

## **June 2020 Calibration/Validation Maturity Review**

### **June 18<sup>th</sup>, 2020**

Review Team Members: Mitch Goldberg (chair), Lihang Zhou, Satya Kalluri, Ingrid Guch, Banghua Yan, Jim Yoe, Kevin Schrab, Rick Stumpf, Michael Ford, Gary Wick, Tom Renkevans, Jim Gleason

The review team acknowledges that the science teams have done an excellent job in preparing the Cal Val results for demonstrating the validated product maturity. The review panel recommends:

- NOAA-20 Surface Reflectance is at the Validated Maturity
- NOAA-20 Snow Cover (Binary Map & Snow Cover Fraction) is at Validated Maturity pending on completion of the action for obtaining the user's evaluation.

### **NOAA-20 Surface Reflectance**

The science team demonstrated excellent accuracy, precision, and uncertainty statistics when comparing with AERONET, and in general the product is meeting the requirement (except M1-M3, which suggested by the team that the spec was too tight for those channels). Very good consistency between the products from NOAA-20 and SNPP. The positive feedback from the downstream products and applications, including the VI/GVF, surface type, and CoastWatch, also support the high quality of the surface reflectance products and usefulness in the applications.

The review team recommends the Surface Reflectance Cal-Val team put together plans moving toward enterprise algorithms; and further expand validation datasets to higher latitudes and over longer periods of time, this is especially important when considering the cryosphere applications.

The review team encourages the Surface Reflectance Cal-Val team to explore more imagery applications, like fire RGB; and to explore adding it to the JSTAR mapper (and encourages the JSTAR mapper team to add functions such as scatter diagrams and toggling between I&T data streams and operational data streams) to support the routine imagery validation and application.

The review team recommends precision specifications for M1-M3 be reviewed by DPMS as it seems they are too strict.

The review team concurs that reviewing CEOS Analysis Ready standards for Surface Reflectance is beneficial for future work.

### **NOAA-20 Snow Cover (Binary Map & Snow Cover Fraction)**

There is a need for user feedback. (With the NIC, EMC, and also a relook at USAF that stopped using the data) Part of the validation definition includes: "Product is ready for operational use based on documented validation findings and user feedback."

Review team recommends Snow Cover Cal/Val team uses requirements from [https://www.jpss.noaa.gov/assets/pdfs/technical\\_documents/474-01543\\_JPSS-GSegDPS\\_A.pdf](https://www.jpss.noaa.gov/assets/pdfs/technical_documents/474-01543_JPSS-GSegDPS_A.pdf) in their analysis and upcoming cal/val plans rather than L1RD.

Review team recommends the Snow Cover Cal/Val team investigate ways to improve how the Snow Cover algorithm is using the cloud mask to reduce potential future disconnects.

Review team recommends that the ASSIST team review issues that caused difficulty obtaining appropriate validation datasets (4 full months) for the Snow Cover team.

**RFA #1:** OSPO JPSS PAL (Shuang) to reach out to the US Air Force users to communicate about the algorithm update and provide test data for evaluation; and get their feedback; Suggest OSPO JPSS PAL (Shuang) to set up a meeting including the DPMS/JSTAR teams with the US Air Force users, to understand the specific users' needs and issues/concerns. plus give updates on what's been done to address the issue; and further discuss the future improvements

**RFA #2:** The snow product team working with JPSS cal/val management to assess the work needed to reprocess VIIRS snow cover products to match the in situ data identified on slides 29 and 30 of the presentation.