

April 7, 2004 - System Issues and Status

**Table 1: Process Strategy/Geier as of 04/07/04
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	1/01 - 12/01	Waiting on GGEO to be rerun and waiting on code delivery.
PR 20-04	Terra	ValR2	FSW (SS 6)	6.1P1 6.2P1 6.3P1	7/01	Done 3/17/04.
PR17-04	Terra	Edition2A	SRBAVG (SS10)	10.1P1	3/00 - 2/02	ValR1 must be approved before this starts.
PR 21-04	Terra	Edition2A	CRS (SS5)	5.0P1 5.1P1 5.4P1	1/01, 4/01, 7/01, 10/01	Done 3/15/04.
PR 19-04	Terra	Edition2A	FSW (SS 6)	6.1P1 6.2P1 6.3P1	1/01, 4/01, 7/01, 10/01	Done 3/25/04.
PR 21-04	Terra	Edition2A	CRS (SS5)	5.0P1 5.1P1 5.4P1	1/01 - 12/01 remaining 8 months	Done 3/23/04.
PR 19-04	Terra	Edition2A	FSW (SS 6)	6.1P1 6.2P1 6.3P1	1/01 - 12/01 remaining 8 months	Done 3/27/04.
M PR 99-03		GEOS4	MOA (SS12)	12.1P1	1/04 - present	Standing request to process data as it arrives.
M PR 109-03		GEOS4	PMOA (SS9.1)	9.1P1	1/04 - present	
PR 116-03	TRMM	Beta3	TSI (SS7.1)	7.1.1P1	4/98, 7/98, 8/98	Waiting on delivery to promote.
PR 97-03	Terra	Edition2-QC	SSF (SS4)	4.1-4.1P2 4.1-4.2P1 4.1-4.2P2 4.1-4.3P1	3/02 - 2/03	Holding - waiting on corrupted 2002 data blocks to be replaced.
PR 10-04, 11-04	Terra	Edition2A	SSF (SS4.5-6)	4.5-6.1P2 4.5-6.2P2 4.5-6.4P1	3/02 - 2/03	

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PR 9-04	Terra	Edition2A	SFC (SS9)	9.2P1 9.3P1 9.4P1	3/02 - 2/03	Need to rerun 8/02 and continue forward as SSFs become available.
PR 8-04		Edition2	GGEO (SS11)	11.4P1	3/02 - 12/02	Waiting on SFC inputs to become available.
PR 8-04		Edition2	GGEO (SS11)	11.1P5 11.1P6 11.1P7 11.1P8 11.2P2 11.4P1	1/03 - 2/03	Waiting on SFC inputs.
PR17-04	Terra	Edition2A	SRBAVG (SS10)	10.1P1	3/02 - 2/03	ValR1 must be approved before this starts.
PR 21-04	Terra	Edition2A	CRS (SS5)	5.0P1 5.1P1 5.4P1	2000	Keep running 2000 months until SSF can start production again.
PR 19-04	Terra	Edition2A	FSW (SS 6)	6.1P1 6.2P1 6.3P1	2000	Keep running 2000 months until SSF can start production again.
PR13-04	Aqua	Beta2	SRBAVG (SS10)	10.1P1	12/02	Run once GGEO and SFC inputs are available.
Standing requests AM-PR 1-00 to 7-00	Terra	Edition1	BDS/ERBEl like (SS1-3)	1.1P3 1.2P1 1.3P1 1.3P2 2.1P1 2.2P1 2.3P1 2.3P2 3.1P1 3.2P2	For 3/04 - present	DO NOT PROCESS 3.2P2 - it is on hold.

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Production Request (PR)	Satellite	Production Strategy	Data Product (SS#)	PGEs	Data Dates	Special Status
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 3.2P2	For 7/03 - present	Need Gains and SCR before processing any further (ValRX approved). DO NOT PROCESS 3.2P2 - it is on hold.
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 3.2P2	For 3/04 - present	Do not start until all January'04 data received. 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 3.2P2	For 7/03 - present	Need Gains and SRF before processing any further (ValRX approved). DO NOT PROCESS 3.2P2 - it is on hold.
Standing request PM-PR 12-03	Aqua/ Terra	Edition2	ES4/ES9 (SS3)	3.2P1	For 7/03 - present	Need Gains and SRF before processing any further (ValRX approved).
M-PR 3-02		NSIDC- NESDIS	EICE ESNOW (SS4.1)	4.1-4.0P1	Standing request	
PR 97-03	Terra	Edition2-QC	SSF (SS4)	4.1-4.1P2 4.1-4.2P1 4.1-4.2P2 4.1-4.3P1	3/03 - 12/03	Run at LOW priority after 2/03 finishes.
PR 10-04, 11-04	Terra	Edition2A	SSF (SS4.5-6)	4.5-6.1P2 4.5-6.2P2 4.5-6.4P1	3/03 - 12/03	
PR 9-04	Terra	Edition2A	SFC (SS9)	9.2P1 9.3P1 9.4P1	3/03 - 12/03	

**Table 2: Process Strategy/Geier as of 04/07/04
Coming Soon (1 of 2)**

Active Month	Satellite	Processing Strategy	Data Product (SS#)	Data Dates	Comments
4/04		ValR11	GGEO (SS11)	3/00 - 6/03	Rerun GGEO prior to running Edition2A SRBAVG.
		Edition2A	GGEO (SS11)	3/00 - 6/03	
6/04	Terra	Beta2	TSI (SS7.1)	12 months	
	Aqua	Edition1A	SSF(SS4)	First 12 months	
	Aqua	Beta3	SFC(SS9)	First 12 months	
7/04	TRMM	Beta3	Synoptic SARB (SS7.2)	9 mo	Rerun 3 months of SYNI to use as input for SYN/AVG/ZAVG.
	Aqua	Beta3	SRBAVG (SS10)	First 12 months	
	Terra	Beta2	Synoptic SARB (SS7.2)	4 seasonal months & 3/00	
8/04	Aqua	Beta1	CRS(SS5)	First 12 months	
	Aqua	Beta1	FSW (SS6)	First 12 months	Test at SCF to verify no redelivery needed.
9/04	TRMM	Beta1	SYN/AVG/ZAVG (SS8)	9 mo	Need Synoptic SARB input
	Terra	Beta1	SYN/AVG/ZAVG (SS8)	4 seasonal months & 3/00	Need Synoptic SARB input.
	Aqua	Edition1A	SSF(SS4)	Second 12 months	
	Aqua	Beta3	SFC(SS9)	Second 12 months	
	Terra	Edition2B	SSF (SS4.5-6)	50 months	Updated ADMs, code correction, correct clear area coverage as needed (50-60 deg lat).
	Terra	Edition2B	SFC (SS9)	50 months	
10/04	Terra	Edition2B	SRBAVG (SS10)	50 months	
	Terra	Edition2B	CRS(SS5)	50 months	

**Table 2: Process Strategy/Geier as of 04/07/04
Coming Soon (2 of 2)**

Active Month	Satellite	Processing Strategy	Data Product (SS#)	Data Dates	Comments
		Edition3	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: April 7, 2004 - System Issues and Status

Activity	Lead	Status
CM	Ayers	<ul style="list-style-type: none"> • See Table 4 for SCCR activity since the last DMT meeting. SCCRs that need to be reviewed follow Table 4. (Ayers) • Tested the following deliveries and released them to the ASDC: Instrument (SCCR 514), Instrument (SCCR 517), and Instantaneous SARB (SCCR 515). (Ayers, Saunders) • Delivered the SRBAVG sample read package to the ASDC. (Ayers) • Delivered the February 2004 Clouds S'COOL data file to the ASDC. (Saunders)

Table 4: SCCR Activity March 22 at 2:00 p.m. - April 5 at 3:00 p.m.

SCCR	S	U	A	C	D	SS	Page No.	Comments
503				X		2&3		
504				X		2&3		
506				X		2&3		
507				X		2&3		
508				X		1		
509				X		9		
510				X		10		
512				X		12		
513		X	X	X		10		
514			X			1		
515			X			5		
516	X		X			10	7	
517	X		X			1	8	
518	X					11	9	
519	X					11	10	CERESlib modifications.
520	X					CERESlib	10	

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

CERES Software Configuration Change Request Submittal

Subsystem: GGEO

SCCR Date & TIME: 2004-03-29 15:08:52

SCCR No.: 518

Description of Change (Science):

1. In Chunk.f90, correct the clearsky icemap algorithm.
2. In ProtoPixel.f90, use same solar constant value that is used in other areas of the GGEO code.
3. In HourQC.f90, use log method to calculate mean optical depth (apply EXP() function to the mean log optical depth).
4. The same calculation for mean optical depth described in #3 above was also used in the Cloud-plot PGE11.4P1.

Reason for Change (Science):

1. The algorithm was incorrectly finding ice in coastal regions around the world.
2. Want consistent value for solar constant.
3. This is the preferred technique for averaging optical depth.
4. Same as #3

Description of Change (non-Science):

1. Move the IR calibration adjustment coefficients and the VIS post-launch calibration equation coefficients from the source code to ancillary data files.
2. Add tables to the GGEO Main processor QA report to list the IR calibration adjustment coefficients and the VIS post-launch calibration equation coefficients used during processing.
3. Modify the check_moafles.csh script to six-hourly DAO MOA files rather than the one-hourly files.

Reason for Change (non-Science):

1. This allows the numbers to be modified without having to redeliver and recompile the source code.
2. The new QA tables will provide a record of the inputs used during calibration.
3. The DAO format has changed from one-hourly to six-hourly. The production operators have been getting incorrect warnings about the number of MOA files used during processing.

Affected PGEs : PGE11.1P1-8, PGE11.2P1-2, PGE11.4P1

Est. Time to Complete Changes : changes should be complete soon

Planned Delivery Date : Friday April 2, 2004

Impact : changes are being made to provide better GGEO to TISA
Averaging Subsystem

Originator: STASSI, JOE C. (SAIC)

Table 5: April 7, 2004 - Subsystem Issues and Status (1 of 4)

SS No.	SS Lead	Status	Problems
1.0	Cooper	<ul style="list-style-type: none"> • Continued tracking receipt of Aqua and Terra data at ASDC. 100% of March 2004 data has been received at ASDC. (Cooper, Snyder) • Continued work to determine updates to the Terra gain coefficients and SRFs covering July 2003 through December 2003. Delivery of updated gains and SRFs expected at the end of this week. (Cooper, Walikainen) • A problem was found when running PGE CER1.2P1 with the Input File Generator. A change was made to look for the new ephemeris/attitude filenaming convention for Terra first which fixed the problem. A delta delivery was made to CERES CM. (Cooper) • Dave Young reported to Kory Priestley that SRBAVG for Aqua Dec. 2002 showed only 3 days out of 25 having data over Australia and the Kalahari Desert. Investigated starting with BDS products to determine what caused the missing data. Through investigation of BDS and ES8, it was determined that there was only one day Dec. 15, 2002 with any missing radiances in those regions. The problem appears to be downstream from instrument. Phil is looking into the reason for the missing data on Dec. 15, 2002; at this point it appears that there were problems with the spaceclamp during the time period that is missing. (Cooper, Hess, Walikainen) 	
2.0	Walikainen	<ul style="list-style-type: none"> • Generating Terra ES8N files to support July thru Dec 2003 Edition2 processing. (Walikainen) • Continuing to provide instrument support in studying flight, ground and zero scan offsets comparison studies. Generated monthly averaged data files and graphics. (Walikainen) • Continuing to examine the production email generated by the QC checker software. (Walikainen) • Continuing to inspect ERBE-like Aqua and Terra output plots and QC reports on the Web. (Walikainen) 	

Table 5: April 7, 2004 - Subsystem Issues and Status (2 of 4)

SS No.	SS Lead	Status	Problems
2.0	Walikainen (Cont'd)	<ul style="list-style-type: none"> • Generating Direct Compare plots, edition2 - edition1, per instrument. (Walikainen) 	
3.0	Walikainen	Combined with above.	
4.1	Sun-Mack	<ul style="list-style-type: none"> • Processed CloudVis images for Terra MODIS ValR4 December 2002 for all 39 subset regions for ClearSky over Desert. CloudVis images for Aqua MODIS Beta2 December 2002 for all 39 subset regions were processed. This was for the purpose of CERES STM held at Boulder, CO. (R. Brown) • TRMM VIRS Edition2 CloudVis images were also processed for the Oklahoma ARM site and the San Nicolas Island regions from January through August 1998. (R. Brown) • Studied and plotted reflectance ratios of 2.1 μm to 0.6 μm and 1.6 μm to 0.6 μm, for various optical depths from Terra-MODIS_ Edition2-QC from March 2000 through September 2001. This extracted information will be possibly used in the future Clouds production. (Chen, Sun-Mack) • Participated CERES-GERB STM. (Sun-Mack) 	
4.2	Sun-Mack	Combined with above.	
4.3	Sun-Mack	Combined with above.	
4.4	Miller	<ul style="list-style-type: none"> • Investigated 2001072201 that failed with a segmentation fault during Edition2-QC processing. A MODIS radiance file had an unreadable radiance SDS. This led to a segmentation fault after reading two more granules. Investigation was put on hold to handle MODIS corruption. (Miller) • Two days of Terra data was processed at the SCF using both corrupted and retransmitted MODIS data. Despite extremely large counts on bit differences in the MODIS files, all the hours processed and showed little difference. There was one hour that has over 2 million different values on the SSF. (Miller) 	

Table 5: April 7, 2004 - Subsystem Issues and Status (3 of 4)

SS No.	SS Lead	Status	Problems
4.5	Nolan	<ul style="list-style-type: none"> • Continued to develop new PGE CER4.5-6.6P2. Issues with header information on output data are being resolved. It seems that metadata generating routines are the source of the problem. (Hoppe) • All output footprints of new PGE CER4.5-6.6P2 generated for one day were successfully compared to output footprints generated by PGE CER4.5-3P2 for that same day. (Hoppe) • Two sets of all available hours of September 4 and 5, 2002 FM1 SSF binary and HDF files were created for Walt Miller. One set used input from good MODIS data and the other set used input from corrupted MODIS data for the same hours. (Nolan) • Tested all Inversion PGEs using executables recompiled with the latest CERESlib in preparation for future new operating system and compiler testing. Only 2 of the 9 PGEs were successfully tested using the comparison data last delivered to CM. The other 7 PGEs will require a CM delivery before SSIT testing could take place after a recompile with current compiler and latest CERESlib. (Nolan) • Examined Aqua Beta2 SSF data for 20021214, where the day did not have TOA fluxes over Australia or South Africa, for Dave Young. The problem seems to be the result of the Inversion 3 channel intercomparison test which failed for footprints over those areas. When the comparison fails, then the unfiltered radiances are written to the footprint, but no fluxes are produced. This problem did not occur with the Terra data and the only difference between the Terra and Aqua calculations should be the filtered radiances and the spectral correction coefficients. (Nolan) 	
4.6	Nolan	Combined with above.	

Table 5: April 7, 2004 - Subsystem Issues and Status (4 of 4)

SS No.	SS Lead	Status	Problems
5.0	Coleman	<ul style="list-style-type: none"> Modified CER 5.4P1 run scripts to combine email messages sent to the SARB DMT distribution. (Caldwell) Delivered PGE 5.4P1 to CM, along with updated Test Plan and Operator's Manual. (Caldwell) 	
7.2	Coleman	<ul style="list-style-type: none"> Incorporating ice-age climatology software provided by Fred Rose into the Synoptic SARB Subsystem. (Zentz) 	
12.0	Coleman	<ul style="list-style-type: none"> No new updates. 	
7.1	Nguyen	<ul style="list-style-type: none"> Checking TSI for out of range parameters as shown by Scott Zentz. (Nguyen) 	
8.0	Nguyen	<ul style="list-style-type: none"> No new updates. 	
10.0	Nguyen	<ul style="list-style-type: none"> Supported the scientists for the CERES Science Team Meeting. (Nguyen) Preparing for the delivery. (Nguyen) Supported Dave Young in comparing December 2002 Aqua and Terra data. (Nguyen) 	
6.0	Raju	<ul style="list-style-type: none"> Started working on FSW product Sample read software. (Raju) 	
9.0	Raju	<ul style="list-style-type: none"> Started checking the code to see why these PGEs run slower than Subsystem 6 at ASDC. (Raju) 	
11.0	Stassi	<ul style="list-style-type: none"> Adding log optical depth values to the GGEO record along with the linear optical depths. (Stassi) Created new GGEO test case for the test suites using July 2001 data. (Stassi) Added tables for the IR calibration adjustment coefficients and the VIS post-launch calibration coefficients to the Main processor QA reports. (Stassi) Preparing for GGEO delivery to CERES CM. (Stassi) 	
CERESlib Stassi/Ayers		<ul style="list-style-type: none"> Updating CERESlib modules related to the planned GGEO delivery. These changes will be delivered to CERES CM prior to the GGEO delivery. (Stassi) 	