

CERES Requirements Log - Clouds

Reqm'ts No.	Requirement	SCCR	Provider	Responsible Subsystem	Responsible Person	How was it conveyed?	When was it received?	When was it accepted?	When was it completed?	Current Status
4-1	Update Terra Main Processor for MODIS Collection 5 and handle Edition 3 changes	603	Geier	Clouds/ Convolution	Sun-Mack	Email, phone, and face-to-face	04/20/05	04/20/05		The delivery for Terra only will not be necessary. We have integrated the changes for Edition3 into this requirement. This requirement has been split in two again. See 4-3 and 4-5 (20070514).
4-1.1	Integrate updated CERES cloud mask code	603	Minnis	Clouds	Sun-Mack	Email	04/20/05	04/20/05		Waiting science code changes (Minnis approval). Moved to 4-5.
4-1.2	Update MOD04 read software to handle rename SDS and change in dimensions for Collection 5	603	Geier	Clouds	Sun-Mack	Email	08/24/05	08/24/05		MOD04 file format reviewed. Test files have been read. Moved to 4-3.
4-1.3	Update cloud algorithms to be similar to Aqua production code	603	Minnis	Clouds	Sun-Mack	Meeting on production schedule	08/11/05	08/11/05		The Terra version of the code has been frozen in production while updates were allowed in the Aqua version. Compatibility was maintained for both satellite in latter versions. The Aqua version will be used as baseline for Edition 3 updates. Moved to 4-5.
4-1.4	Update convolution code to match Aqua production code	603	Geier	Convolution	Miller	Meeting on production schedule	08/11/05	08/11/05		The Terra version of the code has been frozen in production while updates were allowed in the Aqua version. Compatibility was maintained for both satellite in latter versions. The Aqua version will be used as baseline for Edition 3 updates. Moved to 4-5.
4-1.5	Write and implement the initial MCRS-IR Algorithm to retrieval cloud properties	603	Minnis	Clouds	Sun-Mack	Email and face-to-face	06/15/05	06/15/05		Need to validate. Moved to 4-5.
4-1.6	Write a 250 meter MODIS read software to retrieve visible radiances	603	Minnis	Clouds	Sun-Mack	Email	11/15/05	11/15/05	04/15/06	Completed. Moved to 4-5.
4-1.7	With 250 meter reader, write software to implement Partial Cloudy Algorithm	603	Minnis	Clouds	Sun-Mack	Email and meeting.	11/15/05	11/15/05		Initial results looks good for certain types of clouds and not so good for ice cloud. Need to design a strategy when and where to apply the algorithm. Moved to 4-5.

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4.1-8	Implement the latest CO2 Slicing Algorithm from MODIS team.	603	Minnis	Clouds	Sun-Mack	Email	01/26/06	01/26/06	05/30/06	Overall, results look good. Need to find out the cause of stripping over high elevation. Moved to 4-5.
4.1-9	Implement the CO2 Slicing Multilayer Detection Algorithm	603	Minnis	Clouds	Sun-Mack	Email, face-to-face, phone, meeting.	02/22/06	02/22/06		Need to validate. Moved to 4-5.
4.1-10	Correct missing imager data algorithm	603	Geier	Convolution	Miller	Email	04/27/06	04/27/06		Moved to 4-5.
4.1-11	Update SSF structure as proposed	603	Geier	Convolution	Miller	Meeting and Emails	05/30/06	05/30/06		The Edition3 SSF type def has been updated and provided to downstream subsystems. Moved to 4-5.
4.1-12	Convolve imager information for new parameters	603	Geier	Convolution	Miller	Meeting on production schedule	05/30/06	06/05/06		NASA CERES
4-2	Modify PCF Generator Script for FM4 Ed2-NoSW	609	Geier	Clouds/ Convolution	Miller	Email	12/12/05	01/09/06	01/20/06	Delivered. Promoted 2/16/06.
4-3	Update Terra and Aqua Main Processor for MODIS Collection 5	654	Geier	Clouds/ Convolution	Sun-Mack	Email, phone, and face-to-face	04/20/05	04/20/05		The functionality to handle MODIS Collection 005 was split from the Edition 3 changes. This SCCR supercedes 603. Updates and testing have been completed.
4-3.1	Update MOD04 read software to handle rename SDS and change in dimensions for Collection 5	654	Geier	Clouds	Sun-Mack	Email	08/24/05	08/24/05		MOD04 file format reviewed. Test files have been read. Updates and testing has been completed.
4-3.2	Change Terra Hourly QC format to be the same as Aqua	654	Minnis	Clouds	Sun-Mack	Email	08/11/05	08/11/05		New format was implemented and tested.
4-3.3	Increase the number of subset regions	654	Minnis	Clouds	Sun-Mack	Email				New subset regions were added.
4-3.4	Produce reduce set CloudVis each hour for Terra	654	Minnis	Clouds	Sun-Mack	Email				Implemented.
4-3.5	Check IES eclipse flag in Terra	654	Geier	Convolution	Miller	Meeting on production schedule	08/11/05	08/11/05		Code modified and tested.
4-3.6	Increase the number of file name read from imager file to agree with Aqua	654	Geier	Convolution	Miller	Meeting on production schedule	08/11/05	08/11/05		Code modified and tested.
4-3.7	Change to NOMAD addresses for Emails	654	Geier	Clouds/ Convolution	Sun-Mack	Email				Completed.

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4-4	Update GRings to handle sparse data cases	655	Geier	Convolution	Miller	DMT				Tested on two months of Aqua Edition2A plus problem Terra and Aqua granules. Included in CERESlib.
4-5	Update Terra and Aqua Main Processor to handle Edition 3 changes		Geier	Clouds/ Convolution	Sun-Mack	Email, phone, and face-to-face	04/20/05	04/20/05	02/15/08	The functionality to handle Edition 3 changes was split from MODIS Collection 005. This SCCR supercedes 603. The code was delivered on 20080215
4-5.1	Update cloud algorithms to be similar to Aqua production code	603	Minnis	Clouds	Sun-Mack	Meeting on production schedule	08/11/05	08/11/05	02/15/08	The Terra version of the code has been frozen in production while updates were allowed in the Aqua version. Compatibility was maintained for both satellite in latter versions. The Aqua version will be used as baseline for Edition 3 updates. The code was delivered 20080215
4-5.2	Update convolution code to match Aqua production code	603	Geier	Convolution	Miller	Meeting on production schedule	08/11/05	08/11/05	02/15/08	The Terra version of the code has been frozen in production while updates were allowed in the Aqua version. Compatibility was maintained for both satellite in latter versions. The Aqua version will be used as baseline for Edition 3 updates. The code was delivered 20080215.
4-5.3	Integrate updated CERES cloud mask code	603	Minnis	Clouds	Sun-Mack	Email	04/20/05	04/20/05	02/15/08	Minnis approved science code changes. Code delivered 20080215.
4-5.4	Write and implement the initial MCRS-IR Algorithm to retrieval cloud properties	603	Minnis	Clouds	Sun-Mack	Email and face to-face	06/15/05	06/15/05	02/15/08	New algorithm validated. Code delivered 20080215.
4-5.5	Write a 250 meter MODIS read software to retrieve visible radiances	603	Minnis	Clouds	Sun-Mack	Email	11/15/05	11/15/05	04/15/06	Code delivered 20080215.
4-5.6	With 250 meter reader, write software to implement Partial Cloudy Algorithm	603	Minnis	Clouds	Sun-Mack	Email and meeting.	11/15/05	11/15/05		Initial results looks good for certain types of clouds and not so good for ice cloud. Need to design a strategy when and where to apply the algorithm. This requirement was moved to Ed3 Beta2

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4-5.7	Implement the latest CO2 Slicing Algorithm from MODIS team.	603	Minnis	Clouds	Sun-Mack	Email	01/26/06	01/26/06	05/30/06	Overall, results look good. Code was delivered 20080215.
4-5.8	Implement the CO2 Slicing Multilayer Detection Algorithm	603	Minnis	Clouds	Sun-Mack	Email, face-to-face, phone, meeting.	02/22/06	02/22/06	02/15/08	Code was delivered 20080215.
4-5.9	Update SSF structure as proposed	603	Geier	Convolution	Miller	Meeting and Emails	05/30/06	05/30/06	02/15/08	The Edition3 SSF type def has been updated and provided to downstream subsystems. It has been delivered with subsystem and provided to inversion.
4-5.10	Convolve imager information for new parameters	603	Geier	Convolution	Miller	Meeting on production schedule	05/30/06	06/05/06	02/15/08	The Edition3 algorithms were implemented and delivered.
4-5.11	Correct missing imager data algorithm	603	Geier	Convolution	Miller	Email	04/27/06	04/27/06	02/15/08	Code was delivered 20080215
4-6	Handle MODIS IGBP processing and correct FM4 problem.	673	Loeb	Clouds/ Convolution	Miller	Email	04/02/08	04/07/08	05/30/08	
4-6.1	Modify PCF script to select between CERES and MODIS-derived IGBP map	673	Loeb	Clouds	Miller	Email	04/02/08	04/07/08	05/30/08	Script delivered 20080530.
4-6.2	Modify PCF generator to handle FM4 Ed2 NoSW when only instrument requested.	673	Geier	Convolution	Miller	Email	10/18/07	10/18/07	05/30/08	Script delivered 20080530.
4-7.1	Modify 1P6 run script to produce nonzero Exit code on clouds failure.	680	Geier	Clouds	Sun-Mack	Email	06/24/08	06/26/08		Script updated.