

## June 30, 2004 - System Issues and Status

**Table 1: Process Strategy/Geier as of 06/30/04  
Active Requests in order of priority (1 of 3)**

Production Request (PR)	Satellite	Production Strategy	Data Product (SS#)	PGEs	Data Dates	Special Status
PR18-04	Terra	ValR1	SRBAVG (SS10)	10.1P1	3/00 - 2/03	<b>Cancelled 6/28.</b> Will be reissued when code delivery occurs.
PR 58-04	Aqua	ValR1	Intermediate SSF (SS4.1-4)  Clouds	4.1-4.1P3 4.1-4.2P1 4.1-4.2P2 4.1-4.3P1 4.5-6.1P3 4.5-6.2P2 4.5-6.4P1	7/02, 12/02	Process as soon as SSI&T promotes code.
PR 57-04	Aqua	ValR1	SSF (SS4.5-6)  Inversion	4.5-6.1P3 4.5-6.2P2 4.5-6.4P1	7/02, 12/02	<b>HOLDING - waiting on Inversion delivery and promotion.</b>
PR 56-04	Aqua	ValR1	SFC (SS9)	9.2P1 9.3P1 9.4P1	7/02, 12/02	<b>HOLDING - waiting input availability.</b>
PR17-04	Terra	Edition2A	SRBAVG (SS10)	10.1P1	3/00- 2/03	<b>Cancelled 6/28.</b> When code gets delivered, CERES will request Edition2B processing.
Standing requests AM-PR 1-00 to 7-00	Terra	Edition1	BDS/ERBELike (SS1-3)	1.1P3 1.2P1 1.3P1 1.3P2 2.1P1 2.2P1 2.3P1 2.3P2 3.1P1 <del>3.2P2</del>	For 5/04 - present	DO NOT PROCESS 3.2P2 - it is on hold.

**Table 1: Process Strategy/Geier as of 06/30/04  
Active Requests in order of priority (2 of 3)**

<b>Production Request (PR)</b>	<b>Satellite</b>	<b>Production Strategy</b>	<b>Data Product (SS#)</b>	<b>PGEs</b>	<b>Data Dates</b>	<b>Special Status</b>
Standing requests PM-PR 7-03A to 10-03	Aqua	Edition1	BDS/ ERBELike (SS1-3)	1.1P5 1.2P1 1.3P1 1.3P2 2.2P1 2.3P1 2.3P2 3.1P1 <del>3.2P2</del>	For 6/04 - present	DO NOT PROCESS 3.2P2 - it is on hold.
Standing requests AM-PR 8A-02 to 11-02	Terra	Edition2	BDS/ ERBELike (SS1-3)	1.2P1 1.3P3 2.2P1 2.3P1 2.3P2 2.4P1 3.1P1 <del>3.2P2</del>	For 12/04 - present	<b>HOLDING - waiting for Aqua Gains and SRF to be delivered and associated ValRx to run.</b>  DO NOT PROCESS 3.2P2 - it is on hold.
Standing requests PM-PR 11-03, 13-03 to 17-03	Aqua	Edition2	BDS/ ERBELike (SS1-3)	1.3P3 1.2P1 2.2P1 2.3P1 2.3P2 2.4P1 3.1P1 <del>3.2P2</del>	For 3/04 - present	<b>HOLDING - waiting for Aqua Gains and SRF to be delivered and associated ValRx to run.</b>  DO NOT PROCESS 3.2P2 - it is on hold.
Standing request PM-PR 12-03	Aqua/ Terra	Edition2	ES4/ES9 (SS3)	3.2P1	For 1/04 - present	<b>HOLDING - waiting for both Terra and Aqua to have processed Edition2 data beyond 1/04.</b>
M-PR 3-02		NSIDC- NESDIS	EICE ESNOW (SS4.1)	4.1-4.0P1	Standing request	
M PR 2-04		GEOS4	MOA (SS12)	12.1P1	5/04 - present	Priority of MOA/ PMOA has dropped because ASDC is current. Standing request to process data as it arrives.
M PR 1-04		GEOS4	PMOA (SS9.1)	9.1P1	4/04 - present	

**Table 1: Process Strategy/Geier as of 06/30/04  
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<b>Production Request (PR)</b>	<b>Satellite</b>	<b>Production Strategy</b>	<b>Data Product (SS#)</b>	<b>PGEs</b>	<b>Data Dates</b>	<b>Special Status</b>
PR 97-03	Terra	Edition2-QC	SSF (SS4)	4.1-4.1P2 4.1-4.2P1 4.1-4.2P2 4.1-4.3P1	7/03 - 12/03	Done 6/18/04.
PR 10-04, 11-04	Terra	Edition2A	SSF (SS4.5-6)	4.5-6.1P2 4.5-6.2P2 4.5-6.4P1	7/03 - 12/03	Done 6/18/04.
PR 9-04	Terra	Edition2A	SFC (SS9)	9.2P1 9.3P1 9.4P1	7/03 - 12/03	Done 6/19/04.
PR 53-04, 54-04	Aqua-FM4	BetaGERB	SSF (SS4)	4.1-4.1P3 4.1-4.2P1 4.1-4.2P2 4.1-4.3P1 4.5-6.1P3 4.5-6.2P2	4/04	
PR 52-04	Aqua-FM4	BetaGERB	SFC (SS9)	9.2P1 9.3P1 9.4P1	4/04	
PR 116-03	TRMM	Beta3	TSI (SS7.1)	7.1.1P1	1/98 - 8/98 3/00	Done 6/7/04.

**Table 2: Process Strategy/Geier as of 06/30/04  
Coming Soon (1 of 2)**

Active Month	Satellite	Processing Strategy	Data Product (SS#)	Data Dates	Comments
	Terra	ValR5	SSF(SS4)	12/01, 6/02	Inversion only (alternate main) delivery 7/9/04 & 7/16/04.
	Terra	ValR5	CRS(SS5)	?	Delivery 6/25/04.
	Aqua	Edition1A	SSF(SS4)	First 12 months	
	Aqua	Edition1A	SFC(SS9)	First 12 months	
	Terra	Beta2	Synoptic SARB (SS7.2)	3/00, 4/00, 1/01, 7/01, 10/01	6/18/04 delivery.
	TRMM	Beta3	Synoptic SARB (SS7.2)	9 mo	6/18/04 delivery - lower priority than TRMM.
7/04	Terra	Edition2B	SSF (SS4.5-6)	50 months	Updated ADMs, code correction, correct clear area coverage as needed (50-60 deg lat), new cloud classification parameter; delivery expected 6/18/04.
	Terra	Edition2B	CRS(SS5)	50 months	Delivery expected 5/28/04.
	Terra	Edition2B	SFC (SS9)	50 months	6/4/04 delivery.
	Terra	Edition2B	FSW(SS6)	50 months	Assuming no delivery needed.
	Aqua	Edition1A	SRBAVG (SS10)	7/02 - 6/03	Unknown delivery date; requires GGEO for 3/03 - 6/03 which has never been processed.
8/04	Terra	ValR4	BDS/ERBE-like(SS1-3)	1 month	Verify newly delivered gains and spectral response functions.
		ValR11	GGEO (SS11)	4 months	3/03 - 6/03; requires redelivery to handle GOES-9 and GOES-12; requires coefficients.
		Edition2A	GGEO (SS11)	4 months	3/03 - 6/03; ValR11 must be approved.
	Aqua	Beta1	CRS(SS5)	First 12 months	July delivery ??
	Aqua	Beta1	FSW (SS6)	First 12 months	Test at SCF to verify no redelivery needed.
	TRMM	Beta3	SYN/AVG/ZAVG (SS8)	9 months	7/23/04 delivery.

**Table 2: Process Strategy/Geier as of 06/30/04  
Coming Soon (2 of 2)**

Active Month	Satellite	Processing Strategy	Data Product (SS#)	Data Dates	Comments
	Terra	Beta2	SYN/AVG/ ZAVG (SS8)	3/00, 4/00, 1/01, 7/01, 10/01	7/23/04 delivery.
9/04	Aqua	Edition1A	SSF(SS4)	Second 12 months	
	Aqua	Edition1A	SFC(SS9)	Second 12 months	
	Terra	Edition2B	SRBAVG (SS10)	50 months	
10/04		ValR11	GGEO (SS11)	? months	7/03 - 6/04; requires coefficients.
		Edition2A	GGEO (SS11)	7/03 - 6/04	
	TRMM	Beta4	Synoptic SARB (SS7.2)	9 months	
	Terra	Beta3	Synoptic SARB (SS7.2)	12 months	
11/04	TRMM	Beta4	SYN/AVG/ ZAVG (SS8)	9 months	
	Terra	Beta3	SYN/AVG/ ZAVG (SS8)	12 months	
	Aqua	Beta3	SRBAVG (SS10)	7/03 - 6/04	
	Aqua	Beta1	TSI (SS7.1)		Not on Bruce's schedule.
	Aqua	Beta1	Synoptic SARB (SS7.2)		Not on Bruce's schedule.
	Aqua	Beta1	SYN/AVG/ ZAVG (SS8)		Not on Bruce's schedule.

**Table 3: June 16, 2004 - System Issues and Status**

<b>Activity</b>	<b>Lead</b>	<b>Status</b>
CM	Ayers	<ul style="list-style-type: none"><li>• See Table 4 for the current CERES Subsystem Delivery Schedule. (Ayers)</li><li>• See Table 5 for SCCR activity since the last DMT meeting. SCCRs that need to be reviewed follow Table 5. (Ayers)</li><li>• Tested the following subsystem deliveries and released them to the ASDC: Clouds (SCCR 536), TISA Gridding (SCCR 535), and CERESlib (SCCR 542). (Ayers, Saunders)</li><li>• Updated the previously delivered Spectral Response Function files for Aqua FM3 and FM4 Edition2 for July 1, 2003 through February 29, 2004 to the ASDC. (Ayers)</li><li>• Testing the Instantaneous SARB delivery (SCCR 541). (Ayers)</li><li>• Delivered the Clouds S'COOL data file for May 2004 to the ASDC. (Saunders)</li></ul>

**Table 4: CERES Subsystem Delivery Schedule (1 of 2)**

Subsystem	Preliminary Delivery Memo to CM	Delivery to CERES CM	Delivery to Langley DAAC	Reason for Delivery	CERESlib Delivery Needed	New PGE(s)
CERESlib	June 11	June 25	July 2	SARB modifications.		
Instantaneous SARB	June 11	June 25	July 2	Support Terra Edition2B and Aqua Beta1 CRS processing.	X	
Inversion	June 18	July 2	July 9	Delivering PGE CER4.5-6.1P3 to support Aqua Edition1A SSF processing.	X	
CERESlib	June 25	July 9	July 16	Synoptic SARB changes (if they didn't get into the previous CERESlib delivery).		
Synoptic SARB	June 25	July 9	July 16	Support TRMM Beta3 and Terra Beta2 SYNI processing. Full delivery since the TRMM processing problem will also be corrected.	X	
Inversion	June 25	July 9	July 16	Support Terra Edition2B SSF processing.		
Inversion	July 2	July 16	July 23	Delivery of new daily processor PGE CER4.5-6.6P2 to support Terra Edition2B processing.		X
Instrument	N/A	July 23	July 23	Terra gains files.		
ERBE-like	N/A	July 23	July 23	Terra spectral response function files.		
TISA Averaging (Subsystem 8)	July 9	July 23	July 30	Support TRMM Beta3 and Terra Beta2 AVG, ZAVG, and SYN processing.		
TISA Averaging (Subsystem 10)	August			Support Terra Edition2A and Aqua Edition1A (maybe) SRBAVG processing.		

**Table 4: CERES Subsystem Delivery Schedule (2 of 2)**

Subsystem	Preliminary Delivery Memo to CM	Delivery to CERES CM	Delivery to Langley DAAC	Reason for Delivery	CERESlib Delivery Needed	New PGE(s)
GCEO	August 6	August 20	August 27	Delivery to handle GOES-9 and GOES-12.		
Clouds	??? (November)			Support TRMM VIRS-only processing from August 2001 through August 2002.		

**Table 5: SCCR Activity June 14 at 4:15 p.m. - June 28 at 3:30 p.m.**

<b>SCCR</b>	<b>S</b>	<b>U</b>	<b>A</b>	<b>C</b>	<b>D</b>	<b>SS</b>	<b>Page No.</b>	<b>Comments</b>
538				X		CERESlib		
539	X		X			5 & 7.2	10	CERESlib modifications
540	X		X			7.2	11	CERESlib modifications
541	X		X			5	12	
542	X		X			CERESlib	14	
543	X					4.5-4.6	15	

**S=Submitted; U=Updated; A=Approved; C=Closed; D=Disapproved; SS=Subsystem**





## CERES Software Configuration Change Request Submittal

Subsystem: SARB

SCCR Date & TIME: 2004-06-24 13:43:59

SCCR No.: 541

### Description of Change (Science):

1. For the samples where the MATCH data is the sole source of aerosol optical depth information, the MATCH 0.55 mm data instead of the MATCH 0.63 mm data will be applied in the Fu-Liou model.
2. The Langley Fu-Liou model was updated to add new Lacis dust aerosol data for the aerosol scene type indexes 19-23 for 0.5mm, 1.0mm, 2.0mm, 4.0mm, and 8.0mm dust, respectively. The FLSA table was also modified accordingly.
3. Now allowing aerosols in the stratosphere above 15km.
4. UV-A and UV-B lookup table corrections to spectral output from bands 5 and 6, based on work by Wenying Su, have been added to the Langley Fu-Liou model. This table is based on sun angle, ozone amount, surface albedo, cloud and aerosol optical depths. Output will be provided as 35 new parameters on the SYNI.
5. Addition of Spectral response function for Aqua filtered window radiances based on high spectral resolution correction to 3 window band radiances.
6. Added use of lookup table correction factors calculated by Zhonghai Jin that are a function of the sun angle, wind speed, and precipitable water to compute corrected pristine SW flux upwards at the TOA and downwards at the surface. Output will be provided as two new parameters on the SYNI.
7. Add a tuning sigmas control file, accessed only when running the Synoptic Subsystem.
8. Modified interpretation of the ADMgeo parameter to take advantage of new information added by the ADM group for the Terra Edition2B SSF delivery.

CRS Parameters Affected by changes 1, 2, 3, and 8: Terra CRS 161-163, 172-183, 193-235

### Reason for Change (Science):

1. Using the wrong wavelength causes constituents with extinction decreasing with wavelength (sulfate, water soluble, soot) to have a reduced effect, and causes constituents that have extinction increase with wavelength (mineral dust, insoluble) to have an increased effect.
2. The new dust properties are less absorbing than the earlier (1996) version.
3. Allows full use of the MATCH aerosol profile data which is provided up to 1 hPa or ~50Km.
4. Adds parameters consistent with definitions common in the radiation community. Treatment of UV portion of spectrum by Fu-Liou is coarse since only accounts for small portion of Broadband. Look-Up tables give enhanced accuracy in spectral integration to UV-A and UV-B spectral intervals.
5. Adds capability of processing Aqua data through SARB algorithms.
6. Accounts for directional reflectance of ocean surface that is not handled by simple lambertian reflectance in Fu-Liou Model.
7. It will be used in the algorithm to assign different "tuning sigmas" based upon the source of the Cloud /Flux data.
8. Default values are now clearer and new non-default data provided information regarding the location of the centroid of the FOV in relation to the microwave imager retrievals.

Description of Change (non-Science):

N/A

Reason for Change (non-Science):

N/A

Affected PGEs : CER5.0P1, CER5.1P1

Est. Time to Complete Changes : 3 months

Planned Delivery Date : June 25, 2004

Impact : PGEs CER6.0P1

Originator: COLEMAN, LISA H. (SAIC)



## CERES Software Configuration Change Request Submittal

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Subsystem: Inversion

SCCR Date & TIME: 2004-06-28 13:14:23

SCCR No.: 543

### Description of Change (Science):

1. PGE CER4.5-6.1P3 (Aqua main processor) was updated to use the Terra Edition2B ADMs.
2. SSF parameter Window ADM Type (ssf%admtyp\_wn) will contain a cloud classification parameter.
3. SSF parameter ADMGEO will be modified to add 1000 to the value when the CERES FOV centroid falls within the region near the coastline where the microwave imager cannot distinguish between land/snow and water/ice. If a default value is placed in ADMGEO by clouds, then it will be changed to 999 by Inversion and 0 or 1000 will be added to the 999, depending on where the CERES FOV centroid falls.

### Reason for Change (Science):

1. New modules and ADMs provided by ADM working group.
2. Requested by ADM working group
3. Requested by ADM working group

### Description of Change (non-Science):

n/a

### Reason for Change (non-Science):

/N/a

Affected PGEs : CER4.5-6.1P3

Est. Time to Complete Changes : 5 days

Planned Delivery Date : July 2, 2004

Impact : SSF parameter ADMGEO has new format

Originator: NOLAN, SANDY K. (SAIC)

**Table 6: June 30, 2004 - Subsystem Issues and Status (1 of 4)**

SS No.	SS Lead	Status	Problems
1.0	Cooper	<ul style="list-style-type: none"> <li>• Continued tracking receipt of Aqua and Terra data at ASDC. (Cooper, Snyder)</li> <li>• Completed review of TRMM-Terra Intercomparison Paper. Submission of the paper will be done by Kory. (Szewczyk)</li> <li>• Command upload for Terra FM2 has been completely automated with the use of ODSs (one day sequence). (Szewczyk)</li> <li>• Updated the Instrument/ERBE-Like action item lists to be available from the Instrument Working Group web page. (Cooper, Hess)</li> <li>• Beginning work to determine updated gains for Terra from Jan. 2004 - April 2004. (Cooper)</li> </ul>	
2.0	Walikainen	<ul style="list-style-type: none"> <li>• Continuing to examine the production email generated by the QC checker software. (Walikainen)</li> <li>• Continuing to inspect ERBE-like Aqua and Terra output plots and QC reports on the Web. (Walikainen)</li> <li>• Generated Edition Comparison plots for each instrument and Direct Comparison plots for each edition. (Walikainen)</li> <li>• Detected zero-byte ERBE-like gif files posted on the Web. (Walikainen)</li> </ul>	
3.0	Walikainen	Combined with above.	
4.1	Sun-Mack	<ul style="list-style-type: none"> <li>• Processed CloudVis images for Terra-MODIS data for Marie Byrd Land region from May 2002 through December 2002. Completed processing for all 28 TRMM-VIRS subset regions for January 1998 through December 1999. Processed CloudVis images for TRMM-VIRS data for the Dry Tortugas region from January 2001 through July 2001. Results are posted on the Web. (R.Brown)</li> </ul>	

**Table 6: June 30, 2004 - Subsystem Issues and Status (2 of 4)**

SS No.	SS Lead	Status	Problems
4.1	Sun-Mack (Cont'd)	<ul style="list-style-type: none"> <li>• Processed Terra-MODIS Edition2-QC QC global images and statistics from September 2003 through December 2003. Processed Zonal and Zonal Cloud Amount seasonal statistical results for Terra MODIS Edition2-QC Fall 2003. Results are posted on the Web. (R.Brown)</li> <li>• Co-located 4 aircrafts: Citation, ER2, WB57, and PROT with Terra-MODIS and Aqua-MODIS for CRYSTAL FACE location. The cloud properties for co-located pixels were generated, averaged, plotted and posted on the web. (Chen, Gibson, Sun-Mack)</li> <li>• Worked on CRYSTAL proposal. Lots of communications with Pat Minnis. (Chen, Sun-Mack)</li> </ul>	
4.2	Sun-Mack	Combined with above.	
4.3	Sun-Mack	Combined with above.	
4.4	Miller	<ul style="list-style-type: none"> <li>• Discussed needs for a MISR supplement to the SSF with Dr. Loeb, RAB. Submitted a draft data structure and started modifying data type software. (Miller)</li> <li>• Monitored clouds processing for Terra Edition2A. Thirteen and 154 hours failed for November and December 2003, respectively. With the exception of 3 hours without MODIS data, there was no IES data for the remaining hours. (Miller)</li> <li>• Monitored clouds processing for Aqua BetaGERB. One hundred and two hours failed for April 2004. MOA data was not available for the last four days (impacts last six hours of previous day) and three hours did not have an IES. (Miller)</li> <li>• Started a script to monitor production and determine cause of missing hours. (Miller)</li> </ul>	

**Table 6: June 30, 2004 - Subsystem Issues and Status (3 of 4)**

<b>SS No.</b>	<b>SS Lead</b>	<b>Status</b>	<b>Problems</b>
4.5	Nolan	<ul style="list-style-type: none"> <li>Produced one day of SSF subset data for Norman Loeb with PGE4.5-6.3P2 using the modified Edition2B SW Flux modules. (Hoppe)</li> <li>Worked with Norman Loeb to investigate problems with Edition2B SW Flux modules. Norman and Costy provided additional code changes and a day of SSF subset data was recreated with the new code. (Hoppe)</li> <li>Continued testing the latest changes in Norman Loeb's Edition2B SW module in Inversion PGE CER4.5-6.1P3. (Nolan)</li> <li>Processed 12 hours of Terra and 10 hours of Aqua 2004 SSF data for Sunny. (Hoppe)</li> </ul>	
4.6	Nolan	Combined with above.	
5.0	Coleman	<ul style="list-style-type: none"> <li>The software to produce the Terra Edition2B and Aqua Beta1 CRS data sets was delivered to CM. The Operator's Manual and Test Plan were updated and included in the delivery. (Caldwell, Coleman)</li> <li>Produced CRSs from the Clouds/CIFEX study SSFs at the SCF. (Caldwell)</li> </ul>	
7.2	Coleman	<ul style="list-style-type: none"> <li>The updated sarb_params module for CERESlib was delivered. This version contains the new UVA-UVB and Corrected pristine SW flux data structures used by the SYNI product. New subroutines to print these new structures were also included in the delivered sarb_params module. (Caldwell, Coleman)</li> <li>The SYNI test_suites comparison code was updated to include the latest structures added to the SYNI product. (Zentz, Coleman)</li> </ul>	
12.0	Coleman	<ul style="list-style-type: none"> <li>Investigating using the First-Look GMAO data for Paul Stackhouse's FastFlux project. (Zentz)</li> </ul>	
7.1	Nguyen	<ul style="list-style-type: none"> <li>No new updates.</li> </ul>	
8.0	Nguyen	<ul style="list-style-type: none"> <li>No new updates.</li> </ul>	

**Table 6: June 30, 2004 - Subsystem Issues and Status (4 of 4)**

SS No.	SS Lead	Status	Problems
10.0	Nguyen	<ul style="list-style-type: none"> <li>• Processed March 2003 Terra FM1 data on lanina to generate match_TOT_200003, match_CLR_200003 outputs for Dave Young (RAB) as part of SRBAVG validations. (Raju)</li> <li>• Sent TRMM ADM routines for snow cases to Lin Chambers (RAB). Helped her to integrate these routines into her programs. (Raju)</li> </ul>	
6.0	Raju	<ul style="list-style-type: none"> <li>• Delivered Subsystem 6.0 to CERES CM. (Raju)</li> <li>• Updated Operator's manual. (Raju)</li> </ul>	
9.0	Raju	<ul style="list-style-type: none"> <li>• Delivered Subsystem 9.0 to CERES CM. (Raju)</li> <li>• Updated Operator's manual. (Raju)</li> </ul>	
11.0	Stassi	<ul style="list-style-type: none"> <li>• The Clouds subsystem ancillary data directories have been copied over to GGEO so that GGEO can now run completely independently from Clouds (so far just in validation). This was necessary because we discovered that a recently delivered ancillary data file (CER_EMOAW_DAO_015000.epoch) was impacting the GGEO results. (Stassi, Sun-Mack)</li> <li>• Continued testing GGEO on the testbed machine, trying to resolve the lib-4211 problem with the new compiler. Was temporarily side-tracked by differences in testing due to the recent Clouds subsystem delivery, but that is now okay (see above). Will continue this effort when I return in July. (Stassi)</li> </ul>	
CERESlib Stassi/Ayers		<ul style="list-style-type: none"> <li>• Unable to use the secure copy command (scp) when updating CERESlib from <i>thunder</i> to <i>warlock</i>, and no suitable secure alternative has been found. The remote copy command (rcp) still works. (Stassi)</li> <li>• The SARB modules, intsyn_io.f90 and sarb_params.f90, were updated in CERESlib at the SCF machines. CERESlib was delivered to CERES CM. (Caldwell, Stassi)</li> </ul>	The secure copy command (scp) does not work from thunder to <i>warlock</i> .