CERES Science Team Meeting - Fall 2000

Items for Discussion

CERES Data Product Status

Major SSF changes since Spring

Subsetting CERES Data Products

CERES Data Distributed from LaRC DAAC

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These charts: http://asd-www.larc.nasa.gov/ceres/science_team/quart_rept.html
# CERES Data Product Status

## What’s new since last meeting?

<table>
<thead>
<tr>
<th>Data Set</th>
<th>Comments</th>
<th>When?</th>
</tr>
</thead>
</table>
| CER_BDS_Terra-FM1_Edition1    | • Problems receiving Terra data  
| CER_BDS_Terra-FM2_Edition1    | • March - May 2000 most data sources available  
|                               | • June - August 2000 sporadically available  
|                               | • Terra count conversion offsets updated to ground determined values (previously zero)  
|                               | • Second time constant coefficients and algorithm updated  
|                               | • To be reprocessed October 2000                                                                                                                                             | 8/00  |


You must login to the Web Ordering Tool with your CERES Science Team name and password.
Missing CERES Data Sources for Terra
As of 8/23/00

Only 58% of the data for July can be processed because of one or more missing sources.
## CERES Data Product Status (cont.)

### What’s planned for near-term?

<table>
<thead>
<tr>
<th>Data Set</th>
<th>Comments</th>
<th>When?</th>
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</thead>
<tbody>
<tr>
<td>CER_ES8_Terra-FM1_Edition1</td>
<td>• ERBElike data sets for Terra</td>
<td>10/00</td>
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<tr>
<td>CER_ES8_Terra-FM2_Edition1</td>
<td>• Updated Spectral Correction Coefficients for Snow</td>
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<tr>
<td>CER_ES4_Terra-FM1_Edition1</td>
<td></td>
<td></td>
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<tr>
<td>CER_ES4_Terra-FM2_Edition1</td>
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<tr>
<td>CER_ES9_Terra-FM1_Edition1</td>
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<tr>
<td>CER_ES9_Terra-FM2_Edition1</td>
<td></td>
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</tr>
<tr>
<td>CER_SSF_TRMM-PFM-VIRS_ValidationR5</td>
<td>• Clouds, Inversion, Surface data set for TRMM</td>
<td>Fall 2000</td>
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<tr>
<td></td>
<td>• First reprocessing since ValidationR4 over a year ago</td>
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<td></td>
<td>• Changes too numerous to itemize; major changes to be discussed on later slide</td>
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<td></td>
<td>• 9 February days for aerosol validation</td>
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<td></td>
<td>• January ‘98 Validation Regions only for SSF checkout</td>
<td></td>
</tr>
<tr>
<td>CER_SSF_TRMM-PFM-VIRS_Edition1</td>
<td>• Archival data set for TRMM</td>
<td>Fall/ Winter 2000</td>
</tr>
<tr>
<td></td>
<td>• Reprocess full 8 months (Jan - Aug ‘98)</td>
<td></td>
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<td></td>
<td>• Software identical or very similar to ValidationR5</td>
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</tr>
</tbody>
</table>
## CERES Data Product Status (cont.)

### What’s older but possibly still of interest?

<table>
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<tr>
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<th>Comments</th>
<th>When?</th>
</tr>
</thead>
</table>
| CER_BDS_TRMM-PFM_Edition1                    | • Archival BDS for TRMM  
  • January - August ‘98 processed (8 months)                             | 4/99  |
| CER_ES8_TRMM-PFM_Edition2                    | • Most current archival ERBElike data set for TRMM  
  • Slope-intercept, day/night spectral correction  
  • January - August ‘98 processed (8 months)                             | 4/00  |
| CER_ES4_TRMM-PFM_Edition2                    | • Limited TRMM turn-on periods from 9/98 - 2/00  
  • Mainly for ScaRaB and INDOEX comparisons                               | 12/99 |
| CER_ES9_TRMM-PFM_Edition2                    | • Until ValidationR5 and Edition1 produced, remains  
  • most current SSF data set available for TRMM  
  • VIRS Release 4 data  
  • VIRS12A ADM’s  
  • January - August ‘98 processed (8 months)                             | 7/99  |
| CER_CRS_TRMM-PFM-VIRS_ValidationR3           | • Only CRS data set available for TRMM  
  • Processed January ‘98 only                                            | 3/99  |
| CER_FSW_TRMM-PFM-VIRS_ValidationR4           | • Only FSW data set available for TRMM  
  • Processed January ‘98 only                                            | 11/99 |
| CER_SFC_TRMM-PFM-VIRS_ValidationR4           | • Only SFC and SRBAVG data sets available for TRMM  
  • Processed January ‘98 only                                            | 10/99 |
| CER_SRBAVG_TRMM-PFM-VIRS_ValidationR4        | • Only SFC and SRBAVG data sets available for TRMM  
  • Processed January ‘98 only                                            |      |
Major SSF changes since Spring

Parameter changes
- All clear, layer, overlap, and overcast percent coverages now 32-bit real numbers
- Only if clear coverage > 99.9% are fluxes archived on SSFs (otherwise default)
- Cloud-mask aerosol called “aerosol B”, Larry Stowe aerosol called “aerosol A”
- Clear cloud-mask coverages reorganized
  - Parameters: Clear-strong, Clear-weak, Snow/ice, Aerosol B
  - Digits within supplement: Shadow, Clear-glint, Fire

Parameter additions
- Aerosol A supplements 1 - 4 (percent coverages and radiances)
- Cloud property extrapolation over cloudy region (Norman’s discussion)
- Potential overlap and saturated 3.7 \( \mu \)m digits added to “Notes on Cloud algorithms”

Parameter deletions
- Array of 6 spectral albedos (moved to CRS product)
- Area percent coverage for cloud layer (can be derived from layer and overlap coverage)

Consult SSF Guide for details
- Still in draft form
- Until Edition1 available at DAAC, Edition1 Guide available only from SSF webpage
  - click on “SSF Definitions” and select “Edition1 and beyond”
- When data available from DAAC, Guide also available from Collection Guide webpage
- Send SSF Guide questions and comments to e.b.geier@larc.nasa.gov
Subsetting CERES data products

Langley DAAC can subset SSF, CRS, and ES8 products

User may specify individual hdf parameters to be included
- Each file contains all the selected parameters
- Specify parameter names using full names listed in Data Products Catalog

User may specify latitude-longitude boxes
- Latitude ranges from -90 to 90
- Longitude ranges from -180 to 180
- A separate file is generated for each specified box

Drastically reduces data volume
- Larry Stowe reduced SSF data volume by over 75%
- Not fully automated - it must be set up manually
- Know your product before requesting subsets of large data volumes

Suggested scenario
- Obtain one or more complete files of product of interest
- Use files and corresponding Guide to determine parameters of interest
- Request subset of parameters of interest for several files
- Verify subsetted data before requesting subsets for full period of interest

To request subsetted data
- User must provide subsetting requirements and select desired medium for file transfer
- Send requests to: LaRC DAAC User Services at larc@eos.nasa.gov
CERES Data Distributed from LaRC DAAC
1.4 GB/customer, 14 files/customer, 100 MB/file
URL’s of Interest

- CERES home page with links to DAAC, documentation, quicklook results

- Full list of CERES data sets and associated links
  http://eosweb.larc.nasa.gov/PRODOCS/ceres/table_ceres.html

- Langley DAAC with links to data order tool and download view_hdf
  http://eosweb.larc.nasa.gov/

- Instrument Operations and Housekeeping Data Statistics, link to Terra input availability

- ERBE-like Public Web Page
  http://earth-www.larc.nasa.gov/erbelike/pub_cdval

- SSF Public Web Page
  http://earth-www.larc.nasa.gov/ssf/pub_ssf/

- SARB Working Group
  http://srbsun.larc.nasa.gov/sarb/

- Surface Properties