 m - 25 km :: Land/L,R; Ocean/R | N/A; 30 m :: Sfc |
| | O :: FP | ASTER (2828) | m | >50 m :: >30 m | 1/mission | 15 m :: Land/R,L | 30 m :: Sfc |
| Topographic Elevation, Land_sfc, Control, (DEM) | I :: II | Isacks (2837) | | | | | |
| Topographic Elevation-Change Rate, Land_sfc | O :: FP | GLRS-A (2831) | mm/day -mm/yr | 5 mm/yr :: | 1/yr | 100-900 km :: Land/R | :: Sfc |
| Topographic Elevation, Sea_sfc | I :: II | Liu (3123); Murakami (3122); Srokosz (3107) | cm; m | 1 cm - 3 cm :: 1 cm - 3 cm | 1/(10 day) | 10 km :: Ocean/R,G | N/A :: Sfc |
| Topographic Elevation, Sea_sfc | O :: FP | ALT (3108) | cm | 5cm et al :: | 1/(16 day) | 25 km :: Ocean | N/A :: Sfc |
| Topographic Slope (Azimuth), Land_sfc | I :: II | Kerr/Sorooshian (2830/2845) | dg; % | 10 :: 5 | 1/yr | 30 m :: Land/R | :: Sfc |
| Torque, Friction | I :: II | Bates (1640) | kg m^2/s^2 | 5% :: | | :: G | :: Atmos |
| | O :: II | Tapley (1641) | kg m^2/s^2 | 5% :: | 4/day | 50 km :: G | N/A :: Sfc |
| Torque, Mountain | O :: II | Tapley (2875) | kg m^2/s^2 | 5% :: | 4/day | 50 km :: Land | N/A :: Sfc |
| Torque, Ocean-Land | O :: II | Tapley (2876) | kg m^2/s^2 | 10% :: | 4/day | 50 km :: G | N/A :: Sfc |
| Trace Gas Conc | I :: II | Murakami (1374) | mix ratio | 20% :: | | | N/A :: TOA |
| Trace Gas Conc, Non-diurnally-varying | O :: II | Grose (1375) | mix ratio | | 1/day | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| Trace Gas Total Burden | O :: II | Schoeberl (1373) | column density | 25% :: 15% | [irreg] | N/A :: R | Column :: Atmos |
| Trace Gas Total Burden, Greenhouse | O :: II | Murakami (3557) | | | | 5 dg :: G | NA :: Atmos |
| Trace Gas Transfer Coef | O :: II | Brewer (3088) | m/s | | 1/day, 1/seas | 25 km :: Ocean/G,L | N/A :: TOO |
| Trace Gas Transport Diagnostics | O :: II | Grose (1755) | | | 1/mo | ~6 x 6 dg :: G | 24 lvl :: 0-90 km |
| Tropopause Height | O :: FP | AIRS (3688) | km | 1 km :: 0.5 km | 2/day [d,n] | 50 km :: G | N/A :: Atmos |
| Tropopause Height, Aerosol_located | I :: II | Bates (1642) | m | 75 m :: | | 200 km :: G | 75 m :: Trop |
| | O :: FP | GLRS-A (1643) | m | 300 m :: | 1/(2-16 day) | 200 km :: G | 300 m :: Trop |
| Tropopause Height, Cirrus_located | O :: FP | GLRS-A (1644) | m | 300 m :: | 1/(2-16 day) | 10 km :: G | 300 m :: Trop |
| Vegetation Biomass | I :: II | Richey/Batista (2627) , Sellers (2628) | t/ha | 20% :: 20% | 1/seas | 1 km :: Land/R | N/A :: Sfc |
| | O :: II | Kerr/Sorooshian (2609); Moore (2610/2611) | kg/m^2 | 20% :: | 1/seas - 1/(3 yrs) | 30 m - 1 km:: Land/R,G | :: Sfc |
| Vegetation Biomass, Dead | I :: II | Barron (2612/2613) | kg/ha | 25% :: 15% | 1/mission | 30 m - 10 km | N/A :: Sfc |
| | O :: FP | HIRIS (2614) | kg/ha | 30% :: 15% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| Vegetation Biomass, Green | I :: II | Barron (2615/2616); Dickinson (3397); Isacks (2617); Moore (2618/2619) | kg/ha; g/ha | 25% - 40% :: 15% | 1/2 day - 1/mission | 30 m - 100 km :: Land | N/A :: Sfc |
| | O :: FP | HIRIS (2620) | kg/ha | 30% :: 15% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| Vegetation Biomass, Sub_sfc | I :: II | Kerr, Sorooshian (2624) | kg/m^2 | | 1/(1-3 yr) [few yr] | 1120 m :: Land/R | :: Sub_sfc |
| | O :: II | Moore (2625/2626) | kg/ha | | 1/(1-3 yr) [few yr] | :: Land/R,G | |
| Vegetation Biome Area | I :: II | Kerr, Sorooshian (2630) | km^2 | 5% :: 5% | 1/seas | :: Land/R | N/A :: Sfc |
| Vegetation Cellulose Conc | I :: II | Moore (2647) | % | 20% :: 20% | 1/(16 day) | 30 m :: Land/L | |
| | O :: FP | HIRIS (2648) | g/ha | 40% :: 20% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| Vegetation Change | O :: II | Cihlar (2713) | veg change classes | 1 class | 1/yr | 1 km :: Land/R | N/A :: Scf |
| Vegetation Chlorophyll Conc | I :: II | Moore (2649/2650); Schimel (2651/2652) | g/ha; kg/ha | 10 - 20% :: 1 -10% | 1/day - 1/wk | 30 m - 1 km :: Land/L,R | N/A :: Sfc |
| | O :: FP | HIRIS (2653) | g/ha | 25% :: 10% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| Vegetation Class(Type) | O :: II | Isacks (3586) | | | | :: Land/R(Andes) | |
| Vegetation Condition | O :: II | Kerr, Sorooshian (2714) | N/A | 10% :: 10% | 1/wk | 500 m :: Land/R | N/A :: Sfc |
| Vegetation Cover | I :: II | Sellers (2740) | ha | | 1/(1-4 days) | 100 km :: | :: Sfc |
| | O :: FP | HIRIS (2741) | % | 20% :: 10% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| Vegetation Crown Height | O :: FP | HIRIS (2656) | m | 40% :: 20% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| Vegetation Crown Spacing | O :: FP | HIRIS (2657) | m | 40% :: 20% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| Vegetation Density | I :: II | Kerr, Sorooshian (2634) | % | | | 60 m :: Land/R | :: Sfc |
| | O :: II | Isacks (3585) | | | | :: Land/R(Andes) | |

## Appendix D: List of Data Product Groups

| *Product Name* | *Type* | *Investigator or Instrument Team Name* | *Units* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* |
|---|---|---|---|---|---|---|---|
| Vegetation Evapotrans | I :: II | Bates (1989/1990); Cihlar (3497); Dickinson (3351/3352); Lau (1788); Moore (3057/3058); Murakami (1991); Schimel (1790); Simard (1789) | W/m^2; %; cm; mm/day; m/yr | 10% - 20%; 0.05 mm - 1 mm/day :: 5% - 20%; 1 mm/day | 1/day - 1/wk | 30 m - 1 dg :: Canada/R; Land/L,R,G | N/A :: Sfc |
| | O :: FP | ASTER (1791) | mm/day | 1 mm/dy :: 0.5 mm/dy | | 90 m :: Land/R,L | N/A :: Sfc |
| | O :: II | Barron (1792/1793); Lau (3509); Moore (1797/1798); Richey/Batista (1795/1796); Schimel (1799) | W/m^2; mm/day; mm/mo; cm/day | 1 - 20% :: 1% - 5% | 1/event; 1/day - 1/yr | .030-18 km | N/A :: Sfc |
| Vegetation Evapotrans Time-deriv, Annual | O :: II | Schimel (1803) | cm ? | 20% :: 1% | 1/day | [multiple] :: 6 sites/L | :: Sfc |
| Vegetation Extent | I :: II | Barron (2715/2716/2717); Dickinson (3400/3401); Hansen (2718); Moore (2635) | ha | 15% :: 15% | 1/yr | 1 km :: Land | |
| | O :: II | Moore (2635) | ha | 15% :: 15% | 1/yr | 1 km :: Land | |
| Vegetation Growing_Season Duration | O :: FP | MODIS (2659/2660) | day | 10 dy :: | 1/yr | 1 km - 10 km :: Land | N/A :: Sfc |
| | O :: II | Cihlar (2661) | day | 10 dy :: 1dy | 1/yr | 1 km :: Land/R | N/A :: Sfc |
| Vegetation Height | I :: II | Kerr/Sorooshian (2636); Dickinson (3402) | m | 10% :: 10% | 1/seas | 30 m; Med-low_res :: Land/R,G | :: Sfc |
| | O :: II | Schimel (2637) | m | 20% :: 5% | 1/yr | 500 m :: 6 sites/L | :: Sfc |
| Vegetation Index | I :: II | Hansen (2742); Isacks (2743/2744); Murakami (2745) | % | 5%; 1 :: 0.5 - 1 | 1/wk - 1/mo | 30 m - 500 km :: Land/L,R,G | :: Sfc |
| | O :: FP | HIRIS (2746); MODIS (2749/2750/2751) | dimensionless | 20%; 0.01 :: 10%; 0.01 | 1/day - 1/mo | 15 m -10 km; pixel_size :: Land/R,L | N/A :: Sfc |
| | O :: II | Cihlar (2706); Kerr/Sorooshian (2752); Lau (3510); Moore (2753/2754) | various indices; %; dimensionless | .01 - .05 :: 0.001 - .01 | 1/(10 day) - 1/yr | 30 m - 1 km :: Land/L,R,G | N/A :: Sfc |
| Vegetation Index, PVI | O :: FP | ASTER (2747) | | | | | |
| Vegetation Index, Leaf Area, (LAI) | I :: II | Barron (2673/2674/2675); Bates (2676); Dickinson (3406); Lau (2677); Schimel (2678/2679) | area fraction; % | 0.5; 10% :: 0.2; 1 - 10% | 1/day - 1/seas | 30 m - 100 km :: Land/L,R,G | N/A :: Sfc |
| | O :: FP | MODIS (2680) | dimensionless | 0.1-0.25 :: 5% - 20% | 1/day - 1/wk | pixel_size :: Land/R - G | N/A :: Sfc |
| | O :: II | Kerr/Sorooshian (2682); Moore (2683) | % | 10% :: 5% | 1/mo - 1/(1-3 mo) | 30 m :: Land/L,R | :: Sfc |
| Vegetation Index, Normalized | O :: FP | MISR (2756/2757/3682) | dimensionless | 2% :: 2% | 1/(5-16 day) [d] - yr | 240 m - 1.92 km :: Land/R | N/A :: Sfc |
| Vegetation Index, Polarization | O :: FP | MODIS (2337) | dimensionless | | 1/day | pixel_size :: Land | N/A :: Sfc |
| Vegetation Index, Soil&BRDF_Adjusted | O :: FP | MODIS (2724) | dimensionless | 0.01 :: 0.01 | 1/day - 1/mo | 1 km :: Land/R | N/A :: Sfc |
| Vegetation Index, Soil_Adjusted | O :: FP | MODIS (2748) | dimensionless | 0.01 :: 0.01 | 1/day - 1/mo | 1 km :: Land/R | N/A :: Sfc |
| Vegetation Leaf Water Content | I :: II | Moore (2760) | g/cm^3 | 20% :: 20% | 1 day - 1 wk | 30 m :: Land/L | N/A :: Sfc |
| Vegetation Leaf-tissue Water Content | O :: FP | HIRIS (2761) | g/cm^3 | 50% :: 20% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| Vegetation Lignin Conc | I :: II | Moore (2684); Schimel (2685/2686) | % | 20% :: 1 - 20% | 1/(16 day) - [multiple] | 30 m :: Land/L | N/A :: Sfc |
| | O :: FP | HIRIS (2687) | g/ha | 40% :: 20% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| Vegetation Litter Biomass | O :: II | Kerr/Sorooshian (2621); Moore (2622/2623) | kg/km^2; kg/ha | | 1/(1-3 yr) [few yr] | 30 m :: Land/L,R | :: Sfc |
| Vegetation Moisture, Root-zone | I :: II | Barron (2950/2951/2952); Cihlar (3501); Dickinson (3399); Richey/Batista (2708); Simard (2953) | cm^3/cm^3; m | 10% - 20% :: 5% - 20% | 1/day; 1/seas | 30 m -100 km :: Land/L,R,G; Canada/R | N/A :: Sub_sfc |
| | O :: II | Bates 2594) | g/cm^2 | | 1/(20 min) | 50 km :: Land | N/A :: |
| Vegetation N Conc | I :: II | Moore (2688/2689); Schimel (2690/2691) | % | 20% :: 1 - 20% | 1/(16 day) - 1/seas | 30 m - 1 km :: Land/L,R | N/A :: Sfc |
| Vegetation Phenologic State, AVHRR | O :: II | Sellers (2712) | | | 1/mo | 20 km :: | |
| Vegetation Physiography | I :: II | Richey, Batista (2693) | m | 10% :: 10% | 1/mo | 1 km :: Land/R | N/A :: Sfc |
| Vegetation Phytomass | O :: II | Cihlar (2694) | kg/ha | :: 10% | 1/yr | 1 km :: Land/R | N/A :: Sfc |
| Vegetation Production Time-deriv, Net Primary, (dNPP/dt) | O :: II | Schimel (2702) | kg/ha | 20% :: 1% | 1/seas | [multiple] :: 6 sites/L | :: Sfc |
| Vegetation Production, Net Ecosystem, (NEP) | O :: II | Moore (2697) | t/yr/km^2 | 25% :: 10% | 1/yr | ? km :: Land | |
| Vegetation Production, Net Primary, (NPP) | I :: II | Schimel (2698) | kg/ha | 20% :: 5% | 1/yr | 500 m :: 6 sites/L | N/A :: Sfc |
| | O :: II | Kerr/Sorooshian (2699); Moore (2700); Schimel (2701) | t/yr/km^2; t/yr; kg/ha | 20% - 25% :: 1% - 10% | 1/seas - 1/yr | 500 m - 1 km :: Land; 6 sites/L | N/A :: Sfc |
| Vegetation Productivity | O :: II | Kerr, Sorooshian (2704) | annual % | | | 30 m :: Land/R | :: Sfc |
| Vegetation Productivity, Primary | O :: FP | MODIS (2703) | Mg/km^2/yr | 100 :: 5-30% | 1/wk - 1/yr | 1 km :: Land/R - G | N/A :: Sfc |
| Vegetation Reflectance, Bi-directional, (BRDF) | I :: II | Cihlar (3496); Dickinson (3371); Kerr/Sorooshian (2046) | dimensionless | 10% :: 10% | 1/seas | <0.5-1 deg :: Land | |

## Appendix D: List of Data Product Groups

| *Product Name* | *Type* | *Investigator or Instrument Team Name* | *Units* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* |
|---|---|---|---|---|---|---|---|
| Vegetation Reflectance, Bi-directional, (BRDF) | O :: II | Dickinson (3529) | | | | | |
| Vegetation Rooting Depth | I :: II | Kerr/Sorooshian (2707); Dickinson (3403) | m | 20% :: 20% | 1/yr | 30 m - 1 dg :: Land/R,G | |
| Vegetation Roughness | I :: II | Dickinson (3404) | | | | Med-low_res :: Land | |
| Vegetation Spatial Density | I :: II | Kerr, Sorooshian (2638) | #/km^2 | 20% :: 10% | | 60 m :: Land/R | :: Sfc |
| Vegetation Stomatal Resistance | I :: II | Kerr, Sorooshian (2709) | | | 1/seas | 30 m :: Land/R | |
| Vegetation Stress | O :: FP | MODIS (2723) | s/m | 200-1000 :: 5-30% | 1/day - 1/wk | pixel_size :: Land/R - G | N/A :: Sfc |
| Vegetation Stress Index, Water | O :: II | Kerr, Sorooshian (3065) | %change | 5% :: 5% | 1/(2 mo) | 500 m :: Land/R | |
| Vegetation Stress Index, XXX | O :: II | Moore (2725) | %change | 5% :: 5% | 1/(2 mo) | 500 m :: Land/R | |
| Vegetation Structure | I :: II | Barron (2639/2640); Cihlar (3502); Richey/Batista (2726); Schimel (2641/2642/2643) | % | | 1/seas - 1/yr | 30 m - 10 km :: Land/L,R | N/A :: Sfc |
| Vegetation Succession | O :: II | Cihlar (2727) | vegetation change | :: 1 class | 1/(2 yr) | 1 km :: Land/R | N/A :: Sfc |
| Vegetation Temperature | I :: II | Dickinson (3394); Kerr/Sorooshian (2456); Moore (2535) | K | 0.5K :: 0.5K | 2/day [d,n] | 500 m - 1 dg :: Land/R,G | :: Sfc |
| Vegetation Type | I :: II | Barron (2728/2729/2730); Cihlar (3504); Dickinson (3405); Hansen (2731); Isacks (2732); Kerr,Sorooshian (2733); Lau (2734); Moore (2736) | N/A; class; species; ha; m | 5% - 15%; 30 m :: 5% - 15% | 1/wk - 1/yr | 30 m - 500 km :: Land/L,R,G | N/A :: Sfc |
| Vegetation Type | O :: FP | HIRIS (2644) | ha | 10% :: 10% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| | O :: II | Cihlar (2737); Moore (2738) | classes | [1 km] :: 1 class | 1/yr | 1 km :: Land/R,G | N/A :: Sfc |
| Vegetation Type Boundaries | I :: II | Barron (2739) | | | | | |
| Vegetation Water Content | I :: II | Moore (2762) | g/cm^3 | 20% :: 20% | 1/day, 1/wk | 30 m :: Land/L | :: Sfc |
| Vegetation Water Content, Integrated | I :: II | Kerr, Sorooshian (2758) | % | 20% :: 20% | 2/wk | 500 m :: Land/R | N/A :: Sfc |
| Vegetation Water Potential | I :: II | Dickinson (3407) | | | | Low_res :: Land | |
| Vertical Motion | O :: II | Barron (1506/1507); Bates (1692) | cm/s; mb/s | | 1/(20 min) - 1/hr | 1 km - 100 km :: R,G | 50 lyr :: 1000-0.1 mb |
| Vertical Motion, Omega | O :: II | Barron (1504/1505/1508) | Pa/s | | 1/(6 hr) - 2/day | 1 dg - 4.5 x 7.5 dg :: G | 15-20 lvl :: |
| Volcano Age | O :: FP | ASTER (3298) | | variable :: variable | | 15-90 m :: Land/R - L | N/A :: |
| Volcano Cone Deformation | O :: II | Mouginis-Mark (3272) | cm/mo | 1 cm (ver) :: | (~10)/event | 30 m :: Land/L | cm :: Sfc |
| Volcano Deformation | I :: II | Mouginis-Mark (3269) | cm | 1 cm(ver) :: | 1/day | cm [?] :: [30 km^2/10] | N/A :: Sfc |
| Volcano Deformation(Inflation-Deflation) | O :: FP | GLRS-A (3270/3271) | mm/day - mm/yr | 5 mm/yr ; 5/yr-100/d :: | 1/day - 1/yr | 1 km - 100 km :: Land/R - L | :: Sfc |
| Volcano Elevation | O :: II | Mouginis-Mark (3275) | cm | 10 m (ver) :: | 1/mission | 30 m :: Land/L | N/A :: Sfc |
| Volcano Elevation Change | I :: II | Mouginis-Mark (3274/3278) | m, cm | 10 m (ver);1- 5 (ver) :: | 2/day [d,n] :: 1/mission | 30 m :: Land/L | N/A :: Sfc |
| Volcano Elevation, Reference | I :: II | Mouginis-Mark (3276) | cm | 10 m (ver) :: | 1/mission | 30 m :: Land/L | N/A :: Sfc |
| | O :: II | Mouginis-Mark (3277) | cm | 10 m (ver) :: | 1/mission | 30 m :: Land/L | N/A :: Sfc |
| Volcano Emissions, Eruption | O :: II | Mouginis-Mark (3279) | SO2 rlse in kton | | 1/yr | 20 km :: G | N/A :: Plume_top |
| Volcano Morphology | I :: II | Mouginis-Mark (3284) | m | | 4/yr | 30 m :: Land/L | N/A :: Sfc |
| Volcano Roughness | I :: II | Mouginis-Mark (3287) | cm | 3-24 cm :: | 1/yr | 30 m :: Land/L | N/A :: Sfc |
| Volcano Temperature, Eruption Spike | I :: II | Mouginis-Mark (3290) | C | 10 C :: | [near-real time ?] | 1 km :: G | N/A :: Sfc |
| Volcano Temperature-Change | I :: II | Mouginis-Mark (3295) | C/yr | 1 C :: | 1/yr | 30 m :: Land/L | N/A :: Sfc |
| | O :: II | Mouginis-Mark (3296) | C/yr | 1 C :: | 1/yr | 30 m :: Land/L | N/A :: Sfc |
| Volcano Volume-Change | O :: II | Mouginis-Mark (3300) | m^3 | 1000 m^3 :: | 1/event | 30 m :: Land/L | N/A :: Sfc |
| Volcano-Activity Extent | O :: FP | HIRIS (3299) | m^2 | | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| Volcano-Activity Temperature | O :: FP | HIRIS (3294) | C | 10 C :: 5 C | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| Vorticity, Potential | O :: II | Grose (1645); Pyle (1646) | | | 1/day | ~6 x 6 dg :: G | 1 lvl :: 0-30 km |
| Wetlands Extent | I :: II | Dickinson (3408); Hansen (2764) | | 5% :: | 1/wk | Low_res; 500 km :: Land | :: Sfc |
| Wind Direction | I :: II | Liu (1702); Srokosz (1703) | dg | 10 dg :: 1 - 10 dg | 1/day | 25 km :: Ocean/G, R/[S. Atlan] | N/A :: Sfc |
| | O :: II | Barron (1704/1705) | dg | | 1/(5 min) | 500 m - 30 km:: [East. U.S.] | |
| Wind Flux(Draw) | I :: II | Kerr, Sorooshian (1706) | km/day | | 1/day | 25 km :: Land | 10 km :: Trop |
| Wind Speed | I :: II | Lau (1712/1739); Pyle (1714); Sellers (1715) | m/s | 0.5 - 5 m/s :: 2%; 5 m/s | 2/day - 4/day | 15 x 4 km - 100 km :: G | 0.5 - 2 km :: Sfc - Strat |
| | O :: FP | MLS (1734) | m/s | :: 10m/s | 2/day [d, n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: 60-110 km |
| | O :: II | Barron (1721/1722/1723/1724); Schoeberl (1725/1726/1727/1728/1729/1730) | m/s | 2 m/s :: 2 m/s | 1/(5 min) - 1/(4 day) | 500 m - 4 x 5 dg :: R,G; R/[East. U.S.] | 2 km - 3.8 km; 110 mb :: Atmos |
| Wind Speed RMSE, Mean_Meridional | O :: II | Bates (1543) | m/s | | 1/(20 min) | 100 km :: G | 25 lyr :: 1000-0.1 mb |

## Appendix D: List of Data Product Groups

| *Product Name* | *Type* | *Investigator or Instrument Team Name* | *Units* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* |
|---|---|---|---|---|---|---|---|
| Wind Speed RMSE, Mean_Zonal | O :: II | Bates (1544) | m/s | | 1/(20 min) | 100 km :: G | 25 lyr :: 1000-0.1 mb |
| Wind Speed, Along-track | O :: FP | ALT (1735) | m/s | 2 m/s :: | | 7 km :: Ocean | N/A :: Sfc |
| Wind Speed, Land_sfc | I :: II | Dickinson (3339); Kerr/Sorooshian (1711) | m/s | 5 m/s :: 5 m/s | 1/hr | 25 km - 100 km :: Land | N/A :: Sfc |
| Wind Speed, Mean Meridional | O :: II | Bates (1691) | m/s | | 1/(20 min) | 50 km :: G | 50 lyr :: 1000-0.1 mb |
| Wind Speed, Mean Zonal | O :: II | Bates (1693) | m/s | | 1/(20 min) | 50 km :: G | 50 lyr :: 1000-0.1 mb |
| Wind Speed, Meridional | O :: II | Bates (1694/1701); Barron (1736/1737) | m/s | | 1/(20 min) - 2/day | 25 km - 4.5 x 7.5 dg :: G | N/A; 50 lyr :: 1000-0.1 mb; Near_sfc |
| Wind Speed, PBL | I :: II | Lau (1738) | m/s | 20% :: 10% | 1/hr | 30 m :: Land/L | N/A :: PBL |
| Wind Speed, Sea_sfc | I :: II | Abbott (1707/1708); Bates (1709); Brewer (1710); Harris (3435); Liu (1713); Srokosz (1716); Tapley (1717) | m/s | 5% - 15%; 1 m/s :: 2% - 10%; 0.1 - 1 m/s | 4/day - 1/seas | 1 - 50 km :: Ocean | N/A :: Sfc |
| | O :: FP | AIRS (1718) | m/s | | 1/day | 50 km :: Ocean | N/A :: Sfc |
| Wind Speed, Zonal | O :: II | Barron (1740/1741); Bates (1699/1700) | m/s | | 1/(20 min) - 2/day | 25 km - 4.5 x 7.5 dg :: G | N/A :: Near_sfc |
| Wind Stress | I :: II | Bates (1742); Lau (1743); Murakami (1744); Tapley (1745) | N/m^2 | 0.01; 10% :: | 4/day | TBD; 50 km :: Ocean | :: Sfc |
| | O :: FP | STIKSCAT (1746) | | | | :: Ocean | :: Sfc |
| Wind Stress, Meridional | O :: II | Barron (1558/1750); Bates (1649/1749) | N/m^2 | | 1/(20 min) - 2/day | 25 km - 4.5 x 7.5 dg :: G | N/A :: Sfc |
| Wind Stress, Sea_sfc | O :: FP | MIMR (3594/3595) | m/s | | 1/day - 1/mo | 39 km - 1 dg :: Ocean | N/A :: Sfc |
| Wind Stress, Zonal | O :: II | Barron (1747/1748); Bates (1751/1752) | N/m^2 | | 1/(20 min) - 2/day | 25 km - 4.5 x 7.5 dg :: G | N/A :: Sfc |
| Wind Trajectories | O :: II | Bates (1695) | dg (lat,lon),mb | | 1/(20 min) | 50 km :: G | 50 lyr :: 1000-0.1 mb |
| Wind U Tendency | O :: II | Barron (1696/1698) | m/s^2 | | 2/day | 2.8 x 2.8 dg - 4.5 x 7.5 dg :: G | |
| Wind V Tendency | O :: II | Barron (1647/1648) | m/s^2 | | 2/day | 2.8 x 2.8 dg - 4.5 x 7.5 dg :: G | |
| Wind Velocity | I :: II | Abbott (1754); Barron (1650/1651/1652); Barkstrom; Bates (1659/1660/1651); Dickinson; Grose (1662); Harris (3433/3434); Hartmann (1665); Isacks (1666); Liu (1667); Murakami (1668); Schoeberl (1671); Srokosz (1672); Wielicki (1673) | m/s; deg | 1 m/s - 5 m/s, 10 dg - 20 dg; 7% - 20% :: 0.5 m/s - 5 m/s, 5 dg; 5% - 10% | 1/(12 min) - 1/wk | 30 m - 15 x 4 dg | 0 - 3 km :: 0 - 60 km |
| | O :: II | Barron (3163); Grose (1676/1677); Rothrock (3132) | cm/s, m/s; dg | | 48/day - 1/(3 day) | 100 km - ~6 x 6 dg :: G; > 60 dgLat; Land/R(Andes) | 1-24 lvl :: 0 - 90 km |
| Wind Velocity, 3-D | O :: II | Pyle (1683) | | | | | |
| Wind Velocity, Divergent Horizontal | I :: II | Dickinson (3336) | | | | <0.5-1 deg :: G | |
| Wind Velocity, Friction | I :: II | Srokosz (1684) | m/s,dg | 5%,5 dg :: .01m/s,1dg | 1/day | 25 km :: Ocean [S. Atl] | N/A :: Sfc |
| Wind Velocity, Geostrophic | I :: II | Bates (1685) | m/s | 2 m/s :: | 2/day | 4 x 4 dg :: G | 1-1.5 km :: Atmos |
| | O :: FP | HIRDLS (1687) | m/s | 3 m/s :: 3 m/s | 2/day [d, n] | 4 x 4 dg :: G | 1 km :: 7-80 km |
| | O :: II | Rothrock (1686) | m/s | | 1/(3 day) | 100 km :: > 60 dgLAT | |
| Wind Velocity, Land_sfc | I :: II | Barron (1655/1656) | m/s,dg | 1 :: 1 | 1/day | 30 m -100 km :: Land/L,R,G | N/A :: Sfc |
| Wind Velocity, Line-of-sight (Level-1B) | I :: II | Bates (2382) | | | | | |
| Wind Velocity, Prevailing | O :: II | Isacks (3579) | | | | | |
| Wind Velocity, Rotational Horizontal | I :: II | Dickinson (3337) | | | | <0.5-1 deg :: G | |
| Wind Velocity, Sea_sfc | I :: II | Abbott (1753); Barron (1653/1657); Bates (1658); Dickinson (3338); Hansen (1663); Hartmann (1664); Rothrock (1669/1670) | m/s,dg | 10%,<20dg; 1 m/s - 2 m/s :: 5% -10% ,20 dg; 1m- 2m/s | 1/ day - 1/wk | 10 km - 500 km :: Ocean[South.]; Ocean/R,G; Polar | N/A :: Sfc |
| | O :: FP | STIKSCAT (1679/1680) | m/s; dg | :: 7% - 10%; 16 deg | 1/(2 day) | 1 dg; 25 km :: Ocean/R,L | N/A :: Near_Sfc |
| | O :: II | Murakami (3562); Rothrock (1678); Simard (3164) | (m/s,dg); km | 25 km :: | 1/(3 day) - 1/wk | 25 km - 100 km :: Ocean/R(~Pacific); >60 dgLat; Canada/R | :: Sfc |
| Wind Velocity, Sea_sfc Glint-Pattern | O :: FP | MODIS (1688) | m/s | | 1/orbit [d] | 1 km :: Ocean/R | N/A :: Sfc |
| Wind Velocity, Tropospheric 3-D | O :: II | Murakami (3560) | | | | :: Ocean/R(~Pacific) | |
| X-Ray Energy Spectra | I :: II | Schoeberl (3258) | photon/cm^2/s/A | 20% :: 15% | 1/day | 5 dgLAT :: G | N/A :: 15-110 km |
| X-Ray Images | I :: II | Dickinson (3421) | | | | <0.5-1 deg :: G | |

# Output Data Products Listed by Instrument

Appendix E

**Science Processing Support Office (SPSO)**

**Goddard Space Flight Center**

**August 1992**

## Appendix E: Output Data Products Listed by Instrument

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2274 | *Irradiance, Solar, Total* | AR | Willson | ACRIM | MO | GSFC | AL | W/m^2 | 0.1% :: 0.0005% | 1/(2 min) | N/A :: N/A | N/A :: TOA |
| 1718 | Wind Speed, Sea_sfc | AD | Aumann | AIRS | PM | GSFC | PL | m/s | | 1/day | 50 km :: Ocean | N/A :: Sfc |
| 3686 | Cloud Reflectivity, Spectral | AR | Chahine | AIRS | PM | GSFC | PL | dimensionless | TBD :: TBD | 2/day [d,n] | 15 x 45 km :: G | N/A :: Cloud |
| 3685 | Cloud Transmissivity, Spectral | AR | Chahine | AIRS | PM | GSFC | PL | dimensionless | TBD :: TBD | 2/day [d,n] | 15 x 45 km :: G | N/A :: Cloud |
| 2062 | *Cloud Cover* | AH | Chahine, Chedin, Smith | AIRS | PM | GSFC | AL | dimensionless | 0.05 :: 0.025 | 2/day [d,n] | 15 x 15 - 50 x 50 km :: G | N/A :: Cloud |
| 1423 | *Cloud Height, Top* | AH | Chahine, Chedin, Smith | AIRS | PM | GSFC | PL | km | 0.5 km :: 0.25 km | 2/day [d,n] | 15 x 15 - 50 x 50 km :: G | N/A :: Cloud |
| 2463 | *Cloud Temperature, Top* | AR | Chahine, Chedin, Smith | AIRS | PM | GSFC | AL | K | 1 K :: 0.5 K | 2/day [d,n] | 15 x 15 - 50 x 50 km :: G | N/A :: Cloud |
| 2128 | Cloud Emissivity, IR Spectral (3-14um) | AR | Chahine, Smith | AIRS | PM | GSFC | PL | dimensionless | 0.05 :: 0.025 | 2/day [d,n] | 15 x 15 - 15 x 45 km :: G | N/A :: Cloud |
| 2113 | *Land_sfc Emissivity, Spectral* | LR | Chedin, Fleming, Revercomb, Smith, Susskind | AIRS | PM | GSFC | PL | dimensionless | 0.05 :: 0.025 | 2/day [d,n] | 15 x 15 - 50 x 50 km :: Land | N/A :: Sfc |
| 2481 | *Land_sfc Temperature, Skin* | LR | Chedin, Fleming, Revercomb, Smith, Susskind | AIRS | PM | GSFC | AL | K | 1.0 K :: 0.5 K | 2/day [d,n] | 50 km :: Land | N/A :: Sfc |
| 2539 | Land_sfc Temperature-Difference, Day-Night | LR | Chedin, Fleming, Revercomb, Smith, Susskind | AIRS | PM | GSFC | PL | K | 0.5 K :: 0.25 K | 2/day [d,n] | 50 km :: G | N/A :: Sfc |
| 2523 | *Sea_sfc Temperature (SST), Skin* | OR | Chedin, Fleming, Revercomb, Smith, Susskind | AIRS | PM | GSFC | PL | K | 0.5 - 1 K :: 0.4 - 0.5 K | 2/day [d,n] | 50 km :: Ocean | N/A :: Sfc |
| 1828 | *Humidity Profile* | AH | Chedin, Fleming, Smith, Susskind | AIRS | PM | GSFC | AL | g/kg | 10% :: 5% | 2/day [d,n] | 15 x 50 - 50 x 50 km :: G | 2 km :: Atmos |
| 1869 | *Precipitable Water* | AH | Chedin, Fleming, Smith, Susskind | AIRS | PM | GSFC | AL | mm | 5% :: 3% | 2/day [d,n] | 50 km :: G | N/A :: Trop |
| 1588 | *Temperature Profile* | AD | Chedin, Fleming, Smith, Susskind | AIRS | PM | GSFC | AL | K | 1.0 K :: 0.4 K | 2/day [d,n] | 15 x 50 - 50 x 50 km :: G | 1, 2 km :: Atmos |
| 3683 | Radiance, Cloud Cleared, Level-2 | AR | Chedin, McMillin, Rizzi, Smith, Susskind | AIRS | PM | GSFC | AL | | | | | |
| 1332 | *O3 Total Burden* | AC | Chedin, Revercomb, Smith, Susskind | AIRS | PM | GSFC | PL | Dobson unit | 5 - 15% :: 3 - 10% | 2/day [d,n] | 50 km :: G | Column :: Atmos |
| 1095 | *CH4 Total Burden* | AC | Chedin, Revercomb, Strow | AIRS | PM | GSFC | PL | ppb, dimensionless | 50 - 175 ppb, 2% :: 30 - 150 ppb, TBD | 1/day [n] - 2/day [d,n] | 50 - 250 km :: G | Column :: Atmos |
| 3687 | Radiative Flux, LW, Up (OLR) | AR | Chedin, Revercomb, Susskind | AIRS | PM | GSFC | PL | W/m^2 | 5 - TBD :: 3 - TBD | 2/day [d,n] | 50 km :: G | N/A :: TOA |
| 3151 | *Sea_Ice Cover* | OH | Chedin, Staelin | AIRS | PM | GSFC | PL | fraction | 0.1 :: 0.1 | 2/day [d,n] | 50 km :: Ocean/Cryo | N/A :: Sfc |
| 2176 | Radiative Flux, LW, Net | AR | Gautier | AIRS | PM | GSFC | PL | W/m^2 | <15 :: TBD | 1/day | 50 km :: Land | N/A :: Sfc |
| 2177 | Radiative Flux, LW, Net | AR | Gautier | AIRS | PM | GSFC | PL | W/m^2 | <10 :: TBD | 1/day | 50 km :: Ocean | N/A :: Sfc |
| 2232 | Radiative Flux, SW, Net | AR | Gautier | AIRS | PM | GSFC | PL | W/m^2 | <15 :: <5 | 1/day | 50 km :: Land | N/A :: Sfc |
| 2233 | Radiative Flux, SW, Net | AR | Gautier | AIRS | PM | GSFC | PL | W/m^2 | <10 :: <5 | 1/day | 50 km :: Ocean | N/A :: Sfc |
| 2000 | Albedo, Land_sfc | LR | Gautier ?? | AIRS | PM | GSFC | PL | dimensionless | | 1/day | 50 km :: Land | N/A :: Sfc |
| 2209 | *Radiative Flux, LW Spectral* | AR | Gautier ??, Susskind | AIRS | PM | GSFC | PL | W/m^2 | <10 - TBD :: <5 - TBD | 2/day [d,n] | 50 km :: Land | N/A :: Sfc |
| 2210 | *Radiative Flux, LW Spectral* | AR | Gautier ??, Susskind | AIRS | PM | GSFC | PL | W/m^2 | <10 - TBD :: <5 - TBD | 2/day [d,n] | 50 km :: Ocean | N/A :: Sfc |
| 1151 | CO2 Total Burden (Mixing Ratio) | AC | Revercomb | AIRS | PM | GSFC | PL | ppm | 25 :: 20 | 2/day [d,n] | 50 km :: G | Column :: Atmos |
| 1136 | *CO Total Burden* | AC | Revercomb, Strow | AIRS | PM | GSFC | PL | ppb | 10 - 20 :: 6 - 15 | 2/day [d,n] | 50 - 250 km :: G | Column :: Atmos |
| 1249 | *N2O Total Burden* | AC | Revercomb, Strow | AIRS | PM | GSFC | PL | ppb | 20 - 40 :: 15 - 30 | 2/day [d,n] | Zonal_ave :: G | Column :: Atmos |

## Appendix E: Output Data Products Listed by Instrument

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1908 | Cloud Liq_water Content | AH | Rosenkranz | AIRS | PM | GSFC | PL | mm | 0.1 :: 0.1 | 2/day [d,n] | 50 km :: G | N/A :: Cloud |
| 1562 | Stratopause Height | AD | Smith | AIRS | PM | GSFC | PL | km | 1 km :: 0.5 km | 2/day [d,n] | 50 x 50 km :: G | N/A :: Mid-atmos |
| 3684 | Cloud Optical Thickness | AR | Smith, Gautier ?? | AIRS | PM | GSFC | PL | dimensionless | TBD :: TBD | 1/day | 15 x 15 - 15 x 45 km :: G | N/A :: Cloud |
| 3688 | Tropopause Height | AD | Smith, Susskind | AIRS | PM | GSFC | PL | km | 1 km :: 0.5 km | 2/day [d,n] | 50 x 50 km :: G | N/A :: Atmos |
| 1893 | Cloud Ice Index | AH | Staelin | AIRS | PM | GSFC | PL | dimensionless | TBD :: TBD | 2/day [d,n] | 50 km :: G | N/A :: Cloud |
| 2921 | *Ice_Sheet Cover Index* | LH | Staelin | AIRS | PM | GSFC | PL | dimensionless | | 2/day [d,n] | 50 km :: Land/Cryo | N/A :: Sfc |
| 3018 | *Snow Cover Index [combined with 2921]* | LH | Staelin | AIRS | PM | GSFC | PL | dimensionless | | 2/day [d,n] | 50 km :: Land | N/A :: Sfc |
| 3689 | Cloud Radiative Forcing, LW | AR | Susskind | AIRS | PM | GSFC | PL | W/m^2 | 5 :: 3 | | | |
| 3690 | O3 Conc | AC | Susskind | AIRS | PM | GSFC | PL | Dobson unit | 10% :: 5% | 2/day [d,n] | 50 km :: G | variable :: Atmos |
| 1969 | Precipitation Index | AH | Susskind | AIRS | PM | GSFC | PL | mm | 2mm/day :: 1mm/day | 2/day [d,n] | 50 km :: G | N/A :: Trop |
| 2347 | Level-1B Radiance, AIRS | AR | Chahine | AIRS[AIRS] | PM | GSFC | AL | W/m^2/sr/um | 0.2dg NEdT :: 0.2dg NEdT | 2/day [d,n] | 15 x 15 km :: G | N/A :: N/A |
| 2350 | Level-1B Radiance, AMSU-A | AR | Chahine | AIRS[AMSU-A] | PM | GSFC | AL | K | 0.2dg NEdT :: 0.2dg NEdT | 2/day [d,n] | 40 x 40 km :: G | N/A :: N/A |
| 3692 | Humidity Profile, Microwave [see also 1828] | AH | Rosenkranz | AIRS[AMSU-A, MHS] | PM | GSFC | AL | g/kg | 20% :: 20% | 2/day [d,n] | 50 km :: G | 2 km :: Atmos |
| 3695 | Land_sfc Emissivity, Spectral (Microwave) [see also 2113] | LR | Rosenkranz | AIRS[AMSU-A, MHS] | PM | GSFC | PL | dimensionless | 0.05 :: 0.025 | 2/day [d,n] | 15 x 45 km :: Land | N/A :: Sfc |
| 3693 | *Precipitable Water, Microwave [see also 1869]* | AH | Rosenkranz | AIRS[AMSU-A, MHS] | PM | GSFC | AL | mm | 2 mm :: 1 mm | 2/day [d,n] | 50 km :: G | N/A :: Trop |
| 3691 | Temperature Profile, Microwave [see also 1588] | AD | Rosenkranz | AIRS[AMSU-A, MHS] | PM | GSFC | AL | K | 2-4 K :: 2-4 K | 2/day [d,n] | 50 km :: G | 1 km :: Atmos |
| 3694 | Precipitation Index, Microwave [see also 1969] | AH | Staelin | AIRS[AMSU-A, MHS] | PM | GSFC | PL | mm | 2mm/hr :: 1mm/hr | 2/day [d,n] | 50 km :: G | N/A :: Trop |
| 2352 | Level-1B Radiance, MHS | AR | Chahine | AIRS[MHS] | PM | GSFC | AL | K | 0.2dg NEdT :: 0.2dg NEdT | 2/day [d,n] | 15 x 15 km :: G | N/A :: N/A |
| 3464 | Level-1B Backscatter, ALT | AR | Fu | ALT | ALT | JPL | | dB | | | | |
| 3129 | Ocean Wave Height, Along-track | OD | Fu | ALT | ALT | JPL | AL | cm | >.5m,10% :: | | 7 km :: Ocean | N/A :: Sfc |
| 3112 | *Sea_Level Height, Along-track* | OD | Fu | ALT | ALT | JPL | AL | cm | 10 cm :: | | 7 km :: Ocean | N/A :: Sfc |
| 3108 | *Topographic Elevaton, Sea_sfc* | OD | Fu | ALT | ALT | JPL | AL | cm | 5cm et al :: | 1/(16 day) | 25 km :: Ocean | N/A :: Sfc |
| 1735 | *Wind Speed, Along-track* | AD | Fu | ALT | ALT | JPL | AL | m/s | 2 m/s :: | | 7 km :: Ocean | N/A :: Sfc |
| 3121 | Ocean Tide, Model | OD | Sanchez | ALT | ALT | JPL | AL | cm | 2 cm :: | 1/mission | 100 km :: Ocean | N/A :: Sfc |
| 2911 | *Ice_Sheet Elevation* | LH | Zwally | ALT | ALT | NSIDC | AL | m | .5m-5m :: | 1/yr | 15 km :: Land/Cryo | N/A :: Sfc |
| 2801 | Soil Index | LC | Gillespie | ASTER | AM1 | EDC | AL | dimensionless | | 50 scenes/mission | 15 m :: Land/R,L | N/A :: Sfc |
| 2747 | Vegetation Index (PVI) | LB | Gillespie | ASTER | AM1 | EDC | PL | dimensionless | | | 15 m :: Land/R,L | N/A :: Sfc |
| 2817 | Mineral Maps | LC | Gillespie, Rowan, Kahle | ASTER | AM1 | EDC | PL | dimensionless | variable :: variable | 50/mission | 90 m :: Land/R,L | N/A :: Sfc |
| 2883 | Geologic Unit Maps (Geology Maps) | LD | Gillespie, Rowan, Kieffer, Kahle | ASTER | AM1 | EDC | PL | N/A | variable :: variable | 50/mission | 90 m :: Land/R,L | |
| 2375 | Level-1B Radiance, ASTER | AR | Tsu | ASTER | AM1 | EDC | AL | W/m^2/sr/um | 2-4% :: 1% | 1/16 day | 15,30,90m :: G | N/A :: at sensor |
| 2452 | *Brightness Temperature (at Sensor)* | LR | Kahle | ASTER | AM1 | EDC | AL | K | .5NEdT :: .2NEdT | 1/(2-16 day) | 90 m :: G | N/A :: at sensor |
| 2435 | Land_sfc Reflectance, Relative Spectral | LR | Kahle, Becker | ASTER | AM1 | EDC | AL | arbitrary units | N/A :: N/A | 1/(2-16 day) | 15,30 m :: Land/R,L | N/A :: Sfc |
| 2124 | Land_sfc Emissivity [1] | LR | Kahle, Becker, Christensen | ASTER | AM1 | EDC | AL | emissivity units | 0.05-0.1 :: 0.005 | 1/(0.5-16 day) | 90 m :: L | N/A :: Sfc |
| 3674 | Land_sfc Emissivity [2] | LR | Kahle, Becker, Christensen | ASTER | AM1 | EDC | AL | emissivity units | 0.05-0.1 :: 0.005 | 1/(0.5-16 day) | 90 m :: L | N/A :: Sfc |
| 3675 | Land_sfc Emissivity [3] | LR | Kahle, Becker, Christensen | ASTER | AM1 | EDC | AL | emissivity units | 0.05-0.1 :: 0.005 | 1/(0.5-16 day) | 90 m :: L | N/A :: Sfc |

## Appendix E: Output Data Products Listed by Instrument

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2483 | Land_sfc Temperature (3-products) | LR | Kahle, Becker, Christensen | ASTER | AM1 | EDC | AL | K | 1-6 K :: 0.3 K | 1/(2-16 day) | 90 m :: Land | N/A :: Sfc |
| 2129 | Land_sfc Emissivity, Relative Spectral | AR | Kahle, Becker, Schmugge | ASTER | AM1 | EDC | AL | arbitrary units | N/A :: N/A | 1/(0.5-16 day) | 90 m :: Land/R,L | N/A :: Sfc |
| 2803 | Soil Maps, Level-4 [Class,Comp,Age,etc.] | LC | Kahle, Gillespie | ASTER | AM1 | EDC | PL | varies | | 50 maps/mission | 90 m :: Land/R,L | N/A :: Sfc |
| 2828 | Topographic Elevation, Land_sfc, | LD | Kahle, Tsu | ASTER | AM1 | EDC | AL | m | >50 m :: >30 m | 1/mission | 15 m :: Land/R,L | 30 m :: Sfc |
| 2453 | Land_sfc Brightness Temperature (Radiance) | LR | Kahle, Palluconi, Christensen | ASTER | AM1 | EDC | AL | K | 1-2 K :: 0.3 | 1/(2-16 day) | 90 m :: G | N/A :: Sfc |
| 2931 | Glacier Velocity | LH | Kieffer | ASTER | AM1 | EDC | AL | m/yr | 20 m/yr :: 10 m/yr | 1 yr | 15 m :: Land/Cryo | |
| 2542 | Land Thermal Inertia | LR | Kieffer et al | ASTER | AM1 | EDC | AL | joule/m^2/K/s | 40% :: 20% | | 90 m :: Land/R,L | N/A :: Sfc |
| 2540 | Land_sfc Temperature-Difference, Day-Night | LR | Kieffer et al | ASTER | AM1 | EDC | AL | K | 1-2 K :: 0.3 K | | 90 m :: Land/R,L | N/A :: Sfc |
| 2447 | Land_sfc Thermal Change | LR | Kieffer, Christensen, Pieri, | ASTER | AM1 | EDC | AL | dimensionless | 1-2 K :: 0.5 K | | 90 m :: Land/R,L | N/A :: Sfc |
| 2378 | Level-2 Radiance, Land_leaving | LR | Palluconi et al | ASTER | AM1 | EDC | AL | W/m^2/sr/um | TBD :: 0.065-0.085 | 1/(2-16 day) | 90 m :: Land/R,L | N/A :: Sfc |
| 3301 | Eruption-Plume Characteristics | VO | Pieri | ASTER | AM1 | EDC | AL | variable | variable :: variable | | 15,30,90 m :: R/L | |
| 3298 | Volcano Age | VO | Pieri, Kahle | ASTER | AM1 | EDC | AL | KA | variable :: variable | | 15,30,90 m :: Land/R,L | N/A :: |
| 2856 | Landform Lineament / Slope Maps | LD | Rowan | ASTER | AM1 | EDC | AL | Orientation/length | variable :: variable | 25 scenes/yr | 50 m :: Land/R,L | N/A :: Sfc |
| 2773 | Mineral Index | LC | Rowan,Kahle,Gillespie | ASTER | AM1 | EDC | AL | dimensionless | 10% :: 5% | 15 scenes/yr | 15,30,90 m :: Land/R,L | N/A :: Sfc |
| 1791 | Vegetation Evapotranspiration (ET) | AH | Schmugge | ASTER | AM1 | EDC | AL | mm/day | 1 mm/day :: 0.5 mm/day | | 90 m :: Land/R,L | N/A :: Sfc |
| 2433 | Land_sfc Reflectance, Directional | LR | Slater | ASTER | AM1 | EDC | AL | dimensionless | 4% :: 0.5-1.3 | 3/yr | 15,30 m :: Land/R,L | N/A :: Sfc |
| 3631 | Coral Reef Maps | OB | Tsu | ASTER | AM1 | EDC | TBD | | TBD :: TBD | TBD | TBD :: Ocean/TBD | TBD :: TBD |
| 3629 | Land_sfc Thermal Anomalies | LR | Tsu | ASTER | AM1 | EDC | TBD | | TBD :: TBD | TBD | TBD :: Land/TBD | TBD :: TBD |
| 3633 | Land_sfc Water Area | LH | Tsu | ASTER | AM1 | EDC | TBD | | TBD :: TBD | TBD | TBD :: Land/TBD | TBD :: TBD |
| 3636 | Ocean_Water Temperature-Pattern | OD | Tsu | ASTER | AM1 | EDC | TBD | | TBD :: TBD | TBD | TBD :: Ocean/TBD | TBD :: TBD |
| 3632 | Ocean_Water Turbidity | OR | Tsu | ASTER | AM1 | EDC | TBD | | TBD :: TBD | TBD | TBD :: Ocean/TBD | TBD :: TBD |
| 3630 | Sea_Ice Area | OH | Tsu | ASTER | AM1 | EDC | TBD | | TBD :: TBD | TBD | TBD :: Ocean/TBD | TBD :: TBD |
| 3635 | Sea_sfc Temperature (SST) | OD | Tsu | ASTER | AM1 | EDC | TBD | | TBD :: TBD | TBD | TBD :: Ocean/TBD | TBD :: TBD |
| 3634 | Snow Area | LH | Tsu | ASTER | AM1 | EDC | TBD | | TBD :: TBD | TBD | TBD :: Land/TBD | TBD :: TBD |
| 2080 | Cloud Cover | AH | Welch | ASTER | AM1 | EDC | AL | fractional area | 3% :: 3% | 1/(16 day) | 90 m :: L | N/A :: Cloud |
| 1763 | Cloud Drop Phase | AH | Welch | ASTER | AM1 | EDC | AL | dimensionless | water/ice :: | 1/(16 day) | 15-30 m :: L | N/A :: Cloud |
| 1779 | Cloud Drop Size(Effective Radius) | AH | Welch | ASTER | AM1 | EDC | AL | um | 10 um :: | 1/(16 day) | 15-90 m :: L | :: Cloud |
| 3627 | Cloud Drop Size_distribution | AR | Welch | ASTER | AM1 | EDC | AL | | | 1/(16 day) | 90 m :: L | N/A :: Cloud |
| 2115 | Cloud Emissivity | AR | Welch | ASTER | AM1 | EDC | AL | dimensionless | 5% :: | 1/(16 day) | 90 m :: L | N/A :: Cloud |
| 3628 | Cloud Field Scales_of_Organization | AR | Welch | ASTER | AM1 | EDC | AL | | | 1/(16 day) | 90 m :: L | N/A :: Cloud |
| 2093 | Cloud Field Size-distribution | AH | Welch | ASTER | AM1 | EDC | AL | dimensionless | | 1/(16 day) | 90 m :: L | N/A :: Cloud |
| 1391 | Cloud Height, Base | AH | Welch | ASTER | AM1 | EDC | AL | m | 100 m :: 100 m | 1/(16 day) | 100 m :: L | N/A :: Cloud |
| 1427 | Cloud Height, Top | AH | Welch | ASTER | AM1 | EDC | AL | m | 300 m :: 300 m | 1/(16 day) | 90 m :: L | N/A :: Cloud |
| 3626 | Cloud Liquid_Water Content | AR | Welch | ASTER | AM1 | EDC | AL | | | 1/(16 day) | 90 m :: L | N/A :: Cloud |
| 2310 | Cloud Optical Depth | AR | Welch | ASTER | AM1 | EDC | AL | dimensionless | 3% :: 3% | 1/(16 day) | 15-30 m :: L | N/A :: Cloud |
| 1409 | Cloud Structure, 3-D | AH | Welch | ASTER | AM1 | EDC | AL | | | 1/(16 day) | 90 m :: L | :: Cloud |
| 2465 | Cloud Temperature, Top | AR | Welch | ASTER | AM1 | EDC | AL | K | 2 K :: 2 K | 1/(16 day) | 90 m :: L | N/A :: Cloud |
| 3625 | Cloud Thickness | AR | Welch | ASTER | AM1 | EDC | AL | | | 1/(16 day) | 100 m :: L | N/A :: Cloud |
| 3624 | Sea_Ice Albedo | OR | Welch | ASTER | AM1 | EDC | AL | | | | 90 m :: Ocean/Cryo | N/A :: Sfc |
| 3152 | Sea_Ice Fraction | OH | Welch | ASTER | AM1 | EDC | AL | fractional area | | | 90 m :: Ocean/Cryo | N/A :: Sfc |

## Appendix E: Output Data Products Listed by Instrument

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3618 | Sea_Ice Fraction, New (First-Year) | OH | Welch | ASTER | AM1 | EDC | AL | dimensionless | | | 90 m :: Ocean/Cryo | N/A :: Sfc |
| 3622 | Sea_Ice Lead (Open Water) Size-distribution | OH | Welch | ASTER | AM1 | EDC | AL | | | | 90 m :: Ocean/Cryo | N/A :: Sfc |
| 3617 | Sea_Ice Lead (Open-Water) Fraction | OH | Welch | ASTER | AM1 | EDC | AL | dimensionless | | | 90 m :: Ocean/Cryo | N/A :: Sfc |
| 3616 | Sea_Ice Meltpond Fraction | OH | Welch | ASTER | AM1 | EDC | AL | dimensionless | | | 90 m :: Ocean/Cryo | N/A :: Sfc |
| 3621 | Sea_Ice Size-distribution | OH | Welch | ASTER | AM1 | EDC | AL | | | | 90 m :: Ocean/Cryo | N/A :: Sfc |
| 3619 | Sea_Ice Temperature | OH | Welch | ASTER | AM1 | EDC | AL | K | | | 90 m :: Ocean/Cryo | N/A :: Sfc |
| 3623 | Sea_Ice Thickness | OH | Welch | ASTER | AM1 | EDC | AL | m | | | 90 m-1 km :: Ocean/Cryo | N/A :: Sfc |
| 3620 | Sea_sfc Temperature (SST) | OD | Welch | ASTER | AM1 | EDC | AL | K | | | 90 m :: Ocean/Cryo | N/A :: Sfc |
| 2027 | *Anisotropy, LW_broadband* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | fraction | 2% :: 0.5% | | 10 dg [Angle] :: G | N/A :: Sfc,Atmos |
| 2086 | Cloud Cover | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | dimensionless | 5% :: 2% | 6/day [d,n] | 25 km :: G | N/A :: Atmos |
| 2087 | Cloud Cover | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | dimensionless | 5% :: 2% | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: Atmos |
| 2088 | Cloud Cover | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | dimensionless | 5% :: 2% | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: Atmos |
| 1767 | Cloud Drop Phase | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | water/ice | 90% Conf :: 90% Conf | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: Atmos |
| 1768 | Cloud Drop Phase | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | water/ice | 90% Conf :: 90% Conf | 6/day [d,n] | 25 km :: G | N/A :: Atmos |
| 1769 | Cloud Drop Phase | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | water/ice | 90% Conf :: 90% Conf | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: Atmos |
| 1782 | Cloud Drop Size(Effective Radius) | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | um | 30% :: 10% | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: Atmos |
| 1783 | Cloud Drop Size(Effective Radius) | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | um | 30% :: 10% | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: Atmos |
| 1784 | Cloud Drop Size(Effective Radius) | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | um | 30% :: 10% | 6/day [d,n] | 25 km :: G | N/A :: Atmos |
| 1393 | Cloud Height, Base | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | km | 1.0 km :: 0.1 km | 6/day [d,n] | 25 km :: G | 0.1 km :: Atmos |
| 1394 | Cloud Height, Base | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | km | 1.0 km :: 0.1 km | 1/(6 hr) | 1.25 x 1.25 dg :: G | 0.1 km :: Atmos |
| 1395 | Cloud Height, Base | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | km | 1.0 km :: 0.1 km | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | 0.1 km :: Atmos |
| 1429 | Cloud Height, Top | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | km | 1.0 km :: 0.1 km | 6/day [d,n] | 25 km :: G | 0.1 km :: Atmos |
| 1430 | Cloud Height, Top | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | km | 1.0 km :: 0.1 km | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | 0.1 km :: Atmos |
| 1431 | Cloud Height, Top | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | km | 0.5 km :: 0.1 km | 1/(6 hr) | 1.25 x 1.25 dg :: G | 0.1 km :: Atmos |
| 1895 | Cloud Liq_water Content | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | g/m^3 | 75% :: 10% | 1/(6 hr) | 1.25 x 1.25 dg :: G | lyr :: Atmos |
| 1896 | Cloud Liq_water Content | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | g/m^3 | 75% :: 10% | 6/day [d,n] | 25 km :: G | lyr :: Atmos |
| 1897 | Cloud Liq_water Content | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | g/m^3 | 75% :: 10% | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | lyr :: Atmos |
| 1899 | Cloud Liq_water Total Column | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | kg/m^2 | 50% :: 10% | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | Column :: Atmos |
| 1900 | Cloud Liq_water Total Column | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | kg/m^2 | 50% :: 10% | 6/day [d,n] | 25 km :: G | Column :: Atmos |
| 1901 | Cloud Liq_water Total Column | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | kg/m^2 | 50% :: 10% | 1/(6 hr) | 1.25 x 1.25 dg :: G | Column :: Atmos |
| 2316 | Cloud Optical Depth, LW | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | dimensionless | 25% :: 10% | 6/day [d,n] | 25 km :: G | N/A :: Atmos |
| 2317 | Cloud Optical Depth, LW | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | dimensionless | 10% :: 5% | 1/day [Avg], 1/mo [Avg] | 1.25 dg :: G | N/A :: Atmos |
| 2318 | Cloud Optical Depth, LW | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | dimensionless | 25% :: 5% | 1/(6 hr) | 1.25 dg :: G | N/A :: Atmos |
| 2321 | Cloud Optical Depth, SW | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | dimensionless | 25% :: 10% | 3/day [d] | 25 km :: G | N/A :: Atmos |
| 2322 | Cloud Optical Depth, SW | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | dimensionless | 10% :: 5% | 1/day [Avg], 1/mo [Avg] | 1.25 dg :: G | N/A :: Atmos |
| 2323 | Cloud Optical Depth, SW | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | dimensionless | 25% :: 5% | 1/(6 hr) | 1.25 dg :: G | N/A :: Atmos |
| 3698 | Cloud Reflectance, Bi-directional, SW_Broadband, (BRDF) | LR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | fraction | 5% :: 1% | | 10 dg [Angle] :: G | N/A :: Atmos |
| 2045 | Land_sfc Reflectance, Bi-directional, SW_Broadband, (BRDF) | LR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | fraction | 5% :: 1% | | 10 dg [Angle] :: G | N/A :: Sfc,Atmos |
| 2359 | Level-1B Radiance, CERES | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2/sr/um | SW 2%,LW 1% :: 0.005 | 6/day [d,n] | 25 km :: G | N/A :: N/A |
| 2144 | *Radiative Flux Divergence, Clear-sky* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2/km | 10% :: 5% | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | lyr :: Atmos |
| 2145 | *Radiative Flux Divergence, Clear-sky* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2/km | 10% :: 5% | 6/day [d,n] | 1.25 dg :: G | lyr :: Atmos |
| 2146 | *Radiative Flux Divergence, Clear-sky* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2/km | 10% :: 5% | 1/(6 hr) | 1.25 x 1.25 dg :: G | lyr :: Atmos |
| 2147 | *Radiative Flux Divergence, Cloudy_sky* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2/km | 25% :: 10% | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | lyr :: Atmos |
| 2148 | *Radiative Flux Divergence, Cloudy_sky* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2/km | 50% :: 10% | 1/(6 hr) | 1.25 x 1.25 dg :: G | lyr :: Atmos |

## Appendix E: Output Data Products Listed by Instrument

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2149 | *Radiative Flux Divergence, Cloudy_sky* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2/km | 50% :: 10% | 6/day [d,n] | 1.25 dg :: G | lyr :: Atmos |
| 2168 | *Radiative Flux, LW, Down* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 5 W/m^2 :: 2 W/m^2 | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2169 | *Radiative Flux, LW, Down* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 7 W/m^2 :: 2 W/m^2 | 6/day [d,n] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2170 | *Radiative Flux, LW, Down* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 7 W/m^2 :: 2 W/m^2 | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2180 | *Radiative Flux, LW, Net* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 7 W/m^2 :: 2 W/m^2 | 6/day [d,n] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2181 | *Radiative Flux, LW, Net* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 7 W/m^2 :: 2 W/m^2 | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2182 | *Radiative Flux, LW, Net* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 5 W/m^2 :: 2 W/m^2 | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2200 | *Radiative Flux, LW, Up* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 3 W/m^2 :: 1 W/m^2 | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: TOA |
| 2201 | *Radiative Flux, LW, Up* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 7 W/m^2 :: <7 W/m^2 | 6/day [d,n] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2202 | *Radiative Flux, LW, Up* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 7 W/m^2 :: <7 W/m^2 | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2203 | *Radiative Flux, LW, Up* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 5 W/m^2 :: <5 W/m^2 | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2204 | *Radiative Flux, LW, Up* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 5 W/m^2 :: 2 W/m^2 | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: TOA |
| 2205 | *Radiative Flux, LW, Up* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 5 W/m^2 :: 2 W/m^2 | 6/day [d,n] | 25 km :: G | N/A :: TOA |
| 2221 | *Radiative Flux, SW, Down* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 15 W/m^2 :: 2 W/m^2 | 3/day [d] | 1.25 dg :: G | N/A :: Sfc |
| 2222 | *Radiative Flux, SW, Down* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 10 W/m^2 :: 2 W/m^2 | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2223 | *Radiative Flux, SW, Down* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 15 W/m^2 :: 2 W/m^2 | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2229 | *Radiative Flux, SW, Net* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 15 W/m^2 :: 2 W/m^2 | 3/day [d] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2230 | *Radiative Flux, SW, Net* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 10 W/m^2 :: 2 W/m^2 | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2231 | *Radiative Flux, SW, Net* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 15 W/m^2 :: 2 W/m^2 | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2246 | *Radiative Flux, SW, Up* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 12 W/m^2 :: 2 W/m^2 | 3/day [d] | 1.25 x 1.25 dg :: G | N/A :: TOA |
| 2247 | *Radiative Flux, SW, Up* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 15 W/m^2 :: 2 W/m^2 | 3/day [d] | 1.25 dg :: G | N/A :: Sfc |
| 2248 | *Radiative Flux, SW, Up* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 10 W/m^2 :: 2 W/m^2 | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2249 | *Radiative Flux, SW, Up* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 12 W/m^2 :: 2 W/m^2 | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: TOA |
| 2250 | *Radiative Flux, SW, Up* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 15 W/m^2 :: 2 W/m^2 | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2251 | *Radiative Flux, SW, Up* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 7 W/m^2 :: 2 W/m^2 | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: TOA |
| 2297 | *Aerosol Optical Depth* | AR | Travis | EOSP | AERO,AM2 | LaRC | AL | dimensionless | 0.2 :: 10% | 1/day [d] | 40 km :: G | Column :: Atmos |
| 1770 | *Cloud Drop Phase* | AH | Travis | EOSP | AERO,AM2 | LaRC | AL | water/ice | :: 95% Corr | 1/day [d] | 100 km :: G | N/A :: Cloud |
| 1774 | *Cloud Drop Size* | AH | Travis | EOSP | AERO,AM2 | LaRC | AL | um | 25% :: 25% | 1/day [d] | 100 km :: G | N/A :: Cloud |
| 2313 | *Cloud Optical Depth* | AR | Travis | EOSP | AERO,AM2 | LaRC | AL | dimensionless | 20% :: 10% | 1/day [d] | 40 km :: G | Column :: Cloud |
| 1530 | Cloud Pressure, Top | AH | Travis | EOSP | AERO,AM2 | LaRC | AL | mb | 30 mb :: 30 mb | 1/day [d] | 40 km :: G | 30 mb :: Cloud |
| 2336 | *Level-1B Polarization, EOSP* | AR | Travis | EOSP | AERO,AM2 | LaRC | AL | dimensionless | 0.2% :: 0.1% | 1/day [d] | 10-70 km :: G | N/A :: N/A |
| 2362 | Level-1B Radiance, EOSP | AR | Travis | EOSP | AERO,AM2 | LaRC | AL | W/m^2/sr/um | 5% :: 2% | 1/day [d] | 10-70 km :: G | N/A :: N/A |
| 2353 | Level-2 Radiance, Atmos_corrected, EOSP | AR | Travis | EOSP | AERO,AM2 | LaRC | AL | W/m^2/sr/um | 25% :: 15% | 1/day [d] | 40 km :: G | N/A :: N/A |
| 3644 | *Reflectance, Bi-directional (BRDF)* | AR | Travis | EOSP | AERO,AM2 | LaRC | AL | | 5% :: | 2 day [d] | 10 km :: G | NA :: Cloud, Sfc |
| 3229 | *Electron Content, Total, (TEC)* | SE | Melbourne | GGI | ALT | JPL | AL | | :: 0.1% | 1/s [?] | multiple :: G | mult :: 0-20000 km |
| 3228 | *Electron Content-Difference, Total, (TEC-difference)* | SE | Melbourne | GGI | ALT | JPL | AL | | :: 0.1% | 1/s [?] | various :: G | mult :: 0-20000 km |
| 2818 | Geodetic Baselines | LD | Melbourne | GGI | ALT | JPL | AL | km | :: 2:10^9 | 1/min | :: G | :: Sfc |
| 2819 | Geodetic Carrier Phase, GPS(L1,L2), | LD | Melbourne | GGI | ALT | JPL | AL | mm | :: 0.4 mm | 1/(0.1 s) [?] | :: G | |
| 2862 | *Geodetic EOS-platform Position* | LD | Melbourne | GGI | ALT | JPL | AL | cm | :: <3 cm | ? 1/s | | :: In_situ |
| 2850 | Geodetic Geocenter | LD | Melbourne | GGI | ALT | JPL | AL | cm | :: 2 cm | 1/day | | |
| 2861 | Geodetic Orientation | LD | Melbourne | GGI | ALT | JPL | AL | arcsec | :: 0.001arc-s | 2/day | | |
| 2867 | Geodetic Pseudorange, GPS(L1,L2), | LD | Melbourne | GGI | ALT | JPL | AL | cm | :: 12 cm | ? 1/s | :: G | |
| 2364 | Level-1B Radiance, GGI | AR | Melbourne | GGI | ALT | JPL | AL | | | | | |
| 1605 | *Temperature Profile* | AD | Melbourne | GGI | ALT | JPL | AL | K | 1 K :: 1 K | 700 ret/day | 1-200 km :: G | 1 km :: 5 - 50 km |
| 1606 | Temperature Profile | AD | Melbourne | GGI | ALT | JPL | AL | K | 1 K :: 1 K | 700 ret/day | 1-200 km :: G | 1 km :: 2-5/50-60 km |

## Appendix E: Output Data Products Listed by Instrument

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2897 | *Ice_Sheet Displacement* | LH | Bentley | GLRS-A | ALT | NSIDC | AL | mm/day | 10 mm/day :: 10 mm/day | 1/mo | N/A :: Land/Cryo | N/A :: Sfc |
| 2912 | *Ice_Sheet Elevation* | LH | Bentley | GLRS-A | ALT | NSIDC | AL | mm | 100 mm :: 100 mm | 1/mo | 75 m :: Land/Cryo | N/A :: Sfc |
| 1554 | *Ice_Sheet Roughness* | AD | Bentley | GLRS-A | ALT | NSIDC | AL | mm | 100 mm :: 100 mm | 1/(3 mo) | 75 m :: Cryo | :: Sfc |
| 3048 | Ice_Sheet Strain Rate | LH | Bentley | GLRS-A | ALT | NSIDC | AL | u-strain/yr | 10^-6/yr :: 10^-6/yr | 1/(3 mo) | 10-100 km :: Land/Cryo | N/A :: Sfc |
| 2831 | *Topographic Elevation-Change Rate, Land_sfc* | LD | Cohen, Schutz et al | GLRS-A | ALT | GSFC | AL | mm/day -mm/yr | 5 mm/yr :: | 1/yr | 100-900 km :: Land/R | :: Sfc |
| 2858 | *Landform Morphology* | LD | Schutz et al | GLRS-A | ALT | GSFC | AL | mm | 100-500mm :: | 1/wk, 1/yr | 0.1-10 km :: Land | 100-500 mm :: Sfc |
| 3271 | *Volcano Deformation(Inflation-Deflation)* | VO | Schutz et al | GLRS-A | ALT | GSFC | AL | mm/day - mm/yr | 5/yr-100/d :: | 1/day, 1/yr | 1 km :: Land/L | :: Sfc |
| 3270 | Volcano Deformation(Inflation-Deflation) | VO | Schutz et al | GLRS-A | ALT | GSFC | AL | mm/day - mm/yr | 5 mm/yr :: | 1/day, 1/yr | 100 km :: Land/R | :: Sfc |
| 2078 | Cloud Cover | AH | Spinhirne | GLRS-A | ALT | GSFC | AL | % | 1% :: | 1/(2-16 day) | 10-200 km :: G | N/A :: |
| 2114 | Cloud Emissivity | AR | Spinhirne | GLRS-A | ALT | GSFC | AL | | 10% :: | 1/(2-16 day) | 1-100 km :: G | 150 m :: |
| 1400 | *Cloud Height* | AH | Spinhirne | GLRS-A | ALT | GSFC | AL | m | 75 m :: | 1/(2-16 day) | .2-10 km :: G | 75 m :: |
| 2300 | *Cloud Optical Depth, Cirrus* | AR | Spinhirne | GLRS-A | ALT | GSFC | AL | | 20% :: | 1/(2-16 day) | 1-100 km :: G | |
| 1410 | Cloud Structure, Cirrus | AH | Spinhirne | GLRS-A | ALT | GSFC | AL | /m | 0.2 :: | 1/(2-16 day) | 1-10 km :: G | 75 m :: |
| 2104 | Level-1B Backscatter Coef, GLRS | AR | Spinhirne | GLRS-A | ALT | GSFC | AL | /m | 10% :: | 1/(2-16 day) | 1-100 km :: G | 75 m :: |
| 1014 | *Aerosol Layer Boundary Height* | AC | Spinhirne et al | GLRS-A | ALT | GSFC | AL | m | 150 m :: | 1/(2-16 day) | 2-200 km :: G | 75 m :: Atmos |
| 2291 | *Aerosol Optical Depth* | AR | Spinhirne et al | GLRS-A | ALT | GSFC | AL | dimensionless | 20% :: | 1/(2-16 day) | 2-200 km :: G | N/A :: Atmos |
| 1389 | *Cloud Height, Base* | AH | Spinhirne et al | GLRS-A | ALT | GSFC | AL | m | 75 m :: | 1/(2-16 day) | .2-100 km :: G | 75 m :: Cloud |
| 1405 | *Cloud Height, PSC* | AH | Spinhirne et al | GLRS-A | ALT | GSFC | AL | m | 150 m :: | 1/(2-16 day) | 2-200 km :: Polar | 75 m :: Strat |
| 1425 | *Cloud Height, Top* | AH | Spinhirne et al | GLRS-A | ALT | GSFC | AL | m | 75 m :: | 1/(2-16 day) | 200 m :: G | 75 m :: Cloud |
| 2308 | *Cloud Optical Depth* | AR | Spinhirne et al | GLRS-A | ALT | GSFC | AL | dimensionless | 0.1 :: | | 2-200 km :: G | N/A :: Cloud |
| 2324 | *Cloud Optical Depth, PSC* | AR | Spinhirne et al | GLRS-A | ALT | GSFC | AL | dimensionless | 0.1 :: | | 200 m :: Polar | N/A :: Strat |
| 1514 | PBL Height | AD | Spinhirne et al | GLRS-A | ALT | GSFC | AL | m | 150 m :: | 1/(2-16 day) | 2-200 km :: G | 75 m :: Trop |
| 1643 | Tropopause Height, Aerosol_located | AD | Spinhirne et al | GLRS-A | ALT | GSFC | AL | m | 300 m :: | 1/(2-16 day) | 200 km :: G | 300 m :: Trop |
| 1644 | Tropopause Height, Cirrus_located | AD | Spinhirne et al | GLRS-A | ALT | GSFC | AL | m | 300 m :: | 1/(2-16 day) | 10 km :: G | 300 m :: Trop |
| 1992 | *Aerosol Extinction Coef* | AR | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | /km | 5-10% :: 1-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 7-30 km |
| 1055 | *CFC-11(CFCl3) Conc* | AC | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | mix ratio | 5-10% :: 1-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 7-30 km |
| 1047 | *CFC-12(CF2Cl2) Conc* | AC | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | mix ratio | 5-10% :: 1-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 7-30 km |
| 1085 | *CH4 Conc* | AC | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | mix ratio | 5-10% :: 1-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 7-65 km |
| 1408 | *Cloud Height, PSC* | AH | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | km | 0.4 km :: 0.4 km | 2/day [d,n] | 4 x 4 dg :: G | 0.4 km :: Strat |
| 1531 | *Cloud Pressure, Top* | AH | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | mb | 5-10% :: 5-10% | 2/day [d,n] | 4 x 4 dg :: G | 0.4 km :: Trop |
| 1500 | Geopotential Height-Gradient | AD | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | m/km | 0.04m/km :: 0.04m/km | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 15-80 km |
| 1837 | *H2O Conc* | AC | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | mix ratio | 5-10% :: 1-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 7-80 km |
| 1202 | *HNO3 Conc* | AC | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | mix ratio | 5-10% :: 1-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 10-40 km |
| 2369 | Level-1B Radiance, HIRDLS | AR | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | W/m^2/sr/um | | | | |
| 1239 | *N2O Conc* | AC | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | mix ratio | 5-10% :: 1-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 7-60 km |
| 1254 | *N2O5 Conc* | AC | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | mix ratio | 5-10% :: 1-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 15-45 km |
| 1273 | *NO2 Conc* | AC | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | mix ratio | 5-10% :: 3-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 10-55 km |
| 1318 | *O3 Conc* | AC | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | mix ratio | 5-10% :: 1-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 7-80 km |
| 1524 | Pressure | AD | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | mb | 0.1% :: 0.1% | 2/day [d,n] | 4 x 4 dg :: G | 0.2 km :: 7-80 km |
| 1608 | Temperature Profile | AD | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | K | 1K;2K>50km :: 0.3K;1K>50km | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 7-80 km |
| 1687 | Wind Velocity, Geostrophic | AD | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | m/s | 3 m/s :: 3 m/s | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 7-80 km |
| 2564 | Chlorophyll_a Conc, Phytoplankton, Case-I Waters | OB | Carder, Davis | HIRIS | AM2 | EDC | AL | mg/m^3 | 50% :: 25% | 1/(2 day) [d] | 30-90 m :: Ocean-I/L | N/A :: TOO |

## Appendix E: Output Data Products Listed by Instrument

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2565 | Chlorophyll_a Conc, Case-II Waters | OB | Carder, Melack | HIRIS | AM2 | EDC | AL | mg/m^3 | 100% :: 50% | 1/(2 day) [d] | 60-90 m :: Ocean-II/L | N/A :: TOO |
| 3215 | Gelbstoff Absorption Coef@410nm | OR | Carder, Melack | HIRIS | AM2 | EDC | AL | /m | 50% :: 25% | 1/(2 day) [d] | 30-90 m :: Ocean-I/L | N/A :: TOO |
| 3210 | Ocean Water Backscatter Coef@565nm | OR | Carder, Melack | HIRIS | AM2 | EDC | AL | /m | 50% :: 25% | 1/(2 day) [d] | 30-90 m :: Ocean/L | N/A :: Sfc |
| 3314 | Organic Matter Conc, Dissolved | OB | Carder, Melack | HIRIS | AM2 | EDC | | mg/m^3 | 100% :: 50% | (>=2)/day | 30-90 m :: Ocean/L+Land/Lakes | N/A :: TOO |
| 3315 | Suspended-Solids Conc, Ocean Water | OB,OC | Carder, Melack | HIRIS | AM2 | EDC | | mg/m^3 | 100% :: 50% | (>=2)/day | 30-90 m :: Ocean/L+Land/Lakes | N/A :: TOO |
| 3316 | Phytoplankton Type | OB | Davis, Melack | HIRIS | AM2 | EDC | | mg/m^3 | 100% :: 50% | (>=2)/day | 60-90 m :: Ocean/L+Land/Lakes | N/A :: TOO |
| 3072 | Pigment Conc, Accessory | OB | Davis, Melack | HIRIS | AM2 | EDC | AL | mg/m^3 | 100% :: 50% | 1/(>=2 day) | 60-90 m :: Ocean-I/L | N/A :: TOO |
| 2601 | Ocean Productivity, Primary, | OB | Davis, Melack et al | HIRIS | AM2 | EDC | AL | mg-C/m^2/hr | 100% :: 50% | 1/(>=2 day) | 30-90 m :: Ocean/L | N/A :: TOO |
| 2922 | Glacier Cover, Bare_Ice | LH | Dozier | HIRIS | AM2 | NSIDC | AL | km^2 | 5% :: 2% | 1/wk, 1/mo | 50 m :: Glacier/L | N/A :: Sfc |
| 2978 | Glacier Percolation Zone | LH | Dozier | HIRIS | AM2 | NSIDC | AL | km^2 | 5% :: 2% | 1/wk, 1/mo | 50 m :: Glacier/L | N/A :: Sfc |
| 2768 | Snow Contaminant Conc | LC | Dozier | HIRIS | AM2 | NSIDC | AL | mg/m^3 | 20% :: 20% | 1/wk, 1/mo | 50 m :: Snow/L | N/A :: Sfc |
| 3019 | Snow Cover | LH | Dozier | HIRIS | AM2 | NSIDC | AL | km^2 | 5% :: 2% | 1/wk, 1/mo | 50 m :: Cryo/L | N/A :: Sfc |
| 3025 | Snow Cover, Cold | LH | Dozier | HIRIS | AM2 | NSIDC | AL | km^2 | 5% :: 2% | 1/wk, 1/mo | 50 m :: Glacier/L | N/A :: Sfc |
| 3029 | Snow Cover, Wet | LH | Dozier | HIRIS | AM2 | NSIDC | AL | km^2 | 5% :: 2% | 1/wk, 1/mo | 50 m :: Glacier/L | N/A :: Sfc |
| 3030 | Snow Cover, Wet | LH | Dozier | HIRIS | AM2 | NSIDC | AL | km^2 | 10% :: 10% | 1/wk, 1/mo | 50 m :: Cryo/L | N/A :: Sfc |
| 3038 | Snow Grain Size | LH | Dozier | HIRIS | AM2 | NSIDC | AL | um | 200% :: 200% | 1/wk, 1/mo | 50 [km?] :: Snow/L | N/A :: Sfc |
| 2943 | Snow Liq-water Content | LH | Dozier | HIRIS | AM2 | NSIDC | AL | mass fraction | 100% :: 100% | 1/wk, 1/mo | 50 m :: Snow/L | N/A :: Sfc |
| 2440 | Snow Reflectance, Spectral | LR | Dozier | HIRIS | AM2 | NSIDC | AL | dimensionless | 5% :: 1% | 1/wk, 1/mo | 50 m :: Land/L | N/A :: Sfc |
| 2292 | Aerosol Optical Depth | AR | Gerstl | HIRIS | AM2 | EDC | AL | dimensionless | 0.05 :: 0.01 | 1/(2-16 day) | 100 m :: L | Column :: Atmos |
| 2035 | Land_sfc Reflectance, Bi-directional, (BRDF) | LR | Gerstl | HIRIS | AM2 | EDC | AL | dimensionless | 5% :: 5% | 1/(16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2370 | *Level-1B Radiance, HIRIS* | AR | Goetz | HIRIS | AM2 | EDC | AL | W/m^2/sr/um | | | | |
| 1872 | Precipitable Water | AH | Goetz | HIRIS | AM2 | EDC | AL | cm | 10% :: 3% | 1/(1-3 min), 1(2-16 day) | 30 m :: L | Column :: Atmos |
| 1873 | Precipitable Water | AH | Goetz | HIRIS | AM2 | EDC | AL | cm | 10% :: 3% | 1/(1-3 min), 1/(2-16 day) | 30 m :: L | Column :: Trop |
| 2895 | Glacier Displacement | LH | Kieffer | HIRIS | AM2 | NSIDC | AL | km^2 | 1% :: 0.2% | 1/yr | 30 m :: Glacier/L | N/A :: Sfc |
| 2930 | Glacier Velocity | LH | Kieffer | HIRIS | AM2 | NSIDC | AL | m/s | 10^-6 :: variable | 1/yr | 100 m :: Land/Cryo | N/A :: Sfc |
| 2932 | Ice_Sheet Velocity (Outflow), Polar | LH | Kieffer | HIRIS | AM2 | NSIDC | AL | m/s | 10^-6 :: variable | 1/yr | 100 m :: Cryo | N/A :: Sfc |
| 2884 | Landform Sfc units, Geologic | LD | Kieffer, Clark | HIRIS | AM2 | EDC | AL | dimensionless | :: 30% | | 30 m :: L | N/A :: Sfc |
| 2774 | Mineral Thermal history | LC | Rowan | HIRIS | AM2 | EDC | AL | | | 1/seas | 30 m :: Land/L | N/A :: Sfc |
| 2766 | Mineral(CO3) Relative Abundance | LC | Rowan, Clark | HIRIS | AM2 | EDC | AL | dimensionless | 10% :: 5% | 1/seas | 30 m :: Land/L | N/A :: Sfc |
| 2776 | Mineral(OH) Relative Abundance | LC | Rowan, Clark | HIRIS | AM2 | EDC | AL | dimensionless | 10% :: 5% | 1/seas | 30 m :: Land/L | N/A :: Sfc |
| 2784 | Mineral(SO4) Relative Abundance | LC | Rowan, Clark | HIRIS | AM2 | EDC | AL | dimensionless | 10% :: 5% | 1/seas | 30 m :: Land/L | N/A :: Sfc |
| 2772 | Mineral(Fe) Relative Abundance | LC | Rowan, Clark | HIRIS | AM2 | EDC | AL | dimensionless | 10% :: 5% | 1/seas | 30 m :: Land/L | N/A :: Sfc |
| 3299 | Volcano-Activity Extent | VO | Rowan, Goetz | HIRIS | AM2 | EDC | AL | m^2 | | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 3294 | Volcano-Activity Temperature | VO | Rowan, Goetz | HIRIS | AM2 | EDC | AL | C | 10 C :: 5 C | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2432 | Land_sfc Reflectance, Directional | LR | Slater | HIRIS | AM2 | EDC | AL | dimensionless | 3% :: 1% | 1/mo | 30 m :: Land/R,L | N/A :: Sfc |
| 2656 | Vegetation Crown Height | LB | Ustin | HIRIS | AM2 | EDC | AL | m | 40% :: 20% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2657 | Vegetation Crown Spacing | LB | Ustin | HIRIS | AM2 | EDC | AL | m | 40% :: 20% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2746 | Vegetation Index | LB | Ustin et al | HIRIS | AM2 | EDC | AL | dimensionless | 20% :: 10% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2029 | PAR, Absorbed, Non-vegetative, | AR | Ustin, Wessman | HIRIS | AM2 | EDC | AL | W/m^2 | 25% :: 10% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2030 | PAR, Absorbed, Vegetative, (APAR) | AR | Ustin, Wessman | HIRIS | AM2 | EDC | AL | W/m^2 | 25% :: 10% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2614 | Vegetation Biomass, Dead | LB | Ustin, Wessman | HIRIS | AM2 | EDC | AL | kg/ha | 30% :: 15% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2620 | Vegetation Biomass, Green | LB | Ustin, Wessman | HIRIS | AM2 | EDC | AL | kg/ha | 30% :: 15% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2653 | Vegetation Chlorophyll Conc | LB | Ustin, Wessman | HIRIS | AM2 | EDC | AL | g/ha | 25% :: 10% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |

## Appendix E: Output Data Products Listed by Instrument

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2741 | Vegetation Cover | LB | Ustin, Wessman | HIRIS | AM2 | EDC | AL | % | 20% :: 10% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2008 | Albedo, Cloud | AR | Welch | HIRIS | AM2 | EDC | AL | % | 5% :: 5% | | 90 m :: R | :: Cloud |
| 2079 | Cloud Cover | AH | Welch | HIRIS | AM2 | EDC | AL | dimensionless | 1% :: 0.5% | 1/(1-3 min), 1/(2-16 day) | 30 m :: L | :: Cloud |
| 1762 | Cloud Drop Phase | AH | Welch | HIRIS | AM2 | EDC | AL | water/ice | | 1/(2-16 day) | 30 m :: L | N/A :: Cloud |
| 1778 | Cloud Drop Size(Effective Radius) | AH | Welch | HIRIS | AM2 | EDC | AL | um | 10 um :: | 1/(2-16 day) | 30 m :: L | :: Cloud |
| 1776 | Cloud Drop Size-distribution | AH | Welch | HIRIS | AM2 | EDC | AL | no/cm^2/um | 20% :: 10% | 1/(2-16 day) | 30 m :: L | :: Cloud |
| 1509 | Cloud Field Organization scale | AH | Welch | HIRIS | AM2 | EDC | AL | | | | :: L | |
| 1503 | Cloud Field Structure | AD | Welch | HIRIS | AM2 | EDC | AL | | | | :: L | |
| 1390 | Cloud Height, Base | AH | Welch | HIRIS | AM2 | EDC | AL | m | 50 m :: 50 m | 1/(2-16 day) | 30 m :: L | N/A :: Cloud |
| 2281 | Cloud Liq_water Content | AH | Welch | HIRIS | AM2 | EDC | AL | g/m^2 | 30% :: 10% | | 90 m :: R | :: Cloud |
| 2309 | Cloud Optical Depth | AR | Welch | HIRIS | AM2 | EDC | AL | dimensionless | 3% :: 1.5% | 1/(1-3 min), 1/(2-16 day) | 30 m :: L | N/A :: Cloud |
| 2037 | Cloud Reflectance, Bi-directional, (BRDF) | AR | Welch | HIRIS | AM2 | EDC | AL | | :: 1% | | 30 m :: R | :: Cloud |
| 1426 | Cloud Height, Top | AH | Welch, Goetz | HIRIS | AM2 | EDC | AL | m | 500 m :: 250 m | 1/(2-16 day) | 30 m :: L | N/A :: Cloud |
| 2644 | Vegetation Type | LB | Wessman | HIRIS | AM2 | EDC | AL | ha | 10% :: 10% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2648 | Vegetation Cellulose Conc | LB | Wessman, Aber | HIRIS | AM2 | EDC | AL | g/ha | 40% :: 20% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2687 | Vegetation Lignin Conc | LB | Wessman, Aber | HIRIS | AM2 | EDC | AL | g/ha | 40% :: 20% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2761 | Vegetation Leaf-tissue Water Content | LB | Wessman, Goetz | HIRIS | AM2 | EDC | AL | g/cm^3 | 50% :: 20% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2384 | Level-1B Radiance, LIS | AR | Christian | LIS | TRM | MSFC | AL | W/m^2/sr/um | | | | |
| 3642 | *Lightning Occurrence (Location,Time)* | AE | Christian | LIS | TRM | MSFC | AL | | 10 km (in 1100km FOV) :: | | .07 dg :: G | N/A :: Atmos |
| 3643 | *Lightning Radiant Energy* | AE | Christian | LIS | TRM | MSFC | AL | | | | .07 dg :: G | N/A :: Atmos |
| 1756 | Lightning Rate | AE | Christian | LIS | TRM | MSFC | AL | | :: 5% | | .07 dg :: G | N/A :: Atmos |
| 3599 | *Cloud Liq_water Total Column* | AH | TBD | MIMR | PM | MSFC | AL | mg/cm^2 | 0.005 cm :: | 1 mo | 1 dg :: Ocean | N/A :: Trop |
| 3598 | Cloud Liq_water Total Column | AH | TBD | MIMR | PM | MSFC | AL | mg/cm^2 | | | 22 km :: Ocean | N/A :: Trop |
| 3602 | Level-1B Radiance, MIMR | AR | TBD | MIMR | PM | MSFC | AL | K | | 1 day | 1 dg :: Global | N/A :: |
| 3597 | *Precipitable Water* | AH | TBD | MIMR | PM | MSFC | AL | g/km^3 | 0.16 cm :: | 1 mo | 1 dg :: Ocean | Column :: Trop |
| 3596 | Precipitable Water | AH | TBD | MIMR | PM | MSFC | AL | g/km^3 | | | 22 km :: Ocean | Column :: Trop |
| 3601 | *Precipitation Index* | AH | TBD | MIMR | PM | MSFC | AL | | | 1 mo | 1 dg :: Global | N/A :: Sfc |
| 3600 | Precipitation Rate | AH | TBD | MIMR | PM | MSFC | AL | mm/hr? | | | 22 km :: Global | N/A :: Sfc |
| 3610 | *Sea_Ice Age* | OH | TBD | MIMR | PM | NSIDC | AL | | | 1 mo | 1 dg :: Ocean/Cryo | :: Sfc |
| 3609 | Sea_Ice Age | OH | TBD | MIMR | PM | NSIDC | AL | | | | 22 km :: Ocean/Cryo | :: Sfc |
| 3612 | *Sea_Ice Conc* | OH | TBD | MIMR | PM | NSIDC | AL | | | 1 mo | 1 dg :: Ocean/Cryo | N/A :: Sfc |
| 3611 | Sea_Ice Conc | OH | TBD | MIMR | PM | NSIDC | AL | | | | 22 km :: Ocean/Cryo | N/A :: Sfc |
| 3614 | *Sea_Ice Extent* | OH | TBD | MIMR | PM | NSIDC | AL | | | 1 mo | 1 dg :: Ocean/Cryo | N/A :: Sfc |
| 3613 | Sea_Ice Extent | OH | TBD | MIMR | PM | NSIDC | AL | | | | 22 km :: Ocean/Cryo | N/A :: Sfc |
| 3604 | *Sea_sfc Temperature (SST)* | OR | TBD | MIMR | PM | MSFC | AL | K | 1 K :: | 1 mo | 1 dg :: Ocean | N/A :: Sfc |
| 3603 | Sea_sfc Temperature (SST) | OR | TBD | MIMR | PM | MSFC | AL | K | | | 60 km :: Ocean | N/A :: Sfc |
| 3608 | *Snow Cover* | LH | TBD | MIMR | PM | NSIDC | AL | | | 1 mo | 1 dg :: Land | N/A :: Sfc |
| 3607 | Snow Cover | LH | TBD | MIMR | PM | NSIDC | AL | | | | 22 km :: Land | N/A :: Sfc |
| 3606 | *Soil Moisture* | LH | TBD | MIMR | PM | MSFC | AL | | | 1 mo | 1 dg :: Land | N/A :: Sfc |
| 3605 | Soil Moisture | LH | TBD | MIMR | PM | MSFC | AL | | | | 60 km :: Land | N/A :: Sfc |
| 3595 | *Wind Stress, Sea_sfc* | AD | TBD | MIMR | PM | MSFC | AL | m/s | | 1 mo | 1 dg :: Ocean | N/A :: Sfc |
| 3594 | Wind Stress, Sea_sfc | AD | TBD | MIMR | PM | MSFC | AL | m/s | | | 39 km :: Ocean | N/A :: Sfc |
| 2299 | *Aerosol Optical Depth* | AR | Diner | MISR | AM | LaRC | AL | dimensionless | 0.05/10% :: 0.05/10% | 1/(5-16 day) [d] | 15.4 km :: G | Column :: Atmos |
| 3676 | *Aerosol Optical Depth* | AR | Diner | MISR | AM | LaRC | AL | dimensionless | 0.05/10% :: 0.05/10% | 9,16 day; mo; seas; yr | 15.4 km ? :: G | Column :: Atmos |
| 2298 | Aerosol Optical Depth | AR | Diner | MISR | AM | LaRC | PL | dimensionless | 0.05/10% :: 0.05/10% | 1/(5-16 day) [d] | 1.92 km :: R | Column :: Atmos |

## Appendix E: Output Data Products Listed by Instrument

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2334 | Aerosol Phase Function, Asymmetric | AR | Diner | MISR | AM | LaRC | AL | dimensionless | 0.05 :: 0.05 | 1/(5-16 day) [d] | 15.4 km :: G | Column :: Atmos |
| 2335 | Aerosol Phase Function, Asymmetric | AR | Diner | MISR | AM | LaRC | PL | dimensionless | 0.05 :: 0.05 | 1/(5-16 day) [d] | 1.9 km :: R | Column :: Atmos |
| 3677 | Aerosol Phase Function, Asymmetric | AR | Diner | MISR | AM | LaRC | AL | dimensionless | 0.05 :: 0.05 | 9,16 day; mo; seas; yr | 15.4 km ? :: G | Column :: Atmos |
| 1993 | Aerosol Size-distribution | AC | Diner | MISR | AM | LaRC | AL | dimensionless | 15% :: 10% | 1/(5-16 day) [d] | 15.4 km :: G | Column :: Atmos |
| 1994 | Aerosol Size-distribution | AC | Diner | MISR | AM | LaRC | PL | dimensionless | 15% :: 10% | 1/(5-16 day) | 1.9 km :: R | Column :: Atmos |
| 3678 | Aerosol Size-distribution | AC | Diner | MISR | AM | LaRC | AL | dimensionless | 15% :: 10% | 9,16 day; mo; seas; yr | 15.4 km ? :: G | Column :: Atmos |
| 2011 | *Albedo, Planetary Spectral, TOA* | AR | Diner | MISR | AM | LaRC | AL | dimensionless | <=0.03 :: 0.01 | 1/(5-16 day) [d] | 1.92 km :: G | N/A :: TOA |
| 3679 | *Albedo, Planetary Spectral, TOA* | AR | Diner | MISR | AM | LaRC | AL | dimensionless | <=0.03 :: 0.01 | 9,16 day; mo; seas; yr | 1.92 km ? :: G | N/A :: TOA |
| 2010 | Albedo, Planetary Spectral, TOA | AR | Diner | MISR | AM | LaRC | PL | dimensionless | <=0.03 :: 0.01 | 1/(5-16 day) [d] | 240 m :: R | N/A :: TOA |
| 2022 | *Albedo, Spectral, Land_sfc* | LR | Diner | MISR | AM | LaRC | AL | dimensionless | <=0.03 :: 0.01 | 1/(5-16 day) [d] | 1.92 km :: G | N/A :: Sfc |
| 3680 | *Albedo, Spectral, Land_sfc* | LR | Diner | MISR | AM | LaRC | AL | dimensionless | <=0.03 :: 0.01 | 9,16 day; mo; seas; yr | 1.92 km ? :: G | N/A :: Sfc |
| 2021 | Albedo, Spectral, Land_sfc | LR | Diner | MISR | AM | LaRC | PL | dimensionless | <=0.03 :: 0.01 | 1/(5-16 day) [d] | 240 m :: R | N/A :: Sfc |
| 1433 | *Cloud Height, Top* | AH | Diner | MISR | AM | LaRC | PL | m | 100 m :: 100 m | 1/(5-16 day) [d] | 500 m :: R | N/A :: Trop |
| 1432 | Cloud Height, Top | AH | Diner | MISR | AM | LaRC | PL | m | <1000 m :: <1000 m | 1/(5-16 day) [d] | 5 km :: G | N/A :: Trop |
| 2039 | *Cloud Reflectance, Bi-directional, (BRDF)* | AR | Diner | MISR | AM | LaRC | PL | /sr | 3% :: 1% | [variable] [d] | 1.92 km :: G | N/A :: Trop |
| 2038 | Cloud Reflectance, Bi-directional, (BRDF) | AR | Diner | MISR | AM | LaRC | PL | /sr | 3% :: 1% | [variable] [d] | 240 m :: R | N/A :: Trop |
| 3286 | Eruption-Plume Height | VO | Diner | MISR | AM | LaRC | PL | m | 100 m :: 100 m | [variable] [d] | 500 m :: Land/L | N/A :: Plume_top |
| 2631 | *Land_sfc Reflectance, Bi-directional, (BRDF)* | LB | Diner | MISR | AM | LaRC | AL | /sr | 5% :: 2% | 1/(5-16 day) [d] | 1.92 km :: G | N/A :: Sfc |
| 2632 | Land_sfc Reflectance, Bi-directional, (BRDF) | LB | Diner | MISR | AM | LaRC | AL | /sr | 5% :: 2% | 1/(5-16 day) [d] | 240 m :: R | N/A :: Sfc |
| 2386 | Level-1B Radiance, MISR | AR | Diner | MISR | AM | LaRC | AL | W/m^2/sr/um | 3% :: 1% | 1/(5-16 day) [d] | 1.92 km :: G | N/A :: TOA |
| 2387 | Level-1B Radiance, MISR | AR | Diner | MISR | AM | LaRC | AL | W/m^2/sr/um | 3% :: 1% | 1/(5-16 day) [d] | 240 m :: R,L | N/A :: TOA |
| 2588 | Pigment Conc, Phytoplankton | OB | Diner | MISR | AM | LaRC | PL | mg/m^3 | 30% :: 30% | 1/(1-2 day) [d] | 240 m :: Ocean/R | N/A :: TOO |
| 2589 | Pigment Conc, Phytoplankton | OB | Diner | MISR | AM | LaRC | AL | mg/m^3 | 30% :: 30% | 1/(1-2 day) [d] | 1.92 km :: Ocean/G,R | N/A :: TOO |
| 3681 | Pigment Conc, Phytoplankton | OB | Diner | MISR | AM | LaRC | AL | mg/m^3 | 30% :: 30% | 9,16 day; mo; seas; yr | 1.92 km ? :: Ocean/G,R | N/A :: TOO |
| 2846 | *Topographic Elevation, Land_sfc* | LD | Diner | MISR | AM | LaRC | PL | m | 100 m :: 100 m | 1/mission | 500 m :: Land | N/A :: Sfc |
| 2756 | Vegetation Index, Normalized | LB | Diner | MISR | AM | LaRC | AL | dimensionless | 2% :: 2% | 1/(5-16 day) [d] | 1.92 km :: Land | N/A :: Sfc |
| 2757 | Vegetation Index, Normalized | LB | Diner | MISR | AM | LaRC | PL | dimensionless | 2% :: 2% | 1/(5-16 day) [d] | 240 m :: Land/R | N/A :: Sfc |
| 3682 | Vegetation Index, Normalized | LB | Diner | MISR | AM | LaRC | AL | dimensionless | 2% :: 2% | 9,16 day; mo; seas; yr | 1.92 km ? :: Land | N/A :: Sfc |
| 1030 | BrO(Br^81-O) Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | :: 1x10-12 | 1/mo. [z. mean] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: 15-50 km |
| 1070 | CH3Cl Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | :: 1x10-11 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: TPSE, 40 km |
| 1107 | ClO Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | <=5% :: 0.3-3x10-10 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: TPSE, 70 km |
| 1898 | Cloud Liq_water Content | AH | Waters | MLS | MO | GSFC | AL | | :: 5% | 1/day [z. mean] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: Upper Trop |
| 1124 | CO Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | <=5% :: 3x10-8 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: TPSE, 60 km |
| 1125 | CO Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | <=5% :: 1x10-5 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: 60-100 km |
| 1165 | H2CO Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | :: 2x10-11 | 1/day [z. mean] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 30-50 km |
| 1854 | H2O (H2^17O) Conc | AC | Waters | MLS | MO | GSFC | AL | | :: 2%<50km | 2/day [d,n] | | 2.5 km [1.2] :: TPSE, 90 km |
| 1855 | H2O (H2^18O) Conc | AC | Waters | MLS | MO | GSFC | AL | | :: 2%<50km | 2/day [d,n] | | 2.5 km [1.2] :: TPSE, 80 km |
| 1838 | H2O Conc | AC | Waters | MLS | MO | GSFC | AL | | :: 2% <50km | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: TPSE, 100 km |
| 1171 | H2O2 Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | :: 1x10-10 | 1/day [z. mean] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: 30-40 km |
| 1188 | HCl(H_Cl^35) Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | <=5% :: 0.1-10x10-10 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: TPSE, 90 km |

## Appendix E: Output Data Products Listed by Instrument

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1189 | HCl(H_Cl^37) Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | <=5% :: 0.1-10x10-10 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: TPSE, 80 km |
| 1191 | HCN Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | <=5% :: 4x10-11 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: 20-65 km |
| 1203 | HNO3 Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | <=5% :: 5x10-10 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: TPSE, 46 km |
| 1216 | HO2 Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | :: 3-20x10-10 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: 30-80 km |
| 1222 | HOCl Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | :: 3x10-11 | 1/day | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: 25-45 km |
| 2388 | Level-1B Radiance, MLS | AR | Waters | MLS | MO | GSFC | AL | K | | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: Trop-150 km |
| 3247 | Magnetic Field Strength, DC | SE | Waters | MLS | MO | GSFC | AL | G | :: 2x10-3G | 2/day [d,n] | 2.5 x 0.2 dg :: 82N-82S | 2.5 km :: 80-100 km |
| 1240 | N2O Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | <=5% :: 1-10x10-8 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: TPSE, 65 km |
| 1266 | NO Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | :: .1-10x10-7 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 30-120 km |
| 1274 | NO2 Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | :: 1-8x10-8 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 30-60 km |
| 1299 | O2 Conc | AC | Waters | MLS | MO | GSFC | AL | | <=5% :: 1% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [6.5] :: TPSE, 120 km |
| 1303 | O2(NU1) Conc | AC | Waters | MLS | MO | GSFC | AL | | :: 10% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [6.5] :: 20-80 km |
| 1319 | O3 Conc | AC | Waters | MLS | MO | GSFC | AL | | <= 3% :: 1%(<50km) | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: TPSE, 110 km |
| 1328 | O3 Conc | AC | Waters | MLS | MO | GSFC | AL | | :: 10% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: TPSE, 70 km |
| 1339 | O3(17^OOO) Conc | AC | Waters | MLS | MO | GSFC | AL | | :: 50% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 20-50 km |
| 1337 | O3(OO^17_O) Conc | AC | Waters | MLS | MO | GSFC | AL | | :: 100% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 25-45 km |
| 1304 | O3(OO^18) Conc | AC | Waters | MLS | MO | GSFC | AL | | :: 10% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 30-80 km |
| 1338 | O3(OO^18_O) Conc | AC | Waters | MLS | MO | GSFC | AL | | :: 50% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 20-60 km |
| 1343 | O3(^18OOO) Conc | AC | Waters | MLS | MO | GSFC | AL | | :: 20% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 20-60 km |
| 1326 | O3O3(NU1,3) Conc | AC | Waters | MLS | MO | GSFC | AL | | :: 50% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 20-60 km |
| 1352 | OClO Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | :: 3x10-11 | 1/mo. [z. mean] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: TPSE, 25 km |
| 1525 | Pressure | AD | Waters | MLS | MO | GSFC | AL | mb | :: 1%(30-50km) | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: TPSE, 70 km |
| 1369 | SO2 Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | :: 5x10-10 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: TPSE, 30 km |
| 1609 | Temperature Profile | AD | Waters | MLS | MO | GSFC | AL | K | :: 2K <100km) | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: TPSE, 120 km |
| 1734 | Wind Speed | AD | Waters | MLS | MO | GSFC | AL | m/s | :: 10m/s | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 60-110 km |
| 3211 | *Chlorophyll Fluorescence Efficiency* | OR | Abbott | MODIS | AM,PM | GSFC | PL | mW/cm^2/sr/um/mg-Chl/m^3 | 15% :: 5% | 1/day, 1/wk | 1 km :: Ocean/R,L | N/A :: TOO |
| 3212 | *Chlorophyll Fluorescence Efficiency* | OR | Abbott | MODIS | AM,PM | GSFC | PL | mW/cm^2/sr/um/mg-Chl/m^3 | 15% :: 5% | 1/day, 1/wk | 4 km :: Ocean/G,R | N/A :: TOO |
| 2575 | *Chlorophyll Fluorescence Line Height* | OB | Abbott | MODIS | AM,PM | GSFC | AL | mW/cm^2/sr/u | .004 :: .001 | 1/day, 1/wk | 4 km :: Ocean/G,R | N/A :: TOO |
| 2576 | Chlorophyll Fluorescence Line Height | OB | Abbott | MODIS | AM,PM | GSFC | AL | mW/cm^2/sr/u | .004 :: .001 | 1/day, 1/wk | 1 km :: Ocean/R,L | N/A :: TOO |
| 2566 | Chlorophyll_a Conc (via Fluorescence) | OB | Abbott | MODIS | AM,PM | GSFC | PL | mg/m^3 | 50-100% :: 35% | 1/day, 1/wk | 1 km :: Ocean/R,L | N/A :: TOO |
| 2567 | Chlorophyll_a Conc (via Fluorescence) | OB | Abbott | MODIS | AM,PM | GSFC | PL | mg/m^3 | 50-100% :: 35% | 1/day, 1/wk | 4 km :: Ocean/G,R | N/A :: TOO |
| 2602 | Ocean Productivity, Primary, Near_sfc [via Fluorescence] | OB | Abbott | MODIS | AM,PM | GSFC | PL | mg-C/m^3/day | :: 50-100% | 1/day, 1/wk | 1 km :: Ocean-I/R,L | N/A :: TOO |
| 2603 | Ocean Productivity, Primary, Near_sfc [via Fluorescence] | OB | Abbott | MODIS | AM,PM | GSFC | PL | mg-C/m^3/day | :: 50-100% | 1/day, 1/wk | 4 km :: Ocean-I/G,R | N/A :: TOO |
| 2110 | Land_sfc Emissivity | LR | Barton | MODIS | AM,PM | EDC | PL | dimensionless | 0.01 :: 0.01 | 1/day, 1/wk | 1 km :: G,R | N/A :: Sfc |

## Appendix E: Output Data Products Listed by Instrument

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2111 | Land_sfc Emissivity | LR | Barton | MODIS | AM,PM | EDC | PL | dimensionless | 0.01 :: 0.01 | 1/day, 1/wk | 50 km :: G,R | N/A :: Sfc |
| 2527 | *Sea_sfc Temperature (SST)* | OR | Brown | MODIS | AM,PM | GSFC | AL | K | 0.3-0.5 K :: 0.1-0.3 K | 1/day, 1/wk, 1/mo | 1 km :: Ocean/L | N/A :: Sfc |
| 2528 | Sea_sfc Temperature (SST) | OR | Brown | MODIS | AM,PM | GSFC | AL | K | 0.3-0.6K :: 0.1-0.3K | 1/day, 1/wk, 1/mo | 20 km :: Ocean/G,R | N/A :: Sfc |
| 2529 | Sea_sfc Temperature (SST) | OR | Brown | MODIS | AM,PM | GSFC | AL | K | 0.3-0.6K :: 0.1-0.3K | 1/day, 1/wk, 1/mo | 4 km :: Ocean/R,L | N/A :: Sfc |
| 2530 | Sea_sfc Temperature (SST) | OR | Brown, Barton | MODIS | AM,PM | GSFC | AL | K | 0.3-0.6K :: 0.1-0.3K | 1/day, 1/wk, 1/mo | 4 km :: Ocean/R,L | N/A :: Sfc |
| 2531 | Sea_sfc Temperature (SST) | OR | Brown, Barton | MODIS | AM,PM | GSFC | AL | K | 0.3-0.6K :: 0.1-0.3K | 1/day, 1/wk, 1/mo | 20 km :: Ocean/G,R | N/A :: Sfc |
| 2532 | Sea_sfc Temperature (SST) | OR | Brown, Barton | MODIS | AM,PM | GSFC | AL | K | 0.3-0.4K :: 0.1-0.6K | 1/day, 1/wk, 1/mo | 50 km :: Ocean | N/A :: Sfc |
| 2569 | Chlorophyll_a Conc | OB | Carder | MODIS | AM,PM | GSFC | AL | mg/m^3 | 50% :: 10% | 1/day, 1/wk, 1/mo | 1 km :: Ocean-II/ L | N/A :: TOO |
| 2570 | Chlorophyll_a Conc | OB | Carder | MODIS | AM,PM | GSFC | AL | mg/m^3 | 50% :: 10% | 1/day, 1/wk, 1/mo | 1 km :: Ocean-II/G,R | N/A :: TOO |
| 2580 | Organic Matter Conc, Dissolved | OB | Carder | MODIS | AM,PM | GSFC | PL | mg/m^3 | 150% :: 30% | 1/day, 1/wk, 1/mo | 20 km :: Ocean | N/A :: TOO |
| 2581 | Organic Matter Conc, Dissolved | OB | Carder | MODIS | AM,PM | GSFC | PL | mg/m^3 | 150% :: 30% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/R,L | N/A :: TOO |
| 3662 | Organic Matter Degradation_Product Absorption Coef@415nm (DOM+Detritus) | OB | Carder | MODIS | AM,PM | GSFC | AL | /m | 40% :: 15% | 1/day, 1/wk, 1/mo | 20 km :: Ocean | N/A :: TOO |
| 3663 | Organic Matter Degradation_Product Absorption Coef@415nm (DOM+Detritus) | OB | Carder | MODIS | AM,PM | GSFC | AL | /m | 40% :: 15% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/R,L | N/A :: TOO |
| 2571 | *Chlorophyll_a Conc* | OB | Clark | MODIS | AM,PM | GSFC | AL | mg/m^3 | 30% :: 10% | 1/day, 1/wk, 1/mo | 1 km :: Ocean-I/ L | N/A :: TOO |
| 2572 | *Chlorophyll_a Conc* | OB | Clark | MODIS | AM,PM | GSFC | AL | mg/m^3 | 30% :: 10% | 1/day, 1/wk, 1/mo | 20 km :: Ocean-I/G,R | N/A :: TOO |
| 2031 | Ocean Water Attenuation Coef, PAR | OR | Clark | MODIS | AM,PM | GSFC | PL | /m | 35% :: 10% | 1/day, 1/wk | 1 km :: Ocean-I/L | N/A :: TOO |
| 2032 | Ocean Water Attenuation Coef, PAR | OR | Clark | MODIS | AM,PM | GSFC | PL | /m | 35% :: 10% | 1/day, 1/wk | 20 km :: Ocean-I | N/A :: TOO |
| 3206 | Ocean Water Attenuation Coef@520nm, Beam | OR | Clark | MODIS | AM,PM | GSFC | PL | /m | 35% :: 10% | 1/day, 1/wk | 1 km :: Ocean | N/A :: TOO |
| 3207 | Ocean Water Attenuation Coef@520nm, Beam | OR | Clark | MODIS | AM,PM | GSFC | PL | /m | 35% :: 10% | 1/day, 1/wk | 20 km :: Ocean | N/A :: TOO |
| 2608 | Organic Matter Conc, Particulate | OB | Clark | MODIS | AM,PM | GSFC | PL | mg/m^3 | 50% :: 30% | 1/day, 1/wk | 20 km :: Ocean | N/A :: TOO |
| 3664 | Organic Matter Conc, Particulate | OB | Clark | MODIS | AM,PM | GSFC | PL | mg/m^3 | 50% :: 30% | 1/day, 1/wk | 1 km :: Ocean-I/L | N/A :: TOO |
| 3085 | Suspended-Solids Conc, Ocean Water | OC | Clark | MODIS | AM,PM | GSFC | AL | g/m^3 | 50% :: 35% | 1/day, 1/wk, 1/mo | 20 km :: Ocean | N/A :: TOO |
| 3086 | Suspended-Solids Conc, Ocean Water | OC | Clark | MODIS | AM,PM | GSFC | AL | g/m^3 | 50% :: 35% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/R,L | N/A :: TOO |
| 2606 | Ocean Productivity, Primary | OB | Esaias | MODIS | AM,PM | GSFC | AL | mg/m^3 | <35% :: <20% | 1/wk, 1/mo, 1/yr | 20 km :: Ocean/G,R | N/A :: TOO |
| 2330 | PAR | AR | Esaias | MODIS | AM,PM | GSFC | PL | quanta/m^2/s | TBD :: TBD | 1/day | N/A :: G | N/A :: Atmos |
| 3303 | Calibration Data, MODIS | IC | Evans | MODIS | AM,PM | GSFC | AL | variable | | 1/day, 1/wk, 1/mo | N/A :: Ocean/G,R,L | N/A :: Sfc |
| 2295 | *Aerosol Angstrom Exponent* | AR | Gordon | MODIS | AM,PM | GSFC | AL | dimensionless | 15% :: 5% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/R,L | N/A :: Atmos |
| 2296 | *Aerosol Angstrom Exponent* | AR | Gordon | MODIS | AM,PM | GSFC | AL | dimensionless | 15% :: 5% | 1/day, 1/wk, 1/mo | 20 km :: Ocean | N/A :: Atmos |
| 2344 | *Aerosol Radiance* | AR | Gordon | MODIS | AM,PM | GSFC | AL | mW/cm^2/sr/u | 10% :: 5% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/G,R,L | N/A :: Atmos |
| 2345 | *Aerosol Radiance* | AR | Gordon | MODIS | AM,PM | GSFC | AL | mW/cm^2/sr/u | 10% :: 5% | 1/day, 1/wk, 1/mo | 20 km :: Ocean/G,R,L | N/A :: Atmos |
| 2556 | Coccolith Backscatter Coef | OR | Gordon | MODIS | AM,PM | GSFC | PL | /m | 25% :: 10% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/R | N/A :: TOO |
| 2557 | Coccolith Backscatter Coef | OR | Gordon | MODIS | AM,PM | GSFC | PL | /m | 25% :: 10% | 1/day, 1/wk, 1/mo | 20 km :: Ocean | N/A :: TOO |
| 2254 | Glint Field | OR | Gordon | MODIS | AM,PM | GSFC | PL | dimensionless | | 1/orbit [d] | 1 km :: Ocean/R | N/A :: Sfc |
| 2559 | Ocean Water Backscatter Coef, Total | OR | Gordon | MODIS | AM,PM | GSFC | PL | /m | 25% :: 10% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/R | N/A :: TOO |
| 2560 | Ocean Water Backscatter Coef, Total | OR | Gordon | MODIS | AM,PM | GSFC | PL | /m | 25% :: 10% | 1/day, 1/wk, 1/mo | 20 km :: Ocean | N/A :: TOO |
| 2266 | PAR, Sfc (IPAR) | AR | Gordon | MODIS | AM,PM | GSFC | AL | quanta/m^2/s | 10% :: 5% | 1/day [d] | 1 km :: Ocean/L | N/A :: Sfc |
| 2267 | PAR, Sfc (IPAR) | AR | Gordon | MODIS | AM,PM | GSFC | AL | quanta/m^2/s | 10% :: 5% | 1/day [d] | 1 km :: Ocean | N/A :: Sfc |
| 2555 | Phytoplankton Backscatter Coef | OR | Gordon | MODIS | AM,PM | GSFC | PL | soft, med, hard | | 1/day, 1/wk, 1/mo | 1 km :: Ocean/R | N/A :: TOO |
| 2558 | Phytoplankton Backscatter Coef | OR | Gordon | MODIS | AM,PM | GSFC | PL | soft, med, hard | | 1/day, 1/wk, 1/mo | 20 km :: Ocean | N/A :: TOO |
| 1688 | Wind Velocity, Sea_sfc Glint-Pattern | OR | Gordon | MODIS | AM,PM | GSFC | PL | m/s | | 1/orbit [d] | 1 km :: Ocean/R | N/A :: Sfc |
| 2416 | *Level-2 Radiance, Water-leaving* | OR | Gordon et al | MODIS | AM,PM | GSFC | AL | mW/cm^2/sr/u | 5% :: 5% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/R,L | N/A :: Sfc |

## Appendix E: Output Data Products Listed by Instrument

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2417 | *Level-2 Radiance, Water-leaving* | OR | Gordon et al | MODIS | AM,PM | GSFC | AL | mW/cm^2/sr/u | 5% :: 5% | 1/day, 1/wk, 1/mo | 20 km :: Ocean/G,R | N/A :: Sfc |
| 2577 | Coccolith Conc, Detached | OB | Gordon, Clark | MODIS | AM,PM | GSFC | AL | mg-CaCO3/m^3 | 30% :: 10% | 1/day, 1/wk, 1/mo | 20 km :: Ocean/G,R | N/A :: TOO |
| 2578 | Coccolith Conc, Detached | OB | Gordon, Clark | MODIS | AM,PM | GSFC | AL | mg-CaCO3/m^3 | 30% :: 10% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/L | N/A :: TOO |
| 3199 | Ocean Water Attenuation Coef@490nm | OR | Gordon, Clark | MODIS | AM,PM | GSFC | AL | /m | 25% :: 10% | 1/day, 1/wk, 1/mo | 20 km :: Ocean-l/ R,L | N/A :: TOO |
| 3200 | Ocean Water Attenuation Coef@490nm | OR | Gordon, Clark | MODIS | AM,PM | GSFC | AL | /m | 25% :: 10% | 1/day, 1/wk, 1/mo | 1 km :: Ocean-l/ R,L | N/A :: TOO |
| 2591 | Pigment Conc | OB | Gordon, Clark | MODIS | AM,PM | GSFC | AL | mg/m^3 | 30% :: 10% | 1/day, 1/wk, 1/mo | 20 km :: Ocean/G,R | N/A :: TOO |
| 2592 | Pigment Conc | OB | Gordon, Clark | MODIS | AM,PM | GSFC | AL | mg/m^3 | 30% :: 10% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/R,L | N/A :: TOO |
| 2574 | *Chlorophyll Fluorescence Line Curv* | OB | Hoge | MODIS | AM,PM | GSFC | AL | mW/cm^2/sr/u | 25% :: 8% | 1/day, 1/wk | 20 km :: Ocean | N/A :: TOO |
| 2573 | Chlorophyll Fluorescence Line Curv | OB | Hoge | MODIS | AM,PM | GSFC | AL | mW/cm^2/sr/u | 25% :: 8% | 1/day, 1/wk | 1 km :: Ocean/R | N/A :: TOO |
| 3317 | *Organic Matter Fluorescence Efficiency, Colored Dissolved [CDOM* | OB | Hoge | MODIS | AM,PM | GSFC | AL | dimensionless | 100% :: 50% | 1 day,wk,mo | 20 km :: Ocean/GR | N/A :: TOO |
| 3318 | *Organic Matter Fluorescence Efficiency, Colored Dissolved [CDOM* | OB | Hoge | MODIS | AM,PM | GSFC | AL | dimensionless | 100% :: 50% | 1 day,wk,mo | 1 km :: Ocean/RL | N/A :: TOO |
| 3319 | Pigment Conc, Phycobillin [Phycoerythrin, etc.] | OB | Hoge | MODIS | AM,PM | GSFC | PL | mg/m^3 | 50% :: 15% | 1 day,wk,mo | 20 km :: Ocean/GR | N/A :: TOO |
| 3320 | Pigment Conc, Phycobillin [Phycoerythrin, etc.] | OB | Hoge | MODIS | AM,PM | GSFC | PL | mg/m^3 | 50% :: 15% | 1 day,wk,mo | 1 km :: Ocean/RL | N/A :: TOO |
| 2593 | Pigment Conc [via Spectral Curv] | OB | Hoge, Esaias | MODIS | AM,PM | GSFC | PL | mg/m^3 | 50% :: 15% | 1/day, 1/wk | 1 km :: Ocean/R | N/A :: TOO |
| 2594 | Pigment Conc [via Spectral Curv] | OB | Hoge, Esaias | MODIS | AM,PM | GSFC | PL | mg/m^3 | 50% :: 15% | 1/day, 1/wk | 20 km :: Ocean/R | N/A :: TOO |
| 2537 | Land_sfc Temperature-Difference, Day-Night | LR | Huete | MODIS | AM,PM | GSFC | PL | K | 1 K :: 1 K | 1/day | 1 km :: Land/R | N/A :: Sfc |
| 2286 | Level-1B Radiance Mixture-Model, MODIS Spectral-spatial | AR | Huete | MODIS | AM,PM | GSFC | PL | dimensionless | 5-10% :: 0.05 | 1/day | pixel_size :: G | N/A :: Sfc |
| 2047 | Soil Brightness Index | LR | Huete | MODIS | AM,PM | EDC | AL | dimensionless | 5% :: 5% | 1/mo | 1 km :: Land/R | N/A :: Sfc |
| 2095 | Soil Color Index | LR | Huete | MODIS | AM,PM | EDC | PL | class | 10% :: 5% | 1/mo | 1 km :: Land/R | N/A :: Sfc |
| 3703 | Vegetation Index Temporal Signal | LB | Huete, Justice | MODIS | AM,PM | EDC | PL | dimensionless | 0.02 :: 0.01 | 1/yr (weekly points) | 1 km :: Land/R | N/A :: Sfc |
| 3701 | Vegetation Index, Composited, Sfc | LB | Huete, Justice | MODIS | AM,PM | EDC | AL | dimensionless | 0.02 :: 0.01 | 1/wk | 1 km :: Land/R | N/A :: Sfc |
| 3700 | Vegetation Index, Hemispherical, Sfc | LB | Huete, Justice | MODIS | AM,PM | EDC | PL | dimensionless | 0.02 :: 0.01 | 1 wk, 1 mo | 1 km :: Land/R | N/A :: Sfc |
| 3702 | Vegetation Index, Integrated Annual | LB | Huete, Justice | MODIS | AM,PM | EDC | PL | dimensionless | 0.02 :: 0.01 | 1/yr | 1 km :: Land/R | N/A :: Sfc |
| 3699 | Vegetation Index-Directional Reflectances, Atmosphere-Corrected [O3 & molecular scattering] | LB | Huete, Justice | MODIS | AM,PM | EDC | AL | dimensionless | 0.02 :: 0.01 [if low aerosols] | 1/day | 500 m :: Land/R | N/A :: TOA |
| 3704 | Vegetation Index [Self_Atmospheric-Correcting, TOA] | LB | Huete, Justice, Kaufman, Tanre | MODIS | AM,PM | EDC | AL | dimensionless | 0.02 :: 0.01 | 1/day | 1 km :: Land/R | N/A :: TOA |
| 2659 | Vegetation Growing_Season Duration | LB | Justice | MODIS | AM,PM | EDC | PL | day | 10 day :: | 1/yr | 1 km :: Land | N/A :: Sfc |
| 2660 | Vegetation Growing_Season Duration | LB | Justice | MODIS | AM,PM | EDC | PL | day | 10 day :: | 1/yr | 10 km :: Land | N/A :: Sfc |
| 2749 | *Vegetation Index* | LB | Justice, Huete et al | MODIS | AM,PM | EDC | AL | dimensionless | 0.01 :: 0.01 | 1/day, 1/wk, 1/mo | 10 km :: Land | N/A :: Sfc |
| 2750 | *Vegetation Index* | LB | Justice, Huete et al | MODIS | AM,PM | EDC | AL | dimensionless | 0.01 :: 0.01 | 1/day, 1/wk, 1/mo | 0.5 km :: Land/R | N/A :: Sfc |
| 2751 | *Vegetation Index* | LB | Justice, Huete et al | MODIS | AM,PM | EDC | AL | dimensionless | 0.01 :: 0.01 | 1/day, 1/wk, 1/mo | 1 km :: Land/R | N/A :: Sfc |
| 3304 | Data Characteristics, MODIS | IC | Justice, Strahler | MODIS | AM,PM | GSFC | PL | dimensionless | 30,10, 5% :: | 1/day | 1 km :: G | N/A :: Sfc |
| 3305 | Data Characteristics, MODIS | IC | Justice, Strahler | MODIS | AM,PM | GSFC | PL | dimensionless | 30,10, 5% :: | 1/day | 10 km :: G | N/A :: Sfc |
| 3306 | Data Characteristics, MODIS | IC | Justice, Strahler | MODIS | AM,PM | GSFC | PL | dimensionless | 30,10, 5% :: | 1/day | 50 km :: G | N/A :: Sfc |
| 2068 | Cloud Field Area | AH | Kaufman | MODIS | AM,PM | GSFC | PL | km^2 | | 1/mo | 1 dg :: G | N/A :: Sfc |
| 2092 | Cloud Field Perimeter | AH | Kaufman | MODIS | AM,PM | GSFC | PL | km | | 1/mo | 1 dg :: G | N/A :: Sfc |
| 2429 | Land_sfc Reflectance, Directional | LR | Kaufman et al | MODIS | AM,PM | EDC | AL | dimensionless | 0.01 :: 0.005 | 1/day | 1 km :: G | N/A :: Sfc |
| 2430 | Land_sfc Reflectance, Directional | LR | Kaufman et al | MODIS | AM,PM | EDC | AL | dimensionless | 0.01 :: 0.005 | 1/day | 0.5 km :: G | N/A :: Sfc |
| 2431 | Land_sfc Reflectance, Directional | LR | Kaufman et al | MODIS | AM,PM | EDC | AL | dimensionless | 0.01 :: 0.005 | 1/day | 0.25 km :: G | N/A :: Sfc |
| 2711 | Fire Class | LB | Kaufman, Justice | MODIS | AM,PM | EDC | AL | C | 10 C :: 5 C | 1/day, 1/wk | 10 km :: Land | N/A :: Sfc |

## Appendix E: Output Data Products Listed by Instrument

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2663 | *Fire Count* | LB | Kaufman, Justice | MODIS | AM,PM | EDC | AL | | | 1/day, 1/wk | 1 km :: Land/R | N/A :: Sfc |
| 2664 | *Fire Count* | LB | Kaufman, Justice | MODIS | AM,PM | EDC | AL | | | 1/day, 1/wk | 10 km :: Land | N/A :: Sfc |
| 2665 | *Fire Extent* | LB | Kaufman, Justice | MODIS | AM,PM | EDC | AL | | | 1/day, 1/wk | 1 km :: Land/R | N/A :: Sfc |
| 2666 | *Fire Extent* | LB | Kaufman, Justice | MODIS | AM,PM | EDC | AL | | | 1/day, 1/wk | 1 dg :: Land | N/A :: Sfc |
| 2471 | *Fire Temperature* | LB | Kaufman, Justice | MODIS | AM,PM | EDC | AL | C | 10 C :: 5 C | 1/day, 1/wk | 1 km :: Land/R | N/A :: Sfc |
| 1017 | *Aerosol Mass Loading* | AC | Kaufman, Tanre | MODIS | AM,PM | GSFC | AL | g/m^2 | 30% :: 10% | 1/day,1/mo | 0.5 dg :: G,R | N/A :: Atmos |
| 2293 | *Aerosol Optical Depth, Spectral* | AR | Kaufman, Tanre | MODIS | AM,PM | GSFC | AL | dimensionless | 0.1 :: 0.05 | 1/day, 1/mo | 0.5 dg :: Land | N/A :: Atmos |
| 2379 | Level-2 Radiance, Land_leaving | LR | Kaufman, Tanre | MODIS | AM,PM | GSFC | AL | W/m^2/sr/um | 10% :: 5% | 1/day | 1 km :: Land/R | N/A :: Sfc |
| 2380 | Level-2 Radiance, Land_leaving | LR | Kaufman, Tanre | MODIS | AM,PM | GSFC | AL | W/m^2/sr/um | 10% :: 5% | 1/day, 1/mo | 10 km :: Land | N/A :: Sfc |
| 2381 | Level-2 Radiance, Land_leaving | LR | Kaufman, Tanre | MODIS | AM,PM | GSFC | AL | W/m^2/sr/um | 10% :: 5% | 1/day | 0.5 km :: Land/R | N/A :: Sfc |
| 1874 | Precipitable Water | AH | Kaufman, Tanre | MODIS | AM,PM | GSFC | AL | dimensionless ? | 8% :: 6% | 1/day | 5 km :: Land | N/A :: Atmos |
| 3321 | Precipitable Water | AH | Kaufman, Tanre | MODIS | AM,PM | GSFC | AL | dimensionless ? | 12% :: 8% | 1 day, mo | 1 km :: Land | N/A :: Atmos |
| 3322 | Precipitable Water | AH | Kaufman, Tanre | MODIS | AM,PM | GSFC | AL | dimensionless ? | 5% :: 3% | 1 day, mo | 1 dg :: Land | N/A :: Atmos |
| 2081 | Cloud Cover | AH | King | MODIS | AM,PM | GSFC | AL | % | 10% :: 5% | 2/day [d,n], 1/mo | 5 km :: G | N/A :: Cloud |
| 2082 | Cloud Cover | AH | King | MODIS | AM,PM | GSFC | AL | % | 10% :: 5% | 1/day, 1/mo | 1 dg :: G | N/A :: Cloud |
| 2311 | *Cloud Optical Depth* | AR | King | MODIS | AM,PM | GSFC | AL | dimensionless | 20% :: 10% | 1/day [d] | 5 km :: G | N/A :: Cloud |
| 2312 | *Cloud Optical Depth* | AR | King | MODIS | AM,PM | GSFC | AL | dimensionless | 20% :: 10% | 1/day, 1/mo | 1 dg :: G | N/A :: Cloud |
| 1764 | Cloud Drop Phase | AH | King, Menzel | MODIS | AM,PM | GSFC | AL | water/ice | 90% Conf :: 90% Conf | 1/day | 5 km :: G | N/A :: Cloud |
| 1765 | Cloud Drop Phase | AH | King, Menzel | MODIS | AM,PM | GSFC | AL | water/ice | 90% Conf :: 90% Conf | 1/day, 1/mo | 1 dg :: G | N/A :: Cloud |
| 1780 | Cloud Drop Size(Effective Radius) | AH | King, Menzel | MODIS | AM,PM | GSFC | AL | um | 0-40% :: 5% | 1/day | 5 km :: G | N/A :: Cloud |
| 1781 | Cloud Drop Size(Effective Radius) | AH | King, Menzel | MODIS | AM,PM | GSFC | AL | um | 0-40% :: 5% | 1/day, 1/mo | 1 dg :: G | N/A :: Cloud |
| 2094 | Cloud JPDF | AH | King, Menzel | MODIS | AM,PM | GSFC | PL | dimensionless | | 1/day, 1/mo | 1 dg :: G | N/A :: N/A |
| 2126 | *Cloud Emissivity* | AR | Menzel | MODIS | AM,PM | GSFC | AL | dimensionless | 0.10 :: 0.05 | 2/day | 5 km :: G | N/A :: Cloud |
| 2127 | *Cloud Emissivity* | AR | Menzel | MODIS | AM,PM | GSFC | AL | dimensionless | 0.10 :: 0.05 | 1/day, 1/mo | 1 dg :: G | N/A :: Cloud |
| 2116 | Cloud Emissivity | AR | Menzel | MODIS | AM,PM | GSFC | PL | dimensionless | | | | N/A :: Cloud |
| 1528 | Cloud Pressure, Top | AH | Menzel | MODIS | AM,PM | GSFC | AL | mb | 50 mb :: 20 mb | 2/day | 5 km :: G | N/A :: Cloud |
| 1529 | Cloud Pressure, Top | AH | Menzel | MODIS | AM,PM | GSFC | AL | mb | 50 mb :: 20 mb | 1/day, 1/mo | 1 dg :: G | N/A :: Cloud |
| 2466 | *Cloud Temperature, Top* | AR | Menzel | MODIS | AM,PM | GSFC | AL | C | 2 C :: 1 C | 1/day, 1/mo | 1 dg :: G | N/A :: Cloud |
| 2467 | *Cloud Temperature, Top* | AR | Menzel | MODIS | AM,PM | GSFC | AL | C | 2 C :: 1 C | 2/day | 5 km :: G | N/A :: Cloud |
| 1333 | O3 Total Burden | AC | Menzel | MODIS | AM,PM | GSFC | AL | DU | 15-20DU :: 10DU | 2/day, 1/day | 5 km :: G | Column :: Atmos |
| 1334 | O3 Total Burden | AC | Menzel | MODIS | AM,PM | GSFC | AL | DU | 15-20DU :: 10DU | 1/day, 1/mo | 0.5 dg :: G | Column :: Atmos |
| 1875 | Precipitable Water | AH | Menzel | MODIS | AM,PM | GSFC | AL | mm | 10 mm :: 5 mm | 2/day | 5 km :: G | N/A :: Atmos |
| 1559 | Stability (Lifted Index), Atmospheric | AD | Menzel | MODIS | AM,PM | GSFC | AL | C | 2 C :: 1 C | 2/day | 5 km :: G | N/A :: Atmos |
| 1560 | Stability (Lifted Index), Atmospheric | AD | Menzel | MODIS | AM,PM | GSFC | AL | C | 2 C :: 1 C | 2/day, 1/mo | 0.5 dg :: G | N/A :: Atmos |
| 3668 | Ground Control Points, Potential | IU | Muller | MODIS | AM,PM | GSFC | AL | | 0.3 pixels :: | | 0.3 pixels :: Land/L | N/A :: Sfc |
| 2404 | Land_sfc Radiance-Correction, Topographic | LR | Muller | MODIS | AM,PM | EDC | AL | | 1 km :: 0.3 km | 1/day | 1 km :: Land/R | N/A :: Sfc |
| 2405 | Land_sfc Radiance-Correction, Topographic | LR | Muller | MODIS | AM,PM | EDC | AL | | 1 km :: 0.3 km | 1/day | 10 km :: Land | N/A :: Sfc |
| 3671 | Photogrammetric Camera Model | IC | Muller | MODIS | AM,PM | GSFC | BL | | | | N/A :: N/A | N/A :: N/A |
| 3672 | Simulated Data Sets, MODIS | IC | Muller | MODIS | AM,PM | GSFC | BL | | | | 0.25-1 km :: L(test sites) | N/A :: Sfc |
| 3673 | Simulated Scenes, MODIS, Monte Carlo Ray-Tracing | IC | Muller | MODIS | AM,PM | GSFC | BL | | | | 0.25-1 km :: L(test sites) | N/A :: Sfc |
| 2001 | Albedo, Spectral, TOA | AR | Muller, Strahler | MODIS | AM,PM | GSFC | AL | fraction | 10% :: 5% | 1/(3-8 day) | 1 km :: Land/R | N/A :: TOA |
| 2434 | Land_sfc Reflectance, Directional | LR | Muller, Strahler | MODIS | AM,PM | EDC | AL | fraction | 5% :: 3% | 1/day | 1 km :: R | N/A :: Sfc |
| 3665 | Albedo, Spectral, Land_sfc | LR | Muller, Strahler, Tanre | MODIS | AM,PM | EDC | PL | fraction | 5% :: 3% | 1/day | 1 km :: Land/R | N/A :: Sfc |

## Appendix E: Output Data Products Listed by Instrument

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3666 | Albedo, Total [SW], Land_sfc | LR | Muller, Strahler, Tanre | MODIS | AM,PM | EDC | PL | fraction | 5% :: 3% | 1/day | 1 km :: Land/R | N/A :: Sfc |
| 3667 | Albedo, Total [SW], TOA | LR | Muller, Strahler, Tanre | MODIS | AM,PM | GSFC | PL | fraction | 5% :: 3% | 1/day | 1 km :: Land/R | N/A :: TOA |
| 3669 | Land_sfc Reflectance, Bidirectional (BRDF) | LR | Muller, Strahler, Tanre | MODIS | AM,PM | EDC | PL | fraction | 5% :: 3% | 1/day | 1 km :: Land/R | N/A :: Sfc |
| 3670 | Land_sfc Roughness | LR | Muller, Tanre | MODIS | AM,PM | EDC | PL | | 5% :: 3% | 1/day | 1 km :: Land/R | N/A :: Sfc |
| 3216 | Particulate Backscatter Coef | OR | Parslow | MODIS | AM,PM | GSFC | PL | /m | :: 30% | 1/day | 1 km :: Ocean | N/A :: TOO |
| 3217 | Particulate Backscatter Coef | OR | Parslow | MODIS | AM,PM | GSFC | PL | /m | :: 30% | 1/day | 20 km :: Ocean | N/A :: TOO |
| 2582 | Organic Matter Conc, Dissolved | OB | Parslow et al | MODIS | AM,PM | GSFC | AL | mg/m^3 | 150% :: 30% | 1/day, 1/wk, 1/mo | 20 km :: Ocean | N/A :: TOO |
| 2583 | Organic Matter Conc, Dissolved | OB | Parslow et al | MODIS | AM,PM | GSFC | AL | mg/m^3 | 150% :: 30% | 1/day, 1/wk, 1/mo | 1 km :: Ocean [Southern]R,L | N/A :: TOO |
| 2680 | *Vegetation Index, Leaf Area, (LAI)* | LB | Running | MODIS | AM,PM | EDC | PL | dimensionless | 0.1-0.25 :: 5-20% | 1/day, 1/wk | pixel_size :: Land/G,R,L | N/A :: N/A |
| 2703 | *Vegetation Productivity, Primary* | LB | Running | MODIS | AM,PM | EDC | PL | Mg/km^2/yr | 100 :: 5-30% | 1/wk, 1/mo, 1/yr | 1 km :: Land/G,R | N/A :: N/A |
| 2723 | Vegetation Stress | LB | Runnng, Huete | MODIS | AM,PM | EDC | PL | s/m | 200-1000 :: 5-30% | 1/day, 1/wk | pixel_size :: Land/G,R,L | N/A :: N/A |
| 3641 | *Cloud Cover* | AH | Salomonson? | MODIS | AM,PM | GSFC | AL | % | 10% :: 5% | 1/mo (day & night) | 0.25 km :: G | N/A :: Cloud |
| 2282 | Cloud Masking-shadowing | AR | Salomonson | MODIS | AM,PM | GSFC | AL | dimensionless | 5% :: | 1/day | .25 km :: G | N/A :: Sfc |
| 2283 | Cloud Masking-shadowing | AR | Salomonson | MODIS | AM,PM | GSFC | AL | dimensionless | 30% :: | 1/day | 1 km :: G | N/A :: Sfc |
| 2284 | Cloud Masking-shadowing | AR | Salomonson | MODIS | AM,PM | GSFC | AL | dimensionless | 15% :: | 1/day | 0.5 km :: G | N/A :: Sfc |
| 2338 | Level-1B Radiance, MODIS<3um | AR | Salomonson | MODIS | AM,PM | GSFC | AL | W/m^2/sr/um | 5%(1$\Sigma$) :: RMS<NEdL | 1/day | 0.5 km :: G | N/A :: N/A |
| 2339 | Level-1B Radiance, MODIS<3um | AR | Salomonson | MODIS | AM,PM | GSFC | AL | W/m^2/sr/um | 5%(1$\Sigma$) :: RMS<NEdL | 1/day | 1 km :: G | N/A :: N/A |
| 2392 | Level-1B Radiance, MODIS<3um | AR | Salomonson | MODIS | AM,PM | GSFC | AL | W/m^2/sr/um | 5%(1$\Sigma$) :: RMS<NEdL | 1/day | 0.25 km :: G | N/A :: N/A |
| 2340 | Level-1B Radiance, MODIS>3um | AR | Salomonson | MODIS | AM,PM | GSFC | AL | W/m^2/sr/um | 1%(1$\Sigma$) :: RMS<NEdL | 1/day | 1 km :: G | N/A :: N/A |
| 3153 | Sea_Ice Max Extent | OH | Salomonson | MODIS | AM,PM | NSIDC | AL | km^2 | <=5% :: <=5% | 1/day, 1/wk, 1/mo | 10 km :: Ocean/Cryo | N/A :: Sfc |
| 3154 | Sea_Ice Max Extent | OH | Salomonson | MODIS | AM,PM | NSIDC | AL | km^2 | <=5% :: <=5% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/Cryo,R | N/A :: Sfc |
| 3020 | Snow Cover | LH | Salomonson | MODIS | AM,PM | NSIDC | AL | km^2 | <=5% :: <=5% | 1/day, 1/wk | 10 km :: Land | N/A :: Sfc |
| 3021 | Snow Cover | LH | Salomonson | MODIS | AM,PM | NSIDC | AL | km^2 | <=5% :: <=5% | 1/day, 1/wk | 1 km :: Land/R | N/A :: Sfc |
| 3656 | Geometric Error, MODIS Level-2 | IC | Salomonson, Barker | MODIS | AM,PM | GSFC | PL | | | | | |
| 3657 | Geometric Error, MODIS Level-3 | IC | Salomonson, Barker | MODIS | AM,PM | GSFC | PL | | | | | |
| 3645 | Instrument Characteristics, MODIS Level-1 | IC | Salomonson, Barker | MODIS | AM,PM | GSFC | AL | | | | | |
| 3648 | Instrument Model, MODIS Level-1 | IC | Salomonson, Barker | MODIS | AM,PM | GSFC | AL | | | | | |
| 3652 | Irradiance, Lunar, MODIS Level-2 | IC | Salomonson, Barker | MODIS | AM,PM | GSFC | PL | | | | | |
| 3651 | Irradiance, Solar, MODIS Level-2 | IC | Salomonson, Barker | MODIS | AM,PM | GSFC | PL | | | | | |
| 3654 | Radiance Error, MODIS Level-2 | IC | Salomonson, Barker | MODIS | AM,PM | GSFC | AL | | | | | |
| 3646 | Radiance, At-Satellite, MODIS Level-1 | IC | Salomonson, Barker | MODIS | AM,PM | GSFC | AL | | | | | |
| 3650 | Radiance, Lunar Reference, MODIS Level-1 | IC | Salomonson, Barker | MODIS | AM,PM | GSFC | PL | | | | | |
| 3649 | Radiance, Solar Diffuser, MODIS Level- | IC | Salomonson, Barker | MODIS | AM,PM | GSFC | PL | | | | | |
| 3655 | Reflectance Error, MODIS Level-2 | IC | Salomonson, Barker | MODIS | AM,PM | GSFC | PL | | | | | |
| 3647 | Reflectance, Exoatmospheric, MODIS Level-2 | IC | Salomonson, Barker | MODIS | AM,PM | GSFC | AL | | | | | |
| 3653 | Reflectance, Lunar, MODIS Level-2 | IC | Salomonson, Barker | MODIS | AM,PM | GSFC | PL | | | | | |
| 3658 | Texture, MODIS Level-2 | IU | Salomonson, Barker | MODIS | AM,PM | GSFC | AL | | | | | |
| 3659 | Texture, MODIS Level-3 | IU | Salomonson, Barker | MODIS | AM,PM | GSFC | PL | | | | | |
| 3660 | Classification Masks, Clouds/Snow/Land/Water, MODIS Level-2 | IU | Salomonson, Barker (with Hall) | MODIS | AM,PM | GSFC | AL | | | | | |

## Appendix E: Output Data Products Listed by Instrument

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3661 | Classification Masks, Clouds/Snow/Land/Water, MODIS Level-3 | IU | Salomonson, Barker (with Hall) | MODIS | AM,PM | GSFC | PL | | | | | |
| 2669 | *Land_Cover Type* | LB | Strahler, Huete et al | MODIS | AM,PM | EDC | AL | categorical fraction | 10% :: 5% | 1/mo, 1/seas | 1 km :: Land | N/A :: Sfc |
| 2670 | *Land_Cover Type* | LB | Strahler, Huete et al | MODIS | AM,PM | EDC | AL | categorical fraction | 10% :: 5% | 1/mo, 1/seas | 5 km :: Land | N/A :: Sfc |
| 2671 | *Land_Cover Type-Change* | LB | Strahler, Huete et al | MODIS | AM,PM | EDC | AL | categorical fraction | 10% :: 7% | 1/seas | 1 km :: Land | N/A :: Sfc |
| 2672 | *Land_Cover Type-Change* | LB | Strahler, Huete et al | MODIS | AM,PM | EDC | AL | categorical fraction | 10% :: 7% | 1/seas | 5 km :: Land | N/A :: Sfc |
| 2268 | PAR, Incident, (IPAR) | AR | Tanre | MODIS | AM,PM | EDC | PL | MJ/m^2 | 200 :: 5 - 20% | 1/day, 1/wk | 1 km :: G,R | N/A :: Atmos |
| 2294 | *Aerosol Optical Depth, Spectral* | AR | Tanre, Kaufman | MODIS | AM,PM | GSFC | AL | dimensionless | 0.05 :: 0.02 | 1/day, 1/mo | 0.5 dg :: Ocean | N/A :: Atmos |
| 1022 | *Aerosol Size-distribution (Radius-Dispersion)* | AC | Tanre, Kaufman | MODIS | AM,PM | GSFC | AL | um, dimensionless | 10-30% :: 10% | 1/day,1/mo | 0.5 dg :: G,R | N/A :: Atmos |
| 2003 | *Albedo, Aerosol* | AR | Tanre, Kaufman | MODIS | AM,PM | GSFC | PL | dimensionless | 0.06 :: 0.03 | 1/day, 1/mo | 0.5 dg :: G,R | N/A :: Atmos |
| 2015 | Albedo, Land_sfc | LR | Tanre, Muller | MODIS | AM,PM | EDC | PL | dimensionless | 15% :: 5 - 8% | 1/day, 1/wk | 1 km :: G,R | N/A :: Sfc |
| 2016 | Albedo, Land_sfc | LR | Tanre, Muller | MODIS | AM,PM | EDC | PL | dimensionless | 15% :: 5 - 8% | 1/day, 1/wk | 10 km :: G,R | N/A :: Sfc |
| 2424 | Land_sfc Reflectance, Bi-directional, (BRDF) | LR | Tanre, Muller | MODIS | AM,PM | EDC | PL | % | 15% :: 5 - 8% | 1/day, 1/wk | 1 km :: G,R | N/A :: Sfc |
| 2425 | Land_sfc Reflectance, Bi-directional, (BRDF) | LR | Tanre, Muller | MODIS | AM,PM | EDC | PL | % | 15% :: 5 - 8% | 1/day, 1/wk | 10 km :: G,R | N/A :: Sfc |
| 1556 | Land_sfc Roughness | AD | Tanre, Muller | MODIS | AM,PM | EDC | PL | dimensionless | 15% :: 5 - 8% | 1/day, 1/wk | 1 km :: G,R | N/A :: Sfc |
| 1557 | Land_sfc Roughness | AD | Tanre, Muller | MODIS | AM,PM | EDC | PL | dimensionless | 15% :: 5 - 8% | 1/day, 1/wk | 10 km :: G,R | N/A :: Sfc |
| 3696 | Land_sfc BRDF, AM-PM Asymmetry | LR | Vanderbilt | MODIS | AM,PM | GSFC | PL | 1/sr | 5% :: 30% | 1 day | 250 m, 1 km :: Land | N/A :: Sfc |
| 3697 | Land_sfc BRDF, AM-PM Degree_of_Asymmetry | LR | Vanderbilt | MODIS | AM,PM | GSFC | PL | % | 30% :: 30% | 1 day | 250 m, 1 km :: Land | N/A :: Sfc |
| 2337 | *Vegetation Index, Polarization* | LB | Vanderbilt | MODIS | AM,PM | EDC | PL | dimensionless | | 1/day | pixel_size :: Land | N/A :: Sfc |
| 3323 | Land_sfc Emissivity | LR | Wan | MODIS | AM,PM | EDC | PL | dimensionless | 0.05 :: 0.02 | 1 day, 1 wk | 1 km :: Land/R | N/A :: Sfc |
| 3324 | Land_sfc Emissivity | LR | Wan | MODIS | AM,PM | EDC | PL | dimensionless | 0.05 :: 0.02 | 1 day, 1 wk | 10 km :: Land | N/A :: Sfc |
| 2484 | *Land_sfc Temperature* | LR | Wan | MODIS | AM,PM | EDC | AL | C | 1 C :: 1 C | 1/day, 1/wk | 1 km :: Land/R | N/A :: Sfc |
| 2485 | Land_sfc Temperature | LR | Wan | MODIS | AM,PM | EDC | AL | C | 1-3 C :: 1 C | 1/day, 1/wk | 10 km :: Land | N/A :: Sfc |
| 1096 | *CH4 Total Burden* | AC | Drummond | MOPITT | AM1 | LaRC | AL | ppbv | :: 1% | 1/(12 s) [?] | 120 km :: G | Column :: Atmos |
| 1126 | *CO Conc* | AC | Drummond | MOPITT | AM1 | LaRC | AL | ppb | :: 10% | 1/(0.4 s) [?] | 22 km :: G | 3-4 km :: 0-15 km |
| 1137 | *CO Total Burden* | AC | Drummond | MOPITT | AM1 | LaRC | AL | ppb | :: 10% | 1/(4 s) [?] | 66 km :: G [dy] | Column :: Atmos |
| 2394 | Level-1B Radiance, MOPITT | AR | Drummond | MOPITT | AM1 | LaRC | AL | W/m^2/sr/um | 2% :: | 1/(0.4 s) [?] | 22 km :: G | Column :: Atmos |
| 1086 | CH4 Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppmv | :: 7% (15-55km) | 1/(18-72 s) [?] | 25 x 1-5 dg :: 86S-86N | 1.5 km :: 10-65 km |
| 1852 | H2O (H2^17O) Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 10% (20-40 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-50 km |
| 1853 | H2O (H2^18O) Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppmv | :: 10% (20-50 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-60 km |
| 1857 | H2O (HDO) Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppmv | :: 7% (20-50 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 10-60 km |
| 1839 | H2O Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppmv | :: 5% (20-80 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 10-100 km |
| 1172 | H2O2 Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 7% (30-35 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-50 km |
| 1180 | HBr Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 10% (25-35 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 15-40 km |
| 1187 | HCl Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 5% (25-55 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 10-65 km |
| 1192 | HCN Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 35% (25-30 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 25-35 km |
| 1197 | HF Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 15% (40-60 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 40-60 km |
| 1204 | HNO3 Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 7% (15-40 km) | 1/(18-72 s) [?] | 25 x 1-5 dg :: 86S-86N | 1.5 km :: 10-45 km |
| 1217 | HO2 Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 7% (30-60 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-75 km |

## Appendix E: Output Data Products Listed by Instrument

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1223 | HOCl Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 7% (35-40 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-45 km |
| 2396 | Level-1B Radiance, SAFIRE | AR | Russell | SAFIRE | MO | GSFC | AL | | | | | |
| 1241 | N2O Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppmv | :: 15% (20-35 km) | 1/(18-72 s) [?] | 25 x 1-5 dg :: 86S-86N | 1.5 km :: 20-40 km |
| 1255 | N2O5 Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 10% (20-40 km) | 1/(18-72 s) [?] | 25 x 1-5 dg :: 86S-86N | 1.5-3 km :: 10-45 km |
| 1275 | NO2 Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 5% (20-55 km) | 1/(18-72 s) [?] | 25 x 1-5 dg :: 86S-86N | 1.5 km :: 15-60 km |
| 1298 | O(3P) Conc | AC | Russell | SAFIRE | MO | GSFC | AL | % | :: 15%(110-180 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 90-180 km |
| 1300 | O2 Conc | AC | Russell | SAFIRE | MO | GSFC | AL | % | :: <2%(10-65 km) | 1/(36-72 s) [?] | 25 x 1-5 dg :: 86S-86N | 3 km :: 10-80 km |
| 1320 | O3 Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppmv | :: 5% (10-70 km) | 1/(18-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 1.5-3 km :: 10-100 km |
| 1341 | O3(17^OOO) Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 15% (20-35 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-40 km |
| 1329 | O3(NU2) Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 10% (20-40 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-50 km |
| 1340 | O3(O17^OO) Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 40% (20-30 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-35 km |
| 1344 | O3(O^18_OO) Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 15% (20-30 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-35 km |
| 1345 | O3(^18OOO) Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 15% (20-35 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-40 km |
| 1327 | O3O3(NU1,3) Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 15% (20-30 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-35 km |
| 1360 | OH Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 7% (30-75 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-90 km |
| 1526 | Pressure | AD | Russell | SAFIRE | MO | GSFC | AL | mb | :: <2% (16-70 km) | 1/(18-72 s) [?] | 25 x 1-5 dg :: 86S-86N | 1.5 km :: 10-110 km |
| 1610 | Temperature Profile | AD | Russell | SAFIRE | MO | GSFC | AL | K | :: <0.5K(16-65 km) | 1/(18-72 s) [?] | 25 x 1-5 dg :: 86S-86N | 1.5 km :: 10-110 km |
| 1012 | *Aerosol Extinction Coef* | AC | McCormick | SAGE-III | AERO,CHEM | LaRC | AL | /km | 5% :: 5% | 1/(2 min), 30/day | <2 x <1 dg :: G | 1 km :: 0-40 km |
| 1437 | Cloud Height, Top, PSC | AH | McCormick | SAGE-III | AERO,CHEM | LaRC | AL | km | 0.2 km :: 5% | 1/(2 min), 30/day | <2 x <1 dg :: G | 1 km :: Strat/Trop |
| 1840 | *H2O Conc* | AC | McCormick | SAGE-III | AERO,CHEM | LaRC | AL | /cm^3&ppmv | 10% :: 10% | 1/(2 min), 30/day | <2 x <1 dg :: Polar | 1 km :: 3-50 km |
| 1841 | *H2O Conc* | AC | McCormick | SAGE-III | AERO,CHEM | LaRC | AL | /cm^3&ppmv | 10% :: 15% | 1/(2 min), 30/day | <2 x <1 dg :: G | 1 km :: 3-50 km |
| 2543 | Level-1B Transmission, SAGE-III | AR | McCormick | SAGE-III | AERO,CHEM | LaRC | AL | dimensionless | 0.05% :: 0.05% | 1/(2 min), 30/day | 200 x 2.5 km :: G | 1-2 km :: 0-90 km |
| 1276 | *NO2 Conc* | AC | McCormick | SAGE-III | AERO,CHEM | LaRC | AL | /cm^3&ppbv | 10% :: 10% | 1/(2 min), 30/day | <2 x <1 dg :: Polar | 1 km :: 10-50 km |
| 1277 | *NO2 Conc* | AC | McCormick | SAGE-III | AERO,CHEM | LaRC | AL | /cm^3&ppbv | 10% :: 15% | 1/(2 min), 30/day | <2 x <1 dg :: G | 1 km :: 20-50 km |
| 1282 | NO3 Conc | AC | McCormick | SAGE-III | AERO,CHEM | LaRC | AL | /cm^3&ppbv | 10% :: 10% | 1/(2 min), 30/day | <2 x <1 dg :: G | 1 km :: 20-55 km |
| 1321 | *O3 Conc* | AC | McCormick | SAGE-III | AERO,CHEM | LaRC | AL | /cm^3&ppmv | 6% :: 5 % | 1/(2 min), 30/day | <2 x <1 dg :: Polar | 1 km :: 6-85 km |
| 1353 | *OClO Conc* | AC | McCormick | SAGE-III | AERO,CHEM | LaRC | AL | /cm^3&ppbv | 20% :: 20% | 1/(2 min), 30/day | <2 x <1 dg :: G | 2 km :: 15-25 km |
| 1301 | *Pressure* | AC | McCormick | SAGE-III | AERO,CHEM | LaRC | AL | /cm^3 | 2% :: 2% | 1/(2 min), 30/day (Lun.) | <2 x <1 dg :: G | 1 km :: 6-55 km |
| 1302 | *Pressure* | AC | McCormick | SAGE-III | AERO,CHEM | LaRC | AL | /cm^3 | 2% :: 2% | 1/(2 min), 30/day (Sol.) | <2 x <1 dg :: G | 1 km :: 6-70 km |
| 1611 | *Temperature Profile* | AD | McCormick | SAGE-III | AERO,CHEM | LaRC | AL | K | 2 K :: 2K | 1/(2 min), 30/day | <2 x <1 dg :: G | 1 km :: 6-55 km |
| 1612 | *Temperature Profile* | AD | McCormick | SAGE-III | AERO,CHEM | LaRC | AL | K | 2 K :: 2 K | 1/(2 min), 30/day | <2 x <1 dg :: Polar | 1 km :: 6-70 km |
| 2277 | *Irradiance, UV Solar [0.0015 nm res.]* | AR | Rottman | SOLSTICE | MO | GSFC | AL | photons/cm^2/s/nm | <5% :: <1% | 1/hr | N/A :: N/A | N/A :: NA |
| 2278 | *Irradiance, UV Solar [0.1 nm res.]* | AR | Rottman | SOLSTICE | MO | GSFC | AL | photons/cm^2/s/nm | <5% :: <1% | 1/hr | N/A :: N/A | N/A :: NA |
| 2398 | Level-1B Irradiance, SOLSTICE | AR | Rottman | SOLSTICE | MO | GSFC | AL | W/m^2 | | 1/hr | 2 dg :: G | 1 km :: Mid_atm |
| 3640 | *Spectra, UV Stellar Comparison [0.1 nm res.?]* | AR | Rottman | SOLSTICE | MO | GSFC | AL | photons/cm^2/s/nm | <5% :: <1% | | N/A :: N/A | N/A :: NA |
| 2108 | Level-1B Backscatter Coef | AR | Freilich | STIKSCAT | CHEM | JPL | AL | dB | :: 0.25 dB | | 25 km :: G | N/A :: Sfc |
| 1746 | Wind Stress | AD | Freilich | STIKSCAT | CHEM | JPL | AL | | | | :: Ocean | :: Sfc |
| 1680 | *Wind Velocity, Sea_sfc* | AD | Freilich | STIKSCAT | CHEM | JPL | AL | m/s,dg | :: 10%; 16 deg | 1/(2 day) | 25 km :: Ocean | N/A :: Near_Sfc |
| 1679 | Wind Velocity, Sea_sfc | AD | Freilich | STIKSCAT | CHEM | JPL | AL | m/s,dg | :: 7%, 16 deg | 1/(2 day) | 1 dg :: Ocean | N/A :: Near_Sfc |
| 1087 | *CH4 Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppb | :: 14 ppb | 1/(16 day) | 16 x 5 km :: G | 4-6 km :: 0-12 km |
| 1088 | *CH4 Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppb | :: 30 ppb | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 13-30 km |
| 1089 | *CH4 Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppb | :: 40 ppb | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 4-12 km |
| 1127 | *CO Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppb | :: 10 ppb | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 13-30 km |
| 1128 | *CO Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppb | :: 15 ppb | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 4-12 km |

## Appendix E: Output Data Products Listed by Instrument

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1129 | *CO Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppb | :: 3 ppb | 1/(16 day) | 16 x 5 km :: G | 4-6 km :: 0-12 km |
| 3637 | *CO2 Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppb | | 1/(16 day) | 16 x 5 km :: L | |
| 1844 | *H2O Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppm | :: 50 ppm | 1/(16 day) | 16 x 5 km :: G | 4-6 km :: 0-12 km |
| 1843 | *H2O Conc, Stratospheric* | AC | Beer | TES | CHEM | LaRC | AL | ppm | :: 0.5 ppm | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 13-30 km |
| 1842 | *H2O Conc, Tropospheric* | AC | Beer | TES | CHEM | LaRC | AL | ppm | :: 50 ppm | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 4-12 km |
| 3638 | *HCl Conc* | AC | Beer | TES | CHEM | LaRC | AL | | | 1/(16 day) | 16 x 5 km :: L | |
| 3639 | *HFl Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppb | | 1/(16 day) | 16 x 5 km :: L | |
| 1205 | HNO3 Conc | AC | Beer | TES | CHEM | LaRC | AL | ppt | :: 3 ppt | 1/(16 day) | 160 x 23 km :: G | 2.3 km :: 4-12 km |
| 1206 | HNO3 Conc | AC | Beer | TES | CHEM | LaRC | AL | ppt | :: 3 ppt | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 13-30 km |
| 2455 | Land_sfc Brightness Temperature (Radiance) | LR | Beer | TES | CHEM | LaRC | AL | K | :: 1 K | 1/(16 day) | 16 x 5 km :: G | N/A :: Sfc |
| 2402 | Level-1B Radiance, TES | AR | Beer | TES | CHEM | LaRC | AL | | | | | |
| 1243 | N2O Conc | AC | Beer | TES | CHEM | LaRC | AL | ppt | :: 10 ppt | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 13-30 km |
| 1256 | *NH3 Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppt | :: 300 ppt | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 4-12 km |
| 1267 | *NO Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppt | :: 15 ppt | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 4-12 km |
| 1268 | *NO Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppt | :: 25 ppt | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 13-30 km |
| 1278 | *NO2 Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppt | :: 500 ppt | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 4-12 km |
| 1323 | *O3 Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppb | :: 20 ppb | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 13-30 km |
| 1324 | *O3 Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppb | :: 3 ppb | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 4-12 km |
| 1325 | *O3 Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppb | :: 13 ppb | 1/(16 day) | 16 x 5 km :: G | 4-6 km :: 0-12 km |
| 1370 | *SO2 Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppt | :: 600 ppt | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 4-12 km |
| 1614 | Temperature Profile | AD | Beer | TES | CHEM | LaRC | AL | K | :: 2 K | 1/(16 day) | 16 x 5 km :: G | 1 km, 4-6 km :: 0-12 km |
| 1615 | Temperature Profile | AD | Beer | TES | CHEM | LaRC | AL | K | :: 2 K | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 13-30 km |
| 1616 | Temperature Profile | AD | Beer | TES | CHEM | LaRC | AL | K | :: 2 K | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 4-12 km |

# Output Data Products
# Listed by
# Product Name

Appendix F

**Science Processing Support Office (SPSO)**

**Goddard Space Flight Center**

**August 1992**

## Appendix F: Output Data Products Listed by Product Name

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2295 | *Aerosol Angstrom Exponent* | AR | Gordon | MODIS | AM,PM | GSFC | AL | dimensionless | 15% :: 5% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/R,L | N/A :: Atmos |
| 2296 | *Aerosol Angstrom Exponent* | AR | Gordon | MODIS | AM,PM | GSFC | AL | dimensionless | 15% :: 5% | 1/day, 1/wk, 1/mo | 20 km :: Ocean | N/A :: Atmos |
| 1992 | *Aerosol Extinction Coef* | AR | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | /km | 5-10% :: 1-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 7-30 km |
| 1012 | *Aerosol Extinction Coef* | AC | McCormick | SAGE-III | AERO,CHEM | LaRC | AL | /km | 5% :: 5% | 1/(2 min), 30/day | <2 x <1 dg :: G | 1 km :: 0-40 km |
| 1014 | *Aerosol Layer Boundary Height* | AC | Spinhirne et al | GLRS-A | ALT | GSFC | AL | m | 150 m :: | 1/(2-16 day) | 2-200 km :: G | 75 m :: Atmos |
| 1017 | *Aerosol Mass Loading* | AC | Kaufman, Tanre | MODIS | AM,PM | GSFC | AL | g/m^2 | 30% :: 10% | 1/day,1/mo | 0.5 dg :: G,R | N/A :: Atmos |
| 2297 | *Aerosol Optical Depth* | AR | Travis | EOSP | AERO,AM2 | LaRC | AL | dimensionless | 0.2 :: 10% | 1/day [d] | 40 km :: G | Column :: Atmos |
| 2291 | *Aerosol Optical Depth* | AR | Spinhirne et al | GLRS-A | ALT | GSFC | AL | dimensionless | 20% :: | 1/(2-16 day) | 2-200 km :: G | N/A :: Atmos |
| 2292 | Aerosol Optical Depth | AR | Gerstl | HIRIS | AM2 | EDC | AL | dimensionless | 0.05 :: 0.01 | 1/(2-16 day) | 100 m :: L | Column :: Atmos |
| 2299 | *Aerosol Optical Depth* | AR | Diner | MISR | AM | LaRC | AL | dimensionless | 0.05/10% :: 0.05/10% | 1/(5-16 day) [d] | 15.4 km :: G | Column :: Atmos |
| 3676 | *Aerosol Optical Depth* | AR | Diner | MISR | AM | LaRC | AL | dimensionless | 0.05/10% :: 0.05/10% | 9,16 day; mo; seas; yr | 15.4 km ? :: G | Column :: Atmos |
| 2298 | Aerosol Optical Depth | AR | Diner | MISR | AM | LaRC | PL | dimensionless | 0.05/10% :: 0.05/10% | 1/(5-16 day) [d] | 1.92 km :: R | Column :: Atmos |
| 2293 | *Aerosol Optical Depth, Spectral* | AR | Kaufman, Tanre | MODIS | AM,PM | GSFC | AL | dimensionless | 0.1 :: 0.05 | 1/day, 1/mo | 0.5 dg :: Land | N/A :: Atmos |
| 2294 | *Aerosol Optical Depth, Spectral* | AR | Tanre, Kaufman | MODIS | AM,PM | GSFC | AL | dimensionless | 0.05 :: 0.02 | 1/day, 1/mo | 0.5 dg :: Ocean | N/A :: Atmos |
| 2334 | Aerosol Phase Function, Asymmetric | AR | Diner | MISR | AM | LaRC | AL | dimensionless | 0.05 :: 0.05 | 1/(5-16 day) [d] | 15.4 km :: G | Column :: Atmos |
| 2335 | Aerosol Phase Function, Asymmetric | AR | Diner | MISR | AM | LaRC | PL | dimensionless | 0.05 :: 0.05 | 1/(5-16 day) [d] | 1.9 km :: R | Column :: Atmos |
| 3677 | Aerosol Phase Function, Asymmetric | AR | Diner | MISR | AM | LaRC | AL | dimensionless | 0.05 :: 0.05 | 9,16 day; mo; seas; yr | 15.4 km ? :: G | Column :: Atmos |
| 2344 | *Aerosol Radiance* | AR | Gordon | MODIS | AM,PM | GSFC | AL | mW/cm^2/sr/u | 10% :: 5% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/G,R,L | N/A :: Atmos |
| 2345 | *Aerosol Radiance* | AR | Gordon | MODIS | AM,PM | GSFC | AL | mW/cm^2/sr/u | 10% :: 5% | 1/day, 1/wk, 1/mo | 20 km :: Ocean/G,R,L | N/A :: Atmos |
| 1993 | Aerosol Size-distribution | AC | Diner | MISR | AM | LaRC | AL | dimensionless | 15% :: 10% | 1/(5-16 day) [d] | 15.4 km :: G | Column :: Atmos |
| 1994 | Aerosol Size-distribution | AC | Diner | MISR | AM | LaRC | PL | dimensionless | 15% :: 10% | 1/(5-16 day) | 1.9 km :: R | Column :: Atmos |
| 3678 | Aerosol Size-distribution | AC | Diner | MISR | AM | LaRC | AL | dimensionless | 15% :: 10% | 9,16 day; mo; seas; yr | 15.4 km ? :: G | Column :: Atmos |
| 1022 | *Aerosol Size-distribution (Radius-Dispersion)* | AC | Tanre, Kaufman | MODIS | AM,PM | GSFC | AL | um, dimensionless | 10-30% :: 10% | 1/day,1/mo | 0.5 dg :: G,R | N/A :: Atmos |
| 2003 | *Albedo, Aerosol* | AR | Tanre, Kaufman | MODIS | AM,PM | GSFC | PL | dimensionless | 0.06 :: 0.03 | 1/day, 1/mo | 0.5 dg :: G,R | N/A :: Atmos |
| 2008 | Albedo, Cloud | AR | Welch | HIRIS | AM2 | EDC | AL | % | 5% :: 5% | | 90 m :: R | :: Cloud |
| 2000 | Albedo, Land_sfc | LR | Gautier ?? | AIRS | PM | GSFC | PL | dimensionless | | 1/day | 50 km :: Land | N/A :: Sfc |
| 2015 | Albedo, Land_sfc | LR | Tanre, Muller | MODIS | AM,PM | EDC | PL | dimensionless | 15% :: 5 - 8% | 1/day, 1/wk | 1 km :: G,R | N/A :: Sfc |
| 2016 | Albedo, Land_sfc | LR | Tanre, Muller | MODIS | AM,PM | EDC | PL | dimensionless | 15% :: 5 - 8% | 1/day, 1/wk | 10 km :: G,R | N/A :: Sfc |
| 2011 | *Albedo, Planetary Spectral, TOA* | AR | Diner | MISR | AM | LaRC | AL | dimensionless | <=0.03 :: 0.01 | 1/(5-16 day) [d] | 1.92 km :: G | N/A :: TOA |
| 3679 | *Albedo, Planetary Spectral, TOA* | AR | Diner | MISR | AM | LaRC | AL | dimensionless | <=0.03 :: 0.01 | 9,16 day; mo; seas; yr | 1.92 km ? :: G | N/A :: TOA |
| 2010 | Albedo, Planetary Spectral, TOA | AR | Diner | MISR | AM | LaRC | PL | dimensionless | <=0.03 :: 0.01 | 1/(5-16 day) [d] | 240 m :: R | N/A :: TOA |
| 2022 | *Albedo, Spectral, Land_sfc* | LR | Diner | MISR | AM | LaRC | AL | dimensionless | <=0.03 :: 0.01 | 1/(5-16 day) [d] | 1.92 km :: G | N/A :: Sfc |
| 3680 | *Albedo, Spectral, Land_sfc* | LR | Diner | MISR | AM | LaRC | AL | dimensionless | <=0.03 :: 0.01 | 9,16 day; mo; seas; yr | 1.92 km ? :: G | N/A :: Sfc |
| 2021 | Albedo, Spectral, Land_sfc | LR | Diner | MISR | AM | LaRC | PL | dimensionless | <=0.03 :: 0.01 | 1/(5-16 day) [d] | 240 m :: R | N/A :: Sfc |
| 3665 | Albedo, Spectral, Land_sfc | LR | Muller, Strahler, Tanre | MODIS | AM,PM | EDC | PL | fraction | 5% :: 3% | 1/day | 1 km :: Land/R | N/A :: Sfc |
| 2001 | Albedo, Spectral, TOA | AR | Muller, Strahler | MODIS | AM,PM | GSFC | AL | fraction | 10% :: 5% | 1/(3-8 day) | 1 km :: Land/R | N/A :: TOA |
| 3666 | Albedo, Total [SW], Land_sfc | LR | Muller, Strahler, Tanre | MODIS | AM,PM | EDC | PL | fraction | 5% :: 3% | 1/day | 1 km :: Land/R | N/A :: Sfc |
| 3667 | Albedo, Total [SW], TOA | LR | Muller, Strahler, Tanre | MODIS | AM,PM | GSFC | PL | fraction | 5% :: 3% | 1/day | 1 km :: Land/R | N/A :: TOA |
| 2027 | *Anisotropy, LW_broadband* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | fraction | 2% :: 0.5% | | 10 dg [Angle] :: G | N/A :: Sfc,Atmos |
| 2452 | *Brightness Temperature (at Sensor)* | LR | Kahle | ASTER | AM1 | EDC | AL | K | .5NEdT :: .2NEdT | 1/(2-16 day) | 90 m :: G | N/A :: at sensor |
| 1030 | BrO(Br^81-O) Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | :: 1x10-12 | 1/mo. [z. mean] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: 15-50 km |
| 3303 | Calibration Data, MODIS | IC | Evans | MODIS | AM,PM | GSFC | AL | variable | | 1/day, 1/wk, 1/mo | N/A :: Ocean/G,R,L | N/A :: Sfc |
| 1055 | *CFC-11(CFCl3) Conc* | AC | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | mix ratio | 5-10% :: 1-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 7-30 km |

## Appendix F: Output Data Products Listed by Product Name

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1047 | *CFC-12(CF2Cl2) Conc* | AC | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | mix ratio | 5-10% :: 1-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 7-30 km |
| 1070 | CH3Cl Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | :: 1x10-11 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: TPSE, 40 km |
| 1085 | *CH4 Conc* | AC | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | mix ratio | 5-10% :: 1-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 7-65 km |
| 1086 | CH4 Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppmv | :: 7% (15-55km) | 1/(18-72 s) [?] | 25 x 1-5 dg :: 86S-86N | 1.5 km :: 10-65 km |
| 1087 | *CH4 Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppb | :: 14 ppb | 1/(16 day) | 16 x 5 km :: G | 4-6 km :: 0-12 km |
| 1088 | *CH4 Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppb | :: 30 ppb | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 13-30 km |
| 1089 | *CH4 Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppb | :: 40 ppb | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 4-12 km |
| 1095 | *CH4 Total Burden* | AC | Chedin, Revercomb, Strow | AIRS | PM | GSFC | PL | ppb, dimensionless | 50 - 175 ppb, 2% :: 30 - 150 ppb, TBD | 1/day [n] - 2/day [d,n] | 50 - 250 km :: G | Column :: Atmos |
| 1096 | *CH4 Total Burden* | AC | Drummond | MOPITT | AM1 | LaRC | AL | ppbv | :: 1% | 1/(12 s) [?] | 120 km :: G | Column :: Atmos |
| 3211 | *Chlorophyll Fluorescence Efficiency* | OR | Abbott | MODIS | AM,PM | GSFC | PL | mW/cm^2/sr/u m/mg-Chl/m^3 | 15% :: 5% | 1/day, 1/wk | 1 km :: Ocean/R,L | N/A :: TOO |
| 3212 | *Chlorophyll Fluorescence Efficiency* | OR | Abbott | MODIS | AM,PM | GSFC | PL | mW/cm^2/sr/u m/mg-Chl/m^3 | 15% :: 5% | 1/day, 1/wk | 4 km :: Ocean/G,R | N/A :: TOO |
| 2574 | *Chlorophyll Fluorescence Line Curv* | OB | Hoge | MODIS | AM,PM | GSFC | AL | mW/cm^2/sr/u | 25% :: 8% | 1/day, 1/wk | 20 km :: Ocean | N/A :: TOO |
| 2573 | Chlorophyll Fluorescence Line Curv | OB | Hoge | MODIS | AM,PM | GSFC | AL | mW/cm^2/sr/u | 25% :: 8% | 1/day, 1/wk | 1 km :: Ocean/R | N/A :: TOO |
| 2575 | *Chlorophyll Fluorescence Line Height* | OB | Abbott | MODIS | AM,PM | GSFC | AL | mW/cm^2/sr/u | .004 :: .001 | 1/day, 1/wk | 4 km :: Ocean/G,R | N/A :: TOO |
| 2576 | Chlorophyll Fluorescence Line Height | OB | Abbott | MODIS | AM,PM | GSFC | AL | mW/cm^2/sr/u | .004 :: .001 | 1/day, 1/wk | 1 km :: Ocean/R,L | N/A :: TOO |
| 2569 | Chlorophyll_a Conc | OB | Carder | MODIS | AM,PM | GSFC | AL | mg/m^3 | 50% :: 10% | 1/day, 1/wk, 1/mo | 1 km :: Ocean-II/ L | N/A :: TOO |
| 2570 | Chlorophyll_a Conc | OB | Carder | MODIS | AM,PM | GSFC | AL | mg/m^3 | 50% :: 10% | 1/day, 1/wk, 1/mo | 1 km :: Ocean-II/G,R | N/A :: TOO |
| 2571 | *Chlorophyll_a Conc* | OB | Clark | MODIS | AM,PM | GSFC | AL | mg/m^3 | 30% :: 10% | 1/day, 1/wk, 1/mo | 1 km :: Ocean-I/ L | N/A :: TOO |
| 2572 | *Chlorophyll_a Conc* | OB | Clark | MODIS | AM,PM | GSFC | AL | mg/m^3 | 30% :: 10% | 1/day, 1/wk, 1/mo | 20 km :: Ocean-I/G,R | N/A :: TOO |
| 2566 | Chlorophyll_a Conc (via Fluorescence) | OB | Abbott | MODIS | AM,PM | GSFC | PL | mg/m^3 | 50-100% :: 35% | 1/day, 1/wk | 1 km :: Ocean/R,L | N/A :: TOO |
| 2567 | Chlorophyll_a Conc (via Fluorescence) | OB | Abbott | MODIS | AM,PM | GSFC | PL | mg/m^3 | 50-100% :: 35% | 1/day, 1/wk | 4 km :: Ocean/G,R | N/A :: TOO |
| 2565 | Chlorophyll_a Conc, Case-II Waters | OB | Carder, Melack | HIRIS | AM2 | EDC | AL | mg/m^3 | 100% :: 50% | 1/(2 day) [d] | 60-90 m :: Ocean-II/L | N/A :: TOO |
| 2564 | Chlorophyll_a Conc, Phytoplankton, Case-I Waters | OB | Carder, Davis | HIRIS | AM2 | EDC | AL | mg/m^3 | 50% :: 25% | 1/(2 day) [d] | 30-90 m :: Ocean-I/L | N/A :: TOO |
| 3660 | Classification Masks, Clouds/Snow/Land/Water, MODIS Level-2 | IU | Salomonson, Barker (with Hall) | MODIS | AM,PM | GSFC | AL | | | | | |
| 3661 | Classification Masks, Clouds/Snow/Land/Water, MODIS Level-3 | IU | Salomonson, Barker (with Hall) | MODIS | AM,PM | GSFC | PL | | | | | |
| 1107 | ClO Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | <=5% :: 0.3-3x10-10 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: TPSE, 70 km |
| 2062 | *Cloud Cover* | AH | Chahine, Chedin, Smith | AIRS | PM | GSFC | AL | dimensionless | 0.05 :: 0.025 | 2/day [d,n] | 15 x 15 - 50 x 50 km :: G | N/A :: Cloud |
| 2080 | Cloud Cover | AH | Welch | ASTER | AM1 | EDC | AL | fractional area | 3% :: 3% | 1/(16 day) | 90 m :: L | N/A :: Cloud |
| 2086 | Cloud Cover | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | dimensionless | 5% :: 2% | 6/day [d,n] | 25 km :: G | N/A :: Atmos |
| 2087 | Cloud Cover | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | dimensionless | 5% :: 2% | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: Atmos |
| 2088 | Cloud Cover | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | dimensionless | 5% :: 2% | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: Atmos |
| 2078 | Cloud Cover | AH | Spinhirne | GLRS-A | ALT | GSFC | AL | % | 1% :: | 1/(2-16 day) | 10-200 km :: G | N/A :: |
| 2079 | Cloud Cover | AH | Welch | HIRIS | AM2 | EDC | AL | dimensionless | 1% :: 0.5% | 1/(1-3 min), 1/(2-16 day) | 30 m :: L | :: Cloud |
| 2081 | Cloud Cover | AH | King | MODIS | AM,PM | GSFC | AL | % | 10% :: 5% | 2/day [d,n], 1/mo | 5 km :: G | N/A :: Cloud |
| 2082 | Cloud Cover | AH | King | MODIS | AM,PM | GSFC | AL | % | 10% :: 5% | 1/day, 1/mo | 1 dg :: G | N/A :: Cloud |
| 3641 | *Cloud Cover* | AH | Salomonson? | MODIS | AM,PM | GSFC | AL | % | 10% :: 5% | 1/mo (day & night) | 0.25 km :: G | N/A :: Cloud |
| 1763 | Cloud Drop Phase | AH | Welch | ASTER | AM1 | EDC | AL | dimensionless | water/ice :: | 1/(16 day) | 15-30 m :: L | N/A :: Cloud |
| 1767 | Cloud Drop Phase | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | water/ice | 90% Conf :: 90% Conf | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: Atmos |
| 1768 | Cloud Drop Phase | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | water/ice | 90% Conf :: 90% Conf | 6/day [d,n] | 25 km :: G | N/A :: Atmos |

## Appendix F: Output Data Products Listed by Product Name

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1769 | Cloud Drop Phase | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | water/ice | 90% Conf :: 90% Conf | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: Atmos |
| 1770 | *Cloud Drop Phase* | AH | Travis | EOSP | AERO,AM2 | LaRC | AL | water/ice | :: 95% Corr | 1/day [d] | 100 km :: G | N/A :: Cloud |
| 1762 | Cloud Drop Phase | AH | Welch | HIRIS | AM2 | EDC | AL | water/ice | | 1/(2-16 day) | 30 m :: L | N/A :: Cloud |
| 1764 | Cloud Drop Phase | AH | King, Menzel | MODIS | AM,PM | GSFC | AL | water/ice | 90% Conf :: 90% Conf | 1/day | 5 km :: G | N/A :: Cloud |
| 1765 | Cloud Drop Phase | AH | King, Menzel | MODIS | AM,PM | GSFC | AL | water/ice | 90% Conf :: 90% Conf | 1/day, 1/mo | 1 dg :: G | N/A :: Cloud |
| 1774 | *Cloud Drop Size* | AH | Travis | EOSP | AERO,AM2 | LaRC | AL | um | 25% :: 25% | 1/day [d] | 100 km :: G | N/A :: Cloud |
| 1779 | Cloud Drop Size(Effective Radius) | AH | Welch | ASTER | AM1 | EDC | AL | um | 10 um :: | 1/(16 day) | 15-90 m :: L | :: Cloud |
| 1782 | Cloud Drop Size(Effective Radius) | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | um | 30% :: 10% | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: Atmos |
| 1783 | Cloud Drop Size(Effective Radius) | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | um | 30% :: 10% | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: Atmos |
| 1784 | Cloud Drop Size(Effective Radius) | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | um | 30% :: 10% | 6/day [d,n] | 25 km :: G | N/A :: Atmos |
| 1778 | Cloud Drop Size(Effective Radius) | AH | Welch | HIRIS | AM2 | EDC | AL | um | 10 um :: | 1/(2-16 day) | 30 m :: L | :: Cloud |
| 1780 | Cloud Drop Size(Effective Radius) | AH | King, Menzel | MODIS | AM,PM | GSFC | AL | um | 0-40% :: 5% | 1/day | 5 km :: G | N/A :: Cloud |
| 1781 | Cloud Drop Size(Effective Radius) | AH | King, Menzel | MODIS | AM,PM | GSFC | AL | um | 0-40% :: 5% | 1/day, 1/mo | 1 dg :: G | N/A :: Cloud |
| 1776 | Cloud Drop Size-distribution | AH | Welch | HIRIS | AM2 | EDC | AL | no/cm^2/um | 20% :: 10% | 1/(2-16 day) | 30 m :: L | :: Cloud |
| 3627 | Cloud Drop Size_distribution | AR | Welch | ASTER | AM1 | EDC | AL | | | 1/(16 day) | 90 m :: L | N/A :: Cloud |
| 2115 | Cloud Emissivity | AR | Welch | ASTER | AM1 | EDC | AL | dimensionless | 5% :: | 1/(16 day) | 90 m :: L | N/A :: Cloud |
| 2114 | Cloud Emissivity | AR | Spinhirne | GLRS-A | ALT | GSFC | AL | | 10% :: | 1/(2-16 day) | 1-100 km :: G | 150 m :: |
| 2126 | *Cloud Emissivity* | AR | Menzel | MODIS | AM,PM | GSFC | AL | dimensionless | 0.10 :: 0.05 | 2/day | 5 km :: G | N/A :: Cloud |
| 2127 | *Cloud Emissivity* | AR | Menzel | MODIS | AM,PM | GSFC | AL | dimensionless | 0.10 :: 0.05 | 1/day, 1/mo | 1 dg :: G | N/A :: Cloud |
| 2116 | Cloud Emissivity | AR | Menzel | MODIS | AM,PM | GSFC | PL | dimensionless | | | | N/A :: Cloud |
| 2128 | Cloud Emissivity, IR Spectral (3-14um) | AR | Chahine, Smith | AIRS | PM | GSFC | PL | dimensionless | 0.05 :: 0.025 | 2/day [d,n] | 15 x 15 - 15 x 45 km :: G | N/A :: Cloud |
| 2068 | Cloud Field Area | AH | Kaufman | MODIS | AM,PM | GSFC | PL | km^2 | | 1/mo | 1 dg :: G | N/A :: Sfc |
| 1509 | Cloud Field Organization scale | AH | Welch | HIRIS | AM2 | EDC | AL | | | | :: L | |
| 2092 | Cloud Field Perimeter | AH | Kaufman | MODIS | AM,PM | GSFC | PL | km | | 1/mo | 1 dg :: G | N/A :: Sfc |
| 3628 | Cloud Field Scales_of_Organization | AR | Welch | ASTER | AM1 | EDC | AL | | | 1/(16 day) | 90 m :: L | N/A :: Cloud |
| 2093 | Cloud Field Size-distribution | AH | Welch | ASTER | AM1 | EDC | AL | dimensionless | | 1/(16 day) | 90 m :: L | N/A :: Cloud |
| 1503 | Cloud Field Structure | AD | Welch | HIRIS | AM2 | EDC | AL | | | | :: L | |
| 1400 | *Cloud Height* | AH | Spinhirne | GLRS-A | ALT | GSFC | AL | m | 75 m :: | 1/(2-16 day) | .2-10 km :: G | 75 m :: |
| 1391 | Cloud Height, Base | AH | Welch | ASTER | AM1 | EDC | AL | m | 100 m :: 100 m | 1/(16 day) | 100 m :: L | N/A :: Cloud |
| 1393 | Cloud Height, Base | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | km | 1.0 km :: 0.1 km | 6/day [d,n] | 25 km :: G | 0.1 km :: Atmos |
| 1394 | Cloud Height, Base | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | km | 1.0 km :: 0.1 km | 1/(6 hr) | 1.25 x 1.25 dg :: G | 0.1 km :: Atmos |
| 1395 | Cloud Height, Base | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | km | 1.0 km :: 0.1 km | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | 0.1 km :: Atmos |
| 1389 | *Cloud Height, Base* | AH | Spinhirne et al | GLRS-A | ALT | GSFC | AL | m | 75 m :: | 1/(2-16 day) | .2-100 km :: G | 75 m :: Cloud |
| 1390 | Cloud Height, Base | AH | Welch | HIRIS | AM2 | EDC | AL | m | 50 m :: 50 m | 1/(2-16 day) | 30 m :: L | N/A :: Cloud |
| 1405 | *Cloud Height, PSC* | AH | Spinhirne et al | GLRS-A | ALT | GSFC | AL | m | 150 m :: | 1/(2-16 day) | 2-200 km :: Polar | 75 m :: Strat |
| 1408 | *Cloud Height, PSC* | AH | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | km | 0.4 km :: 0.4 km | 2/day [d,n] | 4 x 4 dg :: G | 0.4 km :: Strat |
| 1423 | *Cloud Height, Top* | AH | Chahine, Chedin, Smith | AIRS | PM | GSFC | PL | km | 0.5 km :: 0.25 km | 2/day [d,n] | 15 x 15 - 50 x 50 km :: G | N/A :: Cloud |
| 1427 | Cloud Height, Top | AH | Welch | ASTER | AM1 | EDC | AL | m | 300 m :: 300 m | 1/(16 day) | 90 m :: L | N/A :: Cloud |
| 1429 | Cloud Height, Top | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | km | 1.0 km :: 0.1 km | 6/day [d,n] | 25 km :: G | 0.1 km :: Atmos |
| 1430 | Cloud Height, Top | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | km | 1.0 km :: 0.1 km | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | 0.1 km :: Atmos |
| 1431 | Cloud Height, Top | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | km | 0.5 km :: 0.1 km | 1/(6 hr) | 1.25 x 1.25 dg :: G | 0.1 km :: Atmos |
| 1425 | *Cloud Height, Top* | AH | Spinhirne et al | GLRS-A | ALT | GSFC | AL | m | 75 m :: | 1/(2-16 day) | 200 m :: G | 75 m :: Cloud |
| 1426 | Cloud Height, Top | AH | Welch, Goetz | HIRIS | AM2 | EDC | AL | m | 500 m :: 250 m | 1/(2-16 day) | 30 m :: L | N/A :: Cloud |
| 1433 | *Cloud Height, Top* | AH | Diner | MISR | AM | LaRC | PL | m | 100 m :: 100 m | 1/(5-16 day) [d] | 500 m :: R | N/A :: Trop |
| 1432 | Cloud Height, Top | AH | Diner | MISR | AM | LaRC | PL | m | <1000 m :: <1000 m | 1/(5-16 day) [d] | 5 km :: G | N/A :: Trop |
| 1437 | Cloud Height, Top, PSC | AH | McCormick | SAGE-III | AERO,CHEM | LaRC | AL | km | 0.2 km :: 5% | 1/(2 min), 30/day | <2 x <1 dg :: G | 1 km :: Strat/Trop |

## Appendix F: Output Data Products Listed by Product Name

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1893 | Cloud Ice Index | AH | Staelin | AIRS | PM | GSFC | PL | dimensionless | TBD :: TBD | 2/day [d,n] | 50 km :: G | N/A :: Cloud |
| 2094 | Cloud JPDF | AH | King, Menzel | MODIS | AM,PM | GSFC | PL | dimensionless | | 1/day, 1/mo | 1 dg :: G | N/A :: N/A |
| 3626 | Cloud Liquid_Water Content | AR | Welch | ASTER | AM1 | EDC | AL | | | 1/(16 day) | 90 m :: L | N/A :: Cloud |
| 1908 | Cloud Liq_water Content | AH | Rosenkranz | AIRS | PM | GSFC | PL | mm | 0.1 :: 0.1 | 2/day [d,n] | 50 km :: G | N/A :: Cloud |
| 1895 | Cloud Liq_water Content | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | g/m^3 | 75% :: 10% | 1/(6 hr) | 1.25 x 1.25 dg :: G | 1yr :: Atmos |
| 1896 | Cloud Liq_water Content | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | g/m^3 | 75% :: 10% | 6/day [d,n] | 25 km :: G | 1yr :: Atmos |
| 1897 | Cloud Liq_water Content | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | g/m^3 | 75% :: 10% | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | 1yr :: Atmos |
| 2281 | Cloud Liq_water Content | AH | Welch | HIRIS | AM2 | EDC | AL | g/m^2 | 30% :: 10% | | 90 m :: R | :: Cloud |
| 1898 | Cloud Liq_water Content | AH | Waters | MLS | MO | GSFC | AL | | :: 5% | 1/day [z. mean] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: Upper Trop |
| 1899 | Cloud Liq_water Total Column | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | kg/m^2 | 50% :: 10% | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | Column :: Atmos |
| 1900 | Cloud Liq_water Total Column | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | kg/m^2 | 50% :: 10% | 6/day [d,n] | 25 km :: G | Column :: Atmos |
| 1901 | Cloud Liq_water Total Column | AH | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | kg/m^2 | 50% :: 10% | 1/(6 hr) | 1.25 x 1.25 dg :: G | Column :: Atmos |
| 3599 | *Cloud Liq_water Total Column* | AH | TBD | MIMR | PM | MSFC | AL | mg/cm^2 | 0.005 cm :: | 1 mo | 1 dg :: Ocean | N/A :: Trop |
| 3598 | Cloud Liq_water Total Column | AH | TBD | MIMR | PM | MSFC | AL | mg/cm^2 | | | 22 km :: Ocean | N/A :: Trop |
| 2282 | Cloud Masking-shadowing | AR | Salomonson | MODIS | AM,PM | GSFC | AL | dimensionless | 5% :: | 1/day | .25 km :: G | N/A :: Sfc |
| 2283 | Cloud Masking-shadowing | AR | Salomonson | MODIS | AM,PM | GSFC | AL | dimensionless | 30% :: | 1/day | 1 km :: G | N/A :: Sfc |
| 2284 | Cloud Masking-shadowing | AR | Salomonson | MODIS | AM,PM | GSFC | AL | dimensionless | 15% :: | 1/day | 0.5 km :: G | N/A :: Sfc |
| 2310 | Cloud Optical Depth | AR | Welch | ASTER | AM1 | EDC | AL | dimensionless | 3% :: 3% | 1/(16 day) | 15-30 m :: L | N/A :: Cloud |
| 2313 | *Cloud Optical Depth* | AR | Travis | EOSP | AERO,AM2 | LaRC | AL | dimensionless | 20% :: 10% | 1/day [d] | 40 km :: G | Column :: Cloud |
| 2308 | *Cloud Optical Depth* | AR | Spinhirne et al | GLRS-A | ALT | GSFC | AL | dimensionless | 0.1 :: | | 2-200 km :: G | N/A :: Cloud |
| 2309 | Cloud Optical Depth | AR | Welch | HIRIS | AM2 | EDC | AL | dimensionless | 3% :: 1.5% | 1/(1-3 min), 1/(2-16 day) | 30 m :: L | N/A :: Cloud |
| 2311 | *Cloud Optical Depth* | AR | King | MODIS | AM,PM | GSFC | AL | dimensionless | 20% :: 10% | 1/day [d] | 5 km :: G | N/A :: Cloud |
| 2312 | *Cloud Optical Depth* | AR | King | MODIS | AM,PM | GSFC | AL | dimensionless | 20% :: 10% | 1/day, 1/mo | 1 dg :: G | N/A :: Cloud |
| 2300 | *Cloud Optical Depth, Cirrus* | AR | Spinhirne | GLRS-A | ALT | GSFC | AL | | 20% :: | 1/(2-16 day) | 1-100 km :: G | |
| 2316 | Cloud Optical Depth, LW | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | dimensionless | 25% :: 10% | 6/day [d,n] | 25 km :: G | N/A :: Atmos |
| 2317 | Cloud Optical Depth, LW | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | dimensionless | 10% :: 5% | 1/day [Avg], 1/mo [Avg] | 1.25 dg :: G | N/A :: Atmos |
| 2318 | Cloud Optical Depth, LW | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | dimensionless | 25% :: 5% | 1/(6 hr) | 1.25 dg :: G | N/A :: Atmos |
| 2324 | *Cloud Optical Depth, PSC* | AR | Spinhirne et al | GLRS-A | ALT | GSFC | AL | dimensionless | 0.1 :: | | 200 m :: Polar | N/A :: Strat |
| 2321 | Cloud Optical Depth, SW | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | dimensionless | 25% :: 10% | 3/day [d] | 25 km :: G | N/A :: Atmos |
| 2322 | Cloud Optical Depth, SW | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | dimensionless | 10% :: 5% | 1/day [Avg], 1/mo [Avg] | 1.25 dg :: G | N/A :: Atmos |
| 2323 | Cloud Optical Depth, SW | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | dimensionless | 25% :: 5% | 1/(6 hr) | 1.25 dg :: G | N/A :: Atmos |
| 3684 | Cloud Optical Thickness | AR | Smith, Gautier ?? | AIRS | PM | GSFC | PL | dimensionless | TBD :: TBD | 1/day | 15 x 15 - 15 x 45 km :: G | N/A :: Cloud |
| 1530 | Cloud Pressure, Top | AH | Travis | EOSP | AERO,AM2 | LaRC | AL | mb | 30 mb :: 30 mb | 1/day [d] | 40 km :: G | 30 mb :: Cloud |
| 1531 | *Cloud Pressure, Top* | AH | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | mb | 5-10% :: 5-10% | 2/day [d,n] | 4 x 4 dg :: G | 0.4 km :: Trop |
| 1528 | Cloud Pressure, Top | AH | Menzel | MODIS | AM,PM | GSFC | AL | mb | 50 mb :: 20 mb | 2/day | 5 km :: G | N/A :: Cloud |
| 1529 | Cloud Pressure, Top | AH | Menzel | MODIS | AM,PM | GSFC | AL | mb | 50 mb :: 20 mb | 1/day, 1/mo | 1 dg :: G | N/A :: Cloud |
| 3689 | Cloud Radiative Forcing, LW | AR | Susskind | AIRS | PM | GSFC | PL | W/m^2 | 5 :: 3 | | | |
| 2037 | Cloud Reflectance, Bi-directional, (BRDF) | AR | Welch | HIRIS | AM2 | EDC | AL | | :: 1% | | 30 m :: R | :: Cloud |
| 2039 | *Cloud Reflectance, Bi-directional, (BRDF)* | AR | Diner | MISR | AM | LaRC | PL | /sr | 3% :: 1% | [variable] [d] | 1.92 km :: G | N/A :: Trop |
| 2038 | Cloud Reflectance, Bi-directional, (BRDF) | AR | Diner | MISR | AM | LaRC | PL | /sr | 3% :: 1% | [variable] [d] | 240 m :: R | N/A :: Trop |
| 3698 | Cloud Reflectance, Bi-directional, SW_Broadband, (BRDF) | LR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | fraction | 5% :: 1% | | 10 dg [Angle] :: G | N/A :: Atmos |
| 3686 | Cloud Reflectivity, Spectral | AR | Chahine | AIRS | PM | GSFC | PL | dimensionless | TBD :: TBD | 2/day [d,n] | 15 x 45 km :: G | N/A :: Cloud |

## Appendix F: Output Data Products Listed by Product Name

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1409 | Cloud Structure, 3-D | AH | Welch | ASTER | AM1 | EDC | AL | | | 1/(16 day) | 90 m :: L | :: Cloud |
| 1410 | Cloud Structure, Cirrus | AH | Spinhirne | GLRS-A | ALT | GSFC | AL | /m | 0.2 :: | 1/(2-16 day) | 1-10 km :: G | 75 m :: |
| 2463 | *Cloud Temperature, Top* | AR | Chahine, Chedin, Smith | AIRS | PM | GSFC | AL | K | 1 K :: 0.5 K | 2/day [d,n] | 15 x 15 - 50 x 50 km :: G | N/A :: Cloud |
| 2465 | Cloud Temperature, Top | AR | Welch | ASTER | AM1 | EDC | AL | K | 2 K :: 2 K | 1/(16 day) | 90 m :: L | N/A :: Cloud |
| 2466 | *Cloud Temperature, Top* | AR | Menzel | MODIS | AM,PM | GSFC | AL | C | 2 C :: 1 C | 1/day, 1/mo | 1 dg :: G | N/A :: Cloud |
| 2467 | *Cloud Temperature, Top* | AR | Menzel | MODIS | AM,PM | GSFC | AL | C | 2 C :: 1 C | 2/day | 5 km :: G | N/A :: Cloud |
| 3625 | Cloud Thickness | AR | Welch | ASTER | AM1 | EDC | AL | | | 1/(16 day) | 100 m :: L | N/A :: Cloud |
| 3685 | Cloud Transmissivity, Spectral | AR | Chahine | AIRS | PM | GSFC | PL | dimensionless | TBD :: TBD | 2/day [d,n] | 15 x 45 km :: G | N/A :: Cloud |
| 1124 | CO Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | <=5% :: 3x10-8 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: TPSE, 60 km |
| 1125 | CO Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | <=5% :: 1x10-5 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: 60-100 km |
| 1126 | *CO Conc* | AC | Drummond | MOPITT | AM1 | LaRC | AL | ppb | :: 10% | 1/(0.4 s) [?] | 22 km :: G | 3-4 km :: 0-15 km |
| 1127 | *CO Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppb | :: 10 ppb | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 13-30 km |
| 1128 | *CO Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppb | :: 15 ppb | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 4-12 km |
| 1129 | *CO Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppb | :: 3 ppb | 1/(16 day) | 16 x 5 km :: G | 4-6 km :: 0-12 km |
| 1136 | *CO Total Burden* | AC | Revercomb, Strow | AIRS | PM | GSFC | PL | ppb | 10 - 20 :: 6 - 15 | 2/day [d,n] | 50 - 250 km :: G | Column :: Atmos |
| 1137 | *CO Total Burden* | AC | Drummond | MOPITT | AM1 | LaRC | AL | ppb | :: 10% | 1/(4 s) [?] | 66 km :: G [dy] | Column :: Atmos |
| 3637 | *CO2 Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppb | | 1/(16 day) | 16 x 5 km :: L | |
| 1151 | CO2 Total Burden (Mixing Ratio) | AC | Revercomb | AIRS | PM | GSFC | PL | ppm | 25 :: 20 | 2/day [d,n] | 50 km :: G | Column :: Atmos |
| 2556 | Coccolith Backscatter Coef | OR | Gordon | MODIS | AM,PM | GSFC | PL | /m | 25% :: 10% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/R | N/A :: TOO |
| 2557 | Coccolith Backscatter Coef | OR | Gordon | MODIS | AM,PM | GSFC | PL | /m | 25% :: 10% | 1/day, 1/wk, 1/mo | 20 km :: Ocean | N/A :: TOO |
| 2577 | Coccolith Conc, Detached | OB | Gordon, Clark | MODIS | AM,PM | GSFC | AL | mg-CaCO3/m^3 | 30% :: 10% | 1/day, 1/wk, 1/mo | 20 km :: Ocean/G,R | N/A :: TOO |
| 2578 | Coccolith Conc, Detached | OB | Gordon, Clark | MODIS | AM,PM | GSFC | AL | mg-CaCO3/m^3 | 30% :: 10% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/L | N/A :: TOO |
| 3631 | Coral Reef Maps | OB | Tsu | ASTER | AM1 | EDC | TBD | | TBD :: TBD | TBD | TBD :: Ocean/TBD | TBD :: TBD |
| 3304 | Data Characteristics, MODIS | IC | Justice, Strahler | MODIS | AM,PM | GSFC | PL | dimensionless | 30,10, 5% :: | 1/day | 1 km :: G | N/A :: Sfc |
| 3305 | Data Characteristics, MODIS | IC | Justice, Strahler | MODIS | AM,PM | GSFC | PL | dimensionless | 30,10, 5% :: | 1/day | 10 km :: G | N/A :: Sfc |
| 3306 | Data Characteristics, MODIS | IC | Justice, Strahler | MODIS | AM,PM | GSFC | PL | dimensionless | 30,10, 5% :: | 1/day | 50 km :: G | N/A :: Sfc |
| 3229 | *Electron Content, Total, (TEC)* | SE | Melbourne | GGI | ALT | JPL | AL | | :: 0.1% | 1/s [?] | multiple :: G | mult :: 0-20000 km |
| 3228 | *Electron Content-Difference, Total, (TEC-difference)* | SE | Melbourne | GGI | ALT | JPL | AL | | :: 0.1% | 1/s [?] | various :: G | mult :: 0-20000 km |
| 3301 | Eruption-Plume Characteristics | VO | Pieri | ASTER | AM1 | EDC | AL | variable | variable :: variable | | 15,30,90 m :: R/L | |
| 3286 | Eruption-Plume Height | VO | Diner | MISR | AM | LaRC | PL | m | 100 m :: 100 m | [variable] [d] | 500 m :: Land/L | N/A :: Plume_top |
| 2711 | Fire Class | LB | Kaufman, Justice | MODIS | AM,PM | EDC | AL | C | 10 C :: 5 C | 1/day, 1/wk | 10 km :: Land | N/A :: Sfc |
| 2663 | *Fire Count* | LB | Kaufman, Justice | MODIS | AM,PM | EDC | AL | | | 1/day, 1/wk | 1 km :: Land/R | N/A :: Sfc |
| 2664 | *Fire Count* | LB | Kaufman, Justice | MODIS | AM,PM | EDC | AL | | | 1/day, 1/wk | 10 km :: Land | N/A :: Sfc |
| 2665 | *Fire Extent* | LB | Kaufman, Justice | MODIS | AM,PM | EDC | AL | | | 1/day, 1/wk | 1 km :: Land/R | N/A :: Sfc |
| 2666 | *Fire Extent* | LB | Kaufman, Justice | MODIS | AM,PM | EDC | AL | | | 1/day, 1/wk | 1 dg :: Land | N/A :: Sfc |
| 2471 | *Fire Temperature* | LB | Kaufman, Justice | MODIS | AM,PM | EDC | AL | C | 10 C :: 5 C | 1/day, 1/wk | 1 km :: Land/R | N/A :: Sfc |
| 3215 | Gelbstoff Absorption Coef@410nm | OR | Carder, Melack | HIRIS | AM2 | EDC | AL | /m | 50% :: 25% | 1/(2 day) [d] | 30-90 m :: Ocean-I/L | N/A :: TOO |
| 2818 | Geodetic Baselines | LD | Melbourne | GGI | ALT | JPL | AL | km | :: 2:10^9 | 1/min | :: G | :: Sfc |
| 2819 | Geodetic Carrier Phase, GPS(L1,L2), | LD | Melbourne | GGI | ALT | JPL | AL | mm | :: 0.4 mm | 1/(0.1 s) [?] | :: G | |
| 2862 | *Geodetic EOS-platform Position* | LD | Melbourne | GGI | ALT | JPL | AL | cm | :: <3 cm | ? 1/s | | :: In_situ |
| 2850 | Geodetic Geocenter | LD | Melbourne | GGI | ALT | JPL | AL | cm | :: 2 cm | 1/day | | |
| 2861 | Geodetic Orientation | LD | Melbourne | GGI | ALT | JPL | AL | arcsec | :: 0.001arc-s | 2/day | | |
| 2867 | Geodetic Pseudorange, GPS(L1,L2), | LD | Melbourne | GGI | ALT | JPL | AL | cm | :: 12 cm | ? 1/s | :: G | |
| 2883 | Geologic Unit Maps (Geology Maps) | LD | Gillespie, Rowan, Kieffer, Kahle | ASTER | AM1 | EDC | PL | N/A | variable :: variable | 50/mission | 90 m :: Land/R,L | |

## Appendix F: Output Data Products Listed by Product Name

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3656 | Geometric Error, MODIS Level-2 | IC | Salomonson, Barker | MODIS | AM,PM | GSFC | PL | | | | | |
| 3657 | Geometric Error, MODIS Level-3 | IC | Salomonson, Barker | MODIS | AM,PM | GSFC | PL | | | | | |
| 1500 | Geopotential Height-Gradient | AD | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | m/km | 0.04m/km :: 0.04m/km | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 15-80 km |
| 2922 | Glacier Cover, Bare_Ice | LH | Dozier | HIRIS | AM2 | NSIDC | AL | km^2 | 5% :: 2% | 1/wk, 1/mo | 50 m :: Glacier/L | N/A :: Sfc |
| 2895 | Glacier Displacement | LH | Kieffer | HIRIS | AM2 | NSIDC | AL | km^2 | 1% :: 0.2% | 1/yr | 30 m :: Glacier/L | N/A :: Sfc |
| 2978 | Glacier Percolation Zone | LH | Dozier | HIRIS | AM2 | NSIDC | AL | km^2 | 5% :: 2% | 1/wk, 1/mo | 50 m :: Glacier/L | N/A :: Sfc |
| 2931 | Glacier Velocity | LH | Kieffer | ASTER | AM1 | EDC | AL | m/yr | 20 m/yr :: 10 m/yr | 1 yr | 15 m :: Land/Cryo | |
| 2930 | Glacier Velocity | LH | Kieffer | HIRIS | AM2 | NSIDC | AL | m/s | 10^-6 :: variable | 1/yr | 100 m :: Land/Cryo | N/A :: Sfc |
| 2254 | Glint Field | OR | Gordon | MODIS | AM,PM | GSFC | PL | dimensionless | | 1/orbit [d] | 1 km :: Ocean/R | N/A :: Sfc |
| 3668 | Ground Control Points, Potential | IU | Muller | MODIS | AM,PM | GSFC | AL | | 0.3 pixels :: | | 0.3 pixels :: Land/L | N/A :: Sfc |
| 1165 | H2CO Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | :: 2x10-11 | 1/day [z. mean] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 30-50 km |
| 1854 | H2O (H2^17O) Conc | AC | Waters | MLS | MO | GSFC | AL | | :: 2%<50km | 2/day [d,n] | | 2.5 km [1.2] :: TPSE, 90 km |
| 1852 | H2O (H2^17O) Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 10% (20-40 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-50 km |
| 1855 | H2O (H2^18O) Conc | AC | Waters | MLS | MO | GSFC | AL | | :: 2%<50km | 2/day [d,n] | | 2.5 km [1.2] :: TPSE, 80 km |
| 1853 | H2O (H2^18O) Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppmv | :: 10% (20-50 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-60 km |
| 1857 | H2O (HDO) Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppmv | :: 7% (20-50 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 10-60 km |
| 1837 | *H2O Conc* | AC | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | mix ratio | 5-10% :: 1-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 7-80 km |
| 1838 | H2O Conc | AC | Waters | MLS | MO | GSFC | AL | | :: 2% <50km | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: TPSE, 100 km |
| 1839 | H2O Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppmv | :: 5% (20-80 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 10-100 km |
| 1840 | *H2O Conc* | AC | McCormick | SAGE-III | AERO,CHEM | LaRC | AL | /cm^3&ppmv | 10% :: 10% | 1/(2 min), 30/day | <2 x <1 dg :: Polar | 1 km :: 3-50 km |
| 1841 | *H2O Conc* | AC | McCormick | SAGE-III | AERO,CHEM | LaRC | AL | /cm^3&ppmv | 10% :: 15% | 1/(2 min), 30/day | <2 x <1 dg :: G | 1 km :: 3-50 km |
| 1844 | *H2O Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppm | :: 50 ppm | 1/(16 day) | 16 x 5 km :: G | 4-6 km :: 0-12 km |
| 1843 | *H2O Conc, Stratospheric* | AC | Beer | TES | CHEM | LaRC | AL | ppm | :: 0.5 ppm | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 13-30 km |
| 1842 | *H2O Conc, Tropospheric* | AC | Beer | TES | CHEM | LaRC | AL | ppm | :: 50 ppm | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 4-12 km |
| 1171 | H2O2 Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | :: 1x10-10 | 1/day [z. mean] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: 30-40 km |
| 1172 | H2O2 Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 7% (30-35 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-50 km |
| 1180 | HBr Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 10% (25-35 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 15-40 km |
| 1187 | HCl Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 5% (25-55 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 10-65 km |
| 3638 | *HCl Conc* | AC | Beer | TES | CHEM | LaRC | AL | | | 1/(16 day) | 16 x 5 km :: L | |
| 1188 | HCl(H_Cl^35) Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | <=5% :: 0.1-10x10-10 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: TPSE, 90 km |
| 1189 | HCl(H_Cl^37) Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | <=5% :: 0.1-10x10-10 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: TPSE, 80 km |
| 1191 | HCN Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | <=5% :: 4x10-11 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: 20-65 km |
| 1192 | HCN Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 35% (25-30 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 25-35 km |
| 1197 | HF Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 15% (40-60 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 40-60 km |
| 3639 | *HFl Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppb | | 1/(16 day) | 16 x 5 km :: L | |
| 1202 | *HNO3 Conc* | AC | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | mix ratio | 5-10% :: 1-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 10-40 km |
| 1203 | HNO3 Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | <=5% :: 5x10-10 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: TPSE, 46 km |
| 1204 | HNO3 Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 7% (15-40 km) | 1/(18-72 s) [?] | 25 x 1-5 dg :: 86S-86N | 1.5 km :: 10-45 km |
| 1205 | HNO3 Conc | AC | Beer | TES | CHEM | LaRC | AL | ppt | :: 3 ppt | 1/(16 day) | 160 x 23 km :: G | 2.3 km :: 4-12 km |
| 1206 | HNO3 Conc | AC | Beer | TES | CHEM | LaRC | AL | ppt | :: 3 ppt | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 13-30 km |
| 1216 | HO2 Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | :: 3-20x10-10 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: 30-80 km |
| 1217 | HO2 Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 7% (30-60 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-75 km |
| 1222 | HOCl Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | :: 3x10-11 | 1/day | 0.1 x 2.5 dg :: 82N-82S | 2.5 km :: 25-45 km |
| 1223 | HOCl Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 7% (35-40 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-45 km |

## Appendix F: Output Data Products Listed by Product Name

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1828 | *Humidity Profile* | AH | Chedin, Fleming, Smith, Susskind | AIRS | PM | GSFC | AL | g/kg | 10% :: 5% | 2/day [d,n] | 15 x 50 - 50 x 50 km :: G | 2 km :: Atmos |
| 3692 | Humidity Profile, Microwave [see also 1828] | AH | Rosenkranz | AIRS[AMSU-A, MHS] | PM | GSFC | AL | g/kg | 20% :: 20% | 2/day [d,n] | 50 km :: G | 2 km :: Atmos |
| 2921 | *Ice_Sheet Cover Index* | LH | Staelin | AIRS | PM | GSFC | PL | dimensionless | | 2/day [d,n] | 50 km :: Land/Cryo | N/A :: Sfc |
| 2897 | *Ice_Sheet Displacement* | LH | Bentley | GLRS-A | ALT | NSIDC | AL | mm/day | 10 mm/day :: 10 mm/day | 1/mo | N/A :: Land/Cryo | N/A :: Sfc |
| 2911 | *Ice_Sheet Elevation* | LH | Zwally | ALT | ALT | NSIDC | AL | m | .5m-5m :: | 1/yr | 15 km :: Land/Cryo | N/A :: Sfc |
| 2912 | *Ice_Sheet Elevation* | LH | Bentley | GLRS-A | ALT | NSIDC | AL | mm | 100 mm :: 100 mm | 1/mo | 75 m :: Land/Cryo | N/A :: Sfc |
| 1554 | *Ice_Sheet Roughness* | AD | Bentley | GLRS-A | ALT | NSIDC | AL | mm | 100 mm :: 100 mm | 1/(3 mo) | 75 m :: Cryo | :: Sfc |
| 3048 | Ice_Sheet Strain Rate | LH | Bentley | GLRS-A | ALT | NSIDC | AL | u-strain/yr | 10^-6/yr :: 10^-6/yr | 1/(3 mo) | 10-100 km :: Land/Cryo | N/A :: Sfc |
| 2932 | Ice_Sheet Velocity (Outflow), Polar | LH | Kieffer | HIRIS | AM2 | NSIDC | AL | m/s | 10^-6 :: variable | 1/yr | 100 m :: Cryo | N/A :: Sfc |
| 3645 | Instrument Characteristics, MODIS Level-1 | IC | Salomonson, Barker | MODIS | AM,PM | GSFC | AL | | | | | |
| 3648 | Instrument Model, MODIS Level-1 | IC | Salomonson, Barker | MODIS | AM,PM | GSFC | AL | | | | | |
| 3652 | Irradiance, Lunar, MODIS Level-2 | IC | Salomonson, Barker | MODIS | AM,PM | GSFC | PL | | | | | |
| 3651 | Irradiance, Solar, MODIS Level-2 | IC | Salomonson, Barker | MODIS | AM,PM | GSFC | PL | | | | | |
| 2274 | *Irradiance, Solar, Total* | AR | Willson | ACRIM | MO | GSFC | AL | W/m^2 | 0.1% :: 0.0005% | 1/(2 min) | N/A :: N/A | N/A :: TOA |
| 2277 | *Irradiance, UV Solar [0.0015 nm res.]* | AR | Rottman | SOLSTICE | MO | GSFC | AL | photons/cm^2/s/nm | <5% :: <1% | 1/hr | N/A :: N/A | N/A :: NA |
| 2278 | *Irradiance, UV Solar [0.1 nm res.]* | AR | Rottman | SOLSTICE | MO | GSFC | AL | photons/cm^2/s/nm | <5% :: <1% | 1/hr | N/A :: N/A | N/A :: NA |
| 2542 | Land Thermal Inertia | LR | Kieffer et al | ASTER | AM1 | EDC | AL | joule/m^2/K/s | 40% :: 20% | | 90 m :: Land/R,L | N/A :: Sfc |
| 2856 | Landform Lineament / Slope Maps | LD | Rowan | ASTER | AM1 | EDC | AL | Orientation/length | variable :: variable | 25 scenes/yr | 50 m :: Land/R,L | N/A :: Sfc |
| 2858 | *Landform Morphology* | LD | Schutz et al | GLRS-A | ALT | GSFC | AL | mm | 100-500mm :: | 1/wk, 1/yr | 0.1-10 km :: Land | 100-500 mm :: Sfc |
| 2884 | Landform Sfc units, Geologic | LD | Kieffer, Clark | HIRIS | AM2 | EDC | AL | dimensionless | :: 30% | | 30 m :: L | N/A :: Sfc |
| 2669 | *Land_Cover Type* | LB | Strahler, Huete et al | MODIS | AM,PM | EDC | AL | categorical fraction | 10% :: 5% | 1/mo, 1/seas | 1 km :: Land | N/A :: Sfc |
| 2670 | *Land_Cover Type* | LB | Strahler, Huete et al | MODIS | AM,PM | EDC | AL | categorical fraction | 10% :: 5% | 1/mo, 1/seas | 5 km :: Land | N/A :: Sfc |
| 2671 | *Land_Cover Type-Change* | LB | Strahler, Huete et al | MODIS | AM,PM | EDC | AL | categorical fraction | 10% :: 7% | 1/seas | 1 km :: Land | N/A :: Sfc |
| 2672 | *Land_Cover Type-Change* | LB | Strahler, Huete et al | MODIS | AM,PM | EDC | AL | categorical fraction | 10% :: 7% | 1/seas | 5 km :: Land | N/A :: Sfc |
| 3696 | Land_sfc BRDF, AM-PM Asymmetry | LR | Vanderbilt | MODIS | AM,PM | GSFC | PL | 1/sr | 5% :: 30% | 1 day | 250 m, 1 km :: Land | N/A :: Sfc |
| 3697 | Land_sfc BRDF, AM-PM Degree_of_Asymmetry | LR | Vanderbilt | MODIS | AM,PM | GSFC | PL | % | 30% :: 30% | 1 day | 250 m, 1 km :: Land | N/A :: Sfc |
| 2453 | Land_sfc Brightness Temperature (Radiance) | LR | Kahle, Palluconi, Christensen | ASTER | AM1 | EDC | AL | K | 1-2 K :: 0.3 | 1/(2-16 day) | 90 m :: G | N/A :: Sfc |
| 2455 | Land_sfc Brightness Temperature (Radiance) | LR | Beer | TES | CHEM | LaRC | AL | K | :: 1 K | 1/(16 day) | 16 x 5 km :: G | N/A :: Sfc |
| 2110 | Land_sfc Emissivity | LR | Barton | MODIS | AM,PM | EDC | PL | dimensionless | 0.01 :: 0.01 | 1/day, 1/wk | 1 km :: G,R | N/A :: Sfc |
| 2111 | Land_sfc Emissivity | LR | Barton | MODIS | AM,PM | EDC | PL | dimensionless | 0.01 :: 0.01 | 1/day, 1/wk | 50 km :: G,R | N/A :: Sfc |
| 3323 | Land_sfc Emissivity | LR | Wan | MODIS | AM,PM | EDC | PL | dimensionless | 0.05 :: 0.02 | 1 day, 1 wk | 1 km :: Land/R | N/A :: Sfc |
| 3324 | Land_sfc Emissivity | LR | Wan | MODIS | AM,PM | EDC | PL | dimensionless | 0.05 :: 0.02 | 1 day, 1 wk | 10 km :: Land | N/A :: Sfc |
| 2124 | Land_sfc Emissivity [1] | LR | Kahle, Becker, Christensen | ASTER | AM1 | EDC | AL | emissivity units | 0.05-0.1 :: 0.005 | 1/(0.5-16 day) | 90 m :: L | N/A :: Sfc |

## Appendix F: Output Data Products Listed by Product Name

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3674 | Land_sfc Emissivity [2] | LR | Kahle, Becker, Christensen | ASTER | AM1 | EDC | AL | emissivity units | 0.05-0.1 :: 0.005 | 1/(0.5-16 day) | 90 m :: L | N/A :: Sfc |
| 3675 | Land_sfc Emissivity [3] | LR | Kahle, Becker, Christensen | ASTER | AM1 | EDC | AL | emissivity units | 0.05-0.1 :: 0.005 | 1/(0.5-16 day) | 90 m :: L | N/A :: Sfc |
| 2129 | Land_sfc Emissivity, Relative Spectral | AR | Kahle, Becker, Schmugge | ASTER | AM1 | EDC | AL | arbitrary units | N/A :: N/A | 1/(0.5-16 day) | 90 m :: Land/R,L | N/A :: Sfc |
| 2113 | *Land_sfc Emissivity, Spectral* | LR | Chedin, Fleming, Revercomb, Smith, Susskind | AIRS | PM | GSFC | PL | dimensionless | 0.05 :: 0.025 | 2/day [d,n] | 15 x 15 - 50 x 50 km :: Land | N/A :: Sfc |
| 3695 | Land_sfc Emissivity, Spectral (Microwave) [see also 2113] | LR | Rosenkranz | AIRS[AMSU-A, MHS] | PM | GSFC | PL | dimensionless | 0.05 :: 0.025 | 2/day [d,n] | 15 x 45 km :: Land | N/A :: Sfc |
| 2404 | Land_sfc Radiance-Correction, Topographic | LR | Muller | MODIS | AM,PM | EDC | AL | | 1 km :: 0.3 km | 1/day | 1 km :: Land/R | N/A :: Sfc |
| 2405 | Land_sfc Radiance-Correction, Topographic | LR | Muller | MODIS | AM,PM | EDC | AL | | 1 km :: 0.3 km | 1/day | 10 km :: Land | N/A :: Sfc |
| 2035 | Land_sfc Reflectance, Bi-directional, (BRDF) | LR | Gersl | HIRIS | AM2 | EDC | AL | dimensionless | 5% :: 5% | 1/(16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2631 | *Land_sfc Reflectance, Bi-directional, (BRDF)* | LB | Diner | MISR | AM | LaRC | AL | /sr | 5% :: 2% | 1/(5-16 day) [d] | 1.92 km :: G | N/A :: Sfc |
| 2632 | Land_sfc Reflectance, Bi-directional, (BRDF) | LB | Diner | MISR | AM | LaRC | AL | /sr | 5% :: 2% | 1/(5-16 day) [d] | 240 m :: R | N/A :: Sfc |
| 2424 | Land_sfc Reflectance, Bi-directional, (BRDF) | LR | Tanre, Muller | MODIS | AM,PM | EDC | PL | % | 15% :: 5 - 8% | 1/day, 1/wk | 1 km :: G,R | N/A :: Sfc |
| 2425 | Land_sfc Reflectance, Bi-directional, (BRDF) | LR | Tanre, Muller | MODIS | AM,PM | EDC | PL | % | 15% :: 5 - 8% | 1/day, 1/wk | 10 km :: G,R | N/A :: Sfc |
| 2045 | Land_sfc Reflectance, Bi-directional, SW_Broadband, (BRDF) | LR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | fraction | 5% :: 1% | | 10 dg [Angle] :: G | N/A :: Sfc,Atmos |
| 3669 | Land_sfc Reflectance, Bidirectional (BRDF) | LR | Muller, Strahler, Tanre | MODIS | AM,PM | EDC | PL | fraction | 5% :: 3% | 1/day | 1 km :: Land/R | N/A :: Sfc |
| 2433 | Land_sfc Reflectance, Directional | LR | Slater | ASTER | AM1 | EDC | AL | dimensionless | 4% :: 0.5-1.3 | 3/yr | 15,30 m :: Land/R,L | N/A :: Sfc |
| 2432 | Land_sfc Reflectance, Directional | LR | Slater | HIRIS | AM2 | EDC | AL | dimensionless | 3% :: 1% | 1/mo | 30 m :: Land/R,L | N/A :: Sfc |
| 2429 | Land_sfc Reflectance, Directional | LR | Kaufman et al | MODIS | AM,PM | EDC | AL | dimensionless | 0.01 :: 0.005 | 1/day | 1 km :: G | N/A :: Sfc |
| 2430 | Land_sfc Reflectance, Directional | LR | Kaufman et al | MODIS | AM,PM | EDC | AL | dimensionless | 0.01 :: 0.005 | 1/day | 0.5 km :: G | N/A :: Sfc |
| 2431 | Land_sfc Reflectance, Directional | LR | Kaufman et al | MODIS | AM,PM | EDC | AL | dimensionless | 0.01 :: 0.005 | 1/day | 0.25 km :: G | N/A :: Sfc |
| 2434 | Land_sfc Reflectance, Directional | LR | Muller, Strahler | MODIS | AM,PM | EDC | AL | fraction | 5% :: 3% | 1/day | 1 km :: R | N/A :: Sfc |
| 2435 | Land_sfc Reflectance, Relative Spectral | LR | Kahle, Becker | ASTER | AM1 | EDC | AL | arbitrary units | N/A :: N/A | 1/(2-16 day) | 15,30 m :: Land/R,L | N/A :: Sfc |
| 3670 | Land_sfc Roughness | LR | Muller, Tanre | MODIS | AM,PM | EDC | PL | | 5% :: 3% | 1/day | 1 km :: Land/R | N/A :: Sfc |
| 1556 | Land_sfc Roughness | AD | Tanre, Muller | MODIS | AM,PM | EDC | PL | dimensionless | 15% :: 5 - 8% | 1/day, 1/wk | 1 km :: G,R | N/A :: Sfc |
| 1557 | Land_sfc Roughness | AD | Tanre, Muller | MODIS | AM,PM | EDC | PL | dimensionless | 15% :: 5 - 8% | 1/day, 1/wk | 10 km :: G,R | N/A :: Sfc |
| 2484 | *Land_sfc Temperature* | LR | Wan | MODIS | AM,PM | EDC | AL | C | 1 C :: 1 C | 1/day, 1/wk | 1 km :: Land/R | N/A :: Sfc |
| 2485 | Land_sfc Temperature | LR | Wan | MODIS | AM,PM | EDC | AL | C | 1-3 C :: 1 C | 1/day, 1/wk | 10 km :: Land | N/A :: Sfc |
| 2483 | Land_sfc Temperature (3-products) | LR | Kahle, Becker, Christensen | ASTER | AM1 | EDC | AL | K | 1-6 K :: 0.3 K | 1/(2-16 day) | 90 m :: Land | N/A :: Sfc |
| 2481 | *Land_sfc Temperature, Skin* | LR | Chedin, Fleming, Revercomb, Smith, Susskind | AIRS | PM | GSFC | AL | K | 1.0 K :: 0.5 K | 2/day [d,n] | 50 km :: Land | N/A :: Sfc |
| 2539 | Land_sfc Temperature-Difference, Day-Night | LR | Chedin, Fleming, Revercomb, Smith, Susskind | AIRS | PM | GSFC | PL | K | 0.5 K :: 0.25 K | 2/day [d,n] | 50 km :: G | N/A :: Sfc |

## Appendix F: Output Data Products Listed by Product Name

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2540 | Land_sfc Temperature-Difference, Day-Night | LR | Kieffer et al | ASTER | AM1 | EDC | AL | K | 1-2 K :: 0.3 K | | 90 m :: Land/R,L | N/A :: Sfc |
| 2537 | Land_sfc Temperature-Difference, Day-Night | LR | Huete | MODIS | AM,PM | GSFC | PL | K | 1 K :: 1 K | 1/day | 1 km :: Land/R | N/A :: Sfc |
| 3629 | Land_sfc Thermal Anomalies | LR | Tsu | ASTER | AM1 | EDC | TBD | | TBD :: TBD | TBD | TBD :: Land/TBD | TBD :: TBD |
| 2447 | Land_sfc Thermal Change | LR | Kieffer, Christensen, Pieri, | ASTER | AM1 | EDC | AL | dimensionless | 1-2 K :: 0.5 K | | 90 m :: Land/R,L | N/A :: Sfc |
| 3633 | Land_sfc Water Area | LH | Tsu | ASTER | AM1 | EDC | TBD | | TBD :: TBD | TBD | TBD :: Land/TBD | TBD :: TBD |
| 2108 | Level-1B Backscatter Coef | AR | Freilich | STIKSCAT | CHEM | JPL | AL | dB | :: 0.25 dB | | 25 km :: G | N/A :: Sfc |
| 2104 | Level-1B Backscatter Coef, GLRS | AR | Spinhirne | GLRS-A | ALT | GSFC | AL | /m | 10% :: | 1/(2-16 day) | 1-100 km :: G | 75 m :: |
| 3464 | Level-1B Backscatter, ALT | AR | Fu | ALT | ALT | JPL | | dB | | | | |
| 2398 | Level-1B Irradiance, SOLSTICE | AR | Rottman | SOLSTICE | MO | GSFC | AL | W/m^2 | | 1/hr | 2 dg :: G | 1 km :: Mid_atm |
| 2336 | *Level-1B Polarization, EOSP* | AR | Travis | EOSP | AERO,AM2 | LaRC | AL | dimensionless | 0.2% :: 0.1% | 1/day [d] | 10-70 km :: G | N/A :: N/A |
| 2286 | Level-1B Radiance Mixture-Model, MODIS Spectral-spatial | AR | Huete | MODIS | AM,PM | GSFC | PL | dimensionless | 5-10% :: 0.05 | 1/day | pixel_size :: G | N/A :: Sfc |
| 2347 | Level-1B Radiance, AIRS | AR | Chahine | AIRS[AIRS] | PM | GSFC | AL | W/m^2/sr/um | 0.2dg NEdT :: 0.2dg NEdT | 2/day [d,n] | 15 x 15 km :: G | N/A :: N/A |
| 2350 | Level-1B Radiance, AMSU-A | AR | Chahine | AIRS[AMSU-A] | PM | GSFC | AL | K | 0.2dg NEdT :: 0.2dg NEdT | 2/day [d,n] | 40 x 40 km :: G | N/A :: N/A |
| 2375 | Level-1B Radiance, ASTER | AR | Tsu | ASTER | AM1 | EDC | AL | W/m^2/sr/um | 2-4% :: 1% | 1/16 day | 15,30,90m :: G | N/A :: at sensor |
| 2359 | Level-1B Radiance, CERES | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2/sr/um | SW 2%,LW 1% :: 0.005 | 6/day [d,n] | 25 km :: G | N/A :: N/A |
| 2362 | Level-1B Radiance, EOSP | AR | Travis | EOSP | AERO,AM2 | LaRC | AL | W/m^2/sr/um | 5% :: 2% | 1/day [d] | 10-70 km :: G | N/A :: N/A |
| 2364 | Level-1B Radiance, GGI | AR | Melbourne | GGI | ALT | JPL | AL | | | | | |
| 2369 | Level-1B Radiance, HIRDLS | AR | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | W/m^2/sr/um | | | | |
| 2370 | *Level-1B Radiance, HIRIS* | AR | Goetz | HIRIS | AM2 | EDC | AL | W/m^2/sr/um | | | | |
| 2384 | Level-1B Radiance, LIS | AR | Christian | LIS | TRM | MSFC | AL | W/m^2/sr/um | | | | |
| 2352 | Level-1B Radiance, MHS | AR | Chahine | AIRS[MHS] | PM | GSFC | AL | K | 0.2dg NEdT :: 0.2dg NEdT | 2/day [d,n] | 15 x 15 km :: G | N/A :: N/A |
| 3602 | Level-1B Radiance, MIMR | AR | TBD | MIMR | PM | MSFC | AL | K | | 1 day | 1 dg :: Global | N/A :: |
| 2386 | Level-1B Radiance, MISR | AR | Diner | MISR | AM | LaRC | AL | W/m^2/sr/um | 3% :: 1% | 1/(5-16 day) [d] | 1.92 km :: G | N/A :: TOA |
| 2387 | Level-1B Radiance, MISR | AR | Diner | MISR | AM | LaRC | AL | W/m^2/sr/um | 3% :: 1% | 1/(5-16 day) [d] | 240 m :: R,L | N/A :: TOA |
| 2388 | Level-1B Radiance, MLS | AR | Waters | MLS | MO | GSFC | AL | K | | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: Trop-150 km |
| 2338 | Level-1B Radiance, MODIS<3um | AR | Salomonson | MODIS | AM,PM | GSFC | AL | W/m^2/sr/um | 5%(1$\Sigma$) :: RMS<NEdL | 1/day | 0.5 km :: G | N/A :: N/A |
| 2339 | Level-1B Radiance, MODIS<3um | AR | Salomonson | MODIS | AM,PM | GSFC | AL | W/m^2/sr/um | 5%(1$\Sigma$) :: RMS<NEdL | 1/day | 1 km :: G | N/A :: N/A |
| 2392 | Level-1B Radiance, MODIS<3um | AR | Salomonson | MODIS | AM,PM | GSFC | AL | W/m^2/sr/um | 5%(1$\Sigma$) :: RMS<NEdL | 1/day | 0.25 km :: G | N/A :: N/A |
| 2340 | Level-1B Radiance, MODIS>3um | AR | Salomonson | MODIS | AM,PM | GSFC | AL | W/m^2/sr/um | 1%(1$\Sigma$) :: RMS<NEdL | 1/day | 1 km :: G | N/A :: N/A |
| 2394 | Level-1B Radiance, MOPITT | AR | Drummond | MOPITT | AM1 | LaRC | AL | W/m^2/sr/um | 2% :: | 1/(0.4 s) [?] | 22 km :: G | Column :: Atmos |
| 2396 | Level-1B Radiance, SAFIRE | AR | Russell | SAFIRE | MO | GSFC | AL | | | | | |
| 2402 | Level-1B Radiance, TES | AR | Beer | TES | CHEM | LaRC | AL | | | | | |
| 2543 | Level-1B Transmission, SAGE-III | AR | McCormick | SAGE-III | AERO,CHEM | LaRC | AL | dimensionless | 0.05% :: 0.05% | 1/(2 min), 30/day | 200 x 2.5 km :: G | 1-2 km :: 0-90 km |
| 2353 | Level-2 Radiance, Atmos_corrected, EOSP | AR | Travis | EOSP | AERO,AM2 | LaRC | AL | W/m^2/sr/um | 25% :: 15% | 1/day [d] | 40 km :: G | N/A :: N/A |
| 2378 | Level-2 Radiance, Land_leaving | LR | Palluconi et al | ASTER | AM1 | EDC | AL | W/m^2/sr/um | TBD :: 0.065-0.085 | 1/(2-16 day) | 90 m :: Land/R,L | N/A :: Sfc |
| 2379 | Level-2 Radiance, Land_leaving | LR | Kaufman, Tanre | MODIS | AM,PM | GSFC | AL | W/m^2/sr/um | 10% :: 5% | 1/day | 1 km :: Land/R | N/A :: Sfc |
| 2380 | Level-2 Radiance, Land_leaving | LR | Kaufman, Tanre | MODIS | AM,PM | GSFC | AL | W/m^2/sr/um | 10% :: 5% | 1/day, 1/mo | 10 km :: Land | N/A :: Sfc |
| 2381 | Level-2 Radiance, Land_leaving | LR | Kaufman, Tanre | MODIS | AM,PM | GSFC | AL | W/m^2/sr/um | 10% :: 5% | 1/day | 0.5 km :: Land/R | N/A :: Sfc |
| 2416 | *Level-2 Radiance, Water-leaving* | OR | Gordon et al | MODIS | AM,PM | GSFC | AL | mW/cm^2/sr/u | 5% :: 5% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/R,L | N/A :: Sfc |

## Appendix F: Output Data Products Listed by Product Name

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2417 | *Level-2 Radiance, Water-leaving* | OR | Gordon et al | MODIS | AM,PM | GSFC | AL | mW/cm^2/sr/u | 5% :: 5% | 1/day, 1/wk, 1/mo | 20 km :: Ocean/G,R | N/A :: Sfc |
| 3642 | *Lightning Occurrence (Location,Time)* | AE | Christian | LIS | TRM | MSFC | AL | | 10 km (in 1100km FOV) :: | | .07 dg :: G | N/A :: Atmos |
| 3643 | *Lightning Radiant Energy* | AE | Christian | LIS | TRM | MSFC | AL | | | | .07 dg :: G | N/A :: Atmos |
| 1756 | Lightning Rate | AE | Christian | LIS | TRM | MSFC | AL | | :: 5% | | .07 dg :: G | N/A :: Atmos |
| 3247 | Magnetic Field Strength, DC | SE | Waters | MLS | MO | GSFC | AL | G | :: 2x10-3G | 2/day [d,n] | 2.5 x 0.2 dg :: 82N-82S | 2.5 km :: 80-100 km |
| 2773 | Mineral Index | LC | Rowan,Kahle,Gillespie | ASTER | AM1 | EDC | AL | dimensionless | 10% :: 5% | 15 scenes/yr | 15,30,90 m :: Land/R,L | N/A :: Sfc |
| 2817 | Mineral Maps | LC | Gillespie, Rowan, Kahle | ASTER | AM1 | EDC | PL | dimensionless | variable :: variable | 50/mission | 90 m :: Land/R,L | N/A :: Sfc |
| 2774 | Mineral Thermal history | LC | Rowan | HIRIS | AM2 | EDC | AL | | | 1/seas | 30 m :: Land/L | N/A :: Sfc |
| 2766 | Mineral(CO3) Relative Abundance | LC | Rowan, Clark | HIRIS | AM2 | EDC | AL | dimensionless | 10% :: 5% | 1/seas | 30 m :: Land/L | N/A :: Sfc |
| 2772 | Mineral(Fe) Relative Abundance | LC | Rowan, Clark | HIRIS | AM2 | EDC | AL | dimensionless | 10% :: 5% | 1/seas | 30 m :: Land/L | N/A :: Sfc |
| 2776 | Mineral(OH) Relative Abundance | LC | Rowan, Clark | HIRIS | AM2 | EDC | AL | dimensionless | 10% :: 5% | 1/seas | 30 m :: Land/L | N/A :: Sfc |
| 2784 | Mineral(SO4) Relative Abundance | LC | Rowan, Clark | HIRIS | AM2 | EDC | AL | dimensionless | 10% :: 5% | 1/seas | 30 m :: Land/L | N/A :: Sfc |
| 1239 | *N2O Conc* | AC | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | mix ratio | 5-10% :: 1-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 7-60 km |
| 1240 | N2O Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | <=5% :: 1-10x10-8 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: TPSE, 65 km |
| 1241 | N2O Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppmv | :: 15% (20-35 km) | 1/(18-72 s) [?] | 25 x 1-5 dg :: 86S-86N | 1.5 km :: 20-40 km |
| 1243 | N2O Conc | AC | Beer | TES | CHEM | LaRC | AL | ppt | :: 10 ppt | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 13-30 km |
| 1249 | *N2O Total Burden* | AC | Revercomb, Strow | AIRS | PM | GSFC | PL | ppb | 20 - 40 :: 15 - 30 | 2/day [d,n] | Zonal_ave :: G | Column :: Atmos |
| 1254 | *N2O5 Conc* | AC | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | mix ratio | 5-10% :: 1-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 15-45 km |
| 1255 | N2O5 Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 10% (20-40 km) | 1/(18-72 s) [?] | 25 x 1-5 dg :: 86S-86N | 1.5-3 km :: 10-45 km |
| 1256 | *NH3 Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppt | :: 300 ppt | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 4-12 km |
| 1266 | NO Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | :: .1-10x10-7 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 30-120 km |
| 1267 | *NO Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppt | :: 15 ppt | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 4-12 km |
| 1268 | *NO Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppt | :: 25 ppt | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 13-30 km |
| 1273 | *NO2 Conc* | AC | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | mix ratio | 5-10% :: 3-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 10-55 km |
| 1274 | NO2 Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | :: 1-8x10-8 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 30-60 km |
| 1275 | NO2 Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 5% (20-55 km) | 1/(18-72 s) [?] | 25 x 1-5 dg :: 86S-86N | 1.5 km :: 15-60 km |
| 1276 | *NO2 Conc* | AC | McCormick | SAGE-III | AERO,CHEM | LaRC | AL | /cm^3&ppbv | 10% :: 10% | 1/(2 min), 30/day | <2 x <1 dg :: Polar | 1 km :: 10-50 km |
| 1277 | *NO2 Conc* | AC | McCormick | SAGE-III | AERO,CHEM | LaRC | AL | /cm^3&ppbv | 10% :: 15% | 1/(2 min), 30/day | <2 x <1 dg :: G | 1 km :: 20-50 km |
| 1278 | *NO2 Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppt | :: 500 ppt | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 4-12 km |
| 1282 | NO3 Conc | AC | McCormick | SAGE-III | AERO,CHEM | LaRC | AL | /cm^3&ppbv | 10% :: 10% | 1/(2 min), 30/day | <2 x <1 dg :: G | 1 km :: 20-55 km |
| 1298 | O(3P) Conc | AC | Russell | SAFIRE | MO | GSFC | AL | % | :: 15%(110-180 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 90-180 km |
| 1299 | O2 Conc | AC | Waters | MLS | MO | GSFC | AL | | <=5% :: 1% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [6.5] :: TPSE, 120 km |
| 1300 | O2 Conc | AC | Russell | SAFIRE | MO | GSFC | AL | % | :: <2%(10-65 km) | 1/(36-72 s) [?] | 25 x 1-5 dg :: 86S-86N | 3 km :: 10-80 km |
| 1303 | O2(NU1) Conc | AC | Waters | MLS | MO | GSFC | AL | | :: 10% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [6.5] :: 20-80 km |
| 3690 | O3 Conc | AC | Susskind | AIRS | PM | GSFC | PL | Dobson unit | 10% :: 5% | 2/day [d,n] | 50 km :: G | variable :: Atmos |
| 1318 | *O3 Conc* | AC | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | mix ratio | 5-10% :: 1-10% | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 7-80 km |
| 1319 | O3 Conc | AC | Waters | MLS | MO | GSFC | AL | | <= 3% :: 1%(<50km) | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: TPSE, 110 km |
| 1328 | O3 Conc | AC | Waters | MLS | MO | GSFC | AL | | :: 10% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: TPSE, 70 km |
| 1320 | O3 Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppmv | :: 5% (10-70 km) | 1/(18-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 1.5-3 km :: 10-100 km |
| 1321 | *O3 Conc* | AC | McCormick | SAGE-III | AERO,CHEM | LaRC | AL | /cm^3&ppmv | 6% :: 5 % | 1/(2 min), 30/day | <2 x <1 dg :: Polar | 1 km :: 6-85 km |

## Appendix F: Output Data Products Listed by Product Name

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1323 | *O3 Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppb | :: 20 ppb | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 13-30 km |
| 1324 | *O3 Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppb | :: 3 ppb | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 4-12 km |
| 1325 | *O3 Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppb | :: 13 ppb | 1/(16 day) | 16 x 5 km :: G | 4-6 km :: 0-12 km |
| 1332 | *O3 Total Burden* | AC | Chedin, Revercomb, Smith, Susskind | AIRS | PM | GSFC | PL | Dobson unit | 5 - 15% :: 3 - 10% | 2/day [d,n] | 50 km :: G | Column :: Atmos |
| 1333 | O3 Total Burden | AC | Menzel | MODIS | AM,PM | GSFC | AL | DU | 15-20DU :: 10DU | 2/day, 1/day | 5 km :: G | Column :: Atmos |
| 1334 | O3 Total Burden | AC | Menzel | MODIS | AM,PM | GSFC | AL | DU | 15-20DU :: 10DU | 1/day, 1/mo | 0.5 dg :: G | Column :: Atmos |
| 1339 | O3(17^OOO) Conc | AC | Waters | MLS | MO | GSFC | AL | | :: 50% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 20-50 km |
| 1341 | O3(17^OOO) Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 15% (20-35 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-40 km |
| 1329 | O3(NU2) Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 10% (20-40 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-50 km |
| 1340 | O3(O17^OO) Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 40% (20-30 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-35 km |
| 1337 | O3(OO^17_O) Conc | AC | Waters | MLS | MO | GSFC | AL | | :: 100% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 25-45 km |
| 1304 | O3(OO^18) Conc | AC | Waters | MLS | MO | GSFC | AL | | :: 10% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 30-80 km |
| 1338 | O3(OO^18_O) Conc | AC | Waters | MLS | MO | GSFC | AL | | :: 50% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 20-60 km |
| 1344 | O3(O^18_OO) Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 15% (20-30 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-35 km |
| 1343 | O3(^18OOO) Conc | AC | Waters | MLS | MO | GSFC | AL | | :: 20% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 20-60 km |
| 1345 | O3(^18OOO) Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 15% (20-35 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-40 km |
| 1326 | O3O3(NU1,3) Conc | AC | Waters | MLS | MO | GSFC | AL | | :: 50% | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 20-60 km |
| 1327 | O3O3(NU1,3) Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 15% (20-30 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-35 km |
| 2606 | Ocean Productivity, Primary | OB | Esaias | MODIS | AM,PM | GSFC | AL | mg/m^3 | <35% :: <20% | 1/wk, 1/mo, 1/yr | 20 km :: Ocean/G,R | N/A :: TOO |
| 2601 | Ocean Productivity, Primary, | OB | Davis, Melack et al | HIRIS | AM2 | EDC | AL | mg-C/m^2/hr | 100% :: 50% | 1/(>=2 day) | 30-90 m :: Ocean/L | N/A :: TOO |
| 2602 | Ocean Productivity, Primary, Near_sfc [via Fluorescence] | OB | Abbott | MODIS | AM,PM | GSFC | PL | mg-C/m^3/day | :: 50-100% | 1/day, 1/wk | 1 km :: Ocean-I/R,L | N/A :: TOO |
| 2603 | Ocean Productivity, Primary, Near_sfc [via Fluorescence] | OB | Abbott | MODIS | AM,PM | GSFC | PL | mg-C/m^3/day | :: 50-100% | 1/day, 1/wk | 4 km :: Ocean-I/G,R | N/A :: TOO |
| 3121 | Ocean Tide, Model | OD | Sanchez | ALT | ALT | JPL | AL | cm | 2 cm :: | 1/mission | 100 km :: Ocean | N/A :: Sfc |
| 2031 | Ocean Water Attenuation Coef, PAR | OR | Clark | MODIS | AM,PM | GSFC | PL | /m | 35% :: 10% | 1/day, 1/wk | 1 km :: Ocean-I/L | N/A :: TOO |
| 2032 | Ocean Water Attenuation Coef, PAR | OR | Clark | MODIS | AM,PM | GSFC | PL | /m | 35% :: 10% | 1/day, 1/wk | 20 km :: Ocean-I | N/A :: TOO |
| 3199 | Ocean Water Attenuation Coef@490nm | OR | Gordon, Clark | MODIS | AM,PM | GSFC | AL | /m | 25% :: 10% | 1/day, 1/wk, 1/mo | 20 km :: Ocean-I/ R,L | N/A :: TOO |
| 3200 | Ocean Water Attenuation Coef@490nm | OR | Gordon, Clark | MODIS | AM,PM | GSFC | AL | /m | 25% :: 10% | 1/day, 1/wk, 1/mo | 1 km :: Ocean-I/ R,L | N/A :: TOO |
| 3206 | Ocean Water Attenuation Coef@520nm, Beam | OR | Clark | MODIS | AM,PM | GSFC | PL | /m | 35% :: 10% | 1/day, 1/wk | 1 km :: Ocean | N/A :: TOO |
| 3207 | Ocean Water Attenuation Coef@520nm, Beam | OR | Clark | MODIS | AM,PM | GSFC | PL | /m | 35% :: 10% | 1/day, 1/wk | 20 km :: Ocean | N/A :: TOO |
| 2559 | Ocean Water Backscatter Coef, Total | OR | Gordon | MODIS | AM,PM | GSFC | PL | /m | 25% :: 10% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/R | N/A :: TOO |
| 2560 | Ocean Water Backscatter Coef, Total | OR | Gordon | MODIS | AM,PM | GSFC | PL | /m | 25% :: 10% | 1/day, 1/wk, 1/mo | 20 km :: Ocean | N/A :: TOO |
| 3210 | Ocean Water Backscatter Coef@565nm | OR | Carder, Melack | HIRIS | AM2 | EDC | AL | /m | 50% :: 25% | 1/(2 day) [d] | 30-90 m :: Ocean/L | N/A :: Sfc |
| 3129 | Ocean Wave Height, Along-track | OD | Fu | ALT | ALT | JPL | AL | cm | >.5m,10% :: | | 7 km :: Ocean | N/A :: Sfc |
| 3636 | Ocean_Water Temperature-Pattern | OD | Tsu | ASTER | AM1 | EDC | TBD | | TBD :: TBD | TBD | TBD :: Ocean/TBD | TBD :: TBD |
| 3632 | Ocean_Water Turbidity | OR | Tsu | ASTER | AM1 | EDC | TBD | | TBD :: TBD | TBD | TBD :: Ocean/TBD | TBD :: TBD |
| 1352 | OClO Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | :: 3x10-11 | 1/mo. [z. mean] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: TPSE, 25 km |
| 1353 | *OClO Conc* | AC | McCormick | SAGE-III | AERO,CHEM | LaRC | AL | /cm^3&ppbv | 20% :: 20% | 1/(2 min), 30/day | <2 x <1 dg :: G | 2 km :: 15-25 km |
| 1360 | OH Conc | AC | Russell | SAFIRE | MO | GSFC | AL | ppbv | :: 7% (30-75 km) | 1/(36-72 s) [?] | 25 x 2.5-5 dg :: 86S-86N | 3 km :: 20-90 km |
| 3314 | Organic Matter Conc, Dissolved | OB | Carder, Melack | HIRIS | AM2 | EDC | | mg/m^3 | 100% :: 50% | (>=2)/day | 30-90 m :: Ocean/L+Land/Lakes | N/A :: TOO |
| 2580 | Organic Matter Conc, Dissolved | OB | Carder | MODIS | AM,PM | GSFC | PL | mg/m^3 | 150% :: 30% | 1/day, 1/wk, 1/mo | 20 km :: Ocean | N/A :: TOO |
| 2581 | Organic Matter Conc, Dissolved | OB | Carder | MODIS | AM,PM | GSFC | PL | mg/m^3 | 150% :: 30% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/R,L | N/A :: TOO |

## Appendix F: Output Data Products Listed by Product Name

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2582 | Organic Matter Conc, Dissolved | OB | Parslow et al | MODIS | AM,PM | GSFC | AL | mg/m^3 | 150% :: 30% | 1/day, 1/wk, 1/mo | 20 km :: Ocean | N/A :: TOO |
| 2583 | Organic Matter Conc, Dissolved | OB | Parslow et al | MODIS | AM,PM | GSFC | AL | mg/m^3 | 150% :: 30% | 1/day, 1/wk, 1/mo | 1 km :: Ocean [Southern]R,L | N/A :: TOO |
| 2608 | Organic Matter Conc, Particulate | OB | Clark | MODIS | AM,PM | GSFC | PL | mg/m^3 | 50% :: 30% | 1/day, 1/wk | 20 km :: Ocean | N/A :: TOO |
| 3664 | Organic Matter Conc, Particulate | OB | Clark | MODIS | AM,PM | GSFC | PL | mg/m^3 | 50% :: 30% | 1/day, 1/wk | 1 km :: Ocean-I/L | N/A :: TOO |
| 3662 | Organic Matter Degradation_Product Absorption Coef@415nm (DOM+Detritus) | OB | Carder | MODIS | AM,PM | GSFC | AL | /m | 40% :: 15% | 1/day, 1/wk, 1/mo | 20 km :: Ocean | N/A :: TOO |
| 3663 | Organic Matter Degradation_Product Absorption Coef@415nm (DOM+Detritus) | OB | Carder | MODIS | AM,PM | GSFC | AL | /m | 40% :: 15% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/R,L | N/A :: TOO |
| 3317 | *Organic Matter Fluorescence Efficiency, Colored Dissolved [CDOM* | OB | Hoge | MODIS | AM,PM | GSFC | AL | dimensionless | 100% :: 50% | 1 day,wk,mo | 20 km :: Ocean/GR | N/A :: TOO |
| 3318 | *Organic Matter Fluorescence Efficiency, Colored Dissolved [CDOM* | OB | Hoge | MODIS | AM,PM | GSFC | AL | dimensionless | 100% :: 50% | 1 day,wk,mo | 1 km :: Ocean/RL | N/A :: TOO |
| 2330 | PAR | AR | Esaias | MODIS | AM,PM | GSFC | PL | quanta/m^2/s | TBD :: TBD | 1/day | N/A :: G | N/A :: Atmos |
| 2029 | PAR, Absorbed, Non-vegetative, | AR | Ustin, Wessman | HIRIS | AM2 | EDC | AL | W/m^2 | 25% :: 10% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2030 | PAR, Absorbed, Vegetative, (APAR) | AR | Ustin, Wessman | HIRIS | AM2 | EDC | AL | W/m^2 | 25% :: 10% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2268 | PAR, Incident, (IPAR) | AR | Tanre | MODIS | AM,PM | EDC | PL | MJ/m^2 | 200 :: 5 - 20% | 1/day, 1/wk | 1 km :: G,R | N/A :: Atmos |
| 2266 | PAR, Sfc (IPAR) | AR | Gordon | MODIS | AM,PM | GSFC | AL | quanta/m^2/s | 10% :: 5% | 1/day [d] | 1 km :: Ocean/L | N/A :: Sfc |
| 2267 | PAR, Sfc (IPAR) | AR | Gordon | MODIS | AM,PM | GSFC | AL | quanta/m^2/s | 10% :: 5% | 1/day [d] | 1 km :: Ocean | N/A :: Sfc |
| 3216 | Particulate Backscatter Coef | OR | Parslow | MODIS | AM,PM | GSFC | PL | /m | :: 30% | 1/day | 1 km :: Ocean | N/A :: TOO |
| 3217 | Particulate Backscatter Coef | OR | Parslow | MODIS | AM,PM | GSFC | PL | /m | :: 30% | 1/day | 20 km :: Ocean | N/A :: TOO |
| 1514 | PBL Height | AD | Spinhirne et al | GLRS-A | ALT | GSFC | AL | m | 150 m :: | 1/(2-16 day) | 2-200 km :: G | 75 m :: Trop |
| 3671 | Photogrammetric Camera Model | IC | Muller | MODIS | AM,PM | GSFC | BL | | | | N/A :: N/A | N/A :: N/A |
| 2555 | Phytoplankton Backscatter Coef | OR | Gordon | MODIS | AM,PM | GSFC | PL | soft, med, hard | | 1/day, 1/wk, 1/mo | 1 km :: Ocean/R | N/A :: TOO |
| 2558 | Phytoplankton Backscatter Coef | OR | Gordon | MODIS | AM,PM | GSFC | PL | soft, med, hard | | 1/day, 1/wk, 1/mo | 20 km :: Ocean | N/A :: TOO |
| 3316 | Phytoplankton Type | OB | Davis, Melack | HIRIS | AM2 | EDC | | mg/m^3 | 100% :: 50% | (>=2)/day | 60-90 m :: Ocean/L+Land/Lakes | N/A :: TOO |
| 2591 | Pigment Conc | OB | Gordon, Clark | MODIS | AM,PM | GSFC | AL | mg/m^3 | 30% :: 10% | 1/day, 1/wk, 1/mo | 20 km :: Ocean/G,R | N/A :: TOO |
| 2592 | Pigment Conc | OB | Gordon, Clark | MODIS | AM,PM | GSFC | AL | mg/m^3 | 30% :: 10% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/R,L | N/A :: TOO |
| 2593 | Pigment Conc [via Spectral Curv] | OB | Hoge, Esaias | MODIS | AM,PM | GSFC | PL | mg/m^3 | 50% :: 15% | 1/day, 1/wk | 1 km :: Ocean/R | N/A :: TOO |
| 2594 | Pigment Conc [via Spectral Curv] | OB | Hoge, Esaias | MODIS | AM,PM | GSFC | PL | mg/m^3 | 50% :: 15% | 1/day, 1/wk | 20 km :: Ocean/R | N/A :: TOO |
| 3072 | Pigment Conc, Accessory | OB | Davis, Melack | HIRIS | AM2 | EDC | AL | mg/m^3 | 100% :: 50% | 1/(>=2 day) | 60-90 m :: Ocean-I/L | N/A :: TOO |
| 3319 | Pigment Conc, Phycobillin [Phycoerythrin, etc.] | OB | Hoge | MODIS | AM,PM | GSFC | PL | mg/m^3 | 50% :: 15% | 1 day,wk,mo | 20 km :: Ocean/GR | N/A :: TOO |
| 3320 | Pigment Conc, Phycobillin [Phycoerythrin, etc.] | OB | Hoge | MODIS | AM,PM | GSFC | PL | mg/m^3 | 50% :: 15% | 1 day,wk,mo | 1 km :: Ocean/RL | N/A :: TOO |
| 2588 | Pigment Conc, Phytoplankton | OB | Diner | MISR | AM | LaRC | PL | mg/m^3 | 30% :: 30% | 1/(1-2 day) [d] | 240 m :: Ocean/R | N/A :: TOO |
| 2589 | Pigment Conc, Phytoplankton | OB | Diner | MISR | AM | LaRC | AL | mg/m^3 | 30% :: 30% | 1/(1-2 day) [d] | 1.92 km :: Ocean/G,R | N/A :: TOO |
| 3681 | Pigment Conc, Phytoplankton | OB | Diner | MISR | AM | LaRC | AL | mg/m^3 | 30% :: 30% | 9,16 day; mo; seas; yr | 1.92 km ? :: Ocean/G,R | N/A :: TOO |
| 1869 | *Precipitable Water* | AH | Chedin, Fleming, Smith, Susskind | AIRS | PM | GSFC | AL | mm | 5% :: 3% | 2/day [d,n] | 50 km :: G | N/A :: Trop |
| 1872 | Precipitable Water | AH | Goetz | HIRIS | AM2 | EDC | AL | cm | 10% :: 3% | 1/(1-3 min), 1(2-16 day) | 30 m :: L | Column :: Atmos |
| 1873 | Precipitable Water | AH | Goetz | HIRIS | AM2 | EDC | AL | cm | 10% :: 3% | 1/(1-3 min), 1/(2-16 day) | 30 m :: L | Column :: Trop |
| 3597 | *Precipitable Water* | AH | TBD | MIMR | PM | MSFC | AL | g/km^3 | 0.16 cm :: | 1 mo | 1 dg :: Ocean | Column :: Trop |
| 3596 | Precipitable Water | AH | TBD | MIMR | PM | MSFC | AL | g/km^3 | | | 22 km :: Ocean | Column :: Trop |
| 1874 | Precipitable Water | AH | Kaufman, Tanre | MODIS | AM,PM | GSFC | AL | dimensionless ? | 8% :: 6% | 1/day | 5 km :: Land | N/A :: Atmos |

## Appendix F: Output Data Products Listed by Product Name

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3321 | Precipitable Water | AH | Kaufman, Tanre | MODIS | AM,PM | GSFC | AL | dimensionless ? | 12% :: 8% | 1 day, mo | 1 km :: Land | N/A :: Atmos |
| 3322 | Precipitable Water | AH | Kaufman, Tanre | MODIS | AM,PM | GSFC | AL | dimensionless ? | 5% :: 3% | 1 day, mo | 1 dg :: Land | N/A :: Atmos |
| 1875 | Precipitable Water | AH | Menzel | MODIS | AM,PM | GSFC | AL | mm | 10 mm :: 5 mm | 2/day | 5 km :: G | N/A :: Atmos |
| 3693 | *Precipitable Water, Microwave [see also 1869]* | AH | Rosenkranz | AIRS[AMSU-A, MHS] | PM | GSFC | AL | mm | 2 mm :: 1 mm | 2/day [d,n] | 50 km :: G | N/A :: Trop |
| 1969 | Precipitation Index | AH | Susskind | AIRS | PM | GSFC | PL | mm | 2mm/day :: 1mm/day | 2/day [d,n] | 50 km :: G | N/A :: Trop |
| 3601 | *Precipitation Index* | AH | TBD | MIMR | PM | MSFC | AL | | | 1 mo | 1 dg :: Global | N/A :: Sfc |
| 3694 | Precipitation Index, Microwave [see also 1969] | AH | Staelin | AIRS[AMSU-A, MHS] | PM | GSFC | PL | mm | 2mm/hr :: 1mm/hr | 2/day [d,n] | 50 km :: G | N/A :: Trop |
| 3600 | Precipitation Rate | AH | TBD | MIMR | PM | MSFC | AL | mm/hr? | | | 22 km :: Global | N/A :: Sfc |
| 1524 | Pressure | AD | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | mb | 0.1% :: 0.1% | 2/day [d,n] | 4 x 4 dg :: G | 0.2 km :: 7-80 km |
| 1525 | Pressure | AD | Waters | MLS | MO | GSFC | AL | mb | :: 1%(30-50km) | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: TPSE, 70 km |
| 1526 | Pressure | AD | Russell | SAFIRE | MO | GSFC | AL | mb | :: <2% (16-70 km) | 1/(18-72 s) [?] | 25 x 1-5 dg :: 86S-86N | 1.5 km :: 10-110 km |
| 1301 | *Pressure* | AC | McCormick | SAGE-III | AERO,CHEM | LaRC | AL | /cm^3 | 2% :: 2% | 1/(2 min), 30/day (Lun.) | <2 x <1 dg :: G | 1 km :: 6-55 km |
| 1302 | *Pressure* | AC | McCormick | SAGE-III | AERO,CHEM | LaRC | AL | /cm^3 | 2% :: 2% | 1/(2 min), 30/day (Sol.) | <2 x <1 dg :: G | 1 km :: 6-70 km |
| 3654 | Radiance Error, MODIS Level-2 | IC | Salomonson, Barker | MODIS | AM,PM | GSFC | AL | | | | | |
| 3646 | Radiance, At-Satellite, MODIS Level-1 | IC | Salomonson, Barker | MODIS | AM,PM | GSFC | AL | | | | | |
| 3683 | Radiance, Cloud Cleared, Level-2 | AR | Chedin, McMillin, Rizzi, Smith, Susskind | AIRS | PM | GSFC | AL | | | | | |
| 3650 | Radiance, Lunar Reference, MODIS Level-1 | IC | Salomonson, Barker | MODIS | AM,PM | GSFC | PL | | | | | |
| 3649 | Radiance, Solar Diffuser, MODIS Level- | IC | Salomonson, Barker | MODIS | AM,PM | GSFC | PL | | | | | |
| 2144 | *Radiative Flux Divergence, Clear-sky* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2/km | 10% :: 5% | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | lyr :: Atmos |
| 2145 | *Radiative Flux Divergence, Clear-sky* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2/km | 10% :: 5% | 6/day [d,n] | 1.25 dg :: G | lyr :: Atmos |
| 2146 | *Radiative Flux Divergence, Clear-sky* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2/km | 10% :: 5% | 1/(6 hr) | 1.25 x 1.25 dg :: G | lyr :: Atmos |
| 2147 | *Radiative Flux Divergence, Cloudy_sky* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2/km | 25% :: 10% | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | lyr :: Atmos |
| 2148 | *Radiative Flux Divergence, Cloudy_sky* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2/km | 50% :: 10% | 1/(6 hr) | 1.25 x 1.25 dg :: G | lyr :: Atmos |
| 2149 | *Radiative Flux Divergence, Cloudy_sky* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2/km | 50% :: 10% | 6/day [d,n] | 1.25 dg :: G | lyr :: Atmos |
| 2209 | *Radiative Flux, LW Spectral* | AR | Gautier ??, Susskind | AIRS | PM | GSFC | PL | W/m^2 | <10 - TBD :: <5 - TBD | 2/day [d,n] | 50 km :: Land | N/A :: Sfc |
| 2210 | *Radiative Flux, LW Spectral* | AR | Gautier ??, Susskind | AIRS | PM | GSFC | PL | W/m^2 | <10 - TBD :: <5 - TBD | 2/day [d,n] | 50 km :: Ocean | N/A :: Sfc |
| 2168 | *Radiative Flux, LW, Down* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 5 W/m^2 :: 2 W/m^2 | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2169 | *Radiative Flux, LW, Down* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 7 W/m^2 :: 2 W/m^2 | 6/day [d,n] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2170 | *Radiative Flux, LW, Down* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 7 W/m^2 :: 2 W/m^2 | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2176 | Radiative Flux, LW, Net | AR | Gautier | AIRS | PM | GSFC | PL | W/m^2 | <15 :: TBD | 1/day | 50 km :: Land | N/A :: Sfc |
| 2177 | Radiative Flux, LW, Net | AR | Gautier | AIRS | PM | GSFC | PL | W/m^2 | <10 :: TBD | 1/day | 50 km :: Ocean | N/A :: Sfc |
| 2180 | *Radiative Flux, LW, Net* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 7 W/m^2 :: 2 W/m^2 | 6/day [d,n] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2181 | *Radiative Flux, LW, Net* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 7 W/m^2 :: 2 W/m^2 | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2182 | *Radiative Flux, LW, Net* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 5 W/m^2 :: 2 W/m^2 | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2200 | *Radiative Flux, LW, Up* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 3 W/m^2 :: 1 W/m^2 | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: TOA |
| 2201 | *Radiative Flux, LW, Up* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 7 W/m^2 :: <7 W/m^2 | 6/day [d,n] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2202 | *Radiative Flux, LW, Up* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 7 W/m^2 :: <7 W/m^2 | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2203 | *Radiative Flux, LW, Up* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 5 W/m^2 :: <5 W/m^2 | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2204 | *Radiative Flux, LW, Up* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 5 W/m^2 :: 2 W/m^2 | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: TOA |
| 2205 | *Radiative Flux, LW, Up* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 5 W/m^2 :: 2 W/m^2 | 6/day [d,n] | 25 km :: G | N/A :: TOA |
| 3687 | Radiative Flux, LW, Up (OLR) | AR | Chedin, Revercomb, Susskind | AIRS | PM | GSFC | PL | W/m^2 | 5 - TBD :: 3 - TBD | 2/day [d,n] | 50 km :: G | N/A :: TOA |

## Appendix F: Output Data Products Listed by Product Name

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2221 | *Radiative Flux, SW, Down* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 15 W/m^2 :: 2 W/m^2 | 3/day [d] | 1.25 dg :: G | N/A :: Sfc |
| 2222 | *Radiative Flux, SW, Down* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 10 W/m^2 :: 2 W/m^2 | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2223 | *Radiative Flux, SW, Down* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 15 W/m^2 :: 2 W/m^2 | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2232 | Radiative Flux, SW, Net | AR | Gautier | AIRS | PM | GSFC | PL | W/m^2 | <15 :: <5 | 1/day | 50 km :: Land | N/A :: Sfc |
| 2233 | Radiative Flux, SW, Net | AR | Gautier | AIRS | PM | GSFC | PL | W/m^2 | <10 :: <5 | 1/day | 50 km :: Ocean | N/A :: Sfc |
| 2229 | *Radiative Flux, SW, Net* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 15 W/m^2 :: 2 W/m^2 | 3/day [d] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2230 | *Radiative Flux, SW, Net* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 10 W/m^2 :: 2 W/m^2 | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2231 | *Radiative Flux, SW, Net* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 15 W/m^2 :: 2 W/m^2 | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2246 | *Radiative Flux, SW, Up* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 12 W/m^2 :: 2 W/m^2 | 3/day [d] | 1.25 x 1.25 dg :: G | N/A :: TOA |
| 2247 | *Radiative Flux, SW, Up* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 15 W/m^2 :: 2 W/m^2 | 3/day [d] | 1.25 dg :: G | N/A :: Sfc |
| 2248 | *Radiative Flux, SW, Up* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 10 W/m^2 :: 2 W/m^2 | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2249 | *Radiative Flux, SW, Up* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 12 W/m^2 :: 2 W/m^2 | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: TOA |
| 2250 | *Radiative Flux, SW, Up* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 15 W/m^2 :: 2 W/m^2 | 1/(6 hr) | 1.25 x 1.25 dg :: G | N/A :: Sfc |
| 2251 | *Radiative Flux, SW, Up* | AR | Barkstrom | CERES | TRM,AM,PM | LaRC | AL | W/m^2 | 7 W/m^2 :: 2 W/m^2 | 1/day [Avg], 1/mo [Avg] | 1.25 x 1.25 dg :: G | N/A :: TOA |
| 3655 | Reflectance Error, MODIS Level-2 | IC | Salomonson, Barker | MODIS | AM,PM | GSFC | PL | | | | | |
| 3644 | *Reflectance, Bi-directional (BRDF)* | AR | Travis | EOSP | AERO,AM2 | LaRC | AL | | 5% :: | 2 day [d] | 10 km :: G | NA :: Cloud, Sfc |
| 3647 | Reflectance, Exoatmospheric, MODIS Level-2 | IC | Salomonson, Barker | MODIS | AM,PM | GSFC | AL | | | | | |
| 3653 | Reflectance, Lunar, MODIS Level-2 | IC | Salomonson, Barker | MODIS | AM,PM | GSFC | PL | | | | | |
| 3610 | *Sea_Ice Age* | OH | TBD | MIMR | PM | NSIDC | AL | | | 1 mo | 1 dg :: Ocean/Cryo | :: Sfc |
| 3609 | Sea_Ice Age | OH | TBD | MIMR | PM | NSIDC | AL | | | | 22 km :: Ocean/Cryo | :: Sfc |
| 3624 | Sea_Ice Albedo | OR | Welch | ASTER | AM1 | EDC | AL | | | | 90 m :: Ocean/Cryo | N/A :: Sfc |
| 3630 | Sea_Ice Area | OH | Tsu | ASTER | AM1 | EDC | TBD | | TBD :: TBD | TBD | TBD :: Ocean/TBD | TBD :: TBD |
| 3612 | *Sea_Ice Conc* | OH | TBD | MIMR | PM | NSIDC | AL | | | 1 mo | 1 dg :: Ocean/Cryo | N/A :: Sfc |
| 3611 | Sea_Ice Conc | OH | TBD | MIMR | PM | NSIDC | AL | | | | 22 km :: Ocean/Cryo | N/A :: Sfc |
| 3151 | *Sea_Ice Cover* | OH | Chedin, Staelin | AIRS | PM | GSFC | PL | fraction | 0.1 :: 0.1 | 2/day [d,n] | 50 km :: Ocean/Cryo | N/A :: Sfc |
| 3614 | *Sea_Ice Extent* | OH | TBD | MIMR | PM | NSIDC | AL | | | 1 mo | 1 dg :: Ocean/Cryo | N/A :: Sfc |
| 3613 | Sea_Ice Extent | OH | TBD | MIMR | PM | NSIDC | AL | | | | 22 km :: Ocean/Cryo | N/A :: Sfc |
| 3152 | Sea_Ice Fraction | OH | Welch | ASTER | AM1 | EDC | AL | fractional area | | | 90 m :: Ocean/Cryo | N/A :: Sfc |
| 3618 | Sea_Ice Fraction, New (First-Year) | OH | Welch | ASTER | AM1 | EDC | AL | dimensionless | | | 90 m :: Ocean/Cryo | N/A :: Sfc |
| 3622 | Sea_Ice Lead (Open Water) Size-distribution | OH | Welch | ASTER | AM1 | EDC | AL | | | | 90 m :: Ocean/Cryo | N/A :: Sfc |
| 3617 | Sea_Ice Lead (Open-Water) Fraction | OH | Welch | ASTER | AM1 | EDC | AL | dimensionless | | | 90 m :: Ocean/Cryo | N/A :: Sfc |
| 3153 | Sea_Ice Max Extent | OH | Salomonson | MODIS | AM,PM | NSIDC | AL | km^2 | <=5% :: <=5% | 1/day, 1/wk, 1/mo | 10 km :: Ocean/Cryo | N/A :: Sfc |
| 3154 | Sea_Ice Max Extent | OH | Salomonson | MODIS | AM,PM | NSIDC | AL | km^2 | <=5% :: <=5% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/Cryo,R | N/A :: Sfc |
| 3616 | Sea_Ice Meltpond Fraction | OH | Welch | ASTER | AM1 | EDC | AL | dimensionless | | | 90 m :: Ocean/Cryo | N/A :: Sfc |
| 3621 | Sea_Ice Size-distribution | OH | Welch | ASTER | AM1 | EDC | AL | | | | 90 m :: Ocean/Cryo | N/A :: Sfc |
| 3619 | Sea_Ice Temperature | OH | Welch | ASTER | AM1 | EDC | AL | K | | | 90 m :: Ocean/Cryo | N/A :: Sfc |
| 3623 | Sea_Ice Thickness | OH | Welch | ASTER | AM1 | EDC | AL | m | | | 90 m-1 km :: Ocean/Cryo | N/A :: Sfc |
| 3112 | *Sea_Level Height, Along-track* | OD | Fu | ALT | ALT | JPL | AL | cm | 10 cm :: | | 7 km :: Ocean | N/A :: Sfc |
| 3635 | Sea_sfc Temperature (SST) | OD | Tsu | ASTER | AM1 | EDC | TBD | | TBD :: TBD | TBD | TBD :: Ocean/TBD | TBD :: TBD |
| 3620 | Sea_sfc Temperature (SST) | OD | Welch | ASTER | AM1 | EDC | AL | K | | | 90 m :: Ocean/Cryo | N/A :: Sfc |
| 3604 | *Sea_sfc Temperature (SST)* | OR | TBD | MIMR | PM | MSFC | AL | K | 1 K :: | 1 mo | 1 dg :: Ocean | N/A :: Sfc |
| 3603 | Sea_sfc Temperature (SST) | OR | TBD | MIMR | PM | MSFC | AL | K | | | 60 km :: Ocean | N/A :: Sfc |
| 2527 | *Sea_sfc Temperature (SST)* | OR | Brown | MODIS | AM,PM | GSFC | AL | K | 0.3-0.5 K :: 0.1-0.3 K | 1/day, 1/wk, 1/mo | 1 km :: Ocean/L | N/A :: Sfc |
| 2528 | Sea_sfc Temperature (SST) | OR | Brown | MODIS | AM,PM | GSFC | AL | K | 0.3-0.6K :: 0.1-0.3K | 1/day, 1/wk, 1/mo | 20 km :: Ocean/G,R | N/A :: Sfc |
| 2529 | Sea_sfc Temperature (SST) | OR | Brown | MODIS | AM,PM | GSFC | AL | K | 0.3-0.6K :: 0.1-0.3K | 1/day, 1/wk, 1/mo | 4 km :: Ocean/R,L | N/A :: Sfc |

## Appendix F: Output Data Products Listed by Product Name

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2530 | Sea_sfc Temperature (SST) | OR | Brown, Barton | MODIS | AM,PM | GSFC | AL | K | 0.3-0.6K :: 0.1-0.3K | 1/day, 1/wk, 1/mo | 4 km :: Ocean/R,L | N/A :: Sfc |
| 2531 | Sea_sfc Temperature (SST) | OR | Brown, Barton | MODIS | AM,PM | GSFC | AL | K | 0.3-0.6K :: 0.1-0.3K | 1/day, 1/wk, 1/mo | 20 km :: Ocean/G,R | N/A :: Sfc |
| 2532 | Sea_sfc Temperature (SST) | OR | Brown, Barton | MODIS | AM,PM | GSFC | AL | K | 0.3-0.4K :: 0.1-0.6K | 1/day, 1/wk, 1/mo | 50 km :: Ocean | N/A :: Sfc |
| 2523 | *Sea_sfc Temperature (SST), Skin* | OR | Chedin, Fleming, Revercomb, Smith, Susskind | AIRS | PM | GSFC | PL | K | 0.5 - 1 K :: 0.4 - 0.5 K | 2/day [d,n] | 50 km :: Ocean | N/A :: Sfc |
| 3672 | Simulated Data Sets, MODIS | IC | Muller | MODIS | AM,PM | GSFC | BL | | | | 0.25-1 km :: L(test sites) | N/A :: Sfc |
| 3673 | Simulated Scenes, MODIS, Monte Carlo Ray-Tracing | IC | Muller | MODIS | AM,PM | GSFC | BL | | | | 0.25-1 km :: L(test sites) | N/A :: Sfc |
| 3634 | Snow Area | LH | Tsu | ASTER | AM1 | EDC | TBD | | TBD :: TBD | TBD | TBD :: Land/TBD | TBD :: TBD |
| 2768 | Snow Contaminant Conc | LC | Dozier | HIRIS | AM2 | NSIDC | AL | mg/m^3 | 20% :: 20% | 1/wk, 1/mo | 50 m :: Snow/L | N/A :: Sfc |
| 3019 | Snow Cover | LH | Dozier | HIRIS | AM2 | NSIDC | AL | km^2 | 5% :: 2% | 1/wk, 1/mo | 50 m :: Cryo/L | N/A :: Sfc |
| 3608 | *Snow Cover* | LH | TBD | MIMR | PM | NSIDC | AL | | | 1 mo | 1 dg :: Land | N/A :: Sfc |
| 3607 | Snow Cover | LH | TBD | MIMR | PM | NSIDC | AL | | | | 22 km :: Land | N/A :: Sfc |
| 3020 | Snow Cover | LH | Salomonson | MODIS | AM,PM | NSIDC | AL | km^2 | <=5% :: <=5% | 1/day, 1/wk | 10 km :: Land | N/A :: Sfc |
| 3021 | Snow Cover | LH | Salomonson | MODIS | AM,PM | NSIDC | AL | km^2 | <=5% :: <=5% | 1/day, 1/wk | 1 km :: Land/R | N/A :: Sfc |
| 3018 | *Snow Cover Index [combined with 2921]* | LH | Staelin | AIRS | PM | GSFC | PL | dimensionless | | 2/day [d,n] | 50 km :: Land | N/A :: Sfc |
| 3025 | Snow Cover, Cold | LH | Dozier | HIRIS | AM2 | NSIDC | AL | km^2 | 5% :: 2% | 1/wk, 1/mo | 50 m :: Glacier/L | N/A :: Sfc |
| 3029 | Snow Cover, Wet | LH | Dozier | HIRIS | AM2 | NSIDC | AL | km^2 | 5% :: 2% | 1/wk, 1/mo | 50 m :: Glacier/L | N/A :: Sfc |
| 3030 | Snow Cover, Wet | LH | Dozier | HIRIS | AM2 | NSIDC | AL | km^2 | 10% :: 10% | 1/wk, 1/mo | 50 m :: Cryo/L | N/A :: Sfc |
| 3038 | Snow Grain Size | LH | Dozier | HIRIS | AM2 | NSIDC | AL | um | 200% :: 200% | 1/wk, 1/mo | 50 [km?] :: Snow/L | N/A :: Sfc |
| 2943 | Snow Liq-water Content | LH | Dozier | HIRIS | AM2 | NSIDC | AL | mass fraction | 100% :: 100% | 1/wk, 1/mo | 50 m :: Snow/L | N/A :: Sfc |
| 2440 | Snow Reflectance, Spectral | LR | Dozier | HIRIS | AM2 | NSIDC | AL | dimensionless | 5% :: 1% | 1/wk, 1/mo | 50 m :: Land/L | N/A :: Sfc |
| 1369 | SO2 Conc | AC | Waters | MLS | MO | GSFC | AL | mix ratio | :: 5x10-10 | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: TPSE, 30 km |
| 1370 | *SO2 Conc* | AC | Beer | TES | CHEM | LaRC | AL | ppt | :: 600 ppt | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 4-12 km |
| 2047 | Soil Brightness Index | LR | Huete | MODIS | AM,PM | EDC | AL | dimensionless | 5% :: 5% | 1/mo | 1 km :: Land/R | N/A :: Sfc |
| 2095 | Soil Color Index | LR | Huete | MODIS | AM,PM | EDC | PL | class | 10% :: 5% | 1/mo | 1 km :: Land/R | N/A :: Sfc |
| 2801 | Soil Index | LC | Gillespie | ASTER | AM1 | EDC | AL | dimensionless | | 50 scenes/mission | 15 m :: Land/R,L | N/A :: Sfc |
| 2803 | Soil Maps, Level-4 [Class,Comp,Age,etc.] | LC | Kahle, Gillespie | ASTER | AM1 | EDC | PL | varies | | 50 maps/mission | 90 m :: Land/R,L | N/A :: Sfc |
| 3606 | *Soil Moisture* | LH | TBD | MIMR | PM | MSFC | AL | | | 1 mo | 1 dg :: Land | N/A :: Sfc |
| 3605 | Soil Moisture | LH | TBD | MIMR | PM | MSFC | AL | | | | 60 km :: Land | N/A :: Sfc |
| 3640 | *Spectra, UV Stellar Comparison [0.1 nm res.?]* | AR | Rottman | SOLSTICE | MO | GSFC | AL | photons/cm^2/s/nm | <5% :: <1% | | N/A :: N/A | N/A :: NA |
| 1559 | Stability (Lifted Index), Atmospheric | AD | Menzel | MODIS | AM,PM | GSFC | AL | C | 2 C :: 1 C | 2/day | 5 km :: G | N/A :: Atmos |
| 1560 | Stability (Lifted Index), Atmospheric | AD | Menzel | MODIS | AM,PM | GSFC | AL | C | 2 C :: 1 C | 2/day, 1/mo | 0.5 dg :: G | N/A :: Atmos |
| 1562 | Stratopause Height | AD | Smith | AIRS | PM | GSFC | PL | km | 1 km :: 0.5 km | 2/day [d,n] | 50 x 50 km :: G | N/A :: Mid-atmos |
| 3315 | Suspended-Solids Conc, Ocean Water | OB,OC | Carder, Melack | HIRIS | AM2 | EDC | | mg/m^3 | 100% :: 50% | (>=2)/day | 30-90 m :: Ocean/L+Land/Lakes | N/A :: TOO |
| 3085 | Suspended-Solids Conc, Ocean Water | OC | Clark | MODIS | AM,PM | GSFC | AL | g/m^3 | 50% :: 35% | 1/day, 1/wk, 1/mo | 20 km :: Ocean | N/A :: TOO |
| 3086 | Suspended-Solids Conc, Ocean Water | OC | Clark | MODIS | AM,PM | GSFC | AL | g/m^3 | 50% :: 35% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/R,L | N/A :: TOO |
| 1588 | *Temperature Profile* | AD | Chedin, Fleming, Smith, Susskind | AIRS | PM | GSFC | AL | K | 1.0 K :: 0.4 K | 2/day [d,n] | 15 x 50 - 50 x 50 km :: G | 1, 2 km :: Atmos |
| 1605 | *Temperature Profile* | AD | Melbourne | GGI | ALT | JPL | AL | K | 1 K :: 1 K | 700 ret/day | 1-200 km :: G | 1 km :: 5 - 50 km |
| 1606 | Temperature Profile | AD | Melbourne | GGI | ALT | JPL | AL | K | 1 K :: 1 K | 700 ret/day | 1-200 km :: G | 1 km :: 2-5/50-60 km |

## Appendix F: Output Data Products Listed by Product Name

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1608 | Temperature Profile | AD | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | K | 1K;2K>50km :: 0.3K;1K>50km | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 7-80 km |
| 1609 | Temperature Profile | AD | Waters | MLS | MO | GSFC | AL | K | :: 2K <100km) | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: TPSE, 120 km |
| 1610 | Temperature Profile | AD | Russell | SAFIRE | MO | GSFC | AL | K | :: <0.5K(16-65 km) | 1/(18-72 s) [?] | 25 x 1-5 dg :: 86S-86N | 1.5 km :: 10-110 km |
| 1611 | *Temperature Profile* | AD | McCormick | SAGE-III | AERO,CHEM | LaRC | AL | K | 2 K :: 2K | 1/(2 min), 30/day | <2 x <1 dg :: G | 1 km :: 6-55 km |
| 1612 | *Temperature Profile* | AD | McCormick | SAGE-III | AERO,CHEM | LaRC | AL | K | 2 K :: 2 K | 1/(2 min), 30/day | <2 x <1 dg :: Polar | 1 km :: 6-70 km |
| 1614 | Temperature Profile | AD | Beer | TES | CHEM | LaRC | AL | K | :: 2 K | 1/(16 day) | 16 x 5 km :: G | 1 km, 4-6 km :: 0-12 km |
| 1615 | Temperature Profile | AD | Beer | TES | CHEM | LaRC | AL | K | :: 2 K | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 13-30 km |
| 1616 | Temperature Profile | AD | Beer | TES | CHEM | LaRC | AL | K | :: 2 K | 1/(16 day) | 160 x 23 km :: G | 2-3 km :: 4-12 km |
| 3691 | Temperature Profile, Microwave [see also 1588] | AD | Rosenkranz | AIRS[AMSU-A, MHS] | PM | GSFC | AL | K | 2-4 K :: 2-4 K | 2/day [d,n] | 50 km :: G | 1 km :: Atmos |
| 3658 | Texture, MODIS Level-2 | IU | Salomonson, Barker | MODIS | AM,PM | GSFC | AL | | | | | |
| 3659 | Texture, MODIS Level-3 | IU | Salomonson, Barker | MODIS | AM,PM | GSFC | PL | | | | | |
| 2846 | *Topographic Elevation, Land_sfc* | LD | Diner | MISR | AM | LaRC | PL | m | 100 m :: 100 m | 1/mission | 500 m :: Land | N/A :: Sfc |
| 2828 | Topographic Elevation, Land_sfc, | LD | Kahle, Tsu | ASTER | AM1 | EDC | AL | m | >50 m :: >30 m | 1/mission | 15 m :: Land/R,L | 30 m :: Sfc |
| 2831 | *Topographic Elevation-Change Rate, Land_sfc* | LD | Cohen, Schutz et al | GLRS-A | ALT | GSFC | AL | mm/day -mm/yr | 5 mm/yr :: | 1/yr | 100-900 km :: Land/R | :: Sfc |
| 3108 | *Topographic Elevaton, Sea_sfc* | OD | Fu | ALT | ALT | JPL | AL | cm | 5cm et al :: | 1/(16 day) | 25 km :: Ocean | N/A :: Sfc |
| 3688 | Tropopause Height | AD | Smith, Susskind | AIRS | PM | GSFC | PL | km | 1 km :: 0.5 km | 2/day [d,n] | 50 x 50 km :: G | N/A :: Atmos |
| 1643 | Tropopause Height, Aerosol_located | AD | Spinhirne et al | GLRS-A | ALT | GSFC | AL | m | 300 m :: | 1/(2-16 day) | 200 km :: G | 300 m :: Trop |
| 1644 | Tropopause Height, Cirrus_located | AD | Spinhirne et al | GLRS-A | ALT | GSFC | AL | m | 300 m :: | 1/(2-16 day) | 10 km :: G | 300 m :: Trop |
| 2614 | Vegetation Biomass, Dead | LB | Ustin, Wessman | HIRIS | AM2 | EDC | AL | kg/ha | 30% :: 15% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2620 | Vegetation Biomass, Green | LB | Ustin, Wessman | HIRIS | AM2 | EDC | AL | kg/ha | 30% :: 15% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2648 | Vegetation Cellulose Conc | LB | Wessman, Aber | HIRIS | AM2 | EDC | AL | g/ha | 40% :: 20% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2653 | Vegetation Chlorophyll Conc | LB | Ustin, Wessman | HIRIS | AM2 | EDC | AL | g/ha | 25% :: 10% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2741 | Vegetation Cover | LB | Ustin, Wessman | HIRIS | AM2 | EDC | AL | % | 20% :: 10% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2656 | Vegetation Crown Height | LB | Ustin | HIRIS | AM2 | EDC | AL | m | 40% :: 20% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2657 | Vegetation Crown Spacing | LB | Ustin | HIRIS | AM2 | EDC | AL | m | 40% :: 20% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 1791 | Vegetation Evapotranspiration (ET) | AH | Schmugge | ASTER | AM1 | EDC | AL | mm/day | 1 mm/day :: 0.5 mm/day | | 90 m :: Land/R,L | N/A :: Sfc |
| 2659 | Vegetation Growing_Season Duration | LB | Justice | MODIS | AM,PM | EDC | PL | day | 10 day :: | 1/yr | 1 km :: Land | N/A :: Sfc |
| 2660 | Vegetation Growing_Season Duration | LB | Justice | MODIS | AM,PM | EDC | PL | day | 10 day :: | 1/yr | 10 km :: Land | N/A :: Sfc |
| 2746 | Vegetation Index | LB | Ustin et al | HIRIS | AM2 | EDC | AL | dimensionless | 20% :: 10% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2749 | *Vegetation Index* | LB | Justice, Huete et al | MODIS | AM,PM | EDC | AL | dimensionless | 0.01 :: 0.01 | 1/day, 1/wk, 1/mo | 10 km :: Land | N/A :: Sfc |
| 2750 | *Vegetation Index* | LB | Justice, Huete et al | MODIS | AM,PM | EDC | AL | dimensionless | 0.01 :: 0.01 | 1/day, 1/wk, 1/mo | 0.5 km :: Land/R | N/A :: Sfc |
| 2751 | *Vegetation Index* | LB | Justice, Huete et al | MODIS | AM,PM | EDC | AL | dimensionless | 0.01 :: 0.01 | 1/day, 1/wk, 1/mo | 1 km :: Land/R | N/A :: Sfc |
| 2747 | Vegetation Index (PVI) | LB | Gillespie | ASTER | AM1 | EDC | PL | dimensionless | | | 15 m :: Land/R,L | N/A :: Sfc |
| 3703 | Vegetation Index Temporal Signal | LB | Huete, Justice | MODIS | AM,PM | EDC | PL | dimensionless | 0.02 :: 0.01 | 1/yr (weekly points) | 1 km :: Land/R | N/A :: Sfc |
| 3704 | Vegetation Index [Self_Atmospheric-Correcting, TOA] | LB | Huete, Justice, Kaufman, Tanre | MODIS | AM,PM | EDC | AL | dimensionless | 0.02 :: 0.01 | 1/day | 1 km :: Land/R | N/A :: TOA |
| 3701 | Vegetation Index, Composited, Sfc | LB | Huete, Justice | MODIS | AM,PM | EDC | AL | dimensionless | 0.02 :: 0.01 | 1/wk | 1 km :: Land/R | N/A :: Sfc |
| 3700 | Vegetation Index, Hemispherical, Sfc | LB | Huete, Justice | MODIS | AM,PM | EDC | PL | dimensionless | 0.02 :: 0.01 | 1 wk, 1 mo | 1 km :: Land/R | N/A :: Sfc |
| 3702 | Vegetation Index, Integrated Annual | LB | Huete, Justice | MODIS | AM,PM | EDC | PL | dimensionless | 0.02 :: 0.01 | 1/yr | 1 km :: Land/R | N/A :: Sfc |
| 2680 | *Vegetation Index, Leaf Area, (LAI)* | LB | Running | MODIS | AM,PM | EDC | PL | dimensionless | 0.1-0.25 :: 5-20% | 1/day, 1/wk | pixel_size :: Land/G,R,L | N/A :: N/A |
| 2756 | Vegetation Index, Normalized | LB | Diner | MISR | AM | LaRC | AL | dimensionless | 2% :: 2% | 1/(5-16 day) [d] | 1.92 km :: Land | N/A :: Sfc |
| 2757 | Vegetation Index, Normalized | LB | Diner | MISR | AM | LaRC | PL | dimensionless | 2% :: 2% | 1/(5-16 day) [d] | 240 m :: Land/R | N/A :: Sfc |
| 3682 | Vegetation Index, Normalized | LB | Diner | MISR | AM | LaRC | AL | dimensionless | 2% :: 2% | 9,16 day; mo; seas; yr | 1.92 km ? :: Land | N/A :: Sfc |

## Appendix F: Output Data Products Listed by Product Name

| Prod # | Product Name | Cat | Investigator | Instrument | Platform | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2337 | *Vegetation Index, Polarization* | LB | Vanderbilt | MODIS | AM,PM | EDC | PL | dimensionless | | 1/day | pixel_size :: Land | N/A :: Sfc |
| 3699 | Vegetation Index-Directional Reflectances, Atmosphere-Corrected [O3 & molecular scattering] | LB | Huete, Justice | MODIS | AM,PM | EDC | AL | dimensionless | 0.02 :: 0.01 [if low aerosols] | 1/day | 500 m :: Land/R | N/A :: TOA |
| 2761 | Vegetation Leaf-tissue Water Content | LB | Wessman, Goetz | HIRIS | AM2 | EDC | AL | g/cm^3 | 50% :: 20% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2687 | Vegetation Lignin Conc | LB | Wessman, Aber | HIRIS | AM2 | EDC | AL | g/ha | 40% :: 20% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 2703 | *Vegetation Productivity, Primary* | LB | Running | MODIS | AM,PM | EDC | PL | Mg/km^2/yr | 100 :: 5-30% | 1/wk, 1/mo, 1/yr | 1 km :: Land/G,R | N/A :: N/A |
| 2723 | Vegetation Stress | LB | Runnng, Huete | MODIS | AM,PM | EDC | PL | s/m | 200-1000 :: 5-30% | 1/day, 1/wk | pixel_size :: Land/G,R,L | N/A :: N/A |
| 2644 | Vegetation Type | LB | Wessman | HIRIS | AM2 | EDC | AL | ha | 10% :: 10% | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 3298 | Volcano Age | VO | Pieri, Kahle | ASTER | AM1 | EDC | AL | KA | variable :: variable | | 15,30,90 m :: Land/R,L | N/A :: |
| 3271 | *Volcano Deformation(Inflation-Deflation)* | VO | Schutz et al | GLRS-A | ALT | GSFC | AL | mm/day - mm/yr | 5/yr-100/d :: | 1/day, 1/yr | 1 km :: Land/L | :: Sfc |
| 3270 | Volcano Deformation(Inflation-Deflation) | VO | Schutz et al | GLRS-A | ALT | GSFC | AL | mm/day - mm/yr | 5 mm/yr :: | 1/day, 1/yr | 100 km :: Land/R | :: Sfc |
| 3299 | Volcano-Activity Extent | VO | Rowan, Goetz | HIRIS | AM2 | EDC | AL | m^2 | | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 3294 | Volcano-Activity Temperature | VO | Rowan, Goetz | HIRIS | AM2 | EDC | AL | C | 10 C :: 5 C | 1/(2-16 day) | 30 m :: Land/L | N/A :: Sfc |
| 1734 | Wind Speed | AD | Waters | MLS | MO | GSFC | AL | m/s | :: 10m/s | 2/day [d,n] | 0.1 x 2.5 dg :: 82N-82S | 2.5 km [1.2] :: 60-110 km |
| 1735 | *Wind Speed, Along-track* | AD | Fu | ALT | ALT | JPL | AL | m/s | 2 m/s :: | | 7 km :: Ocean | N/A :: Sfc |
| 1718 | Wind Speed, Sea_sfc | AD | Aumann | AIRS | PM | GSFC | PL | m/s | | 1/day | 50 km :: Ocean | N/A :: Sfc |
| 1746 | Wind Stress | AD | Freilich | STIKSCAT | CHEM | JPL | AL | | | | :: Ocean | :: Sfc |
| 3595 | *Wind Stress, Sea_sfc* | AD | TBD | MIMR | PM | MSFC | AL | m/s | | 1 mo | 1 dg :: Ocean | N/A :: Sfc |
| 3594 | Wind Stress, Sea_sfc | AD | TBD | MIMR | PM | MSFC | AL | m/s | | | 39 km :: Ocean | N/A :: Sfc |
| 1687 | Wind Velocity, Geostrophic | AD | Barnett, Gille | HIRDLS | CHEM | GSFC | AL | m/s | 3 m/s :: 3 m/s | 2/day [d,n] | 4 x 4 dg :: G | 1 km :: 7-80 km |
| 1680 | *Wind Velocity, Sea_sfc* | AD | Freilich | STIKSCAT | CHEM | JPL | AL | m/s,dg | :: 10%; 16 deg | 1/(2 day) | 25 km :: Ocean | N/A :: Near_Sfc |
| 1679 | Wind Velocity, Sea_sfc | AD | Freilich | STIKSCAT | CHEM | JPL | AL | m/s,dg | :: 7%, 16 deg | 1/(2 day) | 1 dg :: Ocean | N/A :: Near_Sfc |
| 1688 | Wind Velocity, Sea_sfc Glint-Pattern | OR | Gordon | MODIS | AM,PM | GSFC | PL | m/s | | 1/orbit [d] | 1 km :: Ocean/R | N/A :: Sfc |

# Instrument Team Input Requirements

Appendix G

## Science Processing Support Office (SPSO)

## Goddard Space Flight Center

**August 1992**

"blanks" indicate EOS data products

## Appendix G: Instrument Team Input Requirements

| *Instrument Team* | *Input Product Name* | *Prod #* | *Input Type* | *Time frame* | *Source Instrument* | *Platform / Experiment* | *Source DAAC or Institution* | *Accuracy Abs :: Rel* | *Temporal Resolution* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* | *Non-EOS* | *Comments* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CERES | Aerosol Extinction Coef | 1012 | A | AL | SAGE-III | AERO,CHEM | LaRC | 0.05 :: 0.05 | 1/mo | 5 dg :: G | N/A :: Strat | | |
| | Aerosol Optical Depth | 2297 | A | AL | EOSP | AERO,AM2 | LaRC | 0.10 :: 0.10 | 1/day [d,n] | 1.25 dg :: G | 3 km :: Strat | | |
| | Aerosol Optical Depth, Spectral | 2294 | A | AL | MODIS | AM,PM | GSFC | 0.10 :: 0.10 | 1/day [d,n] | 1.25 dg :: G | 3 km :: Trop | | |
| | Aerosol Optical Depth, Spectral | 2293 | A | AL | MODIS | AM,PM | GSFC | 0.10 :: 0.10 | 1/day [d,n] | 1.25 dg :: G | 3 km :: Trop | | |
| | Albedo, Aerosol | 2003 | A | PL | MODIS | AM,PM | GSFC | | 1/day [d,n] | 1.25 dg :: G | 3 km :: Trop | | |
| | CH4 Conc | 1085 | A | AL | HIRDLS | CHEM | GSFC | | 1/seas | | | | |
| | Cloud Liq_water Total Column | 3598 | A | AL | MIMR | PM1 | MSFC | 10% :: 10% | 2/day [d,n] | 12 km :: Ocean | N/A :: Atmos | | |
| | Humidity Profile | 1828 | A | AL | AIRS | PM | GSFC | | | | | | |
| | Land_sfc Emissivity | 2111 | A | PL | MODIS | AM,PM | EDC | 0.025 :: 0.025 | 2/day [d,n] | 1.25 dg :: Land | N/A :: Sfc | | |
| | Land_sfc Emissivity, Spectral | 2113 | A | PL | AIRS | PM | GSFC | 0.025 :: 0.025 | 2/day [d,n] | 1.25 dg :: Land | N/A :: Sfc | | |
| | Land_sfc Temperature | 2485 | A | AL | MODIS | AM,PM | EDC | 1.0 K :: 0.5 K | 4/day [d,n] | 1.25 dg :: Land | N/A :: Sfc | | |
| | aerosol optical depth | 350 | D | BL | AVHRR | NOAA | NESDIS | 0.20 :: 0.20 | 1/wk [d,n] | 1.25 dg :: Ocean | N/A :: Atmos | X | |
| | cloud liquid water path | 351 | D | BL | MSU | NOAA | NESDIS | | 2/day[d,n], 7 mo | 150 km :: G | N/A :: Atmos | X | Full res. 10 channels: 1,6,7,20,29,31-35 |

**Input Data Product Use:**

A.....Ancillary
C.....Correlative
D.....Algorithm Development
R.....Specialized Research

**Time-frame when products are required:**

BL....Before-Launch
AL.....At-Launch
PL.....Post-Launch

Source Data Center for specified input requirement

Non-EOS products labeled "X" are expected to be provided by EOSDIS. Those labeled "Y" are to be provided by the instrument investigators themselves.

# Legend for Appendix G: Instrument Team Input Requirements

**NOTE:**

**Except for CERES and MODIS, instrument team input data requirements have not been provided in as full detail as information on instrument output data products, especially when non-EOS data is involved. This table does display the full set of product attribute fields in order to conveniently list the CERES and MODIS team requirements; however, such detailed information is lacking for most instrument teams. Also in many cases the input data requirements are not fully specified, e.g. "meteorological data". For this reason, these product names have not been fully integrated into the standard product naming conventions for EOS products.**

## Appendix G: Instrument Team Input Requirements

| Instrument Team | Input Product Name | Input # | Input Type | Time Frame | Source Instrument | Source Platform / Experiment | Source DAAC or Institution | Accuracy | Temporal Res | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. | Non-EOS | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AIRS | Atmospheric Temperature (not a proposed output product for MIMR) | 9003 | A | | MIMR | PM1 | MSFC | | | | | | Selected sets |
| | Cloud Cover | 2086 | R | AL | CERES | TRM,AM,PM | LaRC | | | | | | Selected sets |
| | Cloud Cover | 2081 | R | AL | MODIS | AM,PM | GSFC | | | | | | Selected sets |
| | Cloud Height, Top | 1429 | R | AL | CERES | TRM,AM,PM | LaRC | | | | | | Selected sets |
| | Cloud Pressure, Top | 1531 | R | AL | HIRDLS | CHEM | GSFC | | | | | | Selected sets |
| | Cloud Pressure, Top | 1530 | R | AL | EOSP | AERO,AM2 | LaRC | | | | | | Selected sets |
| | Cloud Pressure, Top | 1528 | R | AL | MODIS | AM,PM | GSFC | | | | | | Selected sets |
| | Cloud Temperature, Top | 2467 | R | AL | MODIS | AM,PM | GSFC | | | | | | Selected sets |
| | H2O Conc | 1837 | R | AL | HIRDLS | CHEM | GSFC | | | | | | Selected sets |
| | Land_sfc Temperature | 2485 | R | AL | MODIS | AM,PM | EDC | | | | | | Selected sets |
| | Land_sfc Temperature (not a proposed output product for MIMR) | 9004 | A | | MIMR | PM1 | MSFC | | | | | | Selected sets |
| | Level-1B Radiance, CERES | 2359 | C | AL | CERES | TRM,AM,PM | LaRC | | | | | | Selected sets |
| | Level-1B Radiance, EOSP | 2362 | C | AL | EOSP | AERO,AM2 | LaRC | | | | | | Selected sets |
| | Level-1B Radiance, MODIS<3um | 2392 | C | AL | MODIS | AM,PM | GSFC | | | | | | Selected sets |
| | Level-1B Radiance, MODIS<3um | 2339 | C | AL | MODIS | AM,PM | GSFC | | | | | | Selected sets |
| | Level-1B Radiance, MODIS<3um | 2338 | C | AL | MODIS | AM,PM | GSFC | | | | | | Selected sets |
| | Level-1B Radiance, MODIS>3um | 2340 | C | AL | MODIS | AM,PM | GSFC | | | | | | Selected sets |
| | Precipitable Water | 1875 | R | AL | MODIS | AM,PM | GSFC | | | | | | Selected sets |
| | Sea_sfc Temperature (SST) | 3603 | R | AL | MIMR | PM1 | MSFC | | | | | | Selected sets |
| | Sea_sfc Temperature (SST) | 2527 | R | AL | MODIS | AM,PM | GSFC | | | | | | Selected sets |
| | Temperature Profile | 1608 | R | AL | HIRDLS | CHEM | GSFC | | | | | | Selected sets |
| | O3 data | 338 | A | | GOMR | NOAA | | | | | | X | |
| | O3 total column | 551 | A | | TOVS | NOAA | | | | | | X | |
| | column water vapor | 745 | C | BL, PL | | in situ (radiosonde) | NCDC | | | | | X | For quality assurance |
| | digital elevation model | 340 | A | | | in situ | CIA | | | 0.5 x 0.5 km :: | | X | |
| | geophysical data | 47 | A | BL | | in situ (ship) | NCDC | | | | | X | |
| | humidity profiles | 749 | C | BL | | in situ (radiosonde) | NMC | | | | | X | |
| | humidity profiles | 744 | C | BL, PL | | in situ (radiosonde) | NCDC | | | | | X | |
| | land_ice cover | 337 | A | | | in situ | | | | | | X | |
| | radiance | 248 | A | BL | AMSU | NOAA-11 | NESDIS | | | | | X | |
| | radiance | 167 | A | | HIRS | NOAA | NESDIS | SW5%,LW.2K :: SW1%,LW.2K | 2/day [d,n] | 15 km :: R | N/A :: Atmos | X | |
| | radiance | 120 | A | BL | MSU | NOAA | NESDIS | | | | | X | |
| | radiance | 56 | A | BL | HIRS2 | NOAA | NESDIS | | | | | X | |
| | snow cover | 336 | A | | | in situ | | | | | | X | |
| | soil / terrain map | 339 | A | | | in situ | | | | | | X | Best available |
| | sounding data | 28 | A | BL | TOVS | NOAA | NESDIS | | | | | X | |
| | temperature profiles | 84 | A | BL | | in situ (radiosonde) | NMC | | | | | X | |
| | temperature profiles | 46 | A | BL, PL | | in situ (radiosonde) | NCDC | | | | | X | |
| ALT | Geodetic EOS-platform Position | 2862 | A | AL | GGI | ALT | JPL | | | | | | |
| | Precipitable Water | 3597 | A | AL | MIMR | PM1 | MSFC | | | | | | |
| | surface pressure | 341 | A | | | in situ | FNOC | | | | | X | |
| | tide gauge sea level values | 87 | A | BL | | in situ | IERS | | | | | X | |
| ASTER | Aerosol Optical Depth | 2298 | A | | MISR | AM | LaRC | | | | | | Atmospheric correction |
| | Biomass, Above_sfc (not a proposed MISR product) | 9010 | C | | MISR | AM | LaRC | | | | | | Algorithm validation |
| | Brightness Temperature (at Sensor) | 2452 | A | AL | ASTER | AM1 | EDC | | | | | | |
| | CO2 Total Burden (Mixing Ratio) | 1151 | A | PL | AIRS | PM | GSFC | | | | | | Atmospheric correction |

## Appendix G: Instrument Team Input Requirements

| Instrument Team | Input Product Name | Input # | Input Type | Time Frame | Source Instrument | Source Platform / Experiment | Source DAAC or Institution | Accuracy | Temporal Res | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. | Non-EOS | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ASTER | Humidity Profile | 1828 | A | AL | AIRS | PM | GSFC | | | | | | Atmospheric correction |
| | Level-1B Radiance, HIRIS | 2370 | A | AL | HIRIS | AM2 | EDC | | | | | | |
| | Level-1B Radiance, MISR | 2386 | A | AL | MISR | AM | LaRC | | | | | | |
| | Level-1B Radiance, MODIS<3um | 2392 | A | AL | MODIS | AM,PM | GSFC | | | | | | |
| | Level-1B Radiance, MODIS<3um | 2339 | A | AL | MODIS | AM,PM | GSFC | | | | | | |
| | Level-1B Radiance, MODIS<3um | 2338 | A | AL | MODIS | AM,PM | GSFC | | | | | | |
| | Level-1B Radiance, MODIS>3um | 2340 | A | AL | MODIS | AM,PM | GSFC | | | | | | |
| | O2_Total Column (pressure profile from O2 spectra determined by MLS) | 9007 | A | | MLS | MO | GSFC | | | | | | Atmospheric correction |
| | O3 Total Burden | 1333 | A | AL | MODIS | AM,PM | GSFC | | | | | | Atmospheric correction |
| | O3 Total Burden | 1332 | A | PL | AIRS | PM | GSFC | | | | | | Atmospheric correction |
| | Precipitable Water | 1869 | A | AL | AIRS | PM | GSFC | | | | | | Atmospheric correction |
| | Temperature Profile | 1588 | A | AL | AIRS | PM | GSFC | | | | | | Atmospheric correction |
| | O2 profile (atmospheric pressure) | 342 | A | | | TBD | NMC | | | | | X | Atmospheric correction |
| | calibration data for ASTER | 183 | A | | spectrometer | in situ (helicopter) | NASA | | | | | X | |
| | calibration data for ASTER | 182 | A | | SWIR | in situ | NASA | | | | | X | |
| | cloud data | 109 | C | | VISSR | GOES | NESDIS | | | | | X | Algorithm validation |
| | digital elevation model | 113 | C | BL, AL | | SPOT | CNES | | | | | X | Best available supplemented by ASTER at launch |
| | emissivity data | 181 | C | | | in situ | TBD | | | | | X | |
| | evapotranspiration | 713 | C | BL | AMRIR ? | NOAA | NOAA | | | | | X | |
| | geophysical data | 94 | D | BL | TIMS | in situ (aircraft) | Geology MAC | | | | | X | |
| | geophysical data | 38 | C | BL | SAR | in situ (aircraft) | JPL | | | | | X | |
| | geophysical data | 17 | C | BL | | Meteosat | ESA | | | | | X | |
| | geophysical data | 2 | A | BL | AVIRIS | in situ (aircraft) | PLDS | | | | | X | |
| | global cloud climatology scenes | 179 | C | | | Japansat | NASDA? | | | | | X | |
| | global cloud climatology scenes | 178 | C | | | JAS | NASDA? | | | | | X | |
| | precision control point Chip files | 343 | A | | | in situ | | | | | | X | ground registration |
| | radiance | 165 | C | AL | AVHRR-LAC | NOAA | NESDIS | | | | | X | |
| | radiance based calibration | 177 | A | | | ER-2 | | | | | | X | |
| | scene radiances | 33 | C | BL, AL, | | SPOT | CNES | | | | | X | |
| | scene radiances | 16 | C | BL | TM | Landsat | EDC, EOSAT | | | | | X | |
| | snow cover | 336 | A | | | in situ | | | | | | X | Algorithm validation |
| | sounding data | 14 | C | BL, PL | VAS | GOES | NESDIS | | | | | X | |
| CERES | Aerosol Extinction Coef | 1012 | A | AL | SAGE-III | AERO,CHEM | LaRC | 0.05 :: 0.05 | 1/mo | 5 dg :: G | N/A :: Strat | | |
| | Aerosol Optical Depth | 2297 | A | AL | EOSP | AERO,AM2 | LaRC | 0.10 :: 0.10 | 1/day [d,n] | 1.25 dg :: G | 3 km :: Strat | | |
| | Aerosol Optical Depth, Spectral | 2294 | A | AL | MODIS | AM,PM | GSFC | 0.10 :: 0.10 | 1/day [d,n] | 1.25 dg :: G | 3 km :: Trop | | |
| | Aerosol Optical Depth, Spectral | 2293 | A | AL | MODIS | AM,PM | GSFC | 0.10 :: 0.10 | 1/day [d,n] | 1.25 dg :: G | 3 km :: Trop | | |
| | Albedo, Aerosol | 2003 | A | PL | MODIS | AM,PM | GSFC | | 1/day [d,n] | 1.25 dg :: G | 3 km :: Trop | | |
| | CH4 Conc | 1085 | A | AL | HIRDLS | CHEM | GSFC | | 1/seas | | | | |
| | Cloud Liq_water Total Column | 3598 | A | AL | MIMR | PM1 | MSFC | 10% :: 10% | 2/day [d,n] | 12 km :: Ocean | N/A :: Atmos | | |
| | Humidity Profile | 1828 | A | AL | AIRS | PM | GSFC | | | | | | |
| | Land_sfc Emissivity | 2111 | A | PL | MODIS | AM,PM | EDC | 0.025 :: 0.025 | 2/day [d,n] | 1.25 dg :: Land | N/A :: Sfc | | |
| | Land_sfc Emissivity, Spectral | 2113 | A | PL | AIRS | PM | GSFC | 0.025 :: 0.025 | 2/day [d,n] | 1.25 dg :: Land | N/A :: Sfc | | |
| | Land_sfc Temperature | 2485 | A | AL | MODIS | AM,PM | EDC | 1.0 K :: 0.5 K | 4/day [d,n] | 1.25 dg :: Land | N/A :: Sfc | | |
| | Land_sfc Temperature, Skin | 2481 | A | AL | AIRS | PM | GSFC | 1.0 K :: 0.5 K | 4/day [d,n] | 1.25 dg :: Land | N/A :: Sfc | | |
| | Level-1B Radiance, MODIS<3um | 2392 | A | AL | MODIS | AM,PM | GSFC | SW5%,LW.2K :: SW1%,LW.1K | 2/day [d,n] | 0.25 km :: G | N/A :: Atmos | | Ch.1 subsampled 2x2 pixel sets, 1 set/4 km |

## Appendix G: Instrument Team Input Requirements

| Instrument Team | Input Product Name | Input # | Input Type | Time Frame | Source Instrument | Source Platform / Experiment | Source DAAC or Institution | Accuracy | Temporal Res | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. | Non-EOS | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CERES | Level-1B Radiance, MODIS<3um | 2338 | A | AL | MODIS | AM,PM | GSFC | SW5%,LW.2K :: SW1%,LW.1K | 2/day [d,n] | 0.5 km :: G | N/A :: Atmos | | Ch.6,7: subsampled 2x2 pixel sets, 1 set/4 km. Ch.1 averaged to .5 km, subsampled as above. |
| | Level-1B Radiance, MODIS<3um | 2339 | A | AL | MODIS | AM,PM | GSFC | SW5%,LW.2K :: SW1%,LW.1K | 2/day [d,n] | 1 km :: G | N/A :: Atmos | | Ch.6,7:averaged to 1 km, subsampled 2 x 2 pixel sets |
| | Level-1B Radiance, MODIS>3um | 2340 | A | AL | MODIS | AM,PM | GSFC | SW5%,LW.2K :: SW1%,LW.1K | 2/day [d,n] | 1 km :: G | N/A :: Atmos | | Ch.20,29,31-35 subsampled 2x2 pixel sets, 1 set/4km. |
| | Level-1B Radiance, MODIS | 2338 + | A | AL | MODIS | AM,PM | GSFC | SW5%,LW.2K :: SW1%,LW.1K | 2/day [d,n] | 0.25 -1.0 km :: R (30 regions) | N/A :: Atmos | | Full res. 10 channels: 1, 6, 7, 20, 29, 31-35 |
| | Level-2 Radiance, Water-leaving | 2416 | A | AL | MODIS | AM,PM | GSFC | 5% :: 5% | | :: Ocean | | | |
| | N2O Conc | 1239 | A | AL | HIRDLS | CHEM | GSFC | | | | | | |
| | O3 Conc | 1321 | A | AL | SAGE-III | AERO,CHEM | LaRC | | 1/day [d,n] | 1.25 dg :: G | 6 km :: Atmos | | |
| | O3 Conc | 1318 | A | AL | HIRDLS | CHEM | GSFC | | 1/day [d,n] | 1.25 dg :: G | 6 km :: Atmos | | |
| | O3 Total Burden | 1332 | A | PL | AIRS | PM | GSFC | | | | | | |
| | Precipitation Rate | 3600 | A | AL | MIMR | PM1 | MSFC | 50% ::25% | 2/day [d,n] | 22 km :: G | N/A :: Atmos | | |
| | Sea_Ice Conc | 3611 | A | AL | MIMR | PM1 | NSIDC | 10% :: 5% | 1/day | 50 km :: Ocean/Cryo | N/A :: Sfc | | |
| | Sea_sfc Temperature (SST) | 2532 | A | AL | MODIS | AM,PM | GSFC | 1.0 K :: 0.5 K | 1/wk | 1.25 dg :: Ocean | N/A :: Sfc | | |
| | Snow Cover | 3607 | A | AL | MIMR | PM1 | NSIDC | 10% :: 5% | 1/day | 50 km :: Land | N/A :: Sfc | | |
| | Temperature Profile | 1588 | A | AL | AIRS | PM | GSFC | | 2/day [d,n] | | | | |
| | CO2 conc | 365 | D | AL | | | NESDIS | 1% :: 1% | 1/yr | :: G | N/A :: Atmos | X | |
| | O3 profiles | 801 | D | BL | | INSAT, METEOSAT, NOA | NCDS | | 8/day[d,n] | 280 km :: G | 3 km :: Atmos | X | |
| | O3 profiles | 798 | D | BL | | GMS, GOES / ISCCP | GISS | | 8/day[d,n] | 280 km :: G | 3 km :: Atmos | X | |
| | aerosol optical depth | 350 | D | BL | AVHRR | NOAA | NESDIS | 0.20 :: 0.20 | 1/wk [d,n] | 1.25 dg :: Ocean | N/A :: Atmos | X | |
| | cloud data | 802 | D | BL | | INSAT, METEOSAT, NOA | NCDS | | 8/day[d,n] | 280 km :: G | 3 km :: Atmos | X | |
| | cloud data | 799 | D | BL | | GMS, GOES / ISCCP | GISS | | 8/day[d,n] | 280 km :: G | 3 km :: Atmos | X | |
| | cloud data (TRMM) | 369 | D | AL | | INSAT, METEOSAT, NOA | NCDS | | 8/day[d,n] | 280 km :: G | 3 km :: Atmos | X | |
| | cloud data (TRMM) | 368 | D | AL | | GMS, GOES / ISCCP | GISS | | 8/day[d,n] | 280 km :: G | 3 km :: Atmos | X | |
| | cloud liquid water path | 364 | D | AL | TMI | TRMM | GSFC | 10% :: 10% | 2/day[d,n] | 25 km :: G | N/A :: Atmos | X | |
| | cloud liquid water path | 352 | D | BL | SSM/I | DMSP | DMSP | | 2/day[d,n], 7 mo | 2-5 dg :: Ocean | N/A :: Atmos | X | |
| | cloud liquid water path | 351 | D | BL | MSU | NOAA | NESDIS | | 2/day[d,n], 7 mo | 150 km :: G | N/A :: Atmos | X | |
| | cloudiness properties | 353 | D | BL | | model | NWP | | | | | X | |
| | geopotential | 366 | D | AL | | in situ | NMC | | 4/day[d,n] | 1.25 dg :: G | 1 km :: Atmos | X | |
| | humidity (q) profiles | 800 | D | BL | | INSAT, METEOSAT, NOA | NCDS | | 8/day[d,n] | 280 km :: G | 3 km :: Atmos | X | |
| | humidity (q) profiles | 797 | D | BL | | GMS, GOES / ISCCP | GISS | | 8/day[d,n] | 280 km :: G | 3 km :: Atmos | X | |
| | humidity profile | 367 | A | AL | | in situ | NMC | 20% :: 10% | 4/day[d,n] | 1.25 dg :: G | 2 km :: Atmos | X | |
| | land surface skin temperature | 356 | D | BL | | in situ | NESDIS | 1.0 K :: 0.5 K | 4/day[d,n] | 1.25 dg :: Land | N/A :: Sfc | X | |
| | land surface temperature, skin | 370 | D | AL | HIRS | ESA | NESDIS | 1 K :: 0.5 K | 4/day[d,n] | 1.25 dg :: Land | N/A :: Sfc | X | |
| | land surface temperature, skin (TRMM) | 371 | D | AL | HIRS | NOAA | NESDIS | 1 K :: 0.5 K | 4/day[d,n] | 1.25 dg :: Land | N/A :: Sfc | X | |
| | planetary boundary height | 361 | D | BL | | model | NWP | | | | | X | |
| | precipitation rate | 377 | D | AL | TMI | TRMM | MSFC | 50% :: 25% | 2/day [d,n] | 22 km :: G | N/A :: Atmos | X | |
| | precipitation rate | 362 | D | BL | SSM/I | NOAA | DMSP | 50% :: 25% | 2/day [d,n], 7 mo | 150 km :: G | N/A :: Atmos | X | |
| | radiance | 376 | D | AL | VAS/VISSR | GOES | NESDIS | SW5%, LW.2K :: SW1%, LW0.2K | 12/day[d,n] | 4 km :: R [30 - 10x10dg region | N/A :: Atmos | X | |
| | radiance | 375 | D | AL | HIRS | NOAA / TRMM | NESDIS | LW.2K :: LW.1K | 2/day[d,n] | 17 km :: G | N/A :: Atmos | X | |
| | radiance | 374 | D | AL | HIRS | ESA | NESDIS | LW.2K :: LW.1K | 2/day[d,n] | 17 km :: G | N/A :: Atmos | X | |
| | radiance | 373 | D | AL | AVHRR-GAC | TRMM | GSFC | SW5%, LW.2K :: SW1%, LW0.1K | 2/day[d,n] | 2 km :: G | N/A :: Atmos | X | |

## Appendix G: Instrument Team Input Requirements

| *Instrument Team* | *Input Product Name* | *Input #* | *Input Type* | *Time Frame* | *Source Instrument* | *Source Platform / Experiment* | *Source DAAC or Institution* | *Accuracy* | *Temporal Res* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* | *Non-EOS* | *Comments* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CERES | radiance | 372 | D | AL | AVHRR-LAC | ESA | NESDIS | SW5%, LW.2K :: SW1%, LW0.1K | 2/day[d,n] | 1 km :: G; subsampled 2x2 pix | N/A :: Atmos | X | |
| | radiance | 360 | D | BL | TM | Landsat | EOSAT | SW5%, LW.2K :: SW1%, LW0.1K | 100 scenes | 30 m :: R | N/A :: Atmos | X | |
| | radiance | 359 | D | BL | HIRS | NOAA | NESDIS | LW.2K :: LW.1K | 2/day[d,n], 7 mo | 17 km :: G | N/A :: Atmos | X | |
| | radiance: 5 channels | 358 | D | BL | AVHRR-GAC | NOAA | NESDIS | SW5%, LW.2K :: SW1%, LW0.1K | 2/day[d,n], 7 sel. mo | 4.0 km :: G | N/A :: Atmos | X | |
| | radiance: 5 channels | 357 | D | BL | AVHRR-LAC | NOAA | NESDIS | SW5%, LW.2K :: SW1%, LW0.1K | 1/day [d,n], 1 yr | 1 km :: Polar (65-90 dg, N/S) | N/A :: Atmos | X | |
| | sea surface temperature (SST) | 846 | D | BL | AVHRR | NOAA | NESDIS | 1 K :: 0.5K | 1/wk, 7 sel. mo | 100 km :: Ocean | N/A :: Sfc | X | |
| | sea surface temperature (SST) | 378 | D | AL | AVHRR | TRMM | NESDIS | 1 K :: 0.5 K | 1/wk | 1.25 dg :: Ocean | N/A :: Sfc | X | |
| | temperature profile | 379 | A | AL | | in situ | NMC | 1 K :: 1 K | 4/day[d,n] | 1.25 dg :: G | 1 km :: Atmos | X | |
| | temperature profile (TRMM) | 380 | D | AL | | in situ | NMC | 1 K :: 1 K | 4/day[d,n] | 1.25 dg :: G | 1 km :: Atmos | X | |
| | temperature profiles | 355 | D | BL | | INSAT, METEOSAT, NOA | NCDS | | 8/day[d,n] | 280 km :: G | 3 km :: Atmos | X | |
| | temperature profiles | 354 | D | BL | | GMS, GOES / ISCCP | GISS | | 8/day[d,n] | 280 km :: G | 3 km :: Atmos | X | |
| | topographic elevation | 381 | A | AL | | in situ | | 200 m :: 200 m | 1/mission | 10 km :: Land | N/A :: Sfc | X | |
| | water vapor | 363 | D | BL | | model | NWP | | | | | X | |
| | wind velocity | 382 | D | AL | | in situ | NMC | 5 m/s :: 2 m/s | 4/day[d,n] | 1.25 dg :: G | 1 km :: Atmos | X | |
| EOSP | Aerosol Extinction Coef | 1012 | C | AL | SAGE-III | AERO,CHEM | LaRC | | | | | | Standard product, not until 2002 CHEM platform |
| | Aerosol Optical Depth | 2299 | C | AL | MISR | AM | LaRC | | | 15 km :: | | | Standard product |
| | Aerosol Optical Depth, Spectral | 2293 | C | AL | MODIS | AM,PM | GSFC | | | 5 km :: | | | Standard product |
| | Aerosol Size-distribution | 1993 | C | AL | MISR | AM | LaRC | | | 15 km :: | | | Standard product |
| | Cloud Cover | 2086 | C | AL | CERES | TRM,AM,PM | LaRC | | | 25 km :: | | | Standard product |
| | Cloud Cover | 2081 | C | AL | MODIS | AM,PM | GSFC | | | 0.5 km :: | | | Standard product |
| | Cloud Drop Phase | 1767 | C | AL | CERES | TRM,AM,PM | LaRC | | | 25 km :: | | | Standard product |
| | Cloud Drop Phase | 1763 | C | AL | ASTER | AM1 | EDC | | | | | | Standard product |
| | Cloud Drop Size(Effective Radius) | 1782 | C | AL | CERES | TRM,AM,PM | LaRC | | | 25 km :: | | | Standard product |
| | Cloud Drop Size(Effective Radius) | 1780 | C | AL | MODIS | AM,PM | GSFC | | | 5 km :: | | | Standard product |
| | Cloud Height, Top | 1427 | C | AL | ASTER | AM1 | EDC | | | | | | Standard product |
| | Cloud Height, Top | 1423 | C | PL | AIRS | PM | GSFC | | | 50 km :: | | | Standard AIRS product |
| | Cloud Optical Depth | 2311 | C | AL | MODIS | AM,PM | GSFC | | | 5 km :: | | | Standard product |
| | Cloud Optical Depth | 2310 | C | AL | ASTER | AM1 | EDC | | | | | | Standard product |
| | Cloud Optical Depth, SW | 2321 | C | AL | CERES | TRM,AM,PM | LaRC | | | 25 km :: | | | Standard product |
| | Level-1B Radiance, AIRS | 2347 | C | AL | AIRS[AIRS] | PM | GSFC | | | 15 km :: | | | Selected channels |
| | Level-1B Radiance, MODIS<3um | 2392 | C | AL | MODIS | AM,PM | GSFC | | | | | | Selected channels |
| | Temperature Profile | 1588 | C | AL | AIRS | PM | GSFC | | | 50 km :: | | | Standard product |
| | digital elevation model (5 km resolution) | 655 | A | AL | | | EDC | | | 5 km :: Land | | X | Topography at 5 km resolution |
| GGI | Humidity Profile | 1828 | A | AL | AIRS | PM | GSFC | | | | | | |
| | Platform POD Data (not a proposed official EOS output product for ALT) | 9008 | A | | ALT | ALT | JPL | | | | | | |
| | Platform POD Data (not a proposed official EOS output product for GLRS | 9009 | A | | GLRS-A | ALT | GSFC | | | | | | |
| | Temperature Profile | 1588 | A | AL | AIRS | PM | GSFC | | | | | | |
| | O3 data | 338 | A | | GOMR | NOAA | | | | | | X | |
| GGI | down-looking dual frequency radio data | 95 | A | BL | | PRARE | | | | | | X | |
| | geophysical records with reference ephemeris | 81 | A | BL | | GPS | | | | | | X | |
| | solar acitvity (sunspot, flare) | 97 | A | BL | | SMM | NASA | | | | | X | |

## Appendix G: Instrument Team Input Requirements

| *Instrument Team* | *Input Product Name* | *Input #* | *Input Type* | *Time Frame* | *Source Instrument* | *Source Platform / Experiment* | *Source DAAC or Institution* | *Accuracy* | *Temporal Res* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* | *Non-EOS* | *Comments* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GLRS-A | Humidity Profile | 1828 | A | AL | AIRS | PM | GSFC | | | | | | |
| | altimetry | 63 | A | BL | laser | Shuttle | JPL | | | | | X | |
| | altimetry | 62 | A | BL | laser | in situ (aircraft) | | | | | | X | |
| | geophysical records with reference ephemeris | 81 | A | BL | | GPS | | | | | | X | |
| | glaciological data (elevation) | 40 | A | BL | | | NSF/DPP | | | | | X | |
| | ice sheet topography | 61 | A | BL | | | | | | | | X | |
| HIRDLS | Aerosol Extinction Coef | 1012 | C | AL | SAGE-III | AERO,CHEM | LaRC | | | | | | All data |
| | Aerosol Size-distribution | 1993 | C | AL | MISR | AM | LaRC | | | | | | All data |
| | Cloud Cover | 2062 | C | AL | AIRS | PM | GSFC | | | | | | Primary interest upper level clouds |
| | Cloud Drop Phase | 1770 | C | AL | EOSP | AERO,AM2 | LaRC | | | | | | All data |
| | Cloud Drop Size | 1774 | C | AL | EOSP | AERO,AM2 | LaRC | | | | | | All data |
| | Cloud Height, Top | 1423 | C | PL | AIRS | PM | GSFC | | | | :: upper level clouds | | Primary interest upper level clouds |
| | Cloud Temperature, Top | 2463 | C | AL | AIRS | PM | GSFC | | | | | | Primary interest upper level clouds |
| | Humidity Profile | 1828 | C | AL | AIRS | PM | GSFC | | 1/day, 1/wk | | :: >500 mb | | |
| | Level-1B Radiance, AIRS | 2347 | R | AL | AIRS[AIRS] | PM | GSFC | | | | | | All radiances |
| | Level-1B Radiance, AMSU-A | 2350 | C | AL | AIRS[AMSU-A] | PM | GSFC | | | | | | All radiances |
| | Level-1B Radiance, MHS | 2352 | C | AL | AIRS [MHS] | PM | GSFC | | | | | | All radiances |
| | Level-1B Radiance, MODIS>3um | 2340 | C | AL | MODIS | AM,PM | GSFC | | | | | | 6.7 um radiance, all data |
| | Temperature Profile | 1588 | C | AL | AIRS | PM | GSFC | | 1/day, 1/wk | | :: >500 mb | | |
| | atmospheric composition data | 344 | C | | | in situ (balloon, ai | | | | | | X | |
| | geopotential height analysis | 158 | A | | | model | NMC,ECMWF | | | :: G | :: all levels | X | Also surface pressure |
| | temperature analysis fields | 157 | D,A | | | model | NMC,ECMWF | | | :: G | :: all levels | X | Also surface pressure |
| HIRIS | Cloud Height, Top | 1427 | C | AL | ASTER | AM1 | EDC | | | | | | |
| | Cloud Pressure, Top | 1528 | C | AL | MODIS | AM,PM | GSFC | | | | | | |
| | Humidity Profile | 1828 | A | AL | AIRS | PM | GSFC | | | | | | |
| | Level-1B Radiance, AIRS | 2347 | A | AL | AIRS[AIRS] | PM | GSFC | | | | | | |
| | Level-1B Radiance, ASTER | 2375 | A | AL | ASTER | AM1 | EDC | | | | | | |
| | Level-1B Radiance, MISR | 2387 | A | AL | MISR | AM | LaRC | | | | | | |
| | Level-1B Radiance, MODIS<3um | 2392 | A | AL | MODIS | AM,PM | GSFC | | | | | | |
| | Temperature Profile | 1588 | A | AL | AIRS | PM | GSFC | | | | | | |
| | aerosol climatology | 839 | A | BL, PL | sun photometer | in situ (ground) | | | | | | X | |
| | calibration data | 810 | A | BL | field spectrometer | in situ | | | | | | X | |
| | calibration data for ASTER | 183 | A | | spectrometer | in situ (helicopter) | NASA | | | | | X | |
| | calibration data for ASTER | 182 | A | | SWIR | in situ | NASA | | | | | X | |
| | calibration/verification optical data | 811 | C | PL | | in situ (ship) | | | | | | X | |
| | canopy chemistry/biophysics data | 812 | A | BL | AVIRIS | in situ (aircraft) | | | | | | X | |
| | cloud data | 814 | A | BL | | in situ / STORM | | | | | | X | |
| | cloud data | 813 | A | BL | | in situ / FIRE | | | | | | X | |
| | cloud data | 24 | A | PL | AVHRR | NOAA | NESDIS | | | | | X | |
| | cloud imagery | 815 | A | BL | AVIRIS | | | | | | | X | |
| | cloud reflectance, bi-directional, (BRDF) | 816 | A | BL | Personal Spectromete | in situ (aircraft) | | | | | | X | |
| | digital elevation model (surface topography) | 187 | A | AL | | | DMA | | one time only | 0.1 dg | | X | |
| | digital elevation model-7.5 min (DEM) | 817 | A | BL | | in situ | | | | 7.5 min :: L | | X | |
| | field data (pigments, phytoplankton abundance & species, photosyntheti | 818 | A | BL | | in situ | | | | | | X | |

## Appendix G: Instrument Team Input Requirements

| *Instrument Team* | *Input Product Name* | *Input #* | *Input Type* | *Time Frame* | *Source Instrument* | *Source Platform / Experiment* | *Source DAAC or Institution* | *Accuracy* | *Temporal Res* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* | *Non-EOS* | *Comments* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HIRIS | field data in snow regions | 819 | C | BL, PL | | in situ | | | | | | X | |
| | forest ecosystem products (foliar canopy mass, foliar chemistry-N, lig | 820 | A | BL | | in situ | | | | | | X | |
| | geophysical data | 2 | A | BL | AVIRIS | in situ (aircraft) | PLDS | | | | | X | |
| | inorganic suspended matter concentration | 151 | D | AL | | in situ (ship) | | 10% :: 5% | | 5 m :: Ocean/L | :: Sfc | X | |
| | ocean color / chloropyll data | 18 | A | BL | CZCS | Nimbus-7 | NSSDC | | | | | X | |
| | ocean color / temperature data | 335 | A | | OCTS | ADEOS | | | | | | X | |
| | ocean color data | 821 | A | BL, AL | AVIRIS | in situ (aircraft) | | | | | | X | |
| | ocean color data | 32 | A | BL, PL | SeaWiFS | Seastar | NSSDC | | | | | X | |
| | ocean physics and biological data | 822 | C | BL | | in situ | | | | | | X | |
| | optical and constituent data sets | 192 | C | | | in situ | | | | | | X | |
| | organic suspended matter concentration | 150 | D | AL | | in situ (ship) | | 10% :: 5% | | 5 m :: Ocean/L | :: Sfc | X | |
| | radiance based calibration | 177 | A | | | ER-2 | | | | | | X | |
| | radiance, upwelling / downwelling | 823 | C | BL | | in situ | | | | | | X | |
| | scene radiance, vegetation | 826 | A | BL | AVIRIS | in situ (aircraft) | | | | | | X | |
| | scene radiance, vegetation | 825 | A | BL | ASAS | in situ (aircraft) | | | | | | X | |
| | scene radiances | 33 | A | BL, AL, | | SPOT | CNES | | | | | X | |
| | scene radiances | 16 | A | BL | TM | Landsat | EDC, EOSAT | | | | | X | |
| | snow contaminants | 396 | A | BL, AL | | SPOT | | 20% :: 20% | 1 wk - 1 mo | 50 m :: Land/L | | X | |
| | snow covered area | 404 | A | BL, AL | | SPOT | | 10% :: 10% | 1 wk - 1 mo | 50 m :: Land/L | | X | |
| | snow covered area | 402 | A | BL | AVIRIS | in situ (aircraft) | | 10% :: 10% | 1 wk - 1 mo | 50 m :: Land/L | | X | |
| | soil spectral data | 838 | A | BL | field spectrometer | in situ | | | | | | X | |
| | soil spectral data | 828 | A | BL | AVIRIS | in situ (aircraft) | | | | | | X | |
| | spectral albedo | 399 | A | BL | AVIRIS | in situ (aircraft) | | 5% :: 1% | 1 wk - 1 mo | 50 m :: Land/L | | X | |
| | spectral data in snow regions | 829 | A | BL, PL | AVIRIS | in situ (aircraft) | | | | | | X | |
| | spectral reflectance | 836 | A | BL | VNIR portable spectr | in situ | | | | | | X | |
| | spectral reflectance | 835 | A | BL | TIMS | in situ (aircraft) | | | | | | X | |
| | spectral reflectance | 834 | A | BL | PIDAS | in situ | | | | | | X | |
| | spectral reflectance | 833 | A | BL | AVIRIS | in situ (aircraft) | | | | | | X | |
| | spectral reflectance, geologic mapping | 824 | A | BL | AVIRIS | in situ (aircraft) | | | | | | X | |
| | spectral reflectance, mineral | 832 | A | BL, PL | VNIR portable spectr | in situ | | | | | | X | |
| | spectral reflectance, mineral | 831 | A | BL, PL | TIMS | in situ (aircraft) | | | | | | X | |
| | spectral reflectance, mineral | 830 | A | BL, PL | AVIRIS | in situ (aircraft) | | | | | | X | |
| | stereoscopic images | 837 | A | BL, PL | | SPOT | | | | | | X | |
| | surface elevation | 383 | A | BL, AL | | SPOT | | 1 m :: 20 m | N/A | 20 m :: Land/L | | X | |
| | total suspended matter concentration | 149 | D | AL | | in situ (ship) | | 10% :: 5% | | 5 m :: Ocean/L | :: Sfc | X | |
| | visible and IR images | 652 | A | AL | VISSR | GOES | NESDIS | | | | | X | |
| | water vapor | 767 | A | | AVIRIS | in situ (aircraft) | | | | | | X | |
| LIS | Cloud Cover | 2081 | A | AL | MODIS | AM,PM | GSFC | | 2/day [d,n], 1/mo | | | | |
| | Cloud Height, Top | 1425 | A | AL | GLRS-A | ALT | GSFC | | 1/(2-16 day) | | | | |
| | Electron Precipitation Events (product from deselected instrument) | 9005 | A | | XIE | PM1 | | | | | | | |
| | Humidity Profile | 1828 | A | AL | AIRS | PM | GSFC | | 2/day [d,n] | | | | |
| | Precipitation Rate | 3600 | A | AL | MIMR | PM1 | MSFC | | | | | | |
| | Temperature Profile | 1588 | A | AL | AIRS | PM | GSFC | | 2/day [d,n] | | | | |
| | lightning observations (National Lightning Network) | 651 | C | BL, AL | | in situ | NLN | | | | | X | Cloud to ground lightning observations |
| | radar data | 650 | C | BL, AL | NEXRAD | in situ | NWS | | | | | X | |
| | visible and IR images | 652 | C | AL | VISSR | GOES | NESDIS | | | | | X | |

## Appendix G: Instrument Team Input Requirements

| Instrument Team | Input Product Name | Input # | Input Type | Time Frame | Source Instrument | Source Platform / Experiment | Source DAAC or Institution | Accuracy | Temporal Res | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. | Non-EOS | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MIMR | Temperature Profile | 1588 | A | AL | AIRS | PM | GSFC | | | | | | |
| | geophysical data | 48 | C | BL, PL | | in situ (ship) | FNOC | | | | | X | |
| | geophysical data | 47 | C | BL | | in situ (ship) | NCDC | | | | | X | |
| | humidity profiles | 749 | C | BL | | in situ (radiosonde) | NMC | | | | | X | |
| | other level 2 data | 750 | C | BL | | in situ (radiosonde) | NMC | | | | | X | |
| | sea surface temperature (SST) | 746 | C | BL | | in situ (buoy) | NOAA DBC | | | | | X | |
| | sea surface temperature (SST) | 27 | C | BL, PL | AVHRR | NOAA | NESDIS | | | | | X | |
| | snow cover | 349 | D | | SSM/I | DMSP | | | | | | X | |
| | temperature profiles | 84 | C | BL | | in situ (radiosonde) | NMC | | | | | X | |
| | wind climatology | 52 | C | BL | | | NOAA/WPL | | | | | X | |
| | wind speed | 53 | C | BL | | in situ (buoy) | NOAA DBC | | | | | X | |
| MISR | Aerosol Mass Loading | 1017 | C | AL | MODIS | AM,PM | GSFC | | | | | | |
| | Aerosol Optical Depth | 2297 | C | AL | EOSP | AERO,AM2 | LaRC | | | | | | |
| | Aerosol Optical Depth | 2292 | C | AL | HIRIS | AM2 | EDC | | | | | | Correlate with local mode data |
| | Aerosol Optical Depth, Spectral | 2294 | C | AL | MODIS | AM,PM | GSFC | | | | | | |
| | Aerosol Optical Depth, Spectral | 2293 | C | AL | MODIS | AM,PM | GSFC | | | | | | |
| | Aerosol Size-distribution (Radius-Dispersion) | 1022 | C | AL | MODIS | AM,PM | GSFC | | | | | | |
| | Albedo, Aerosol | 2003 | A | PL | MODIS | AM,PM | GSFC | | | | | | |
| | Cloud Field Structure | 1503 | C | AL | HIRIS | AM2 | EDC | | | | | | Correlate with local mode data |
| | Cloud Pressure, Top | 1530 | C | AL | EOSP | AERO,AM2 | LaRC | | | | | | |
| | Cloud Pressure, Top | 1528 | C | AL | MODIS | AM,PM | GSFC | | | | | | |
| | Cloud Reflectance, Bidirectional, | 3698 | C,R | AL | CERES | TRM,AM,PM | LaRC | | | | | | |
| | Cloud Temperature, Top | 2467 | C | AL | MODIS | AM,PM | GSFC | | | | | | |
| | Cloud Temperature, Top | 2465 | C | AL | ASTER | AM1 | EDC | | | | | | |
| | Land_sfc Reflectance, Bi-directional, (BRDF) | 2035 | C | AL | HIRIS | AM2 | EDC | | | | | | Correlate with local mode data |
| | Land_sfc Reflectance, Directional | 2431 | C | AL | MODIS | AM,PM | EDC | | | | | | |
| | Land_sfc Reflectance, Directional | 2430 | C | AL | MODIS | AM,PM | EDC | | | | | | |
| | Land_sfc Reflectance, Directional | 2429 | C | AL | MODIS | AM,PM | EDC | | | | | | |
| | O3 Total Burden | 1333 | A | AL | MODIS | AM,PM | GSFC | | | | | | Atmospheric correction |
| | PAR, Absorbed, Non-vegetative, (APAR) | 2029 | C | AL | HIRIS | AM2 | EDC | | | | | | Correlate with local mode data |
| | PAR, Absorbed, Vegetative, (APAR) | 2030 | C | AL | HIRIS | AM2 | EDC | | | | | | Correlate with local mode data |
| | Precipitable Water | 1875 | A | AL | MODIS | AM,PM | GSFC | | | | | | Atmospheric correction |
| | Radiative Flux, SW, Up | 2247 | C | AL | CERES | TRM,AM,PM | LaRC | | | | | | |
| | Vegetation Cover | 2741 | C | AL | HIRIS | AM2 | EDC | | | | | | Correlate with local mode data |
| MISR | Wind Velocity, Sea_sfc | 1680 | A | AL | STIKSCAT | CHEM | JPL | | | | | | |
| | O3 conc | 554 | C | | SBUV/2 | NOAA | | | | | | X | |
| | O3 conc | 553 | C | | SSBUV | Shuttle | | | | | | X | |
| | O3 total column | 552 | C | | TOMS | ADEOS | | | | | | X | |
| | atmospheric optical depth | 345 | C | | photometer | in situ | | | | | | X | sun photometry |
| | geophysical data | 58 | D | BL | MISR simulator | in situ (aircraft) | | | | | | X | |
| | radiance, multi-angle images | 347 | C | | ASAS | in situ (aircraft) | | | | | | X | data should be radiometrically calibrated and co-registered |
| | scene radiances | 33 | C | BL, AL, | | SPOT | CNES | | | | | X | For semi-annual ground calibration |
| | scene radiances | 16 | C | BL | TM | Landsat | EDC, EOSAT | | | | | X | For semi-annual ground calibration |
| | sea ice data | 555 | C | | SAR | in situ (aircraft) | NASA | | | | | X | |
| | surface BRDF's | 346 | C | | Deering Parabola | in situ | | | | | | X | Data needed for a variety of surface types |

## Appendix G: Instrument Team Input Requirements

| *Instrument Team* | *Input Product Name* | *Input #* | *Input Type* | *Time Frame* | *Source Instrument* | *Source Platform / Experiment* | *Source DAAC or Institution* | *Accuracy* | *Temporal Res* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* | *Non-EOS* | *Comments* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODIS | Aerosol Optical Depth | 2298 | C | PL | MISR | AM | LaRC | | | 15.4 or 1.92 km :: G or R | | | |
| | Aerosol Phase Function, Asymmetric | 2335 | A | PL | MISR | AM | LaRC | | | 15.4 or 1.92 km :: G or R | | | |
| | Cloud Cover | 2088 | A | AL | CERES | TRM,AM,PM | LaRC | 2-4% | | 1.25 dg :: G | | | |
| | Humidity Profile | 1828 | A | AL | AIRS | PM | GSFC | | | | | | |
| | Land_sfc Reflectance, Bi-directional, (BRDF) | 2632 | A | AL | MISR | AM | LaRC | | | | | | |
| | Land_sfc Reflectance, Bi-directional, (BRDF) | 2631 | A | AL | MISR | AM | LaRC | | | | | | |
| | Land_sfc Temperature, Skin | 2481 | A | AL | AIRS | PM | GSFC | | 2/day [d,n] | | | | |
| | Level-1B Polarization, POLDER | 7002 | A | | POLDER | EPOP | Atmos.Opt.Lab-Lille,FR | | | | | | |
| | Level-1B Radiance, AMSU-A | 2350 | A | AL | AIRS[AMSU-A] | PM | GSFC | | | 15 or 40 km :: | | | Wan |
| | Level-1B Radiance, MHS | 2352 | A | AL | AIRS [MHS] | PM | GSFC | | | | | | |
| | Level-1B Radiance, MISR | 2386 | A | AL | MISR | AM | LaRC | | | :: R (Equatorial) | | | Evans |
| | Level-1B Radiance, POLDER | 7001 | A | | POLDER | EPOP | Atmos.Opt.Lab-Lille,FR | | | | | | |
| | O3 Total Burden | 1332 | A | PL | AIRS | PM | GSFC | 10-15% :: | 2/day [d,n] | 50 km :: | | | |
| | Precipitable Water | 1869 | A | AL | AIRS | PM | GSFC | | 2/day [d,n] | 50 km :: | | | Atmospheric correction |
| | Sea_sfc Temperature (SST), Skin | 2523 | A | PL | AIRS | PM | GSFC | | 2/day [d,n] | | | | |
| | Temperature Profile | 1588 | A | AL | AIRS | PM | GSFC | | 2/day [d,n] | | | | |
| | Topographic Elevation, Land_sfc | 2846 | A | PL | MISR | AM | LaRC | | 1/mission | | | | |
| | Topographic Elevation, Land_sfc, (DEM) | 2828 | A | AL | ASTER | AM1 | EDC | 15-30 m | 1/mission | 15-30 m :: | | | |
| | Vegetation Chlorophyll Conc | 2653 | A | AL | HIRIS | AM2 | EDC | | 1/(2-16 day) | 30 m :: Land | | | |
| | Wind Speed, Along-track | 1735 | A | AL | ALT | ALT | JPL | 2 m/s | | 7 km :: Ocean | | | |
| | Wind Stress, Sea_sfc | 3594 | A | AL | MIMR | PM1 | MSFC | 0.44m/sec (4.4%) | | 8 km :: | | | |
| | Wind Velocity, Sea_sfc | 1680 | A | AL | STIKSCAT | CHEM | JPL | 10%, 20 dg | | 25 km :: | | | |
| | BRDFs | 199 | D | | | LTER | Univ. of Montana | | | | | X | |
| | IR surface brightness temperatures | 147 | C | AL | | in situ (ship) | | 0.5 K :: 0.1 K | | 1 m :: Ocean/L | :: Sfc | X | |
| | O3 data | 338 | A | | GOMR | NOAA | | | | 100 km :: | | X | |
| | O3 data | 23 | A | BL | TOMS | Nimbus-7 | NSSDC | | 50 scenes/yr | 100 km :: | | X | |
| | PAR (400 - 700 nm) | 145 | C | AL | | in situ (ship, buoy) | | 5% :: 2% | | :: Ocean/L | :: Sfc | Y | Clark |
| | aerosol radiation | 185 | A | | | in situ | | | | | | X | |
| | backscattering coefficient | 137 | C | AL | | in situ (ship) | | 7% :: 4% | | :: Ocean/L | 1 m :: | Y | Carder |
| | biome discrimination | 753 | D | | | LTER | Univ. of Montana | | | | | X | |
| | calibration/verification optical data | 194 | C | | | in situ | | | | | | Y | Carder |
| | chlorophyll concentration and others (mid-Atlantic Bight) | 142 | C | AL | | in situ (ship) | | 10% :: 2% | | :: Ocean/L | :: Site | Y | Hoge |
| | chlorophyll fluorescence (mid-Atlantic Bight) | 144 | C | AL | | in situ (ship) | | 10% :: 2% | | :: Ocean/L | :: Sfc | Y | Hoge |
| | chlorophyll specific absorption | 840 | C | BL, PL | | in situ (ship/buoy) | | | | :: Ocean/R,L | | X | |
| | chlorophyll, phycoerythrin, and dissolved organic matter fluorescence | 152 | A | BL | AOL | in situ (aircraft) | | 15% :: 8% | each pass | 10 m :: Ocean/R | :: Sfc | Y | Hoge |
| | climate data | 200 | D | AL, PL | | in situ | | | | :: Land/R | | X | |
| | cloud data | 13 | A | BL | | in situ | NESDIS | | | | | X | |
| | cloud liquid/ice content | 122 | C | AL | | in situ (aircraft) | | | | :: Local | :: Cloud | X | |
| | cloud optical thickness | 121 | C | AL | | in situ (aircraft) | | | | :: Local | :: Cloud | X | |
| | column water vapor | 745 | C | BL, PL | | in situ (radiosonde) | NCDC | | | | | X | |
| | detached coccolith concentration | 148 | C | AL | | in situ (ship) | | | | :: Ocean/L | :: Sfc | Y | Clark |
| | detritus absorption coefficient | 136 | C | AL | | in situ (ship) | | 15% :: 6% | | :: Ocean/L | 1 m :: | Y | Carder |

## Appendix G: Instrument Team Input Requirements

| *Instrument Team* | *Input Product Name* | *Input #* | *Input Type* | *Time Frame* | *Source Instrument* | *Source Platform / Experiment* | *Source DAAC or Institution* | *Accuracy* | *Temporal Res* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* | *Non-EOS* | *Comments* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODIS | diffuse attenuation coefficient-downwelling radiation | 128 | C | AL | | in situ (ship, buoy) | | 5% :: 2% | | :: Ocean/L | 1 m :: 0-150 m | Y | Clark |
| | diffuse attenuation coefficient-upwelling radiation | 129 | C | AL | | in situ (ship, buoy) | | 5% :: 2% | | :: Ocean/L | 1 m :: 0-150 m | Y | Clark |
| | digital elevation model | 115 | A | BL, AL | | JERS-1 | NASDA | | | | | X | |
| | digital elevation model | 114 | A | BL, AL | | ERS-1 | ESA | | | | | X | |
| | digital elevation model | 113 | A | BL, AL | | SPOT | CNES | | | | | X | |
| | digital elevation model; DTED-1, DCW | 847 | A | AL | | | | | | various :: Land | N/A :: Sfc | X | |
| | directional radiance, spectral irradiance, etc. | 186 | A | | | in situ | | | | | | X | |
| | downwelling spectral radiance | 124 | C | AL | | in situ (ship, buoy) | | 5% :: 1-2 % | | :: Ocean/L | 1 m :: 0-150 m | Y | Clark |
| | fluorescence and other data | 140 | C | BL, AL, | AOL | in situ (aircraft) | | 15% :: 8% | | :: Ocean/L | :: Sfc | X | |
| | fluorescence efficiency | 841 | C | BL, PL | | in situ (ship/buoy) | | | | :: Ocean/R,L | | X | |
| | fluorescence line height (FLH) | 193 | C | BL | FLI/CASI | | Borstad/Gower | | | | | Y | Abbott |
| | fluorescence line magnitude @685 um | 143 | C | AL | | in situ (ship) | | 10% :: 4% | | :: Ocean/L | 1 m :: 0-150 m | Y | Clark |
| | geophysical data | 101 | A | BL | | JGOFS | | | | | | X | |
| | geophysical data | 47 | C | BL | | in situ (ship) | NCDC | | | | | X | |
| | ground data | 197 | D | | transmissionometer | in situ | GSFC | | | | | X | |
| | ground radiances | 203 | D | | MMR | in situ | GSFC | | | | | X | |
| | ground radiances | 202 | D | BL, AL, | | in situ | | | | | | X | |
| | humic and fulvic acids | 134 | C | AL | | in situ (ship) | | 10% :: 3% | | :: Ocean/L | | Y | Carder |
| | humidity profiles | 744 | C | BL, PL | | in situ (radiosonde) | NCDC | | | | | X | |
| | incident spectral irradiance | 123 | C | AL | | in situ (ship, buoy) | | 5% :: 1-2 % | | :: Ocean/L | :: Sfc | Y | Clark |
| | land surface temperature | 75 | A | BL | | | | | | | | X | |
| | mixed layer depth | 843 | C | BL, PL | | in situ (ship/buoy) | | | | :: Ocean/R,L | | X | |
| | model output/analysis (Surf.temp, pressure, wind) | 44 | A | BL | | | NMC, ECMWF, GSFC | | | | | X | |
| | multispectral scanner data | 54 | A | BL | MAS | in situ (aircraft) | GSFC | | | | | X | |
| | ocean color / chloropyll data | 18 | A | BL | CZCS | Nimbus-7 | NSSDC | | | | | X | |
| | ocean color data | 592 | C | | CZCS | Nimbus-7 | | | | :: Ocean/Coastal | | X | |
| | ocean color data | 32 | A | BL, PL | SeaWiFS | Seastar | NSSDC | | | | | X | |
| | ocean density profiles | 844 | C | BL, PL | | in situ (ship/buoy) | | | | :: Ocean/R,L | | X | |
| | optical and constituent data sets | 192 | C | | | in situ | | | | | | Y | Carder |
| | particle absorption coeffient | 135 | C | AL | | in situ (ship) | | 10% :: 4% | | :: Ocean/L | 1 m :: | Y | Carder |
| | phycobilipigments | 130 | C | AL | | in situ (ship) | | | | :: Ocean/L | 5 m :: | X | |
| | phytoplankton pigment | 133 | C | AL | | in situ (ship) | | 5% :: 1-2% | | :: Ocean/L | 5 m :: | Y | |
| | phytoplankton pigment: chlorophyll-a and phaeopigment-a | 132 | C | AL | | in situ (ship) | | 15% :: 10% | | :: Ocean/L | 5 m :: | Y | Clark |
| | primary productivity (14-C) | 146 | C | AL | | in situ (ship, buoy) | | 20-100 % :: 5-10 % | | :: Ocean/L | :: Sfc | Y | Clark |
| | primary productivity vs irradiance data | 842 | C | BL, PL | | in situ (ship) | | | | :: Ocean/R,L | | X | |
| | radiance | 348 | C | | OCTS | ADEOS | | | | | | X | |
| | radiance | 42 | A | BL, PL | | in situ | | | | | | X | |
| | radiance | 25 | A | BL | AVHRR-GAC | NOAA | NESDIS | | | | | X | |
| | radiances for SST | 191 | D | PL | ATSR | | | | | | | Y | Barton |
| | radiances-0.41 to 0.75 um | 141 | C | AL | | in situ (aircraft) | | 10% :: 5% | | :: Ocean/L | :: Sfc | Y | Hoge |
| | radiation budget components in snow covered regions | 184 | A | | | | NASA? | | | | | X | |
| | scene radiances | 33 | D | BL, AL, | | SPOT | CNES | | | | | X | |
| | sea surface temperature (SST) | 746 | C | BL | | in situ (buoy) | NOAA DBC | | | | | X | |
| | sky radiance data (SBRDF) | 112 | D | BL | | | UCL | | | | | X | |

## Appendix G: Instrument Team Input Requirements

| *Instrument Team* | *Input Product Name* | *Input #* | *Input Type* | *Time Frame* | *Source Instrument* | *Source Platform / Experiment* | *Source DAAC or Institution* | *Accuracy* | *Temporal Res* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* | *Non-EOS* | *Comments* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODIS | snow cover | 336 | A | | | in situ | | | | | | X | |
| | snow reflectance | 201 | D | BL | | | | | | | | X | |
| | spectral beam attenuation coefficient | 127 | C | AL | | in situ (ship, buoy) | | 5% :: 1-2% | | :: Ocean/L | 1 m :: 0-150 m | Y | Clark |
| | spectral reflectance factor | 131 | C | AL | | in situ (ship) | | 5% :: 2% | | :: Ocean/L | 1 m :: 0-150 m | Y | Clark |
| | spectral solar atmospheric transmission | 139 | C | AL | | in situ (ship, station) | | :: 1% | | :: Ocean/L | | X | |
| | surface air pressure | 50 | A | BL, PL | | | NMC | | | | | X | |
| | surface wind speed | 51 | A | PL | | in situ | NMC | | | | | X | |
| | temperature profiles | 46 | C | BL, PL | | in situ (radiosonde) | NCDC | | | | | X | |
| | thermal data | 198 | A | | | in situ (aircraft) | | | | | | X | |
| | total dissolved organic carbon | 138 | C | AL | | in situ (ship) | | | | :: Ocean/L | | Y | Carder |
| | turbulence dissipation rate | 845 | C | BL, PL | | in situ (ship/buoy) | | | | :: Ocean/R,L | | X | |
| | upwelling spectral radiances | 125 | C | AL | | in situ (ship, buoy) | | 5% :: 1-2 % | | :: Ocean/L | 1 m :: 0-150 m | Y | Clark |
| | water leaving radiances | 153 | A | BL | | in situ (aircraft) | | 5% :: 4% | each pass | 10 m :: Ocean/R | :: Sfc | Y | Hoge |
| | water-leaving radiances | 126 | C | AL | | in situ (ship, buoy) | | 8% :: 3% | | :: Ocean/L | 1 m :: | Y | Clark |
| | wind speed | 53 | C | BL | | in situ (buoy) | NOAA DBC | | | | | X | |
| MOPITT | Cloud Cover | 2086 | A | AL | CERES | TRM,AM,PM | LaRC | | | | | | |
| | Humidity Profile | 1828 | A | AL | AIRS | PM | GSFC | | | | | | |
| | Level-1B Radiance, AIRS | 2347 | A | AL | AIRS[AIRS] | PM | GSFC | | | | | | |
| | Level-1B Radiance, ASTER | 2375 | A | AL | ASTER | AM1 | EDC | | | | | | |
| | Level-1B Radiance, MODIS>3um | 2340 | A | AL | MODIS | AM,PM | GSFC | | | | | | |
| | Temperature Profile | 1588 | A | AL | AIRS | PM | GSFC | | | | | | |
| | CO observations | 334 | C | | | in situ (aircraft) | | | | | | X | |
| | CO observations | 333 | C | | | in situ (ground) | | | | | | X | |
| | model output/analysis | 44 | A | BL | | | NMC, ECMWF, GSFC | | | | | X | |
| SAFIRE | pressure-height field | 72 | A | AL | | model analysis (NMC) | NMC | | | | | X | |
| SOLSTICE | model output/analysis | 44 | A | BL | | | NMC, ECMWF, GSFC | | | | | X | |
| STIKSCAT | Atmospheric Correction for STIKSCAT (originally an AMSR proposed profile) | 9006 | A | | TBD | N/A | | | | | | | For radiance correction |
| | Cloud Liq_water Total Column | 3598 | A | AL | MIMR | PM1 | MSFC | | | | | | |
| | Cloud Liq_water Total Column | 1900 | A | AL | CERES | TRM,AM,PM | LaRC | | | | | | |
| | Level-1B Radiance, MIMR | 3602 | A | AL | MIMR | PM1 | MSFC | | | | | | For attenuation correction and ice |
| | Precipitable Water | 3596 | A | AL | MIMR | PM1 | MSFC | | | | | | |
| | Precipitable Water | 1869 | A | AL | AIRS | PM | GSFC | | | | | | |
| | Radiative Flux, LW, Net | 2181 | A | AL | CERES | TRM,AM,PM | LaRC | | | | | | All fluxes for input to PL |
| | Radiative Flux, SW, Net | 2230 | A | AL | CERES | TRM,AM,PM | LaRC | | | | | | All fluxes for input to PL |
| | Sea_Ice Conc | 3611 | A | AL | MIMR | PM1 | NSIDC | | | | | | Boundary of sea ice |
| | Sea_sfc Temperature (SST) | 3603 | A | AL | MIMR | PM1 | MSFC | | | | | | For possible estimation algorithm |
| | Sea_sfc Temperature (SST) | 2528 | A | AL | MODIS | AM,PM | GSFC | | | | | | |
| | Wind Stress, Sea_sfc | 3594 | C | AL | MIMR | PM1 | MSFC | 4% | | | | | |
| | geophysical data | 48 | D | BL, PL | | in situ (ship) | FNOC | | | | | X | |
| | geophysical data | 47 | D | BL | | in situ (ship) | NCDC | | | | | X | |
| | ocean wave data | 653 | D | BL, AL | | in situ (buoy) | NOAA/DBC | | | | | X | All moored and drifting buoys |
| | sea surface temperature (SST) | 746 | D | BL | | in situ (buoy) | NOAA DBC | | | | | X | All moored and drifting buoys |
| | surface analysis fields | 654 | C | AL | | model | NMC / ECMWF / FNOC | | 6-12 hr | 2.5 x 2.5 dg :: Ocean/G | N/A :: Sfc | X | |
| | wind speed | 53 | D | BL | | in situ (buoy) | NOAA DBC | | | | | X | All moored and drifting buoys |

## Appendix G: Instrument Team Input Requirements

| *Instrument Team* | *Input Product Name* | *Input #* | *Input Type* | *Time Frame* | *Source Instrument* | *Source Platform / Experiment* | *Source DAAC or Institution* | *Accuracy* | *Temporal Res* | *Horizontal Resol. :: Cover.* | *Vertical Resol. :: Cover.* | *Non-EOS* | *Comments* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TES | Aerosol Layer Boundary Height | 1014 | A | AL | GLRS-A | ALT | GSFC | | | | | | |
| | Aerosol Optical Depth | 2291 | A | AL | GLRS-A | ALT | GSFC | | | | | | |
| | Cloud Cover | 2081 | A | AL | MODIS | AM,PM | GSFC | | | | | | |
| | Cloud Pressure, Top | 1528 | A | AL | MODIS | AM,PM | GSFC | | | | | | |
| | Cloud Temperature, Top | 2467 | A | AL | MODIS | AM,PM | GSFC | | | | | | |
| | Level-1B Radiance, TES | 2402 | A | AL | TES | CHEM | LaRC | | | | | | |
| | wind analysis | 159 | A | | | | NMC,ECMWF | | | | | X | |

# Products from Deselected Instruments

Appendix H

**Science Processing Support Office (SPSO)**

**Goddard Space Flight Center**

**August 1992**

## Appendix H: Products from Deselected Instruments

| Prod # | Product Name | Instrument | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|
| 2864 | Geodetic Site Position, Horizontal | GLRS-R | GSFC | AL | mm | 3 mm :: | | :: G | :: Sfc |
| 2866 | Geodetic Site Position, Vertical | GLRS-R | GSFC | AL | mm | 5 mm :: | | :: G | :: Sfc |
| 2878 | Geodetic Site Velocity, Post_seismic | GLRS-R | GSFC | AL | mm/mo | 5 mm/mo :: | 1/mo | 100-900 km :: G | :: Sfc |
| 2879 | Geodetic Site Velocity, Post_seismic | GLRS-R | GSFC | AL | mm/wk | 10 mm/wk :: | 1/yr | 100-900 km :: G | :: Sfc |
| 2880 | Geodetic Site Velocity, Relative | GLRS-R | GSFC | AL | mm/wk-mm/yr | 1 mm/yr :: | | :: G | :: Sfc |
| 2881 | Geodetic Site Velocity, Secular | GLRS-R | GSFC | AL | mm/yr | 1 mm/yr :: | 1/yr | 1000-9000 km :: G | :: Sfc |
| 2871 | Land_Crustal Strain Rate | GLRS-R | GSFC | AL | u-strain/yr | 0.1/yr :: | 1/yr | 1 km :: Land/L | :: Sfc |
| 2872 | Land_Crustal Strain Rate | GLRS-R | GSFC | AL | u-strain/yr | 0.1/yr :: | 1/yr | 100 km :: Land/R | :: Sfc |
| 2820 | Ocean Crust Deformation | GLRS-R | GSFC | AL | mm/yr | 1 mm/yr :: | 1/yr | 100-900 km :: Ocean | N/A :: Sfc |
| 3223 | Electric Field Strength, AC | GOS | GSFC | AL | mV/m | :: 1% | 1/(0.8 s) [?] | point :: G | N/A :: In_situ |
| 3224 | Electric Field Strength, DC | GOS | GSFC | AL | mV/m | :: 3 mV/m | 1/(0.2 s) [?] | point :: G | N/A :: In_situ |
| 2367 | Level-1B Radiance, GOS | GOS | GSFC | AL | | | | | |
| 3248 | Magnetic Field Strength, AC | GOS | GSFC | AL | Tesla | :: 1% | 1/(0.8 s) [?] | point :: G | N/A :: In_situ |
| 3249 | Magnetic Field Strength, DC | GOS | GSFC | AL | Tesla | 2.0 nT :: 0.1 nT | 1/(0.02 s) [?] | point :: G | N/A :: In_situ |
| 3250 | Magnetic Field Strength, DC | GOS | GSFC | AL | Tesla | 1.6 nT :: 0.1 nT | 1/(0.5 s) [?] | point :: G | N/A :: In_situ |
| 3252 | Electric Field Potential Difference, DC, Ionosphere | IPEI | GSFC | AL | dimensionless | | 2/orbit | :: G | N/A :: Ionos |
| 3253 | Electric Field Potential Drop, DC, High-latitude | IPEI | GSFC | AL | kV | | 2/orbit | :: [High_lat] | N/A :: 700 km |
| 3225 | Electric Field Strength, DC | IPEI | GSFC | AL | dimensionless | | 2/orbit | :: High_lat | N/A :: 700 km |
| 3230 | Electron Temperature | IPEI | GSFC | AL | K | :: 5% | 1/(2 s) [?] | 22 x 0.1 dg :: G | N/A :: 700 km |
| 3246 | Energetic-particle Joule Dissipation | IPEI | GSFC | AL | Joule/s | | 2/orbit | :: [High_lat] | N/A :: 700 km |
| 3236 | Ion Conc | IPEI | GSFC | AL | /m^3 | :: 2% | 1/(2 s) [?] | 22 x 0.1 dg :: G | N/A :: 700 km |
| 3238 | Ion Drift, Along-track | IPEI | GSFC | AL | m/s | :: 5% | 1/(2 s) [?] | 22 x 0.1 dg :: G | N/A :: 700 km |
| 3239 | Ion Drift, Cross-track | IPEI | GSFC | AL | m/s | :: 5% | 1/(2 s) [?] | 22 x 0.1 dg :: G | N/A :: 700 km |
| 3240 | Ion Drift, Vertical | IPEI | GSFC | AL | m/s | :: 5% | 1/(2 s) [?] | 22 x 0.1 dg :: G | N/A :: 700 km |
| 3245 | Ion Temperature | IPEI | GSFC | AL | K | :: 8% | 1/(2 s) [?] | 22 x 0.1 dg :: G | N/A :: 700 km |
| 2373 | Level-1B Radiance, IPEI | IPEI | GSFC | AL | | | | | |
| 1011 | Aerosol XXX | LAWS | GSFC | AL | /m/sr | | 1/(1-3 day) [few day] | 100 km :: G | 1 km :: Atmos |
| 2071 | Cloud Cover, Cirrus | LAWS | GSFC | AL | /m/sr | | 1/day | 100 km :: G | 0.5 km :: Trop |
| 1403 | Cloud Height, Cirrus | LAWS | GSFC | AL | m | 50 m :: | 2/day | 50 km :: G | N/A :: Cloud |
| 1407 | Cloud Height, Stratoform | LAWS | GSFC | AL | m | 50 m :: | 2/day | 50 km :: G | N/A :: Cloud |
| 1675 | Wind Velocity | LAWS | GSFC | AL | m/s,dg | 1-5 m/s :: | 2/day | 100 km :: G | 1 km :: Atmos |
| 3486 | Wind Velocity, High-res | LAWS | GSFC | AL | m/s,dg | 1-5 m/s :: | 2/day | few km :: G | 100 lev(<0.5 km) :: Atmos |
| 2383 | Wind Velocity, LAWS Line-of-sight (Level-1B) | LAWS | GSFC | AL | | | | | |
| 1689 | Wind Velocity, Line-of-sight | LAWS | GSFC | AL | m/s,dg | 1 - 5 m/s :: | 2/day | 100 km :: G | 1 km :: |
| 2285 | Cloud Masking-shadowing | MODIS-T | GSFC | AL | dimensionless | 10% :: | 1/day | 1.1 km :: G | N/A :: Sfc |
| 2040 | Land_sfc Reflectance, Bi-directional, (BRDF) | MODIS-T | EDC | AL | fraction | 10% :: 5% | 1/mo | 1.1 km :: Land/R | N/A :: Sfc |
| 2393 | Level-1B Radiance, MODIS-T | MODIS-T | GSFC | AL | W/m^2/sr/um | 5%(1Σ) :: RMS<NEdL | 1/day | 1.1 km :: G | N/A :: TOA |
| 2585 | Pigment Conc, Phycoerythrin | MODIS-T | GSFC | AL | mg/m^3 | 200% :: 50% | 1/day, 1/wk, 1/mo | 1 km :: Ocean/R,L | N/A :: TOO |
| 2586 | Pigment Conc, Phycoerythrin | MODIS-T | GSFC | AL | mg/m^3 | 200% :: 50% | 1/day, 1/wk, 1/mo | 20 km :: Ocean | N/A :: TOO |
| 2885 | Drainage_Basin Boundary | SAR | EDC | AL | km^2 | 100 m^2 :: 100 m^2 | 1/mission | 10 m :: Land/L | N/A :: Sfc |
| 2903 | Drainage_Network Structure | SAR | EDC | AL | m (linear extent) | 20 m :: 20 m | 1/mission | 30 m :: Land/R | N/A :: Sfc |
| 2848 | Erosion XXX | SAR | EDC | AL | m^2 | (60m)^2 :: (30m)^2 | 2/yr | 60 m :: Land/R | N/A :: Sfc |
| 2667 | Forest Boundaries | SAR | EDC | AL | m^2 | (60m)^2, :: (60m)^2 | 1/mo | 60 m :: Land/R | N/A :: Sfc |
| 2668 | Forest Deforestation | SAR | EDC | AL | m^2 | (60m)^2, :: (60m)^2 | 1/mo | 60 m :: Land/R | N/A :: Sfc |
| 2924 | Ice_Sheet Cover | SAR | ASF | AL | lat, lon | 60 m :: 60 m | 1/(5 day) | 60 m :: Land/Cryo | N/A :: Sfc |
| 2898 | Ice_Sheet Displacement | SAR | ASF | AL | m/yr | 0.5 km/day :: 0.5 km/day | 1/wk | 30 m :: Land/Cryo | N/A :: Sfc |
| 2900 | Ice_Sheet Displacement | SAR | ASF | AL | m/yr | 0.5 km/day :: 0.5 km/day | 1/wk | 30 m :: Land/Cryo | N/A :: Sfc |

## Appendix H: Products from Deselected Instruments

| Prod # | Product Name | Instrument | DAAC | Time frame | Units | Accuracy Abs :: Rel | Temporal Resolution | Horizontal Resol. :: Cover. | Vertical Resol. :: Cover. |
|---|---|---|---|---|---|---|---|---|---|
| 2940 | Inundation Extent | SAR | EDC | AL | m^2 | (30m)^2 :: 10% | 1/(3 day) var | 30 m :: Land/L | N/A :: Sfc |
| 2925 | Lake Ice Cover | SAR | ASF | AL | lat, lon | 60 m :: 60 m | 1/(5 day) | 60 m :: Land/Cryo | N/A :: Sfc |
| 2870 | Land Scattering, Sub_sfc | SAR | EDC | AL | m^2 | (60m)^2 :: (30m)^2 | 2/yr | 50-75 m :: Land/R | N/A :: Sub_Sfc |
| 2859 | Landform Patterns | SAR | EDC | AL | m^2 | (60m)^2 :: (30m)^2 | 1/mission | 60 m :: Land/R | N/A :: Sfc |
| 2783 | Land_Cover Material boundaries, Sfc | SAR | EDC | AL | m^2 | | 1/mission | 60 m :: Land/R | N/A :: Sfc |
| 1548 | Land_sfc Roughness | SAR | EDC | AL | m | .1 m :: .05 m | 2/yr | 60 m :: Land/R | N/A :: Sfc |
| 2397 | Level-1B Radiance, SAR | SAR | EDC | AL | dB | 3 :: 1 | | 30 [?] :: | |
| 3095 | Ocean Current Location | SAR | JPL | AL | lat,lon | | 1/wk | :: Ocean/R,L | N/A :: Sfc |
| 3093 | Ocean Current Velocity, Boundary | SAR | JPL | AL | m/s | | 1/wk | 1 km :: Ocean/R,L | N/A :: Sfc |
| 3127 | Ocean Wave Height | SAR | JPL | AL | m | 20% :: 20% | 1/day | 50-75 m :: Ocean | N/A :: Sfc |
| 3101 | Ocean Wave Height, Internal | SAR | JPL | AL | lat,lon | | 1/wk | 1 km :: Ocean/R,L | N/A :: Sub_Sfc |
| 2926 | River Ice Cover | SAR | ASF | AL | lat, lon | 60 m :: 60 m | 1/(5 day) | 60 m :: Land/Cryo | N/A :: Sfc |
| 2986 | Runoff | SAR | EDC | AL | m^3/s | 5% :: 5% | 1/day | N/A :: Land/L | N/A :: Sfc |
| 2781 | Sand Depth | SAR | EDC | AL | m | 0.5 m :: 0.5 m | 2/yr | 50-75 m :: Land/R | N/A :: Sfc |
| 3139 | Sea_Ice Conc | SAR | ASF | AL | fraction | 5-10% :: 5-10% | 1/(5 day) | 5 km :: Ocean/Cryo | N/A :: Sfc |
| 3155 | Sea_Ice Cover | SAR | ASF | AL | lat,lon (location) | 1 km :: 1 km | 1/(5 day) | 5 km :: Ocean/Cryo | N/A :: Sfc |
| 3192 | Sea_Ice Edge | SAR | ASF | AL | fraction (5-10type) | 5-10% :: 5-10% | 1/(5 day) | 5 km :: Ocean/Cryo | N/A :: Sfc |
| 3104 | Sea_Ice Motion | SAR | ASF | AL | km/day | 0.5 km/day :: 0.5 km/day | | 5 km :: Ocean/Cryo | N/A :: Sfc |
| 3022 | Snow Cover | SAR | ASF | AL | m^2 | 0.5-2km :: 5% | | 30 m :: Land/L | N/A :: Sfc |
| 3047 | Snow Water Equivalent | SAR | ASF | AL | cm (height) | 20% :: 20% | | 30 m :: Land/L | N/A :: Sfc |
| 2968 | Soil Moisture | SAR | EDC | AL | g/cm^3 | 10-25% :: 5-10% | 1/(3 day), 1/wk | 60-100 m :: Land | N/A :: Sfc |
| 2829 | Topographic Elevation, Land_sfc | SAR | EDC | AL | m (height) | 60 m :: 10 m | 1/mission | 30 m :: Land | N/A :: Sfc |
| 2836 | Topographic Elevation, Land_sfc, (DEM) | SAR | EDC | AL | m | 1.0 m :: 1.0 m | 1/mission | 10 m :: Land/L | 1 m :: Sfc |
| 2629 | Vegetation Biomass, Above_sfc | SAR | EDC | AL | kg/ha | 20% :: TBD | 1/seas, 1/yr | 60 m :: Land | N/A :: Sfc |
| 2645 | Vegetation Geometry | SAR | EDC | AL | deg,m | | 1/seas | 60-250 m :: Land/L | N/A :: Sfc |
| 2681 | Vegetation Index, Leaf Area, (LAI) | SAR | EDC | AL | area fraction | 20% :: 20% | 1/mo | 60 m :: Land | N/A :: Sfc |
| 2692 | Vegetation Phenologic State | SAR | EDC | AL | N/A | | 1/wk | 60 m :: Land | N/A :: Sfc |
| 2646 | Vegetation State | SAR | EDC | AL | type | 5% :: | 1/mo | 60-250 m :: Land/L | N/A :: Sfc |
| 2759 | Vegetation Water Content | SAR | EDC | AL | kg/ha | :: 30% | 1/(16 day) | 60-250 m :: Land | N/A :: Sfc |
| 2763 | Vegetation Water Potential | SAR | EDC | AL | bars | | 1/day, 2/wk | 60-250 m :: Land | N/A :: Sfc |
| 3133 | Wind Velocity, Sea_sfc | SAR | JPL | AL | m/s ? | | 2/wk | 1 km :: Ocean/R,L | N/A :: Sfc |
| 2401 | Level-1B Radiance, SWIRLS | SWIRLS | GSFC | AL | W/sr/cm^2/cm^-1 | | | | |
| 1242 | N2O Conc | SWIRLS | GSFC | AL | mix Ratio | :: 10% | 1/(2 s) [?] | 1.8 x .16 dg :: G | 3 km :: 20-60 km |
| 1322 | O3 Conc | SWIRLS | GSFC | AL | mix ratio | :: 10% | 1/(2 s) [?] | 1.8 x .16 dg :: G | 3 km :: 20-60 km |
| 1613 | Temperature Profile | SWIRLS | GSFC | AL | K | :: 1-2K | 1/(2 s) [?] | 1.8 x .16 dg :: G | 3 km :: 20-60 km |
| 1681 | Wind Velocity | SWIRLS | GSFC | AL | m/s,dg | <2m/s :: <2 m/s | 1/(40 s) [?] | 3.1 x 1.8 dg :: G | 3 km :: 38-60 km |
| 1682 | Wind Velocity | SWIRLS | GSFC | AL | m/s,dg | <2m/s :: <5 m/s | 1/(40 s) [?] | 3.1 x 1.8 dg :: G | 3 km :: 20-38 km |
| 3227 | Electron Energy Spectra | XIE | GSFC | AL | | :: 1% | 1/(6 s) [?] | 50 km :: G | 7 km :: 50-700 km |
| 2418 | Level-1B Radiance, XIE | XIE | GSFC | AL | | | | | |
| 3256 | Proton Energy Spectra | XIE | GSFC | AL | | :: 1% | 1/(0.1 min) | 50 km :: G | 7 km :: 50-700 km |
| 3259 | X-Ray Energy Spectra | XIE | GSFC | AL | | :: 3% | ? 1/(0.1 min) | 50 km :: G | 15 km :: 15-110 km |
| 3257 | X-Ray Images | XIE | GSFC | AL | | :: 3% | 1/(0.1 min) | 50 km :: G | 15 km :: 15-100 km |

# Requirements Analysis Tables

Appendix I

**Science Processing Support Office (SPSO)**

**Goddard Space Flight Center**

**August 1992**

# Appendix I: Table I-1. Daily Data Volume

| Platform | Launch Date | Instrument | Avg. Data Rate (Kbps) | Daily Data Volume (GB/day) | | | | | Total (L0 - L3) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | L-0 | L-1A | L-1B | L-2 | L-3 | |
| AM-1 | Jun-1998 | CERES | 20.000 | 0.216 | 0.317 | 0.317 | 0.465 | 0.454 | 1.768 |
| | | MODIS | 5400.000 | 58.320 | 85.536 | 85.536 | 34.938 | 14.192 | 278.522 |
| | | MISR | 1270.000 | 13.716 | 20.117 | 20.117 | 1.163 | 0.911 | 56.023 |
| | | ASTER * | 8300.000 | 89.640 | 131.472 | 131.472 | 0.809 | 1.133 | 354.526 |
| | | MOPITT | 5.000 | 0.054 | 0.079 | 0.079 | 0.006 | 0.001 | 0.219 |
| | | Total | 14995.000 | 161.946 | 237.521 | 237.521 | 37.381 | 16.690 | 691.059 |
| AERO | Jun-2000 | SAGE III | 14.075 | 0.152 | 0.223 | 0.223 | 0.550 | 0.275 | 1.423 |
| PM-1 | Dec-2000 | CERES | 20.000 | 0.216 | 0.317 | 0.317 | 0.465 | 0.454 | 1.768 |
| | | MODIS | 5400.000 | 58.320 | 85.536 | 85.536 | 34.938 | 14.192 | 278.522 |
| | | AIRS | 2000.000 | 21.600 | 31.680 | 31.680 | 0.102 | 0.096 | 85.157 |
| | | AMSU-A | 3.200 | 0.035 | 0.051 | 0.051 | | | 0.136 |
| | | MHS | 4.200 | 0.045 | 0.067 | 0.067 | | | 0.178 |
| | | MIMR | 62.000 | 0.670 | 0.982 | 0.982 | 0.031 | 0.002 | 2.667 |
| | | Total | 7489.400 | 80.886 | 118.632 | 118.632 | 35.535 | 14.744 | 368.429 |
| ALT | Jun-2002 | ALT | 85.000 | 0.918 | 1.346 | 1.346 | 0.001 | 0.000 | 3.612 |
| | | GGI | 50.000 | 0.540 | 0.792 | 0.792 | 0.079 | 0.043 | 2.246 |
| | | GLRS-A | 400.000 | 4.320 | 6.336 | 6.336 | 0.053 | 0.011 | 17.056 |
| | | Total | 535.000 | 5.778 | 8.474 | 8.474 | 0.133 | 0.054 | 22.914 |
| CHEM | Jun-2002 | HIRDLS | 40.000 | 0.432 | 0.634 | 0.634 | 0.028 | 0.007 | 1.733 |
| | | TES | 406.000 | 4.385 | 6.431 | 6.431 | 0.011 | 0.006 | 17.263 |
| | | SAGE III | 14.075 | 0.152 | 0.223 | 0.223 | 0.550 | 0.275 | 1.423 |
| | | STIKSCAT | 5.200 | 0.056 | 0.082 | 0.082 | 0.007 | 0.000 | 0.228 |
| | | Total | 465.275 | 5.025 | 7.370 | 7.370 | 0.595 | 0.287 | 20.648 |
| AM-2 | Jun-2003 | CERES | 20.000 | 0.216 | 0.317 | 0.317 | 0.465 | 0.454 | 1.768 |
| | | MODIS | 5400.000 | 58.320 | 85.536 | 85.536 | 34.938 | 14.192 | 278.522 |
| | | MISR | 1270.000 | 13.716 | 20.117 | 20.117 | 1.163 | 0.911 | 56.023 |
| | | HIRIS | 3000.000 | 32.400 | 47.520 | 47.520 | 11.684 | 1.091 | 140.214 |
| | | EOSP | 44.000 | 0.475 | 0.697 | 0.697 | 0.772 | 0.012 | 2.653 |
| | | Total | 9734.000 | 105.127 | 154.187 | 154.187 | 49.021 | 16.660 | 479.181 |

* Many of ASTER L2 products are on-demand products which will not be archived but will be regenerated each time as requested. Volume estimates for these data products are not included in the table.

# Appendix I: Table I-2. Data Volume by DAAC and Platform

| Level | Platform | DAACs | | | | | | Total (GB/day) |
|---|---|---|---|---|---|---|---|---|
| | | EDC | GSFC | JPL | LaRC | MSFC | NSIDC | |
| Level 1 | AM-1 | 262.944 | 171.072 | | 41.026 | | | 475.042 |
| | AERO | | | | 0.446 | | | 0.446 |
| | PM-1 | | 234.666 | | 0.634 | 1.964 | | 237.264 |
| | ALT | | 12.672 | 4.277 | | | | 16.949 |
| | CHEM | | 1.267 | 0.165 | 13.308 | | | 14.740 |
| | AM-2 | 95.040 | 171.072 | | 42.261 | | | 308.373 |
| | **Total** | **357.984** | **590.750** | **4.442** | **97.674** | **1.964** | | **1052.814** |
| Level 2 | AM-1 | 4.112 | 31.366 | | 1.633 | | 0.270 | 37.381 |
| | AERO | | | | 0.550 | | | 0.550 |
| | PM-1 | 3.303 | 31.468 | | 0.465 | 0.025 | 0.275 | 35.535 |
| | ALT | | 0.015 | 0.080 | | | 0.039 | 0.133 |
| | CHEM | | 0.028 | 0.007 | 0.561 | | | 0.595 |
| | AM-2 | 14.742 | 31.584 | | 2.399 | | 0.296 | 49.021 |
| | **Total** | **22.156** | **94.460** | **0.087** | **5.609** | **0.025** | **0.880** | **123.216** |
| Level 3 | AM-1 | 4.864 | 10.388 | | 1.366 | | 0.072 | 16.690 |
| | AERO | | | | 0.275 | | | 0.275 |
| | PM-1 | 3.732 | 10.483 | | 0.454 | 0.002 | 0.073 | 14.744 |
| | ALT | | 0.011 | 0.044 | | | | 0.054 |
| | CHEM | | 0.007 | 0.000 | 0.281 | | | 0.287 |
| | AM-2 | 4.801 | 10.408 | | 1.377 | | 0.074 | 16.660 |
| | **Total** | **13.397** | **31.297** | **0.044** | **3.752** | **0.002** | **0.219** | **48.711** |
| TOTAL (Level 1-3) | AM-1 | 271.920 | 212.826 | | 44.025 | | 0.342 | 529.113 |
| | AERO | | | | 1.271 | | | 1.271 |
| | PM-1 | 7.035 | 276.617 | | 1.552 | 1.991 | 0.348 | 287.543 |
| | ALT | | 12.697 | 4.400 | | | 0.039 | 17.136 |
| | CHEM | | 1.301 | 0.172 | 14.149 | | | 15.623 |
| | AM-2 | 114.582 | 213.064 | | 46.037 | | 0.370 | 374.054 |
| | **Total** | **393.537** | **716.506** | **4.572** | **107.035** | **1.991** | **1.099** | **1224.740** |

# Appendix I: Table I-3. Processing Load Estimates

| Platform | Launch Date | Instrument | Processing Load (MFLOPS) | | | | Total |
|---|---|---|---|---|---|---|---|
| | | | L-1 | L-2 | L-3 | Others * | |
| AM-1 | Jun-1998 | CERES | 0.093 | 12.153 | 0.231 | 11.000 | 23.477 |
| | | MODIS | 36.407 | 35.136 | 1.251 | | 72.795 |
| | | MISR | 5.522 | 15.776 | 0.789 | | 22.087 |
| | | ASTER | N/A | 60.520 | 0.526 | | 61.046 |
| | | MOPITT | 0.117 | 0.469 | 0.039 | | 0.625 |
| | | Total | 42.138 | 124.054 | 2.837 | 11.000 | 180.030 |
| AERO | Jun-2000 | SAGE III | 0.162 | 0.116 | 0.023 | | 0.301 |
| PM-1 | Dec-2000 | CERES | 0.093 | 12.153 | 0.231 | 11.000 | 23.477 |
| | | MODIS | 36.407 | 35.136 | 1.251 | | 72.795 |
| | | AIRS | 7.301 | 9.032 | 0.015 | 11.700 | 28.048 |
| | | AMSU-A | 0.014 | | | | 0.014 |
| | | MHS | 0.041 | | | | 0.041 |
| | | MIMR | 0.093 | 0.000 | 0.001 | | 0.094 |
| | | Total | 43.948 | 56.321 | 1.499 | 22.700 | 124.469 |
| ALT | Jun-2002 | ALT | 0.000 | 0.003 | 0.000 | | 0.003 |
| | | GGI | 3.600 | 20.400 | | | 24.000 |
| | | GLRS-A | 6.100 | 0.150 | 0.032 | | 6.282 |
| | | Total | 9.700 | 20.553 | 0.032 | | 30.285 |
| CHEM | Jun-2002 | HIRDLS | 12.731 | 6.366 | 1.273 | | 20.370 |
| | | TES | 30.000 | 90.000 | 9.000 | | 129.000 |
| | | SAGE III | 0.162 | 0.116 | 0.023 | | 0.301 |
| | | STIKSCAT | 0.100 | 0.700 | 0.100 | | 0.900 |
| | | Total | 42.994 | 97.181 | 10.396 | | 150.571 |
| AM-2 | Jun-2003 | CERES | 0.093 | 12.153 | 0.231 | 11.000 | 23.477 |
| | | MODIS | 36.407 | 35.136 | 1.251 | | 72.795 |
| | | MISR | 5.522 | 15.776 | 0.789 | | 22.087 |
| | | HIRIS | 15.573 | 15.583 | 0.239 | | 31.395 |
| | | EOSP | 0.200 | 20.500 | 0.001 | | 20.701 |
| | | Total | 57.795 | 99.148 | 2.511 | 11.000 | 170.454 |

* *Including those required for analysis*

# Appendix I: Table I-4. Processing Load by DAAC and Platform

| Level | Platform | DAACs | | | | | | Total (MFLOPS) |
|---|---|---|---|---|---|---|---|---|
| | | EDC | GSFC | JPL | LaRC | MSFC | NSIDC | |
| Level 1 | AM-1 | N/A | 36.407 | | 5.731 | | | 42.138 |
| | AERO | | | | 0.162 | | | 0.162 |
| | PM-1 | | 43.763 | | 0.093 | 0.093 | | 43.949 |
| | ALT | | 6.100 | 3.600 | | | | 9.700 |
| | CHEM | | 12.731 | 0.100 | 30.162 | | | 42.994 |
| | AM-2 | 15.573 | 36.407 | | 5.814 | | | 57.795 |
| | Total | 15.573 | 135.409 | 3.700 | 41.962 | 0.093 | | 196.738 |
| Level 2 | AM-1 | 62.345 | 33.240 | | 28.398 | | 0.071 | 124.054 |
| | AERO | | | | 0.116 | | | 0.116 |
| | PM-1 | 1.825 | 42.271 | | 12.153 | 0.000 | 0.071 | 56.321 |
| | ALT | | 0.049 | 20.403 | | | 0.102 | 20.553 |
| | CHEM | | 6.366 | 0.700 | 90.116 | | | 97.181 |
| | AM-2 | 17.402 | 33.243 | | 48.429 | | 0.074 | 99.148 |
| | Total | 81.572 | 115.168 | 21.103 | 179.212 | 0.000 | 0.318 | 397.373 |
| Level 3 | AM-1 | 0.849 | 0.923 | | 1.059 | | 0.006 | 2.837 |
| | AERO | | | | 0.023 | | | 0.023 |
| | PM-1 | 0.322 | 0.938 | | 0.231 | 0.001 | 0.006 | 1.499 |
| | ALT | | 0.032 | 0.000 | | | | 0.032 |
| | CHEM | | 1.273 | 0.100 | 9.023 | | | 10.396 |
| | AM-2 | 0.551 | 0.930 | | 1.021 | | 0.009 | 2.511 |
| | Total | 1.722 | 4.096 | 0.100 | 11.358 | 0.001 | 0.022 | 17.299 |
| Others * | AM-1 | | | | 11.000 | | | 11.000 |
| | AERO | | | | | | | |
| | PM-1 | | | | 22.700 | | | 22.700 |
| | ALT | | | | | | | |
| | CHEM | | | | | | | |
| | AM-2 | | | | 11.000 | | | 11.000 |
| | Total | | | | 44.700 | | | 44.700 |
| TOTAL | AM-1 | 63.194 | 70.570 | | 46.189 | | 0.077 | 180.030 |
| | AERO | | | | 0.301 | | | 0.301 |
| | PM-1 | 2.148 | 86.973 | | 35.177 | 0.094 | 0.077 | 124.469 |
| | ALT | | 6.181 | 24.003 | | | 0.102 | 30.285 |
| | CHEM | | 20.370 | 0.900 | 129.301 | | | 150.571 |
| | AM-2 | 33.526 | 70.580 | | 66.265 | | 0.084 | 170.454 |
| | Total | 98.867 | 254.673 | 24.903 | 277.232 | 0.094 | 0.340 | 656.110 |

** Including those required for analysis*

## Appendix I: Table I-5. Level 1B Data Traffic

| PLATFORM (LAUNCH) | DESTINATION DAACs | EOS SOURCE DATA CENTERS | | | | | | | EOS TOTAL (GB/Day) |
|---|---|---|---|---|---|---|---|---|---|
| | | ASF | EDC | GSFC | JPL | LaRC | MSFC | NSIDC | |
| AM-1(1998) | ASF | NA | | | | | | | |
| | EDC | | NA | | | | | | |
| | GSFC | | | NA | | 4.023 | | | 4.023 |
| | JPL | | | | NA | | | | |
| | LaRC | | | 18.244 | | NA | | | 18.244 |
| | MSFC | | | | | | NA | | |
| | NSIDC | | | | | | | NA | |
| | TOTAL | | | 18.244 | | 4.023 | | | 22.268 |
| AERO(2000) | ASF | NA | | | | | | | |
| | EDC | | NA | | | | | | |
| | GSFC | | | NA | | | | | |
| | JPL | | | | NA | | | | |
| | LaRC | | | | | NA | | | |
| | MSFC | | | | | | NA | | |
| | NSIDC | | | | | | | NA | |
| | TOTAL | | | | | | | | |
| PM-1(2000) | ASF | NA | | | | | | | |
| | EDC | | NA | | | | | | |
| | GSFC | | | NA | | 4.720 | | | 4.720 |
| | JPL | | | | NA | | | | |
| | LaRC | | | 17.072 | | NA | | | 17.072 |
| | MSFC | | | | | | NA | | |
| | NSIDC | | | | | | | NA | |
| | TOTAL | | | 17.072 | | 4.720 | | | 21.792 |
| ALT(2002) | ASF | NA | | | | | | | |
| | EDC | | NA | | | | | | |
| | GSFC | | | NA | | | | | |
| | JPL | | | | NA | | | | |
| | LaRC | | | | | NA | | | |
| | MSFC | | | | | | NA | | |
| | NSIDC | | | | | | | NA | |
| | TOTAL | | | | | | | | |
| CHEM(2002) | ASF | NA | | | | | | | |
| | EDC | | NA | | | | | | |
| | GSFC | | | NA | | | | | |
| | JPL | | | | NA | | | | |
| | LaRC | | | | | NA | | | |
| | MSFC | | | | | | NA | | |
| | NSIDC | | | | | | | NA | |
| | TOTAL | | | | | | | | |
| AM-2(2003) | ASF | NA | | | | | | | |
| | EDC | | NA | 3.079 | | | | | 3.079 |
| | GSFC | | | NA | | 4.023 | | | 4.023 |
| | JPL | | | | NA | | | | |
| | LaRC | | | 17.927 | | NA | | | 17.927 |
| | MSFC | | | | | | NA | | |
| | NSIDC | | | | | | | NA | |
| | TOTAL | | | 21.007 | | 4.023 | | | 25.030 |

## Appendix I: Table I-6. Level 2/3 Data Traffic

| PLATFORM (LAUNCH) | DESTINATION DAACs | EOS SOURCE DATA CENTERS | | | | | | | EOS TOTAL (GB/Day) |
|---|---|---|---|---|---|---|---|---|---|
| | | ASF | EDC | GSFC | JPL | LaRC | MSFC | NSIDC | |
| AM-1(1998) | ASF | NA | | | | | | | |
| | EDC | | NA | 3.311 | | 0.106 | | | 3.417 |
| | GSFC | | | NA | 0.003 | 0.757 | 0.002 | | 0.763 |
| | JPL | | | | NA | | | | |
| | LaRC | | 0.006 | 5.031 | 0.003 | NA | | | 5.040 |
| | MSFC | | | | | | NA | | |
| | NSIDC | | | | | | | NA | |
| | TOTAL | | 0.006 | 8.342 | 0.007 | 0.863 | 0.002 | | 9.219 |
| AERO(2000) | ASF | NA | | | | | | | |
| | EDC | | NA | | | | | | |
| | GSFC | | | NA | | | | | |
| | JPL | | | | NA | | | | |
| | LaRC | | | | | NA | | | |
| | MSFC | | | | | | NA | | |
| | NSIDC | | | | | | | NA | |
| | TOTAL | | | | | | | | |
| PM-1(2000) | ASF | NA | | | | | | | |
| | EDC | | NA | 3.303 | | | | | 3.303 |
| | GSFC | | | NA | 0.003 | 0.773 | 0.002 | | 0.778 |
| | JPL | | | | NA | | | | |
| | LaRC | | | 1.121 | | NA | | | 1.121 |
| | MSFC | | | | | | NA | | |
| | NSIDC | | | | | | | NA | |
| | TOTAL | | | 4.424 | 0.003 | 0.773 | 0.002 | | 5.202 |
| ALT(2002) | ASF | NA | | | | | | | |
| | EDC | | NA | | | | | | |
| | GSFC | | | NA | | | | | |
| | JPL | | | 0.319 | NA | | 0.006 | | 0.325 |
| | LaRC | | | | | NA | | | |
| | MSFC | | | | | | NA | | |
| | NSIDC | | | | | | | NA | |
| | TOTAL | | | 0.319 | | | 0.006 | | 0.325 |
| CHEM(2002) | ASF | NA | | | | | | | |
| | EDC | | NA | | | | | | |
| | GSFC | | | NA | | 0.021 | | | 0.021 |
| | JPL | | | 0.007 | NA | 0.022 | 0.010 | | 0.039 |
| | LaRC | | | 0.001 | | NA | | | 0.001 |
| | MSFC | | | | | | NA | | |
| | NSIDC | | | | | | | NA | |
| | TOTAL | | | 0.008 | | 0.043 | 0.010 | | 0.061 |
| AM-2(2003) | ASF | NA | | | | | | | |
| | EDC | | NA | 3.310 | | 0.724 | | | 4.034 |
| | GSFC | | | NA | 0.003 | 0.757 | 0.002 | | 0.763 |
| | JPL | | | | NA | | | | |
| | LaRC | | 0.006 | 5.262 | 0.003 | NA | | | 5.271 |
| | MSFC | | | | | | NA | | |
| | NSIDC | | | | | | | NA | |
| | TOTAL | | 0.006 | 8.572 | 0.007 | 1.481 | 0.002 | | 10.067 |

# Quick Reference for Appendices

| *Appendix* | *Volume* | *Contents* | *Sorted By* |
|---|---|---|---|
| A | I | Acronyms and Abbreviations | - |
| B | I | Major and Minor Product Group Names | - |
| C | I | Complete List of Output/Input Data Products | Product Number |
| D | I | List of Product Groups | Group Name |
| E | I | Output Data Products Listed by Instrument | Instrument Name |
| F | I | Output Data Products Listed by Product Name | Product Name |
| G | I | Instrument Team Input Data Requirements | Instrument Name |
| H | I | Data Products from Deselected Instruments | Instrument Name |
| I | I | Requirements Analysis Tables | - |
| J | II | IDS Output Data Products | IDS Investigator |
| K | II | IDS EOS Input Data Requirements | Product Name |
| L | II | Best and Alternative Products for IDS Input Requirements | IDS Investigator |
| M | II | Best and Alternative Products for IDS Input Requirements | Instrument Name |
| N | II | IDS Input Requirements Not Met until Year 2001 | IDS Investigator |
| O | II | IDS Input Requirements Not Met by EOS Instruments | IDS Investigator |
| P | III | Algorithm Summary Table | Instrument Name |
| Q | III | Algorithm Summary Table | IDS Investigator |
| R | III | Non-EOS Input Requirements | Product Number |
| S | III | Non-EOS Input Requirements | Parameter Name |
| T | III | Current and Future Data Holdings of DAAC's | DAAC |
| U | III | Current and Future Data Holdings of DAAC's | Platform/Project |
| V | III | Data Products from Future Missions/Projects | Platform/Project |