



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 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.

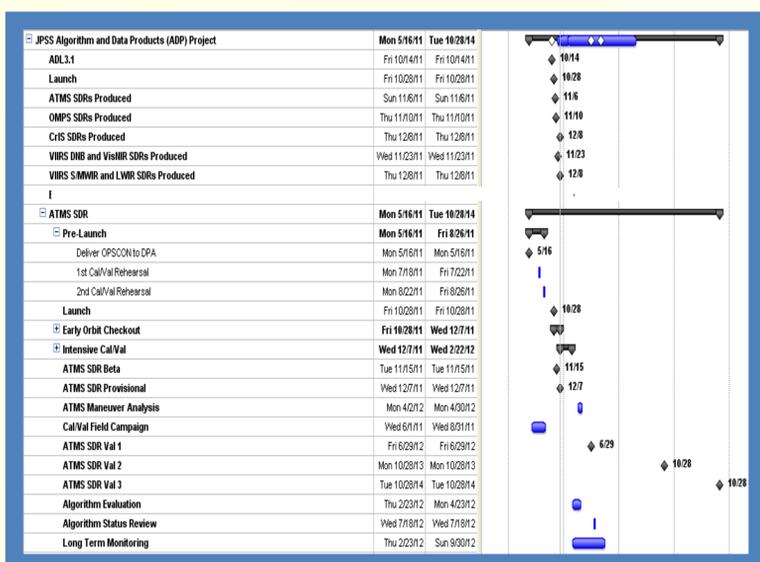
The QA activities and plans for the ADP program will be described in this presentation.

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:

- Beta
- Provisional
- 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.

DR ID	Date last discuss	DR Title	Status	Comments	Priority	DR Status	STAR POC
4154	10/31/11	DR Ingest to Filtering and Dropping OMPs Instrument diagnostic mode	Open	Correction to this error was implemented in 2010. However, this is still open because OMPSSDC is not confident that missing data from NCT4 tests is only due to subscription drops (DR 4235) - OMPSSDC contacting Rob Kimberly to clarify missing not only diagnostic but also nominal data from observatory test run. It was discussed at the DRAT on Oct 24, 2011. - Gen Information: 1. no issue that nominal data is missing. 2. This will be pursued after launch. 3. Current data complete? When do we expect to get this information (440)?	(1) Needed Before Launch	(0) EDR approved by ACCB	
4256	10/24/11	Improved Algorithm for OMPs Nadir Coarse Profile EDR	Follow-up needed	This was discussed at the DRAT on Oct 24, 2011. Larry information being pursued, need funding, included in upcoming BOE for J2.			
4239 = 4242	10/19/11	Significant TC EDR performance degradation if LUTs not updated	Follow-up needed	In progress. NGAAS working on update. - Proposing TM for discussion on Oct 10, 2011. Delivery to SDR/EDR planned by NGAAS for Oct 14, 2011. - Deferred: TM Oct 15. TM held on Oct 15. Agreement by NGAAS to deliver LUT but continue debugging activities. Follow up complete debug test in GABA, CCR submitted. LUT delivered on Oct 27, 11	(4) Highly Recommended (May be done post-launch)	(00) Non-Submission	
4266	09/28/11	Replace VIIRS cloud fraction	Open	In progress. Larry Flynn raising different code modifications.	(4) Highly Recommended (May be done post-launch)	(05) POC Assigned and EDR in Work	Liang Zhao
4269	10/12/11	Replace CTP TABLE AN_NP-11020-001.dat with new one	Open	In progress. Larry working tests in the GABA as part of continuation of CV rehearsal 2 with help from J. Joel. CTP was (1) obtained. - Next steps: TM files (input/baseline, new/output), delivery to SDR for functional test (if needed). Delivery letter, Form 3, CCR submitted. - Review related processes (checkboxes with tech items). - Once inputs/outputs ready, a CCR will be	(3) Highly Recommended (Pre-Launch Fix)	(05) POC Assigned and EDR in Work	

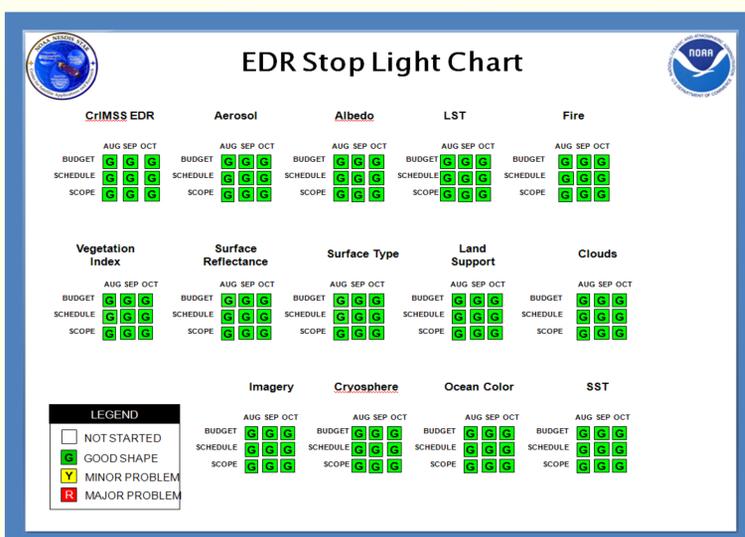
□ = Open □ = Follow-up needed □ = Future Evaluation

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.



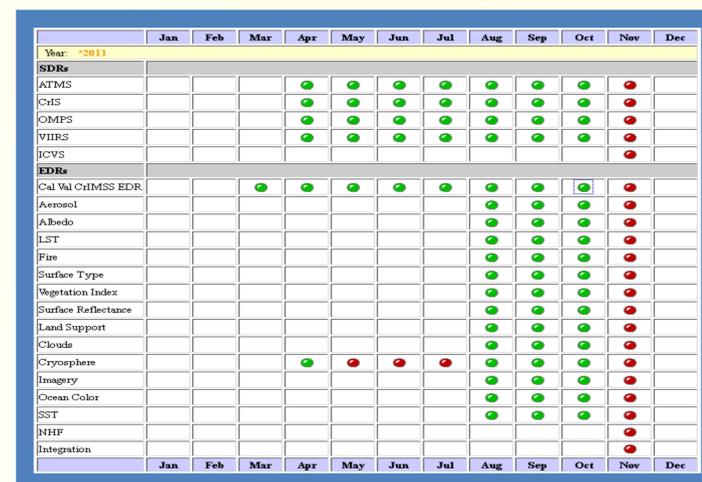
Monthly Reports

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.