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To: Distribution

From: J. Kinnison

Subject: Guidelines for SPP Phase B Reviews

With Solar Probe Plus well into Phase B, the number and frequency of reviews is expected to increase as we approach PDR. Our goal with all reviews is to do the right thing: use the format, level of formality, and technical expertise appropriate to provide the best insight into our processes and product. It's important that we get the appropriate depth of review needed at each stage across the project to make sure we're going to meet mission requirements, and so we also want to ensure consistency of reviews. The purpose of this memo is to give the project expectations for hardware and discipline area reviews (see Table 1). Guidelines for software reviews are covered in the SPP Software Development Plan (7434-9042).

We have three broad types of reviews – Project Life Cycle Reviews, Subsystem/Instrument Reviews, and Peer Reviews. Each type is important, but each serves a different purpose, and should be approached differently.

- Project Life Cycle Reviews are the major reviews that typically indicate a transition from one phase to the next. These reviews are defined by NASA NPR 7120.5 (version as defined by our contract with NASA). Entrance and exit criteria, interaction with the Standing Review Board, etc, are laid out in the NPR and we will follow that document to make sure we successfully complete the required reviews. Given the broad scope of a Project Life Cycle Review, the content for any particular discipline or subsystem is usually kept at a high level.
- Subsystem/Instrument reviews are those reviews that feed directly into the Life Cycle Reviews. These include, for example subsystem or instrument PDRs that lead to the Mission PDR. These reviews are intended to be more formal than Peer Reviews, and the guidance in Table 1 reflects that. These reviews fill in the detail that can't reasonably be included in a higher-level review. Note: APL has historically called some of these reviews "Peer Reviews". We can continue to do this, but any review held at the subsystem, discipline area, or instrument level should be included in this category no matter what it is called.
- Peer Reviews are those that are targeted to specific items within subsystems or instruments, or subjects within disciplines. These reviews allow a deep dive into a specific subject that generally cannot be achieved in the context of a subsystem/instrument review, and the entirety of these peer reviews covers all aspects of the subsystem/instrument review. Examples such as a manufacturing review for a test article or design review for a board are typical; less obvious examples are reviews to determine TRL 6 achievement for a technology development item or a review of a set of requirements. Of critical importance in these reviews is getting a group of experts together for the technical penetration needed to adequately review our work, and the level of formality for these reviews should be what best accomplishes this goal.

Please keep in mind as reviews are completed that we have reporting requirements to NASA as well. The project keeps a log of all Project Life Cycle and subsystem/instrument reviews held, and it's important that material from each review is archived in a way that is easily accessible for future use. This should be coordinated through the system engineering team as the review is planned. A copy of all review materials should be sent to me.

Many of our reviews will include reviewers from outside institutions, in many cases, NASA. The Project Office will work with the planner of each review as needed to coordinate external attendance. For NASA reviewers, requests will be coordinated with the LWS Program Office as well.

Table 1. Review Guidance for SPP

	Project Life Cycle Review.	Subsystem/Discipline/Instrument Review.	Peer Review
Format	Formal presentation with supplemental material per NPR 7120.	Formal presentation with supplemental material.	Tabletop discussion preferred, presentation as best fits material
Chair	SRB Chair per NPR 7120.	Chair from outside the project, can be internal to institution	Lead or designee.
Review Board	NASA SRB per NPR 7120.	External to project required, external to institution preferred. SRB invited, but not required.	Minimum one Subject Matter Expert external to project required, external to institution preferred. SRB not required.
Action Item Tracking	PIMS	PIMS	Tracked by Lead, status reported at next higher level review.
Project Participation	Project Management, System Engineering, System Assurance required.	Project Management, System Engineering, System Assurance required. SPP team notified.	Project Management, System Engineering, System Assurance notified, but not required.
Review Record	Review presentation package, archived with project files.	Review presentation package, archived with project files. Written minutes published in memo form.	Written minutes published in memo form. Other material archived.
Entrance/Exit	As defined in NPR 7120	Pre-defined success criteria.	Scope and intent defined at the review.
Material Availability	2 weeks in advance per NPR 7120 for presentations, supplemental material as defined in NPR 7120.	1 week in advance.	Three-step process preferred (as logistics allow): - Meeting or telecon to introduce material - One week for review of material - In-depth discussion of questions and findings.

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