

Table 1: September 27, 2000 - Subsystem Status.

SS No.	SS Lead	Status	Problems
1.0	Escuadra /Cooper	<ul style="list-style-type: none"> Continuing analysis of the TRMM data. (Hess, Spence) Attended CERES Science Team Mtg. in Huntsville, Alabama. (Cooper) Tracked down the problem with Terra WN channel data not looking correct for RAPS data. The Terra offsets were incorrectly entered in the ancillary data file for offsets. FAPS data offsets are correct in the ancillary files. The files have been fixed and are being rechecked before they will be delivered on Oct. 6. (Escuadra) Gathering all the minor fixes to be put in the Oct. 6th delivery to fix the Terra Offsets. The subsystem delivery will contain updates to fix BDS dimension name problems, as well as, a fix to properly set the Scan Level flags. (Cooper) Looking into reason for the dimension names on BDS to now be Dimension1 and Dimension2. The problem was tracked down to the BDS compression program, however, a problem with dimension names is also occurring in the uncompressed BDS, unit names are appearing rather than "Records", the reason for this is unknown at this time, the code appears to be calling the HDF routines correctly. A fix for the compression program has been found and is being worked. (Szewczyk) Continuing work to determine if there are any Azimuth dependent offsets on Terra. (Escuadra) Continued TRMM/Terra operations/analysis support. (Weaver) 	

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SS No.	SS Lead	Status	Problems
2.0	Kizer	<ul style="list-style-type: none">• Attended STM. (Kizer)• At Erika Geier's request, began working on ES4 and ES9 HDF conversion packages. Package includes stand-alone code, documentation on binary and HDF file formats, and print utilities. (Kizer)• Updated CER2.2P1 ascii input and pcf file generator script to accommodate QC file names that may not exist as directed by DAAC epilogue team. (Kizer)• Began making changes to accommodate non-existing QC file names for months prior to instrument launch. Separate Logic IDs were used for current month and previous months. (Walikainen)• Investigated QC Checker software CPU runtime with multiple months. CPU runtime reduced to one minute. (Walikainen)• Continuing to make changes and add more functions to QC Checker software as suggested in meeting with Richard Green. (Walikainen)• Updated Subsystem 2 Operator's Manual to include QC Checker Error Messages. (Walikainen)• Continuing to inspect ERBE-like Terra and TRMM output plots and QC reports on the Web. (Walikainen, Kizer)	
3.0	Kizer	Combined with above.	

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4.1	Murray	<ul style="list-style-type: none">• Worked on producing plots, charts and various images for the Science Team Meeting. (R. Brown, Sun-Mack, Murray)• Completed processing of July 1998 run at the SCF. Began processing of January 1998. (R. Brown, Murray).• Attended Java and JavaScript classes. (R. Brown)• Run a day of MODIS (20000630) to produce solar zenith angle dependent clear sky albedos and clear sky overhead albedo maps. These runs were done with ERBE directional model and VIRS directional model separately to see the effects. Still evaluating the results. (Sun-Mack)• Investigated a problem in our reflectance model found by Nicolas Clerbaux (from Belgium). (Sun-Mack, Heck)• Participated in CERES science meeting. (Sun-Mack, Murray)• Continued preparations for the Clouds Delivery. (Murray)	
4.2	Murray	Combined with above.	
4.3	Murray	Combined with above.	

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4.4	Miller	<ul style="list-style-type: none"> Added a check before adding them to the pixel list that they would have a PSF weighting. This resolves a problem Ms. Geier identified where the standard deviation was 0, but the optical depth percentile had different values. (Miller) The supplemental digit algorithm was modified to correctly account for round-off error causing the value to be greater than a 100. (Miller) The standard deviation calculation was recasted to double precision to provide more consistent results. (Miller) Completed the analysis of why there were more footprints with aerosol optical thickness. Most came from additional pixels added with Dr. Loeb's changes. Even trade-off with algorithm changes. (Miller) Discussed PSF and convolution with Jianglong Zhang, a student of Dr. Welch. (Miller) 	
4.5	Nolan	<ul style="list-style-type: none"> Continued work to update SSF read software and SSF 5 record sample package. (Franklin and Nolan) Attended CERES Science Team Meeting. (Nolan) Created test SSF files using simulated SSFI as input. (Nolan) Provide Dave Doelling with SSF subset read software. (Nolan) Continued work to update SSF Subset software using new SSF type 117 definition. (Nolan) 	
4.6	Nolan	Combined with above.	
5.0	Coleman	<ul style="list-style-type: none"> Continued work and testing on the Surface Albedo Pre-Processor. (Coleman) Began implementation of code in Main-Processor that uses monthly map output by the Surface Albedo Pre-Processor. (Coleman) Attended CERES Science Team meeting. (Coleman) 	
7.2	Coleman	Combined with above.	

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12.0	Coleman	<ul style="list-style-type: none"> Continued work on further automating software that subsets ECMWF data upon ingestion at the DAAC. (Caldwell) Began effort to provide MOA read software without Toolkit and CERESlib calls for Mike Folks, along with accompanying documentation. (Caldwell, Coleman) 	
7.1	Nguyen/Raju	<ul style="list-style-type: none"> No new updates 	
8.0	Raju/Nguyen	<ul style="list-style-type: none"> No new updates 	
10.0	Nguyen/Raju	<ul style="list-style-type: none"> Testing codes using the GGEO cloud. Examined the SW surface flux data of the BSRN sites. Wrote programs to plot the time history of each BSRN site and output tables of SSF data and Florianopolis data at SSF times. Supported and attended the CERES Science Team Meeting. 	
6.0	McKoy	<ul style="list-style-type: none"> An error was found in the SFC data generated at the SCF. The data written to the SFC files was incorrect, but internally the data was correct at point of the Fortran90 write call. The SFC data structure was truncated at the time of the write call. In some cases, inserting an inquire statement to obtain the SFC record structure size and the SFC data file record size prior to write call corrected the problem; however, we have found that the problem still exists and are attempting to track down the source of the problem. 	
9.0	McKoy	Combined with above.	

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11.0	Stassi/ Fan	<ul style="list-style-type: none"> Modified cloud processing to work with the actual image time rather than the synoptic image time. (Stassi) Corrected another problem with how the GOES-East image processing handled time. (Stassi) Modified post-processing code to create GGEO gif files for three cloud parameters: Cloud Percent, Total Cloud Temperature, and Total Cloud Optical Depth. (Stassi) 	<ul style="list-style-type: none"> Having continued sporadic problems with the SGI compiler write error, iostat=4211. (Stassi)
CERESlib Stassi/ Ayers		<ul style="list-style-type: none"> Updated the meta_write.f90 module. (Kizer, Stassi) Working on alternative CERESlib update procedures. The current procedures do not work because remote commands to thunder, where the CVS repository for CERESlib resides, have been shut down. (Stassi, Flippo) 	
CM	Ayers	<ul style="list-style-type: none"> No new SCCRs submitted since last DMTM;SCCRs updated since last DMTM: 208;Instrument or ERBE-like SCCRs to be reviewed for approval: 208 (see following pages). (Ayers) Expecting the Clouds re-delivery followed a week later by GGEO. (Ayers) 	
IST	Flug	<ul style="list-style-type: none"> No new updates 	

CERES System Configuration Change Request Submittal

Subsystem: SS_1.0_Instrument SCCR Date: 06/05/2000 SCCR Number: 208

Description of Change (Science):

- 1) Fix reading of first packet of Level-0 data, this packet was previously skipped.
- 2) Add code to check for crosstalk between the radiance channels, return a 16-bit fill value for corresponding channels whenever crosstalk is detected.
- 3) Add new SDSs to the BDS: Time-Ordered analog parameters, and Drift corrected counts for each channel.
- 4) Fix the BDS Conversion to Pre-ES8 to not pass on records where the spacecraft location has been set to a fill-value due to problems with the ephemeris/attitude data files.
- 5) Update Edit limits for radiance count conversion and instrument housekeeping calculations.
- 6) Change Terra count conversion offsets from all zeros to ground determine values, since no deep space calibration has been preformed.

Reason for Change (Science):

Post-launch version of code for Terra. Preliminary updates for TRMM noisy data anomaly, remaining TRMM updates will be delivered at a later TBD date.

Description of Change (non-Science):

- 1) Update code to work with new SGI Ada 95 compiler, the new compiler found some bugs and non-standard implementations in the existing SS1 code.
- 2) Fix scripts to use new date scripts to calculate previous and next data dates, so that these calculations are in 1 place rather than repeated 7 times.
- 3) Fix scripts to use new parameter map read script, which removes the requirement that the scripts be in tcsh.
- 4) Add crosstalk check runtime parameter to scripts, at this time this parameter is set to OFF for Terra.
- 5) Add compression to the HDF write routines for the BDS to make the data product smaller, since we are adding new SDSs to the product.
- 6) Fix fatal error return from geolocation routines when problems with the ephemeris/attitude files are detected. Add one more ToolKit error code to the non-fatal error list for the geolocation routines.

- 7) Update the production QC report to add a new table, which shows the number of times crosstalk was detected between each pair of radiance channels.
- 8) Update the production QC report to remove the timing error report and move the timing error report to the instrument statistics QC report.
- 9) Add a flag to indicate when DAA ground spike has been detected.
- 10) Reformat BQCRPS detector_assy and instrument information.
- 11) Modified algorithm for the detector header DAC coarse/fine combined value.
- 12) Update code to flag when an Elevation scan rate glitch is detected.

Reason for Change (non-Science):

Upgrade of SGI systems which includes the new SGI Ada 95 compiler and various requested updates to QC reports requested by Instrument team and CERES team members.

Estimates Man Power:

Schedule : Delivery July 7, 2000 to CM

Impact : Reprocessing of all Terra data since launch, no reprocessing of TRMM data at this time, this will be done after the next delivery.

Date: 06/05/2000 Status: SUBMITTED

Originator: COOPER, DENISE L. (SAIC)

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ADDITIONAL CHANGES TO SCCR NO. 208:

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Description of Change (Science):

N/A

Reason for Change (Science):

N/A

Description of Change (non-Science):

- a) MODify Terra PCF generator script to always stage ephemeris and attitude 2-hr files in matched pairs.
- b) Fix NextDay.csh error for Dec. 31 to Jan. 1 calculation.

Reason for Change (non-Science):

- a) It was discovered that a ToolKit error, which needs to be treated as a fatal error in the SS1 code occurs when the ephemeris and attitude files are not staged in matched pairs.
- b) An incorrect variable name was used in the calculation of the year value for the transition from one year to the next.

Date & Time: 2000-08-22 11:46:35

Originator : COOPER, DENISE L. (SAIC)

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Description of Change (Science):

The following changes were in the delivered code, but were missing from this SCCR:

- 7) Fix error in Second Time constant algorithm, "- 1" should have been a "+ 1".
- 8) Update Second Time Constant Coefficients based on values determined by Pete Spence's automated program.

Reason for Change (Science):

While doing analysis on the Second Time Constant coefficients Lou Smith discovered an error in the algorithm he originally provided a "- 1" should have been a "+ 1". This made a very small difference in the algorithm results.

Analysis using Pete

Spence's automated second time constant determination program yielded new coefficients for FM1 and FM2 than those determined using the ground calibration data.

Description of Change (non-Science):

n/a

Reason for Change (non-Science):

n/a

Date & Time: 2000-09-13 15:47:16

Originator : COOPER, DENISE L. (SAIC)

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