CERES Software Bulletin 96-06

November 5, 1996

Release 2 Archival Data Product Policy

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The purpose of this bulletin is to clarify our format and distribution policy for Release 2 archival data products. In a little more than a year, we will be processing TRMM flight data and producing candidate archival products using the Release 2 software which we must deliver to the DAAC starting early in 1997. One of our goals is to make our data products easy to use and to minimize format changes which complicate the analysis of the data. Recent testing of HDF-EOS (the EOS-specific flavor of Hierarchical Data Format developed by the National Center for Supercomputer Applications) has shown that many of our archival data products do not easily fit within the EOS swath, point and grid structures. While these structures are still evolving, it is clear that the EOSDIS focus is on the AM launch and the formats are unlikely to stabilize in time for TRMM production. The actions stated below are based on our current understanding of HDF-EOS and the supporting software tools. As these tools mature, we may need to reconsider these actions.

Actions:

1) Standardize the format of each archival data product and plan to distribute the product in that form for both test and flight data sets. Our goal is to maintain a consistent data format as we move from test data to TRMM to AM to PM so that investigators can concentrate on detecting changes in the data, not changes in format. Changes to the data format after releasing the test data must be very carefully considered and should be avoided wherever possible.

2) Produce all CERES products which fall naturally into the swath and grid structures using HDF-EOS. For example, ES-8 effectively uses the swath structure and all 1x1 degree gridded archival results use the grid structure. The gridded results are the final monthly, regionally-averaged results which are most likely to be used for modeling intercomparisons with other EOS data sets. They do not include the S-9 type products which have a variable number of hour-box samples per region. Study modifications to the HDF-EOS metadata to include usable metadata for standard HDF tools such as collage.

3) Produce all other archival products using standard HDF structures. We must assure that the toolkit metadata routines work with standard HDF files.

4) Use internal file structures as needed to get TRMM production moving. However, we must have post-processors to convert archival products from the internal format to the intended archival format before distribution outside of LaRC. For example, we need to convert our internal version of SSF to HDF before distribution to non-Langley Science Team members - likely to be a few months after TRMM launch.

5) Develop read routines which can be distributed by the DAAC to use the simplest possible HDF routines to read our data products. These routines will also be distributed to Science Team members for validation of the data products.

The following table shows the current HDF implementation plan for each CERES archival product.

File Formats for CERES Archival Products

Product	Responsible Person	HDF Plan	Comments
BDS	Joey Escuadra	HDF Vdatas	No plans to move to HDF-EOS.
ES-8	Lynn Jimenez	HDF-EOS Swath	The current plan is to write the ES-8 in the swath structure.
ES-9	Lynn Jimenez	HDF SDSs	When writing this product with the HDF-EOS Grid structure, there was an incredible amount of wasted space; therefore it was decided to use HDF SDSs. This is in keeping with Bruce Barkstrom's original suggestion to use SDSs for CERES products.
ES-4	Lynn Jimenez	HDF-EOS Grid	This product, although not 1-deg, fits nicely into the HDF-EOS Gridded structure and will stay that way.
SSF	Lynn Jimenez/ Sandy Nolan	HDF Vdatas	It would be easy to change to Point structure if the API stablizes and it becomes advantageous to use HDF-EOS.
CRS	Shalini Gupta	HDF Vdatas	Same as SSF.
FSW	Nichele McKoy	HDF Vdatas	Like the ES-9, due to the amount of wasted space when using HDF-EOS, it was decided to write using HDF Vdatas.
SYN	Shalini Gupta	HDF-EOS Grid	
AVG	Sarah Sullivan	HDF-EOS Grid	Based on the decision made Friday, 10/25, this product will stay in the HDF-EOS Gridded structure.
ZAVG	Sarah Sullivan	HDF-EOS Grid	Based on the decision made Friday, 10/25, this product will stay in the HDF-EOS Gridded structure.
SFC	Nichele McKoy	HDF Vdatas	Like the ES-9, due to the amount of wasted space when using HDF-EOS, it was decided to write using HDF Vdatas.
SRBAVG	Sarah Sullivan	HDF-EOS Grid	Based on the decision made Friday, 10/25, this product will stay in the HDF-EOS Gridded structure.