

Preparation of a Data Management Plan, Development of the Data Pipeline, and Efficient Archiving

Your plan should accomplish three objectives:

1. Identify the data required to achieve the science goals of the mission, estimate data volume and complexity of the data structure, and identify calibration and geometric information that is required to utilize the data
2. Identify products needed to fulfill the AO requirements — i.e. low-level (raw) data, higher-level (processed in physical units in common use by the community), derived products, calibration data (ground and in-flight) and documentation necessary to interpret the data.
3. Scope the data processing and archiving budget.

To ensure that a high quality data archive is produced, design archive production into the instrument data pipeline, use PDS label-making and validation tools where they exist, and route the archival products to team members for science analysis so that metadata and calibration are validated and evaluated by in-house experts.

The following Check List will help you develop a compliant and efficient data management and archiving plan.

- A. Although the PI is responsible for data management and archiving, does the proposal identify a data manager who is familiar with PDS requirements to lead the data planning and archiving?
- B. Is the FTE profile adequate for producing the archive and managing its ingestion into PDS in accord with NASA guidelines?
- C. Does the proposal contain an estimate of the volume and complexity of the data that will be generated?
- D. Does the proposal contain a clearly defined schedule for archive development? Does it include major archive design milestones, early generation of sample data, peer review of the pipeline, and subsequent lien removal?
- E. Has the team contacted the appropriate nodes and developed a preliminary plan for how interactions will be accomplished with node personnel to implement the plan (For example, formation of a data archive working group with mission

and node personnel, the role of a SOC, if proposed, or plans for handling large data sets.)?

F. Has the team revealed an awareness of ITAR restrictions and included plans to assure that the mission will produce ITAR-insensitive documentation to be submitted as part of the archive?

G. Has the team specified PDS compliant data formats for its products?

H. Will the team use a PDS-conformant, configuration-controlled pipeline with incremental deliveries and plans for peer review of the pipeline and first delivery or

Will the team deliver data in bulk at one or more discrete times during the mission with peer review after each delivery? And, is the selection justified?

I. Does the proposal include the schedule for delivering raw and calibrated data to PDS? If the proposed deliveries are more than six months after raw data acquisition, is the schedule justified?

J. Does the plan include delivery of high-level (derived) data products — such as maps, synthesized products from multiple instruments, shape models, and other interpretation level products — within six months of raw data acquisition? If not, is the proposed schedule justified?