



Remote Sensing Applications Division (RSAD)

CDR Program Office

Weekly Report for Nov 2, 2012
Ed Kearns, Acting Chief



CDR Program Office

FY13 Climate Data Records

Weekly Report – Nov 2, 2012

1 Mean Layer Temperatures – Remote Sensing Systems (RSS)

- PI working on documenting code (80%)

2 Vegetation

- PI responded to SOW – awaiting funding

3 PERSIANN

- SOW sent to PI, PI submitted proposal to CICS

4 ISCCP

- SOW agreed upon by PI - awaiting funding

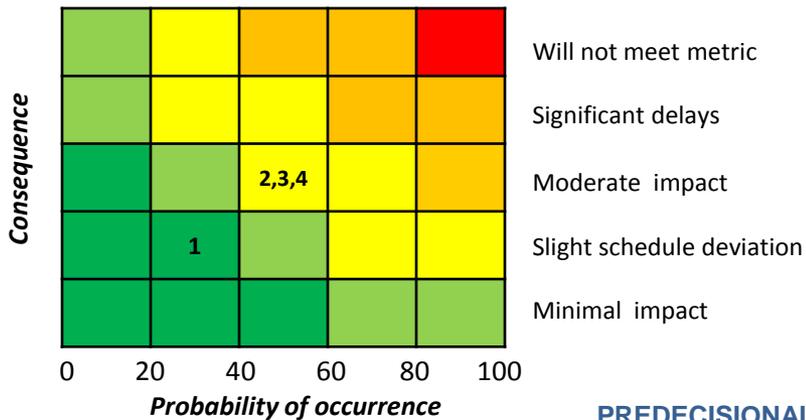
● No change ↑ Increasing Risk ↓ Decreasing Risk *Candidate CDRs

FY13 CDRs	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Mean Layer Temps - RSS												
Vegetation Bundle												
Cryosphere Bundle												
Solar Irradiance Bundle												
PERSIANN												
Atmos Temp Bundle												
Cloud Moisture Bundle												
Ocean Surface Bundle												
MSU/AMSU Temp Suite												
ISCCP												

TBD

R2O PHASE: ASSESSMENT SUBMISSION PREP TRANSFER VERIFY ARCHIVE ACCESS

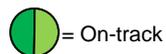
Risk Matrix



Risk - Mitigation

- Lots of CDRs to assess and transition
 - Need dedicated resources from each Branch
- No formal QA on product, software, and documentation process
 - IPT reviews and ORR checklist helps alleviate some of risk
 - Need to formally document the current QC steps being done

PREDECISIONAL DRAFT INFORMATION



Backup FY12 CDR - Mean Layer Temperature - RSS

CDR Product: TCDR – Atmospheric Temperature at Four Layers, 1978-2011 (140 MB)

GEOSS Societal Benefit: Energy, Climate, Ecosystems

Project Status

- IPT's moved to Fridays per PI request
- Current netCDF file is failing the CF checker
- PI code status:
 - About 80% of the code has been documented
- PI sent final draft of C-ATBD, looks good
- PI sent all 5 flow charts of process
 - 4 of 5 sets of accompanying code is complete
- SA available on Google docs for final review

NCDC SOW developed for:

- 1) Monthly updates for one year
- 2) QC tools and training

Next Action/Milestone

- PI send updated draft C-ATBD (8/20) - done
- Send next set of documented code and flow chart (11/14) - 4 of 5
- Archive all parts (11/30)



Project Risks

- Funding (SDS 2008)
 - Proposal submitted thru CICS back in May;
 - funding available to PI in Oct.

ID	Task Name	Status	Start	Stop	FY12 Q4			FY13 Q1			FY13 Q2			FY13 Q3		
					Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1	Initial Assessment	100	10/17/2011	2/3/2012												
2	Transfer Prep	85	2/6/2012	11/14/2012												
2a	Comment Source Code	80	2/6/2012	11/14/2012												
2b	Create Docs (CATBD, Flow Chart, MM, Readme)	90	3/19/2012	10/7/2012												
2c	Create NetCDF Dataset	90	5/3/2012	10/31/2012												
3	Transfer Code, Docs, and Data	25	4/18/2012	11/21/2012												
4	Verify Code, Docs, and Data	25	4/19/2012	11/30/2012												
5	Archive Code, Docs, and Data	0	5/31/2012	12/7/2012												
6	Provide Access to Code, Docs, and Data	0	6/1/2012	12/15/2012												

PREDECISIONAL DRAFT INFORMATION

FY13 CDR Assessment Process

- 1) Terry - notify (email) each PI that they are a FY13 CDR transition candidate (10/29) - done
- 2) Branch Chiefs - confirm IPT members are correct on google docs; edit as necessary (10/22) - done
- 3) Dan/Candace - set up IPT emails and send initial contact to PIs and rest of team, describe expectations, and request information for initial assessments (10/31) – done
 - Sent emails to all PIs asking for assessment items
 - Waiting on group emails for a couple of days to see if PIs want to add members
- 4) SMEs - use CDRP assessment report and briefing templates to conduct initial assessments (staggered timeline)
- 5) CDRP - make decision on whether to proceed with transition or not based on assessment presentation and discussions. (staggered timeline, all completed by Nov 30)



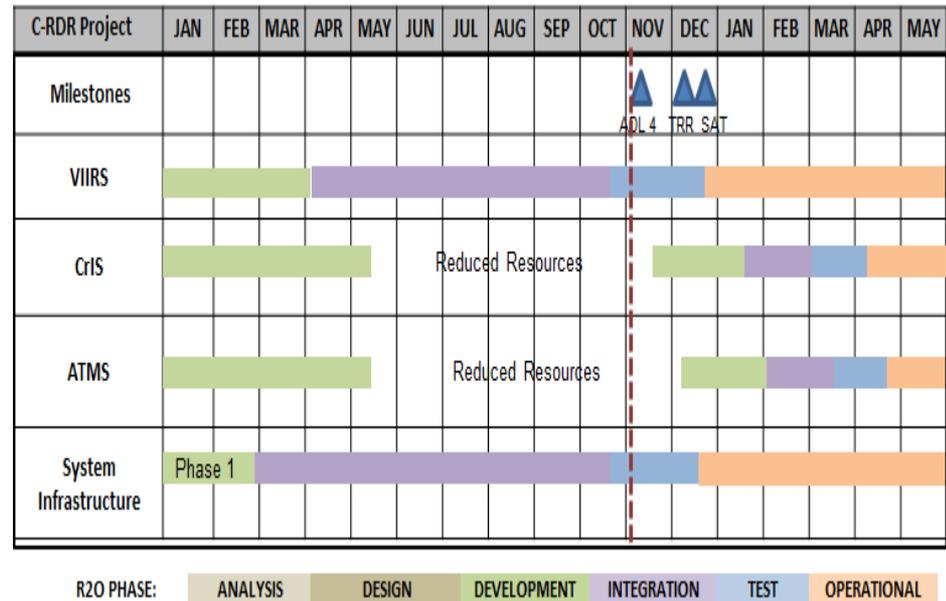
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NPP/JPSS Climate Raw Data Records (C-RDRs) Project

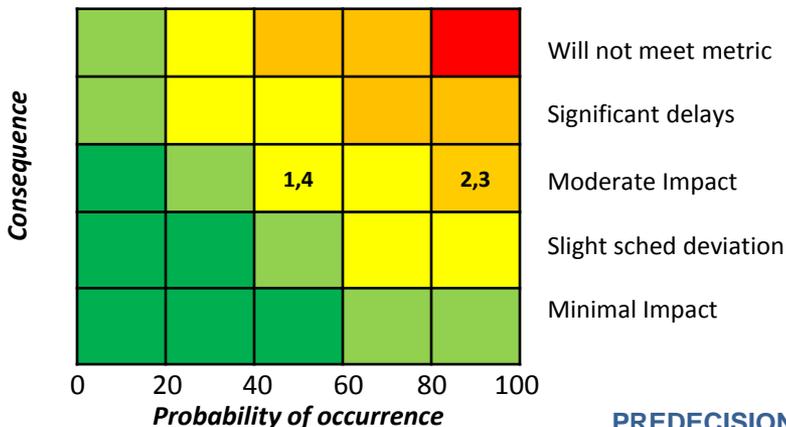
Weekly Report – November 2, 2012

- ① **VIIRS**
 - Integrating with the system infrastructure.
- ② **CrIS**
 - Postponed.
- ③ **ATMS**
 - Postponed.
- ④ **System Infrastructure**
 - Integrating with the VIIRS C-RDR.

- **Integrating: Ingest data from CLASS and producing C-RDRs.**
- **Need to verify the C-RDRs for correctness.**
- Validated post-launch auxiliary files in C-RDR format.
- Successfully created VIIRS C-RDR.



Risk Matrix



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= On-track
 = Potential management action required
 = Management attention required

Risk and Mitigation

VIIRS, CrIS, ATMS –

- Resources are being reduced. Delivery of CrIS and ATMS will be delayed.
- Operational software is under maintenance, updated versions may affect C-RDR ported version.

System Infrastructure –

- Reliability of NPP RDRs from CLASS. Need to test ingest of RDRs from CLASS and develop an automated mechanism for re-requesting data.
- Ability of CLASS to handle the frequency and volume of NPP data. CLASS has been successful during system tests.
- Archive in CLASS is currently cost prohibitive. Need to identify alternate archive. Plan to store C-RDRs on HPSS until migration to CLASS.

Visible Infrared Imaging Radiometer Suite (VIIRS)

C-RDR Product: Raw sensor measurements with usage and provenance metadata in easily accessible netCDF4 format

GEOSS Societal Benefit: Climate, Water, Ecosystems, Agriculture, Biodiversity, Energy

Project Status

- **Helping debug processing errors.**
- **Continued work on code for validation of C-RDRs against SDRs.**
- Helping define common metadata model for CLASS.
- Completed Draft VIIRS C-RDR Product Specification.
- Temporarily working on snow cover CDR for IOC.
- Generated an image from a VIIRS C-RDR.
- Successfully ran VIIRS data from CLASS through C-RDR packer.
- Completed dynamic C-RDR file-level metadata code.
- Implemented and verified netCDF compression.
- Verifying (IDPS) documentation and code changes with DEWG.
- Completed writing science and spacecraft diary data.
- Completed test of code that writes VIIRS Support Data.

Next Action / Milestone

- Integrating the VIIRS C-RDR software and the system infrastructure.



Project Risks

- Complexity of the NPP/JPSS RDRs and operational software
- Operational software is under maintenance, updated versions may affect C-RDR ported version

Project Schedule

ID	Task Name	Status	Start	Stop	FY12 Q1			FY12 Q2			FY12 Q3			FY12 Q4		
					Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	Analysis	Completed	10/23/2009	5/4/2010												
2	Design	Completed	5/6/2010	1/5/2011												
3	Development	95.00%	1/6/2011	1/30/2012												
3a	Develop VIIRS processing component	95.00%	1/6/2011	1/12/2012												
3b	Test VIIRS processing component	95.00%	12/28/2011	1/30/2012												
4	Integration	10.00%	1/31/2012	3/26/2012												
5	Test		3/23/2012	4/12/2012												
5a	Dry Runs		3/23/2012	4/11/2012												
5b	System Acceptance Test		4/12/2012	4/12/2012												
6	Operational		4/13/2012													

Being Reworked

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C-RDR System Infrastructure

C-RDR Product: Infrastructure to automate the production of the C-RDRs.

GEOSS Societal Benefit: Climate, Water, Ecosystems, Agriculture, Biodiversity, Energy

Project Status

- Investigating processing errors, both C-RDR and ADL. Have processed ~13,000 files. Have fixed C-RDR code errors that caused crashes.
- Refining selection criteria when multiple RDRs are received.
- Consistently processing C-RDRs using staged ingest data from CLASS.
- Completed validation of post-launch auxiliary files in C-RDR format.
- Using ADL 4.0 code to create required metadata for auxiliary files.
- Investigating missing metadata for auxiliary data from CLASS.
- Modified supporting data software for auxiliary data changes.
- Created initial VIIRS C-RDR from CLASS mission data.
- Development environment is set up on the CICS network.
- Working on managing queues and processing jobs.
- Locating, validating, and statusing files for processing.
- Developing code for ingest detection and processing.

Next Action / Milestone

- Integrating and testing the system infrastructure.



Project Risks

- Need to develop an automated re-request mechanism for CLASS.

Project Schedule

ID	Task Name	Status	Start	Stop	FY12 Q1			FY12 Q2			FY12 Q3			FY12 Q4		
					Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	Analysis	Completed	9/29/2010	4/22/2011												
2	Design	90.00%	4/25/2011	7/8/2011												
3	Development	80.00%	5/31/2011	2/28/2012												
3a	Develop infrastructure	90.00%	5/31/2011	2/14/2012												
3b	Test infrastructure	70.00%	9/27/2011	2/28/2012												
4	Integration (Phase 2)	5.00%	1/31/2012	3/26/2012												
5	Test		3/23/2012	4/12/2012												
5a	Dry Runs		3/23/2012	4/11/2012												
5b	System Acceptance Test		4/12/2012	4/12/2012												
6	Operational		4/13/2012													

Being Reworked

PREDECISIONAL DRAFT INFORMATION



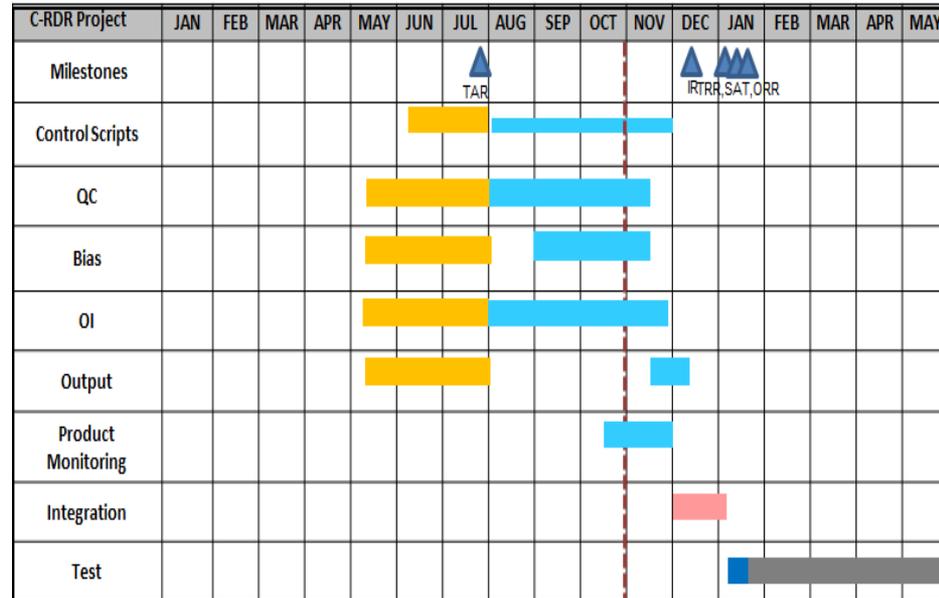
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OISST Research to Operations Project

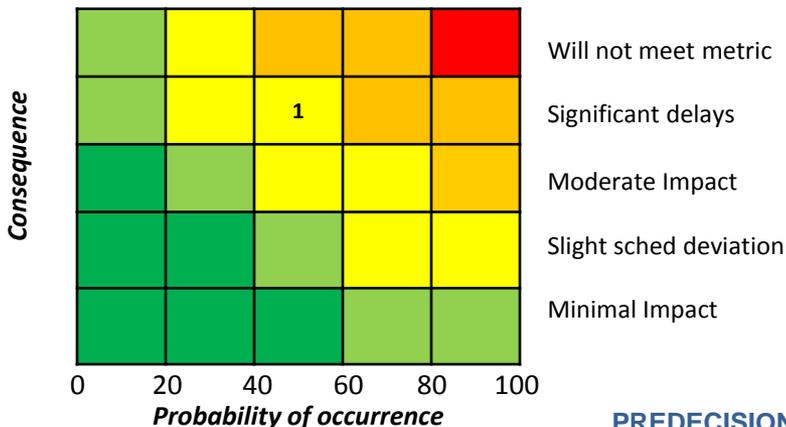
Weekly Report – November 2, 2012

1 OISST – Optimum Interpolated Sea Surface Temperature

- **Modifying log code to better handle strings.**
 - **Conducting code review for buoyship QC.**
 - **Refactoring code (Bias, QC, OI).**
 - Integrated a common logging utility and identified log levels.
 - Investigating the use of SPEC for product monitoring.
 - Conducted code review, refactor and unit test of ship_bias.f90.
 - Evaluating validity/duplicates in compile options & static analysis.
 - Defined list of tasks for refactoring of each component.
 - Developing tests (functional & component) to verify code.
 - Completed testing of static analysis and complexity tools.
 - Conducted Technology Assessment Review July 25.
- Operations:
- Updated and tested scripts to handle new sea ice data format.



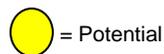
Risk Matrix



Risk and Mitigation

- Resource availability for performing the transition.
- Configuration Management (CM) process not defined for operations.
- No Quality Assurance team available.
- Modifying existing software for internal software changes. Product output must remain unchanged for users.
- Common infrastructure for operations is not fully defined.
- OISST processing will be on a 64 bit architecture.

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Integrated Marine Protected Area Climate Tools (IMPACT)

Weekly Report – November 02, 2012

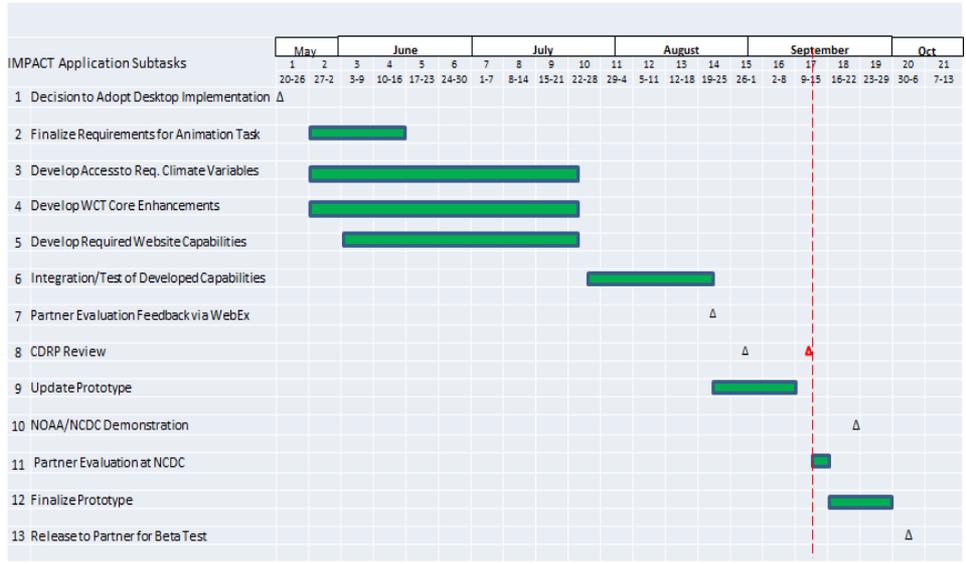
On line tutorial/presentation

- IMPACT portion complete, working on WCT

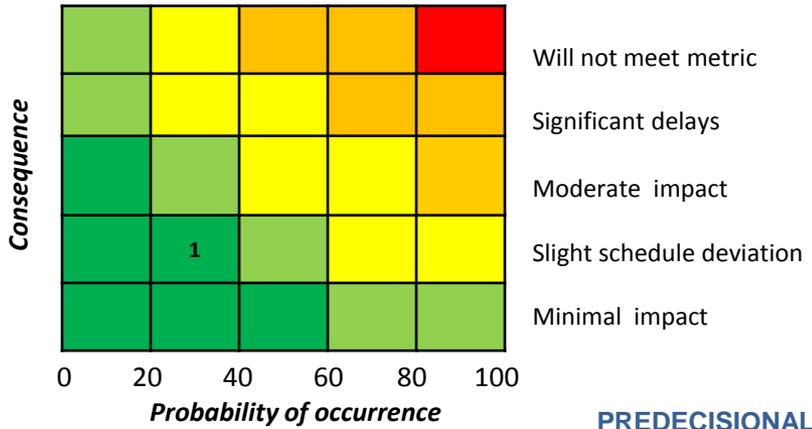
Future Enhancements under consideration

- Include a user interface for data sub-setting (easier data access)
- Quad-display feature
- Provide analysis feature
- Improve graphical user interface
- Include a time-series function (trending, min/max, etc.)
- Provide ability for users to include local in-situ data for analysis

Prototyping Schedule (currently being updated)



Risk Matrix



Risk and Mitigation

- 1- Limited resources have other obligations
 - Resources moving on to other projects – Steve, Mike
 - Need to plan for transition of ownership & future development

● No change ↑ Increasing Risk ↓ Decreasing Risk

PREDECISIONAL DRAFT INFORMATION

