Second Circular

SUOMI NPP SDR Science and Validated Product Maturity Review

December 18-20, 2013

NOAA Center for Weather and Climate Prediction Auditorium

5830 University Research Court, College Park, MD 20740

Purpose and Goals:

The purposes of this review are to discuss the science results and progress of Suomi NPP cal/val tasks, review SNPP products in meeting the requirements of the SNPP validated maturity level, JPSS L1RD, and demonstrate product impacts on the user community. Cal/Val team members will present progress on their specific tasks and users will offer their independent assessments of SDR product quality. The expected outcome is a recommendation from the JPSS Product Review Panel (JPSRP) and SDR leads to the AERB that the current products are at the validated level, or scheduled changes already approved by the AERB will result in a validated quality SDR data product. If the data product is determined to not yet be at the validated level, this meeting will identify the path forward to achieve this level.

Through interaction with the data product operational users, the SDR chair and team will collect feedback on recommended SDR product improvements. The discussion will provide an overview of the overall performance of CrIS, ATMS, VIIRS and OMPS instruments and algorithms as known at this time.

Outline:

- Overview the progress of SNPP SDR cal/val tasks and the instrument characterization
- Acquire user, including EDR team, feedbacks on product quality
- Provide planned improvements of SDR products
- Define the SDR maturity level, and identify necessary actions for achieving validated status, if necessary

Review Panel: Mitch Goldberg (Chair), Fuzhong Weng, Jim Gleason, Eric Gottshall, Lihang Zhou, David Benner, Jim Yoe, Tom Schott, Rick Stumpf, Mike Ford, Jeff Privette, Gary Wick, Mike Johnson

Review Materials Required from JPSS SDR Teams

1. **ATMS, CrIS, VIIRS and OMPS SDR team leads need to submit to JPSS SDR Science Chair the following materials prior to the review:**
    - Algorithm Theoretical Basis Document (ATBD)
    - SDR data user manuals (Optional)
    - Operational algorithm document, OAD (Optional)
    - Team member presentations
2. **ATMS, CrIS, VIIRS and OMPS SDR team lead presentations should cover:**
    - List peer-reviewed publications that justify products
    - Criteria for validated maturity status
    - SDR specifications (e.g., NEDT, NEDN) consistent with JPSS L1RD
    - On-orbit performance results (e.g., NEDT/NEDN, Stability)
    - Data quality, including long-term performance trending metrics from ICVS
    - Status of completion of all cal/val tasks from OPSCON
    - Remaining cal/val tasks from provisional reviews
    - Challenges and remaining issues (e.g. critical DRs, required waivers)
    - Path Forward
3. **Team member individual presentations:**
    - Highlights of cal/val task results assigned to individual investigators
    - Innovative cal/val science and impacts
    - Challenges and remaining issues
    - Path forward (include how lessons learned from NPP are integrated into J1 planned activities)

Agenda

Day 1 – Wednesday, December 18
Session 1: Welcome and Opening Remarks

8:30 – 8:40	Welcome	Al Powell, STAR Director
8:40 – 8:50	Opening Remarks	Mary Kicza, NESDIS AA
8:50 – 9:00	Opening Remarks	Harry Cikanek, NJO Director
9:00 – 9:10	Opening Remarks	Eric Gottshall, DPA
9:10 – 9:20	Highlights on SDR Products	Fuzhong Weng, JPSS SDR Lead

Session 2: ATMS SDR Product Review
Chairs: Ninghai Sun and Vince Leslie

9:20 – 9:40	ATMS Cal/Val Task Overview	Fuzhong Weng, STAR
9:40 – 10:00	ATMS TDR to SDR Algorithm	Vince Leslie, MIT/LL
10:00 – 10:20	ATMS Lunar Correction	Tiger Yang, STAR
10:20 – 10:40	ATMS Striping Analysis	Degui Gu, NGAS

Break

Session 2: ATMS SDR Product Review (Continued)
Chairs: Ninghai Sun and Vince Leslie

11:00 – 11:20	ATMS Cross Calibration	Xiaolei Zou, FSU
11:20 – 11:40	ATMS Data Quality	Ninghai Sun, STAR
11:40 – 12:00	ATMS Data in GFS	Andrew Collard, NCEP
12:00 – 12:20	ATMS Data in ECMWF	Niels Bormann, ECMWF
12:20 – 12:40	NASA Contingency Plan for New ATMS Scan Profile	Otto Bruegman, NASA/JPSS

Lunch

Session 3: CRIS SDR Product Review
Chairs: Yong Han and Hank Revercomb

1:40 – 2:00	CrIS Cal/Val Task Overview	Yong Han, STAR
2:00 – 2:20	CrIS Radiometric Calibration: Uncertainty Estimates and Evaluations	Dave Tobin, UW
2:20 – 2:40	Noise Performance of the CrIS Instrument On-orbit	Vladimir Zavyalov, SDL
2:40 – 3:00	CrIS Spectral Calibration and Trending	Larrabee Strow, UMBC
3:00 – 3:20	CrIS SDR Geolocation Performance	Likun Wang, STAR

Break

Session 3: CRIS SDR Product Review (Continued)
Chairs: Yong Han and Hank Revercomb

3:40 – 4:00	Source and Effect of Ripple in CrIS Measurements	Dan Mooney, MIT/LL
4:00 – 4:20	CrIS SDR Quality	Xin Jin, STAR/ERT
4:20 – 4:40	CrIS Data in UM	Bill Bell, UK Met Office
4:40 – 5:00	CrIS Data in GFS	Andrew Collard, NCEP/EMC
5:00 – 5:20	CrIS Data in ECMWF	Reima Eresmaa, ECMWF

Adjourn

Day 2 – Thursday, December 19

Session 4: VIIRS SDR Product Review
Chairs: Changyong Cao and Frank DeLuccia

8:30 – 8:50	VIIRS Cal/Val Task Overview	Changyong Cao, STAR
8:50 – 9:10	VIIRS Visible Channel Calibration	Frank DeLuccia, Aerospace Corp
9:10 – 9:30	VIIRS RSB Automation	Frank DeLuccia, Aerospace Corp.
9:30 – 9:50	VIIRS Thermal Emissive Bands	Jack Xiong, NASA
9:50 – 10:10	VIIRS Geolocation	Robert Wolfe, NASA
10:10 – 10:30	VIIRS SDR Issues	Slawek Blonski, STAR

Break

Session 4: VIIRS SDR Product Review (Continued)
Chairs: Changyong Cao and Frank DeLuccia

10:45 – 11:05	VIIRS SDR Day Night Band Calibration	Lushalan Liao, NGAS
11:05 – 11:25	VIIRS SDR Quality Monitoring	Lushalan Liao, NGAS
11:25 – 11:45	VIIRS in NWS/Alaska	Eric Stevens, University of Alaska
11:45 – 12:05	VIIRS for Land EDR	Ivan Csiszar, STAR
12:05 – 12:25	VIIRS for SST EDR	Alex Ignatov, STAR
12:25 – 12:45	VIIRS for Ocean Color EDR	Menghua Wang, STAR

Lunch

Session 5: OMPS EV SDR Product Review
Chairs: Fred Wu and Glen Jaross

2:00 – 2:20	OMPS Cal/Val Task Overview	Fred Wu, STAR
2:20 – 2:40	Instrument Performance	Chunhui Pan, STAR
2:40 – 3:00	Stray Light Correction	Glen Jaross, NASA
3:00 – 3:20	Wavelength Registration	Larry Flynn, STAR

Break

3:40 – 4:00	Cross Calibration	Fred Wu, STAR
4:00 – 4:20	OMPS Product Applications	Craig Long, NOAA/CPC
4:20 – 4:40	New SO2 Product from OMPS	Kai Yang, GSFC/NASA
4:40 – 5:00	Total Column Ozone EDR and Nadir Profile IP	Larry Flynn, STAR

Adjourn

Day 3 – Friday, December 20

Session 6: SNPP and JPSS Overarching Issues
Chairs: Lihang Zhou and Eric Gottshall

8:30 – 8:50	STAR ICVS LTM	Ninghai Sun, STAR
8:50 – 9:10	STAR ICVS Demonstration	Lori Brown, STAR
9:10 – 9:30	Algorithm Transition Process	Walter Wolf, STAR
9:30 – 9:50	IDPS Implementation Process	Kerry Grant, Raytheon
9:50 – 10:10	STAR EDR LTM Plan	Lihang Zhou, STAR

Break from 10:10 to 11:30 am for Meeting Participants

Session 7: Panel Review and Discussion in Conference Rooms
Chairs: Mitch Goldberg and Mike Johnson

10:25 –11:30	Panel Reviews	Panel Members Only
11:30– 12:00	Recommendations	All

Adjourn

Logistical Information

Remote Access

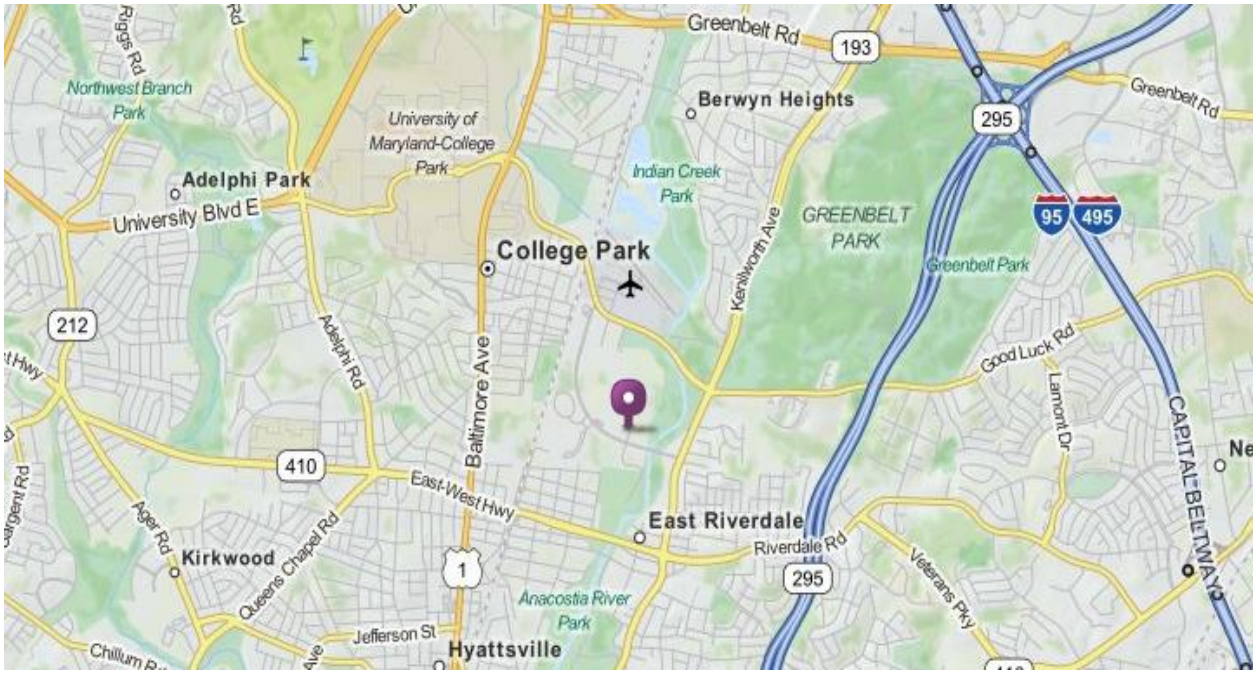
Teleconference number: 1-866-915-8960 Participant Code: 1938801
WebEx: https://star-nesdis-noaa.webex.com Password: ATMSsdr2013
STAR WEB SITE URL (REGISTRATION, ETC.):

Breaks

We have arranged with the NCWCP cafeteria (Kloud Café) to have a morning and afternoon break with coffee, tea, water and donuts (morning) or cookies (afternoon). However, you need to sign up at https://kloudcafe.wufoo.com/forms/suomi-npp-sdr-science-review/ for these morning and afternoon breaks (you can order lunch too). Contact Danette Warren (Danette.Warren@noaa.gov) if you need more information.

Map and Directions

NOAA Center for Weather and Climate Prediction (NCWCP) Auditorium
5830 University Research Court, College Park, MD 20740



Driving Directions

From Maryland: Take I-495 East to exit 23A (Kenilworth Ave/MD-210 S). Stay on 210 South until you make a right onto River Rd. Take the 1st right onto University Research Ct. The NCWCP will be the building on the left.

From Virginia: Merge onto I-495 OUTERLOOP/Capital Beltway/ toward Alexandria. Take the I-295 N/National Harbor exit, EXIT 2A-B, toward Washington. Keep right to take DC-295 N toward US-50 E

(crossing into Maryland). Take the exit toward MD-410/Hyattsville/New Carrollton. Take left onto Riverdale Rd (Riverdale Rd becomes East-West Hwy/MD-410 W). Turn left onto River Rd. Take the 1st right onto University Research Ct. The NCWCP will be the building on the left.

From Washington DC: Take I-295 North to MD-410/Hyattsville/New Carrollton. Take left onto Riverdale Rd (Riverdale Rd becomes East-West Hwy/MD-410 W). Turn left onto River Rd. Take the 1st right onto University Research Ct. The NCWCP will be the building on the left.

The NCWCP is also accessible by taking the Green or Yellow Metrorail Line to the College Park/University of Maryland station. It is a 20-minute walk (to the east down River Road) from the station to the NCWCP.

Hotel Information

The following hotels are located close to the NCWCP.

Marriott	**Marriott Greenbelt** 6400 Ivy Ln, Greenbelt, Maryland 20770 Front Desk/Reservations: 1-800-676-5975 / 1-301-441-3700 http://www.marriott.com/hotels/travel/wasgb-greenbelt-marriott/
Hilton Garden Inn	**Hilton Garden Inn Washington DC/Greenbelt** 7810 Walker Dr, Greenbelt, Maryland 20770 Front Desk/Reservations: 1-301-474-7400 http://hiltongardeninn3.hilton.com/en/hotels/maryland/hilton-garden-inn-washington-dc-greenbelt-DCAGBGI/index.html