



Quality Assurance (QA) Activities and Plans for STAR JPSS Algorithm and Data Products (ADP) Program



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Introduction

To support the Joint Polar Satellite System (JPSS), Center for Satellite Applications and Research (STAR) Algorithm and Data Products (ADP) will provide managerial and technical expertise for the JPSS Sensor Data Record (SDR) and Environmental Data Record (EDR) algorithm tasks.

Quality Assurance procedures have been put into place to ensure a faster and more efficient research-to-operation transition. The QA process is defined to coordinate the ADP algorithm teams on the Calibration/Validation activities, to support the algorithm change process, to support the algorithm discrepancy report process, to perform algorithm assessments and product validation activities.

Detailed team schedules will be developed and maintained to ensure the deliveries to the JPSS Ground Segment. Monthly status reports will be reviewed and submitted by the QA team. The QA team will also organize any required technical reviews. The QA team also includes the STAR ADP Algorithm Integration Team (AIT). We will work together to bring consistency to algorithm development work and deliveries.

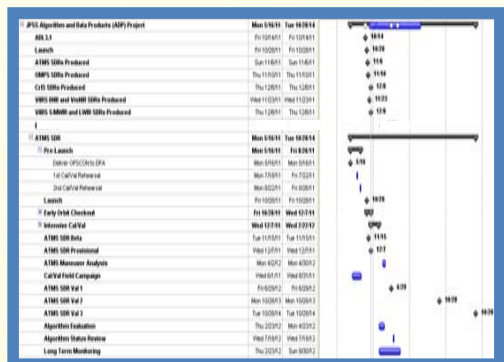
The QA activities and plans for the ADP program will be described in this presentation.

Schedule and Milestones

As the phases of cal/val progress, data product quality is expected to improve. Accordingly, the JPSS program has defined a set of Data Product Maturity Levels, shown below, and detailed in the handouts.

NPP SDR and EDR Product Maturity Levels:

1. Beta
2. Provisional
3. Validated/Calibrated



Discrepancy Report

The Discrepancy Report Assessment Team (DRAT) exists to log and track issues during the satellite development process. The QA team is supporting the daily DRAT meeting by providing guidance on new Discrepancy Report (DR) submissions and coordinating DR reviews and responses. The status of DRs is tracked in NOAA CasaNosa tool for each SDR & EDR.

ID	DR Title	Status	Comments	Priority	DR Matrix STAR ID
001	DR: Update of Training and Training Data for Advanced Algorithm	Open	Review of training data for advanced algorithm. Review of training data for advanced algorithm. Review of training data for advanced algorithm.	High	001
002	DR: Improved Algorithm for SDR: Sea Ice Profile	Follow-up needed	Review of algorithm for SDR: Sea Ice Profile. Review of algorithm for SDR: Sea Ice Profile. Review of algorithm for SDR: Sea Ice Profile.	Medium	002
003	DR: Improved Algorithm for SDR: Sea Ice Profile	Follow-up needed	Review of algorithm for SDR: Sea Ice Profile. Review of algorithm for SDR: Sea Ice Profile. Review of algorithm for SDR: Sea Ice Profile.	Medium	003
004	DR: Improved VRR Cloud Fraction	Follow-up needed	Review of algorithm for SDR: VRR Cloud Fraction. Review of algorithm for SDR: VRR Cloud Fraction. Review of algorithm for SDR: VRR Cloud Fraction.	High	004
005	DR: Improved VRR Cloud Fraction	Follow-up needed	Review of algorithm for SDR: VRR Cloud Fraction. Review of algorithm for SDR: VRR Cloud Fraction. Review of algorithm for SDR: VRR Cloud Fraction.	High	005

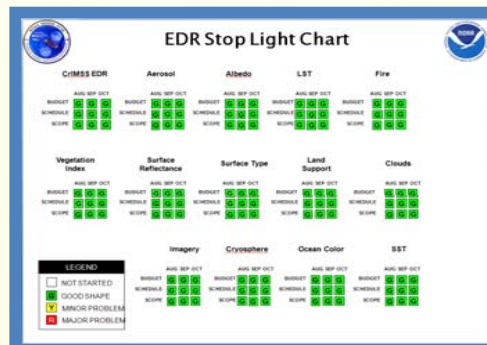
□ = Open □ = Follow-up needed □ = Future Evaluation

Risk Management

Monthly STAR management review of ADP performance Measures.

- Risk
- Potential for performance shortfalls which may be realized in the future, with respect to achieving established performance requirements
- Accept / Reject
- Mitigate / Watch
- Elevate
- Issue – Risk that has occurred

The overall status of each SDR and EDR algorithm is extracted from the team monthly report. The stop light charts are created based on three month rolling status to demonstrate the progress of the algorithm teams. Any potential problem will be identified as a risk.



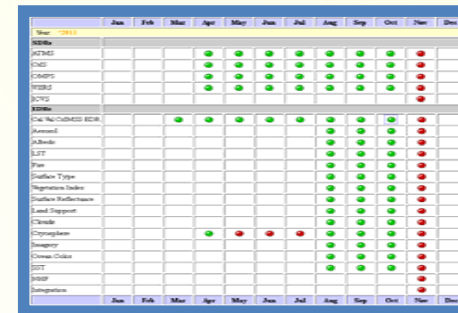
Monthly Reports

All SDR and EDR teams report progress on a monthly basis. The monthly report covers:

- Overall Status in terms of budget, schedule and scope
- Scheduled Milestones and Deliverables
- Accomplishments and Plans

The figure below illustrates monthly reports available for review (in green) and monthly reports expected (in red).

STAR JPSS ADP Monthly Report



Other QA Activities

- Support algorithm change process to ensure a faster and more efficient update/adjustment to the operational algorithms
- Algorithm Assessment and Validation
 - Long term monitoring and product validation will provide real-time satellite and product performance monitoring and will be able to detect the products availability and abnormal events.
- STAR JPSS ADP website at <http://www.star.nesdis.noaa.gov/jpss/index.php>

A centralized location of information and resources from sensor description to ATBD documents, from monthly report to meeting presentations, from NPP status update to NPP image gallery.

Summary

The STAR ADP Quality Assurance Activities include:

- Track Milestones to ensure all deliveries are on schedule.
- Track the discrepancy report status.
- Review monthly report and identify ADP performance risks.
- Support algorithm change process.
- Coordinate with algorithm teams for the product monitoring methods.