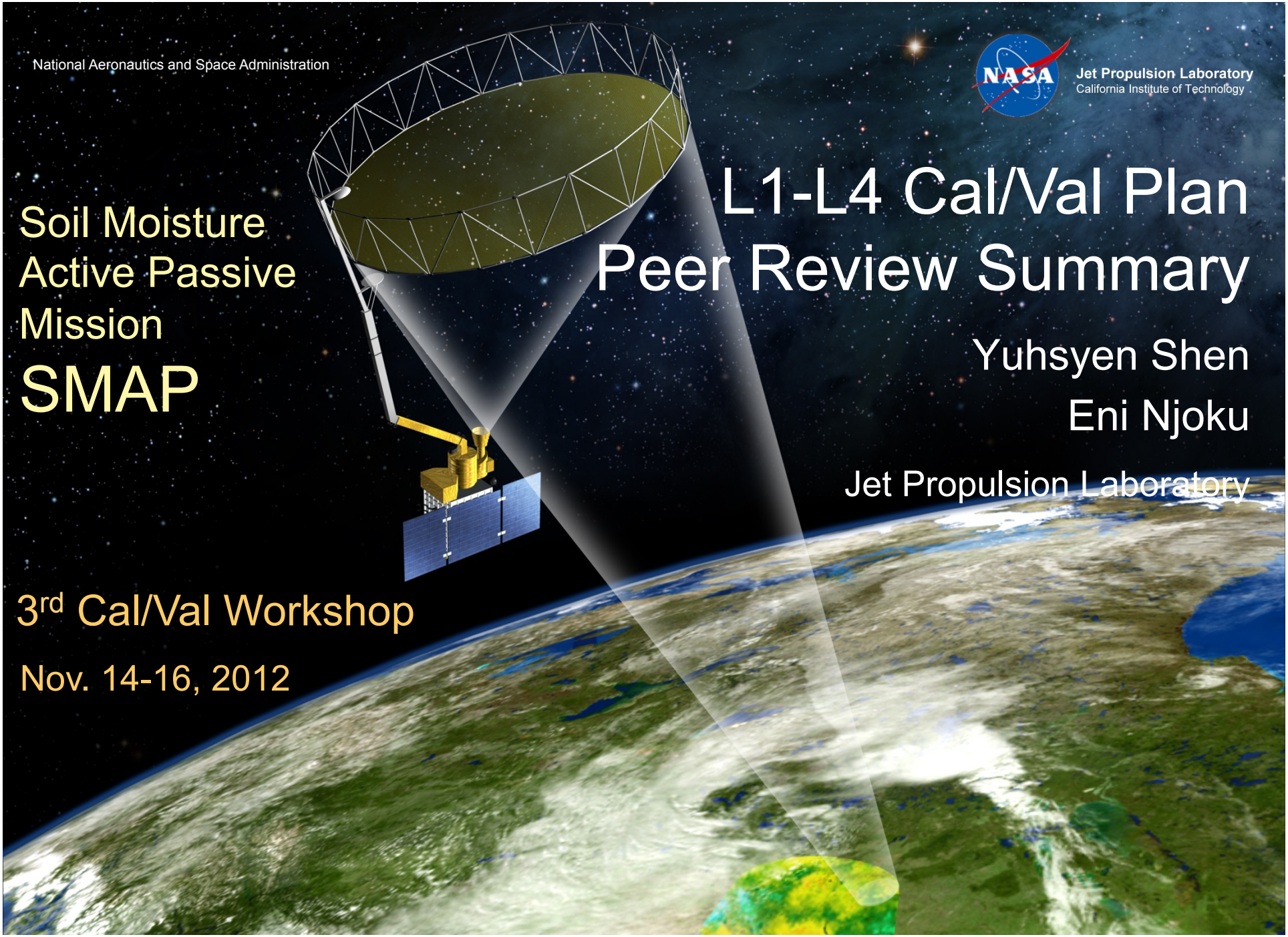

Summary of Cal/Val Peer Review Results
(Provided by Y. Shen)

- Cal/Val Peer Review held on October 3, 2012
  - Board report dated October 18

- Review Board:
  - Randall Friedl, chair
  - Shawn Goodman
  - David Perz
  - Simon Yueh
  - Shannon Brown
  - Yunjin Kim
  - David Schimel
  - Frank Wentz
  - Ted Engman
  - Dara Entekhabi
  - Edward Wollack

- Three Findings:
  - See subsequent pages… Responses incorporated into advisory responses

- Thirty-two RFA Advisories:
  - Grouped responses indicated below
  - Will be referenced as development of Cal/Val plans continue

Assessment Findings

- Cal/Val requirements are well understood; Cal/Val plan is comprehensive and complete; Cal/Val approaches and methodologies are credible and thorough

- A few issues were of particular concern
  - *Tight timeline between now and validated products release: Need Cal/Val phase lead as early as possible; ensure OASIS in place and functional for rehearsals and flight operations Cal/Val*
  - *Rapid post-launch data turnaround and release, data quality flagging, and rapid data evaluation by Cal/Val and science teams*
  - *Validation highly challenging with all the envisioned external sites and activities; needs prioritization and coordination*

- 32 RFAs, all accepted as advisory
  - *Concerns spit into three groups: Calibration (14 RFAs), Validation (13 RFAs), Science Data System (5 RFAs)*

RFA Summary (1/2)

RFA #s	Concern	Response
Cal 3, Cal 7, Cal 8, SDS 5	Instrument calibrations will likely vary over time: How will this variability be handled in the algorithms; are there sufficient reprocessing resources in SDS; does Science have the resources for repeat calibration?	Discussion among Cal/Val lead, SDS team, and Science team within integrated Cal/Val organization about algorithms and interfaces for periodic calibration updates. Ensure OASIS has infrastructure and resources for partial (and perhaps complete) cal-related reprocessings. SDS to examine possibility of additional official reprocessings with updated calibrations.
Cal 1, Cal 2, Val 4, Val 6, SDS 1, SDS 3	There is a tight timeline between now and validated product release: Need improved cal/val schedule and planning prior to launch, in the cal/val phase, and for the remainder of mission.	Cal/Val planning and scheduling will mature after Cal/Val lead and team are chosen in near future. The SDS and MS will ensure that systems and tools are available and adequate for Rehearsals, as plans become finalized, and for flight ops. Evaluate if rehearsal scope can include evaluating post-launch data turnaround, data quality evaluation, and data flagging.
Cal 4, Cal 10, Cal 13, SDS 2	Near-term planning tasks such as on-orbit simulator, joint L1/L2 cal coordination issues, cal/val during IOC, OASIS requirement definitions for cal/val.	Cal/Val lead and integrated cal/val organization will work these planning issues with MS, ISE and Science over next several months.

RFA Summary (2/2)

RFA #s	Concern	Response
Val 11, Val 12	RFI is challenging: RFI mitigation schemes require verification; cal/val sites may have excessive RFI contamination.	SDS and IOT are developing and testing RFI processing tools for L1 corrections. RFI phenomenology in L2-L4 products is a Science question, as are RFI issues with cal/val site selection.
Cal 5, Cal 9	Cross-calibration with other satellites and missions requires more detail and planning.	The cal/val lead and integrated cal/val team will work to ensure data access and tool availability for any needed L1 cross calibration. Details of cross-calibration algorithms to be developed by Science.
Cal 6, 11, 12, 14, Val 1, 2, 3, 5, 7, 8, 9, 10, 13, SDS 4	Various Cal/Val site issues, cal/val algorithm questions and L2-L4 science questions.	Cal/Val Site issues are allocated to Science. Science will refine use of calibration sites for Tb, soil moisture, sigma0, etc. Science will spearhead prioritization and coordination of external calibration sites and site activities.

Summary

- The Cal/Val plan is comprehensive and complete
  - *Scope of work, procedure and tool development schedule, rehearsal timeline, and rapid operational data turn around are all ambitious*
  - *Integrated Cal/Val team under Cal/Val lead will form in very near future to address these issues*
- The Cal/Val approach and methodologies are credible and rigorous
  - *A number of challenges exist, but these will be dealt with by the Science portion of the integrated Cal/Val team*
  - *These include validation site planning, calibration accuracy, cross-pol and inter-frequency calibration, etc.*
- The implementation of the pre-launch Cal/Val plan is on track
  - *Considerably more work lies ahead*
  - *Details of Cal/Val processes and procedures will be developed over the next few months*