



# ***CERES Data Products Workshop***



## **CERES Documentation Summary**

**Presenter: Erika Geier**  
**CERES Data Management**  
**757.864.1854**  
**[e.b.geier@larc.nasa.gov](mailto:e.b.geier@larc.nasa.gov)**



## Agenda



- Documentation Overview
  - Algorithm Theoretical Basis Documents (ATBDs)
  - Validation Documents
  - Data Products Catalog
  - Collection Guides
  - Data Quality Summaries
- CERES Data Set Naming Conventions
- CERES File Naming Conventions
- Data Set Versions
- CERES Data Product Summary Tables
- Questions about Data Set



## *Documentation Overview*



- Algorithm Theoretical Basis Documents (ATBDs)
- Validation Documents
- Data Products Catalog
- Collection Guides
- Data Quality Summaries



## Algorithm Theoretical Basis Documents (ATBDs)



- Written Spring/Summer 1997
- Subsystem level document
  - Single Scanner Footprint (SSF) data product has numerous CERES Subsystems associated with it
  - Some CERES Subsystems produce intermediate or ancillary data products which are not available to the public
- Presents algorithms used to process data
- Link to ATBDs available from CERES On-Line Documentation web page

**<http://asd-www.larc.nasa.gov/ceres/docs.html>**



## *Validation Documents*



- Written August 2000
- Subsystem level document
  - Similar subsystem breakdown to ATBDs
- Presents validation plan for every subsystem
  - Measurement and Science Objectives
  - Science data products
  - Validation criterion
- Link to Validation Documents available from CERES On-Line Documentation web page  
**<http://asd-www.larc.nasa.gov/ceres/docs.html>**



## ***Data Products Catalog (DPC)***



### Data Products Catalog (DPC) Pages for all data sets in archive

- Static, records data product parameters as they existed at time data set was processed
- Appropriate version of DPC pages included in every Sample Read package
- Full listing of all DPC pages by data set

**<http://eosweb.larc.nasa.gov/PRODOCS/ceres/DPC/index.html>**

### Complete Data Products Catalog

- Living document, only most current version of DPC pages available for each product
- Available as complete listing or individual sets of pages grouped by data product
- Link to DPC available from CERES On-Line Documentation page **<http://asd-www.larc.nasa.gov/ceres/docs.html>**



## Collection Guides



- User's Guide for Data Product
- Living document
  - Updated as needed and time/resources allow
- Eventually will be available for every CERES data product
- Meant to be used interactively
  - Fully hyperlinked and bookmarked
  - Some guides contain fully linked Index
  - Too long to print
- Linked from CERES On-Line Documentation web page  
**<http://asd-www.larc.nasa.gov/ceres/docs.html>**
- Linked from CERES Data Sets web page  
**<http://asd-www.larc.nasa.gov/ceres/docs.html>**



## ***Data Quality Summary (DQS)***



- User should **always** consult Data Quality Summary (DQS) before working with data set.
- Minimum set of information necessary to understand strengths and weaknesses of data set
- Living document; most up-to-date documentation
- When updates are made, e-mail is sent to all who have ordered data set
- DQS may contain helpful hints about data set
  - Consult these first when encountering a peculiarity
- Linked from CERES Data Sets web page  
**<http://asd-www.larc.nasa.gov/ceres/docs.html>**





## ***CERES Data Set Naming Convention***



### **CER\_Product-ID\_Sampling-Strategy\_Production-Strategy**

- Example: CER\_ES8\_TRMM-PFM\_Edition2
  - CER is investigation designation for CERES
  - Product-ID specifies the data product (BDS, ES8, ES4, ES9, SSF, SFC, SRBAVG, CRS, FSW, SYN, AVG or ZAVG)  
Note: Product-ID may be followed by a number if size requires multiple files
  - Sampling-Strategy specifies CERES instrument(s) and, when applicable, platform and/or imager (Examples: Terra-FM2, TRMM-PFM-VIRS, PFM+FM1+FM2)
  - Production-Strategy specifies the version (Examples: Beta1, Edition1, Edition2B)
- Within name, underscores designate change in type of information, dashes are means of separating list of items that belong together
- Preferred shorthand for referring to data set stated in Data Quality Summary



## ***CERES File Naming Convention***



- Same as Data Set naming convention but has Configuration Code (CC#) and data date appended to the end  
(Example: CER\_SSF\_Terra-FM2-MODIS\_Edition1A\_024025.2001031623)
- Configuration Code is a 6 digit number for file and software version management, all files in a data set are considered scientifically equivalent even when configuration codes change
  - CERES recommends users always order newest file (those with greatest configuration code)
  - Users may mix and match files from same data set but with different configuration codes
- Data date preceded by a “.” includes 4-digit year, 2-digit month, 2-digit day (daily and hourly products only), and 2-digit hour (hourly products only) (Examples: “.2001031623”, “.20010316”, “.200103”)
- Gridded products may also have a zone appended directly after the date (Example: “.199804Z09”)



## *Data Set Versions*



### Edition Data Sets

- Validated data set
- May be used for publications
- Will remain publicly available and in archive, even after later Editions supercede it
- Not all data products will have an Edition1 data set
- Examples: Edition1, Edition2B

### Beta Data Sets

- Not of publication quality
- May be removed from archive at any time, typically after an Edition supercedes it
- Not all Beta data sets may be made public
- Examples: Beta1, Beta2



## ***CERES Instantaneous Data Products***



<b>CERES Data Product</b>	<b>Subsystem affiliation</b>	<b>TRMM availability</b>	<b>Terra availability</b>	<b>Aqua availability</b>	<b>ERBElike Product</b>	<b>TOA and Surface Product</b>	<b>Atmosphere Product</b>
<b>BDS</b> (Bi-Directional Scan)	1.0	Edition1	Edition2	Spr '03 Edition1	<b>X</b>		
<b>ES8</b> (ERBElike Instantaneous TOA Estimates)	2.0	Edition2	Edition2	Spr '03 Edition1	<b>X</b>		
<b>SSF</b> (Single Scanner Footprint TOA/Surface Fluxes and Clouds)	4.x	Edition2B	Edition1A	Spr '03 Beta1		<b>X</b>	
<b>CRS</b> (Clouds and Radiative Swath)	5.0	Edition2B	Spr'03 Beta3	2004 Beta1			<b>X</b>



# ***CERES Instantaneous Gridded Data Products***



<b>CERES Data Product</b>	<b>Subsystem affiliation</b>	<b>TRMM availability</b>	<b>Terra availability</b>	<b>Aqua availability</b>	<b>ERBElike Product</b>	<b>TOA and Surface Product</b>	<b>Atmosphere Product</b>
<b>ES9</b> (ERBElike Monthly Regional Averages)	3.0	Edition2	Edition2	Spr '03 Edition1	<b>X</b>		
<b>SFC</b> (Monthly Gridded TOA/Surface Fluxes and Clouds)	9.0	Edition2B	Beta1	2004 Beta1		<b>X</b>	
<b>FSW</b> (Monthly Gridded Radiative Fluxes and Clouds)	6.0	Spr '03 Edition2C	Spr '03 Beta3	2005 Beta1			<b>X</b>
<b>SYN</b> (Synoptic Radiative Fluxes and Clouds)	7.0	2003 Beta1	2004 Beta1	2005 Beta1			<b>X</b>



# CERES Monthly Gridded Average Data Products



<b>CERES Data Product</b>	<b>Subsystem affiliation</b>	<b>TRMM availability</b>	<b>Terra availability</b>	<b>Aqua availability</b>	<b>ERBElike Product</b>	<b>TOA and Surface Product</b>	<b>Atmosphere Product</b>
<b>ES9</b> (ERBElike Monthly Regional Averages)	3.0	Edition2	Edition2	Spr '03 Edition1	<b>X</b>		
<b>ES4</b> (ERBElike Monthly Geographical Averages)	3.0	Edition2	Edition2	Spr '03 Edition1	<b>X</b>		
<b>SRBAVG</b> (Monthly TOA/Surface Averages)	10.0	Edition2B	Spr '03 Beta1	2005 Beta1		<b>X</b>	
<b>AVG</b> (Monthly Regional Radiative Fluxes and Clouds)	8.0	2004 Beta1	2004 Beta1	2005 Beta1			<b>X</b>
<b>ZAVG</b> (Monthly Zonal and Global Radiative Fluxes and Clouds)	8.0	2004 Beta1	2004 Beta1	2005 Beta1			<b>X</b>



## ***Questions about Data Set***



- Reread Data Quality Summary
- Consult Collection Guide, if available
- Specific science questions may be sent to Contact Scientist listed in Section 2.2 of Collection Guide
- All other questions should be sent to User Services  
[larc@eos.nasa.gov](mailto:larc@eos.nasa.gov)
- For data products for which no Collection Guide is available, send all questions to User Services