The Current POES & JPSS Status

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Office of Satellite and Product Operations (OSPO)

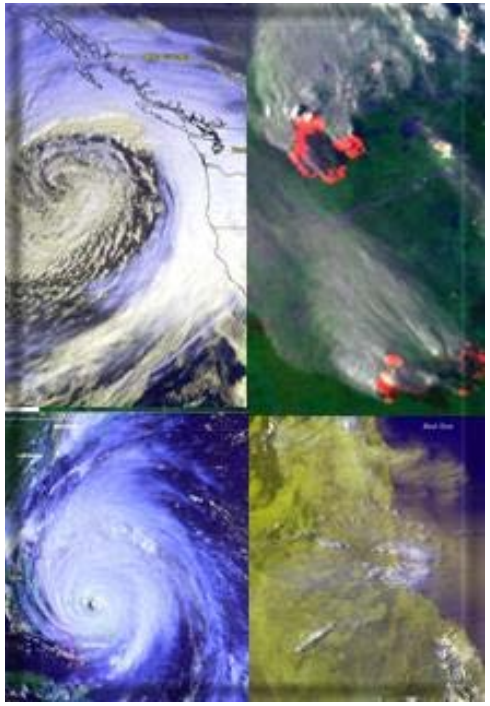
Session 17: Wednesday, July 19, 2017

2017 NOAA Satellite Conference

"A New Era for NOAA Environmental Satellites"

Presentation Overview

- Introduction
- Status of POES, Jason, DSCOVR
- SNPP/JPSS-1 Status Updates
  - Product Highlights



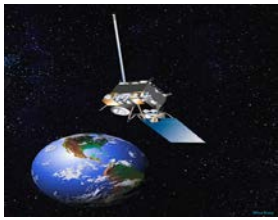
NESDIS Office of Satellite and Product Operations (OSPO)

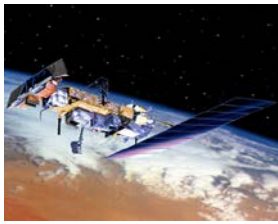
- Operates the Nation's 18 environmental satellites:
  - 4 Geostationary (GOES-13/14/15/16) by NOAA
  - 3 Polar-Orbiting (NOAA-15/18/19) by NOAA
  - 6 Defense Meteorological Satellite program (DMSP) operated by NOAA
  - 2 OSTM Jason-2 & Jason-3 (Ocean Surface Topography Mission) - Joint NOAA, NASA, CNES, EUMETSAT effort
  - 1 Suomi National Polar-orbiting Partnership (NPP) by NOAA & NASA
  - 1 DSCOVR (Deep Space Climate Observatory) by NOAA
  - 1 COSMIC-1 (Constellation Observing System for Meteorology, Ionosphere and Climate)

*GOES-16 handover to OSPO occurred June 23, 2017.

*JPSS-1 is scheduled to launch on October 12, 2017 from Vandenberg Air Force Base , CA. Becomes NOAA-20 once it reaches orbit.

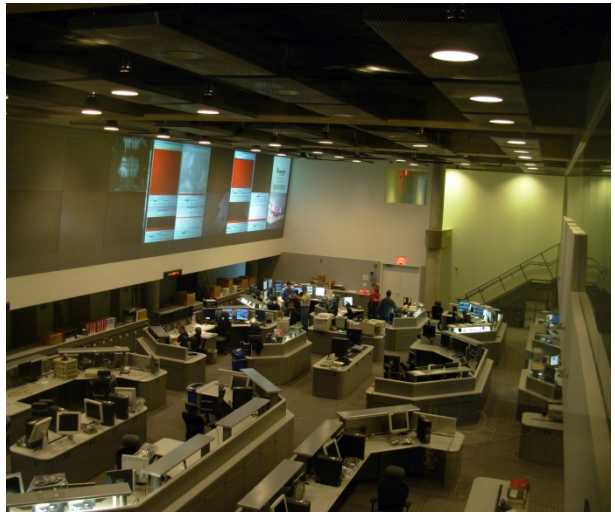
*COSMIC-2A spacecraft and ground segments nearing completion in support of planned April 30, 2018 launch.





OSPO's Key Roles

- Ground System Command & Control, Ingest, Generation, and Distribution
- Pre-Launch and Post-Launch Testing
- Operational Testing, Validation, and Verification
- User Readiness for Broadcast Services and Product Delivery
- Long-Term Continuity of Products and Services



OSPO Facilities

*Over 500 staff supporting operation of the satellites, receptors, and processing systems

Suitland, MD

Asheville, NC

College Park, MD

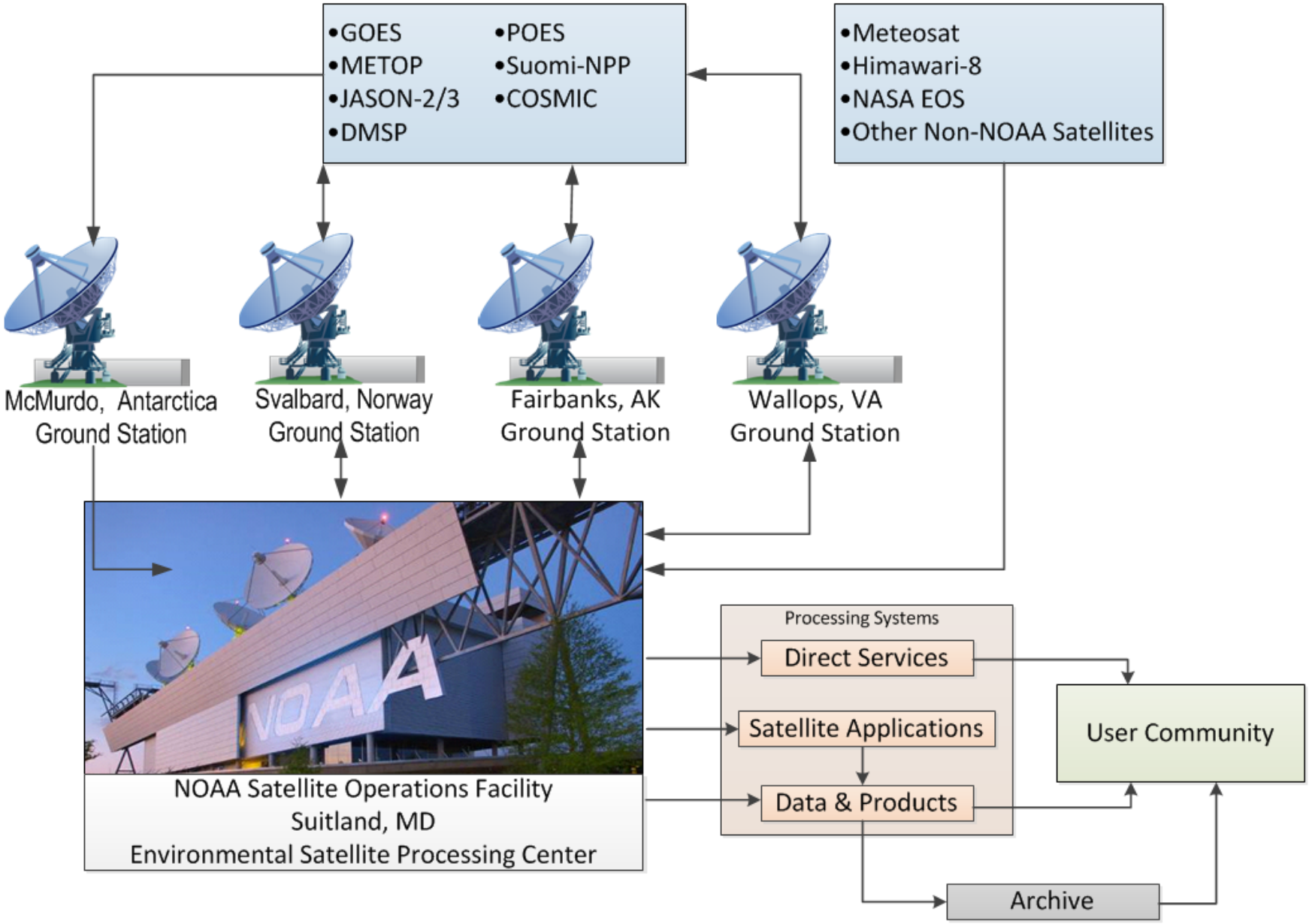
Fairmont, WV*

Wallops, VA

Fairbanks, AK

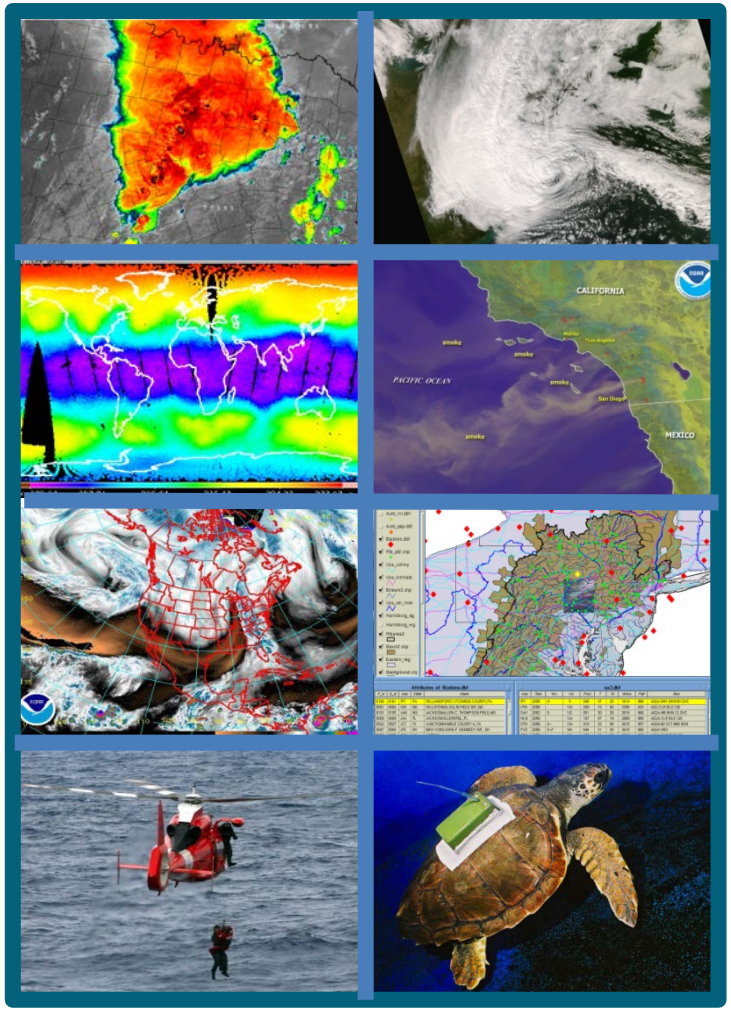
* GOES-R and JPSS (New) Backup Facility

Operational Satellite Data Flow

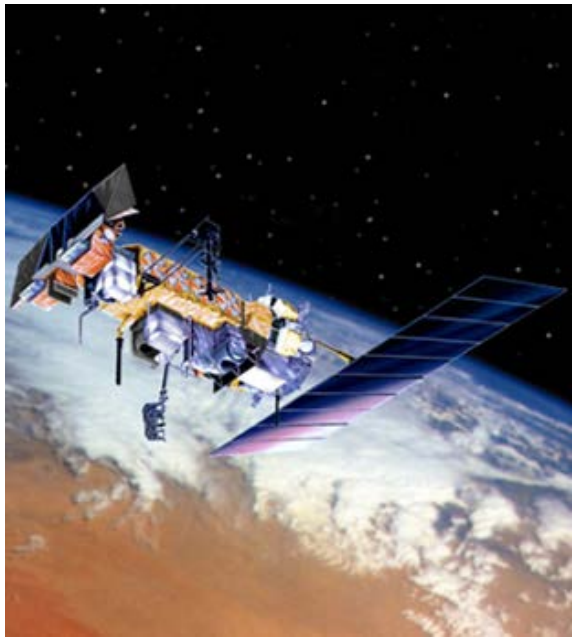


Satellite Products and Services Division

- Provides 24x7 interpretive analyses of satellite data
  - Hurricane intensity and position
  - Volcanic Ash
  - Fire and Smoke
  - Oil Spills
- Manages automated environmental products
- Search and Rescue Satellite Aided Tracking (SARSAT)
- Argos Data Collection System
- GOES Data Collection System
- Broadcast Services
  - Geonetcast
  - Emergency Managers Weather Information Network
  - Direct broadcast of geostationary and polar data
- Collaborate with partners to support transition of research products into operations



POES Update



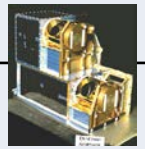
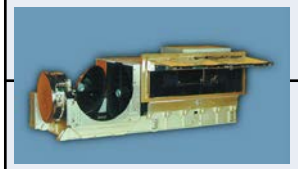
POES Status (July 2017)

http://www.ospo.noaa.gov/Operations/POES/status.html

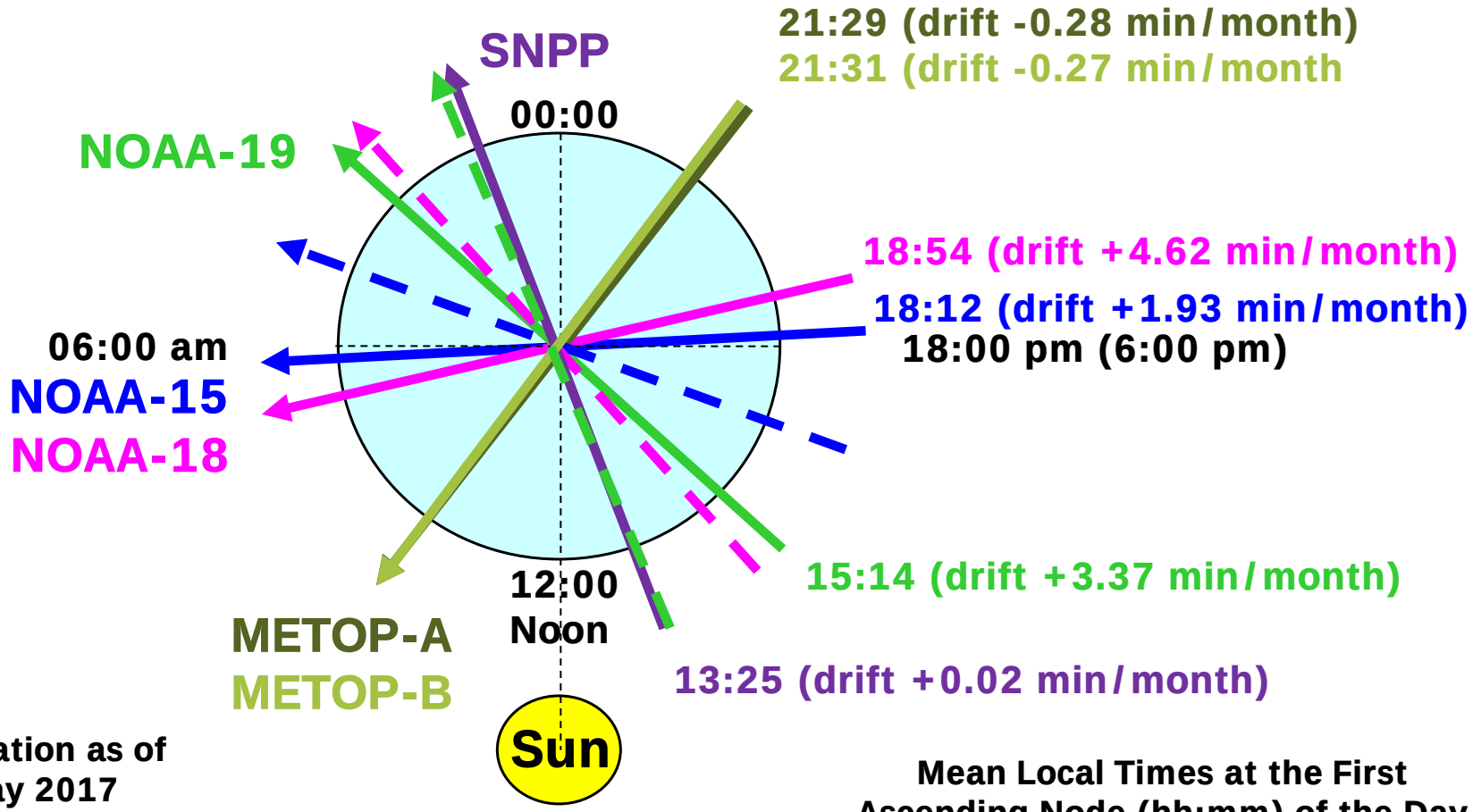
Operational	G
Spacecraft Issue but no User Impact	S/C
Possible Impact to Products	P
Operational with Limitation	Y
Non-Operational	R
Not Applicable	N/A

Spacecraft Subsystems	METOP-A	METOP-B	NOAA-19	NOAA-18	NOAA-15
Launch Date	Oct 2006	Sept 2012	Feb 2009	May 2005	May 1998
Operational Date	May 2007	April 2013	Jun 2009	Aug 2005	Dec 1998
Mission Data Category	Secondary (AM)	Primary (AM)	Prime Services Mission (PM)	Secondary (PM)	Secondary (AM)
Payload Instruments					
AVHRR	G	G	G	G	Y(20)
HIRS	Y(37)	P (33)	Y (32)	Y (3)	R (6)
AMSU-A1	G	P (36)	G	G	Y(21)
AMSU-A2	G	G	G	G	G
AMSU-B	N/A		N/A	N/A	R (12)
MHS	G	G	Y (8)	G	N/A
SEM	G	G	G	G	G
SBUV	N/A		S/C (9)	R(29)	N/A
Spacecraft Subsystems					
Telemetry, Command & Control	G	G	G	G	G
ADACS	G	G	G	Y (7)	Y(10)
EPS	G	G	G	G	G
Thermal Control	G	G	G	G	Y(22)
Communications	Y (1)	G	G	G	Y(23)
APT/LRPT	R (2)	G	G	G	G
DCS	N/A	N/A	N/A	G	G
ADCS	G	Y(31)	G	N/A	N/A
SAR	G	Y(31)	G	G	Y(24)

POES Instruments

Instrument		Description
	AMSU - Advanced Microwave Sounding Unit	Measures scene radiance in the microwave spectrum.
	AVHRR - Advanced Very High Resolution Radiometer	Measures reflected solar energy (visible and near-IR) and radiated thermal energy from land, sea and clouds.
	HIRS - High Resolution Radiometer	Measures scene radiance in the IR spectrum.
	MHS - Microwave Humidity Sounder	Five channel microwave instrument primarily for measuring atmospheric humidity.
	SBUV - Solar Backscatter Ultraviolet Spectral Radiometer	Measures solar irradiance and Earth radiance in the near ultraviolet spectrum.
	SEM - Space Environment Monitor	Measures flux of charged particles at satellite altitude.
	SAR - Search And Rescue	Designed to detect emergency satellite beacons for search and rescue operations.

POLAR Constellation O'clock Diagram
Orbital Configuration



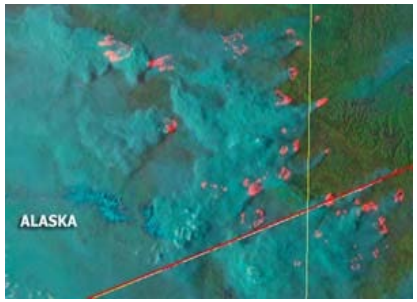
Constellation as of 03 May 2017

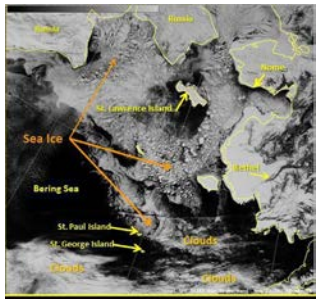
Dashed Lines are from July 2012

Mean Local Times at the First Ascending Node (hh:mm) of the Day

POES AVHRR Seasonal Channel Switching

- **Seasonal AVHRR Channel 3A/3B on NOAA-15 & NOAA-19 over Alaska**
  - OSPO deactivates channel switching over Alaska for period of May 15th – Sep 15th
    - NOAA-15/19 AVHRR remain channel 3B (3.7 um) to support fire detection monitoring.
  - OSPO activates channel switching to 3A (1.6 um) for period of Sep 16th – May 14th
    - Helps to aid the safety of fishing fleets that operate near the ice edge during times when the weather can cause rapid changes.
    - Provides important information for the Coast Guard when conducting search and rescue missions in areas affected by ice.
  - Initiated as a collaborative effort between NESDIS/OSPO, National Weather Service (NWS) Alaska Region, University of Alaska - Geographic Information Network of Alaska (GINA), and the NWS Fire Weather Service Manager
    - Seasonally optimize the Fire Weather & Cryosphere observing posture for Alaska.





Deep Space Climate Observatory (DSCOVR) Performance Status – July 2017

Spacecraft	DSCOVR
Launch Date	Feb 11, 2015
Activation	June 2015

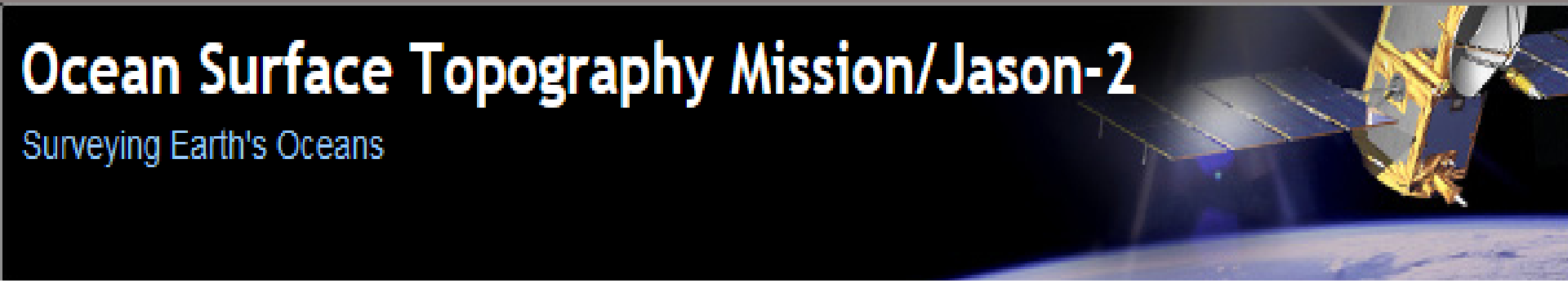
Payload Instruments	Status
EPIC	G
PlasMag	G
NISTAR	G
Faraday Cup	G
ESA	G
Magnetometer	G
PHA	G

Spacecraft Subsystem	Status
Telemetry, Command & Control	G
Guidance, Navigation and Control	G
Attitude Control System	G
Propulsion	G
Mechanisms	G
Electrical Power	G
Thermal Control	G
Communications Payloads	G
Flight Software	G
1394	G

- Operational (or capable of)
- Operational with limitations (or in standby)
- Operational with degraded performance
- Not functional
- Functional but turned off
- No status reported

Ocean Surface Topography Mission/Jason-2

Surveying Earth's Oceans

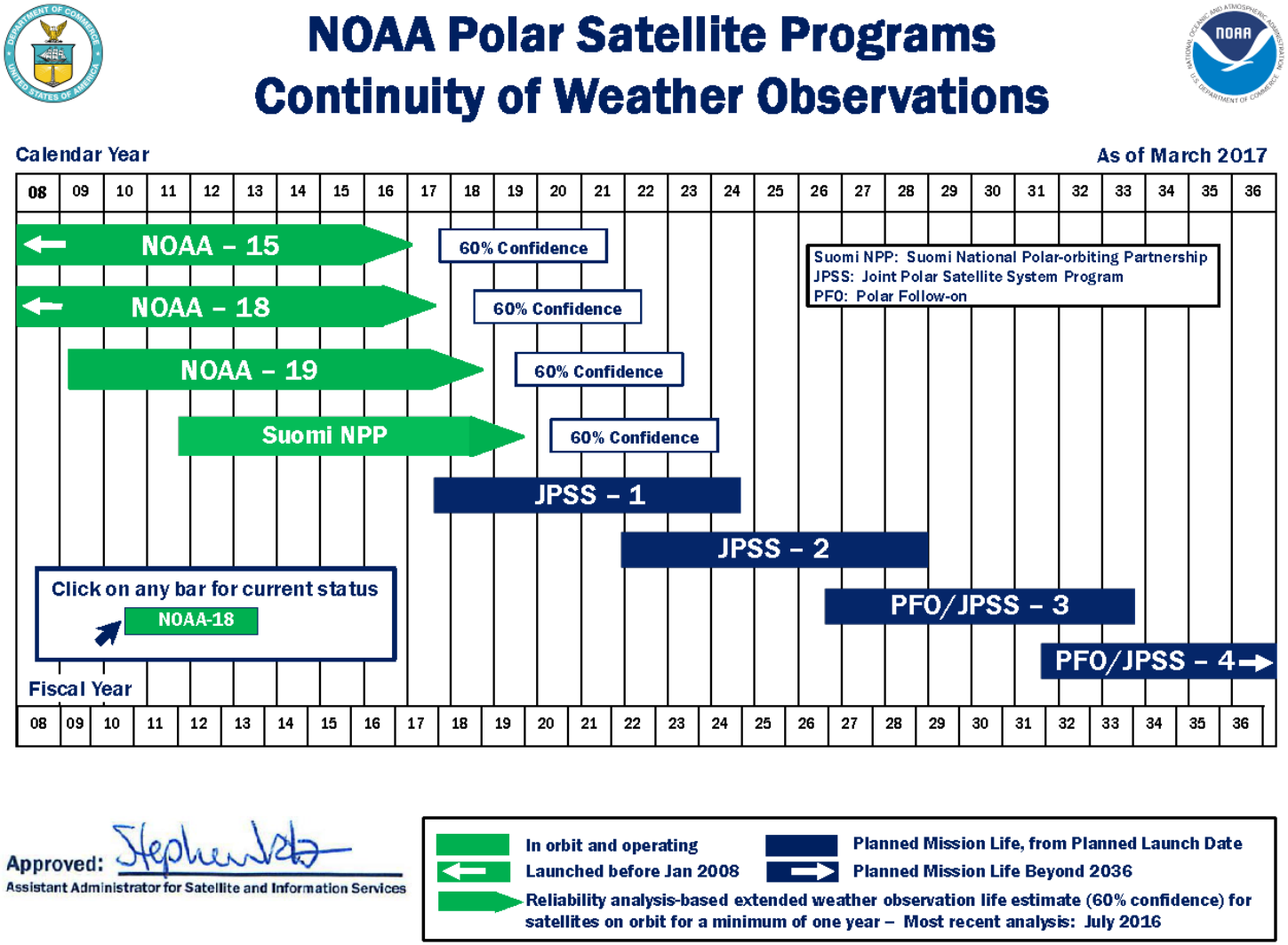


- October 2-13, 2016 - Move to interleaved orbit (no products generated)
- November 30, 2016 - Began parallel flow of data to new Product Distribution and Access (PDA) system
- March 15-30, 2017 - In Safe Hold Mode (no products generated)
- May 18, 2017– In Safe Hold Mode
  - Anomaly caused by a Gyro 2 health status Fault Detection.
- June 20, 2017 - Joint Steering Group decided to start maneuvers to get Jason-2 into Long Repeat Orbit (LRO).
- July 3, 2017 – Jason-2 brought out of safe hold mode to perform maneuvers toward Long Repeat Orbit (LRO).
- July 11, 2017 – Poseidon-3 and Advanced Microwave Radiometer (AMR) instruments are turned back on.
- July 11-16, 2017 – CNES generation of Operational Geophysical Data Records (OGDRs) for verification ONLY
- Week of July 17, 2017 – Operational production and distribution of OGDRs by EUMETSAT and NOAA resumes.

- June 21, 2016 - Near Real-time Verification Workshop –public release of NRT products recommended
- June 28, 2016 - Joint Steering Committee endorsed the Workshop's recommendation.
- July 1, 2016 – Public release of NRT products began
- August 9 2016 - Level 2 anomaly corrections and security patches implemented
- September 6, 2016 - Implemented fix for SSHAs being defaulted (primarily by rain flag) and radiometer land/sea flag having ocean values
- December 5, 2016 - Began parallel flow of data to new Product Distribution and Access (PDA) system

S-NPP Status

LEO Flyout Schedule



http://www.nesdis.noaa.gov/FlyoutSchedules.html http://www.jpss.noaa.gov

S-NPP Status as of July 2017

Spacecraft	S-NPP
Launch Date	Oct 28, 2011
Mission Category	LTAN 1330 (PM) +/- 10 mins

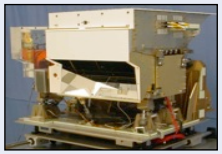
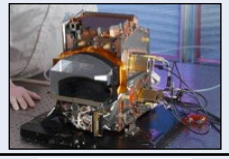
Payload Instruments	Status
ATMS	G
CERES	G
CrIS	G
OMPS – Nadir	G
OMPS – Limb	G
VIIRS	G

- Operational (or capable of)
- Operational with limitations (or in standby)
- Operational with degraded performance
- Not functional

Spacecraft Subsystem	Status
TLM, Command & Control	G
ADCS	G
EPS	G
Thermal Control	G
Communications	G
CDP	G
SCC	G
GPS	G
1553	G
1394	G

- Functional but turned off
- No status reported

S-NPP Instruments

Instrument		Measurement
	**ATMS** - Advanced Technology Microwave Sounder	ATMS and CrIS together provide profiles of atmospheric temperature, moisture, and pressure
	**CrIS** - Cross-track Infrared Sounder	
	**VIIRS** – Visible Infrared Imaging Radiometer Suite	Provides daily high-resolution imagery and radiometry across the visible to long wave infrared spectrum
	**OMPS** - Ozone Mapping and Profiler Suite	Spectrometer with UV bands for ozone total column measurements
	**CERES** - Clouds and the Earth's Radiant Energy System	Scanning radiometer which supports studies of Earth Radiation Budget

S-NPP Status - Additional Notes

- Extensive monitoring of the ATMS scan drive motor current loads and temperatures is ongoing.
- Routine execution of twice an orbit ATMS scan drive motor reversal activities been ongoing since 18 Aug 2016 – this activity will continue indefinitely.
  - Reversal activations are performed near high latitudes (70N, 70S, 75N, 75S, 80N, 80S) in order to provide for a more consistent placement of the reversal-induced data gaps.
  - ATMS scan driver motor reversal extends the bearing life (1-min data outage).
- All data processing and distribution is being performed on Block JPSS 2.0 systems and on the new ground segment (NDE 2.0/PDA).
  - New system transferred from old NDE 1.0 to operations on Mar 8, 2017.

S-NPP Internal and External Users

External Users	Product Types
NWS-AWIPS	• NUP – VIIRS
NCEP-NCO	• NUP – ATMS/CrIS/OMPS
NCEP-EMC	• NUP – VIIRS
EUMETSAT	• NUP – ATMS/CrIS/VIIRS
CMC	• NUP – ATMS/CrIS/OMPS/VIIRS
JMA	• NUP – ATMS/CrIS/OMPS
NASA-GPM	• xDR – ATMS (pass-thru)
NASA-JPL	• NUP - VIIRS
India-NCMWRF	• NUP – ATMS/CrIS
NEP-IDP	• NUP – VIIRS/ATMS-MiRS
STAR-CIRA	• xDR – VIIRS (pass-thru)
STAR	• NUP – ATMS/CrIS/VIIRS
NOAA-AOML	• NUP – VIIRS
CLASS	• NUP – VIIRS/ATMS/CrIS
JTWC	• ATMS (derived)
NCEI	• NUP
DoD	• NUP • xDR

Internal Users	Product Type
VIIRSDIST	• NUPS – VIIRS
SFS	• NUP • xDR
NIC	• xDR – VIIRS (pass-thru) • NUP – ATMS
Coast Watch	• NUP – VIIRS
NUCAPS	• NUP – ATMS/CrIS
TOAST	• NUP – ATMS/ CrIS/OMPS
Okeanos	• xDR – VIIRS (pass-thru)
Blended SST	• NUP - VIIRS
DAPE	• NUP – ATMS/CrIS/VIIRS
Prod Mon	• NUP – ATMS/CrIS/VIIRS
DDS-Legacy	• Ancillary

S-NPP Maneuvers

Long lead time scheduled maneuvers:

- Drag Make-Up maneuver (DMU) for maintaining optimum geo-location.
  - DMU #024 scheduled to occur 19 Jul 2017 (16:20 UTC)
- VIIRS Lunar Roll (~9 per year) for VIIRS calibration activities
  - No opportunities from Jul to Sep
  - 31 Oct 2017 (~06:06 UTC) and 29 Nov 2017 (~20:28 UTC)
- Inclination Maneuvers (IAM), conducted every year, to ensure optimum Local Time of the Ascending Node (LTAN) maintenance:
  - Next IAM next is expected to occur 21/22 Sep 2017 (TBD) – IAM#7

Short lead time maneuvers:

- Risk Mitigation Maneuver (RMM) – risk analysis provided by NASA CARA and analyzed/planned for by the NESDIS Mission Ops Team (MOT).

*Note –IAM and DMU maneuvers are subject to change. During propulsive maneuvers, data navigation may be affected; therefore, users should always perform data quality checks and data exclusion during such maneuvers.

S-NPP– Other Activities

Other activities:

- VIIRS Day-Night Band (DNB) Calibration Schedule

• 23 Jul 2017
• 21 Aug 2017
• 20 Sep 2017
• 19 Oct 2017
• 18 Nov 2017
• 18 Dec 2017

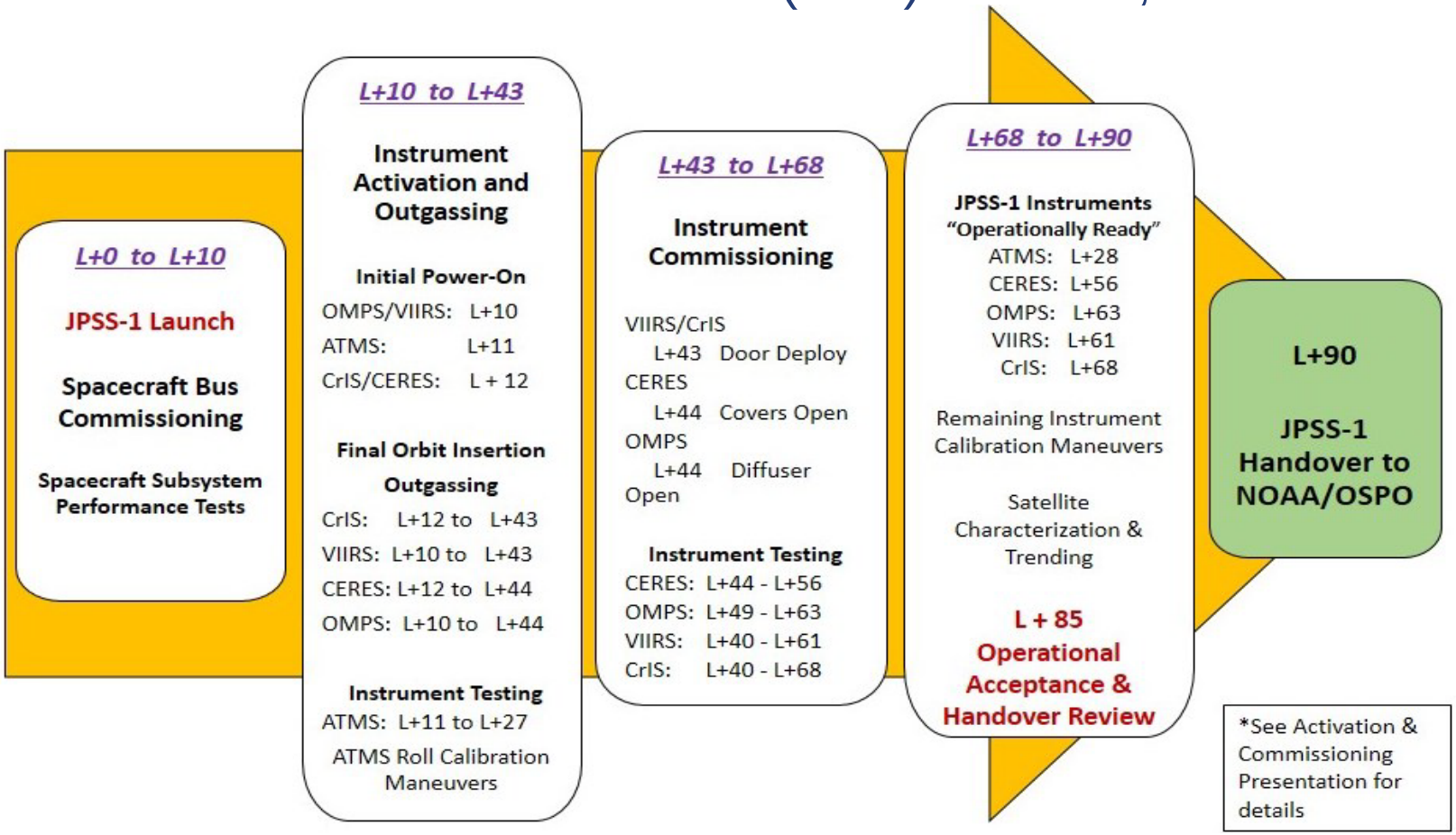
- 13 Jul 2017 – JPSS Block 2.0 Flight Operations ORR
  - Block 2.0 Transition to Operations (TTO) no earlier than 20 Jul 2017 (TBC)
  - 20 Jul 2017 (TBC) Activation of M-11 at night – contingent upon TTO of B2.0 flight ops systems
- 22-24 Aug 2017 (TBC) – JPSS-1 Operational Readiness Review
- mid-Aug 2017 (TBD) – S-NPP Continuity of Operations Exercise at CBU Backup location

  Planned alternative date for this activity: TBD
- 12 Oct 2017 (TBC) – JPSS-1 Launch

TBC = To Be Confirmed; TBD = To Be Determined

On-orbit Commissioning Timeline Overview (JPSS-1)

Launch Readiness Date (LRD) – Oct 12, 2017

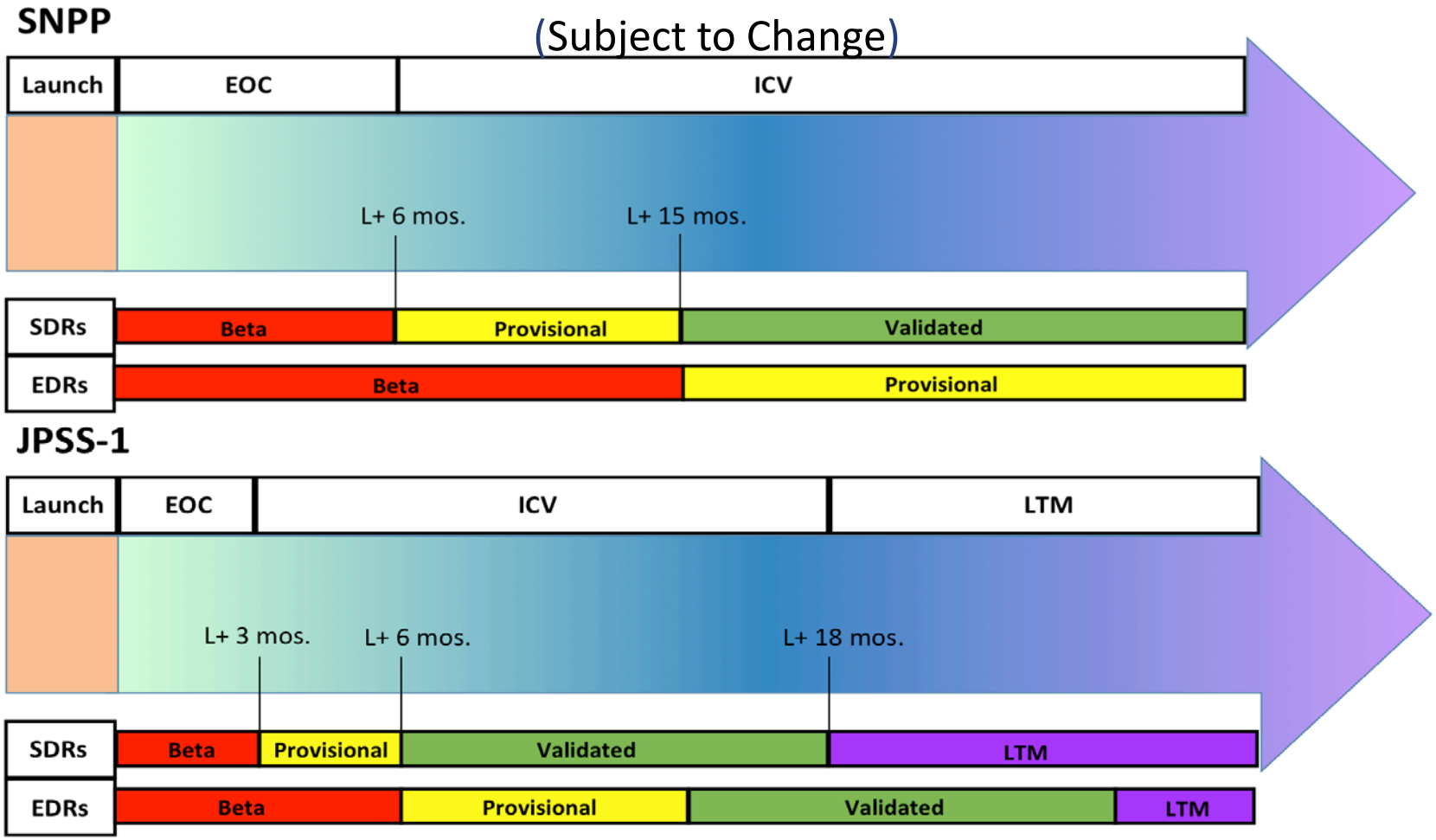


Spacecraft Bus PLT → Instrument PLT → Science PLT

Tentative schedule – informational only

JPSS-1 Cal/Val Timeline

(Subject to Change)



- Early Orbit Checkout (EOC); Intensive Cal/Val (ICV); Long Term Maintenance (LTM)
- KEY TAKE-AWAY is the calibration/validation process is compressed for JPSS-1 (NOAA-20) versus what occurred with S-NPP

Product Highlights

NDE Operational Products

Application Short Name	Application Name	Product Name	Format	Satellite
ACSPO SST	Advanced Clear Sky Processor for Oceans (NDE) - SST	SST, Clear Sky Mask	netCDF	SNPP
AOT	Aerosol Optical Thickness	VIIRS Aerosol Optical Thickness (NDE)	BUFR	SNPP
ATMS-SDR	ATMS SDR radiances	ATMS SDR radiances 22 channels (NDE)	BUFR	SNPP
CRIS-SDR-399	CrIS SDR radiances 399	CrIS IR sounder SDR radiances 399 channels for NWP data assimilation (NDE)	BUFR	SNPP
CRIS-SDR-1305	CrIS SDR radiances 1305	CrIS IR sounder SDR radiances 1305 channels for NWP data assimilation (NDE)	BUFR	SNPP
GVF	GVF	Green Vegetation Fraction – 7 day product	Grib2	SNPP
NUCAPS Level 2	NOAA Unique CrIS ATMS product System Level 2	CrIS/ATMS Atmospheric Temp Profile CrIS/ATMS Atmospheric Moisture Profile	netCDF	SNPP
NTCP	Tropical Cyclone Products	ATMS Microwave Tropical Cyclone Product	ATCF Ascii	SNPP
MIRS ATMS	Microwave Integrated Retrieval System (NDE) - ATMS	MIRS ATMS image products MIRS ATMS SND products	netCDF	SNPP
OMPS-NP	OMPS nadir profile	Ozone nadir profile (NDE)	BUFR	SNPP
OMPS-TC	OMPS total column	Ozone total column (NDE)	BUFR	SNPP
VIIRS-EDR	VIIRS EDR	VIIRS EDR (NDE)	netCDF	SNPP
VIIRS-SDR	VIIRS SDR	VIIRS SDR (NDE)	netCDF	SNPP
VIIRS Binary Snow Cover	VIIRS Binary Snow Cover	VIIRS Binary Snow Map	netCDF	SNPP
VPW	VIIRS Polar Winds	VIIRS Polar Winds	BUFR netCDF	SNPP

NDE Operational Products

Application Short Name	Application Name	Product Name	Format	Satellite
Vegetation Health	Vegetation Health Products	VIIRS Vegetation Health Products	netCDF/ Geotiff	SNPP
GAASP	GCOM AMSR2 Algorithm Software Processor	AMSR2 Radiances, Ocean, Precipitation, Sea Ice	netCDF/ BUFR	GCOM
Active Fire	VIIRS Active Fire	VIIRS Active Fire	netCDF	SNPP
JPSSRR	JPSS Risk Reduction Products	VIIRS Aerosol, Cloud, and Crosphere	netCDF	SNPP

Upcoming Operational Products (SPSRB schedule)

- V8TOZ and V8Pro (Aug)

JPSS Risk Reduction Products Operational

- SNPP VIIRS Aerosol, Cloud and Cryosphere Products (JPSS Risk Reduction Project)
  - Implemented into operations July 5, 2017.
  - Will meet the requirements of JPSS L1RD Supplements for VIIRS EDRs.
  - Below is a list of products:

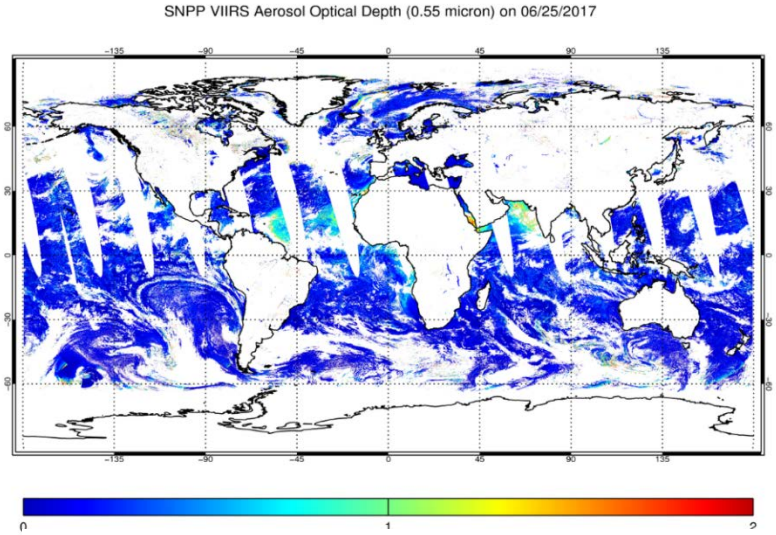
Cloud Mask
Cloud Top Phase
Cloud Type
Cloud Top Height
Cloud Top Temperature
Cloud Top Pressure
Cloud Optical Depth
Cloud Particle Size Distribution
Cloud Liquid Water
Cloud Ice Water Path

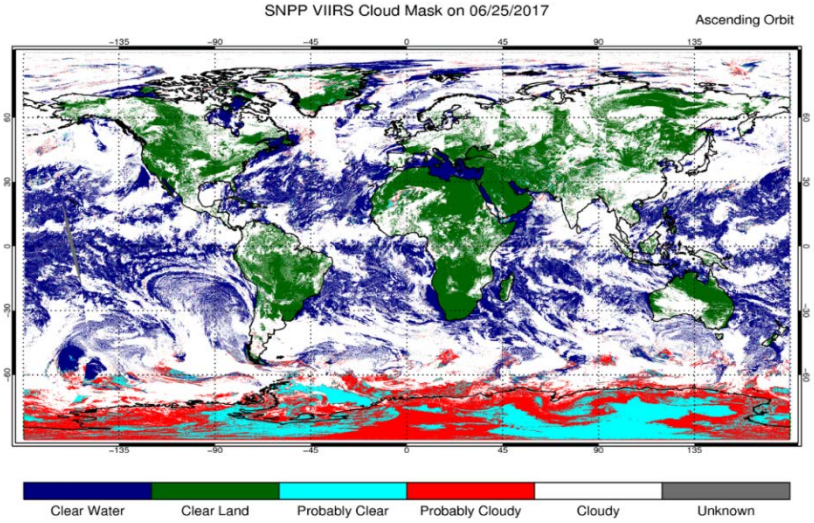
Aerosol Detection – Smoke & Dust
Aerosol Optical Depth
Aerosol Particle Size
Volcanic Ash Mass Loading
Volcanic Ash Height

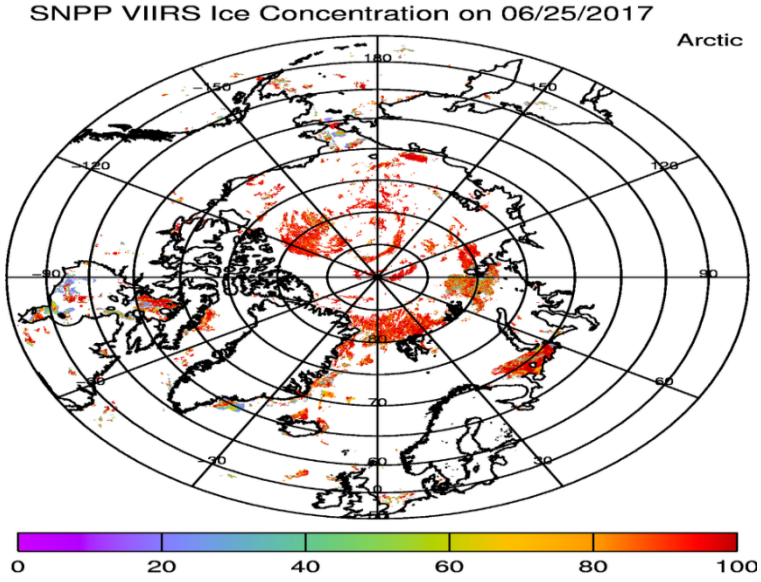
Ice Concentration and Cover
Ice Surface Temperature
Ice Thickness/Age
Snow Cover
Fractional Snow Cover

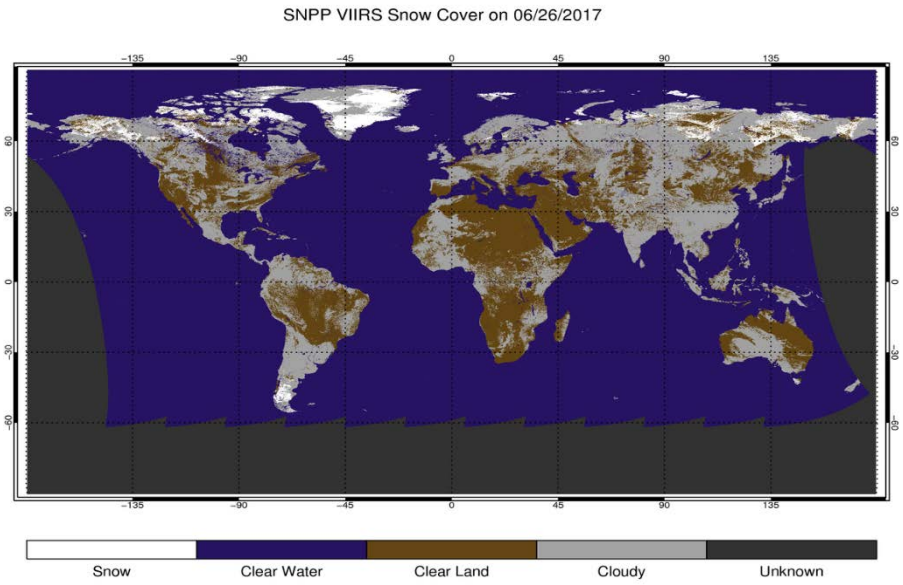
SNPP VIIRS

Product Highlights: Aerosol, Cloud and Cryosphere Products









NDE VIIRS Active Fire Products

Courtesy of STAR JPSS Fire Team

VIIRS DNB Image for Portugal on June 18, 2017

Courtesy of VIIRS Imagery Cal/Val Team

Thank you to content providers!

NESDIS / OSPO / MOD

- Carl Gliniak
- Chris Sisko

NESDIS / OSPO / SPSD

- Shuang Qiu
- Zhaohu Cheng
- David Donahue
- Tom Renkevens
- Antonio Irving
- Natalia Donoho
- Banghua Yan
- Limin Zhao

Thank you!

Questions?

Backup Slides

POES Status (July 2017)

http://www.ospo.noaa.gov/Operations/POES/status.html

Operational	G
Spacecraft Issue but no User Impact	S/C
Possible Impact to Products	P
Operational with Limitation	Y
Non-Operational	R
Not Applicable	N/A

Spacecraft Subsystems	METOP-A	METOP-B	NOAA-19	NOAA-18	NOAA-15
Launch Date	Oct 2006	Sept 2012	Feb 2009	May 2005	May 1998
Operational Date	May 2007	April 2013	Jun 2009	Aug 2005	Dec 1998
Mission Data Category	Secondary (AM)	Primary (AM)	Prime Services Mission (PM)	Secondary (PM)	Secondary (AM)
Payload Instruments					
AVHRR	G	G	G	G	Y(20)
HIRS	Y(37)	P (33)	Y (32)	Y (3)	R (6)
AMSU-A1	G	P (36)	G	G	Y(21)
AMSU-A2	G	G	G	G	G
AMSU-B	N/A		N/A	N/A	R (12)
MHS	G	G	Y (8)	G	N/A
SEM	G	G	G	G	G
SBUV	N/A		S/C (9)	R(29)	N/A
Spacecraft Subsystems					
Telemetry, Command & Control	G	G	G	G	G
ADACS	G	G	G	Y (7)	Y(10)
EPS	G	G	G	G	G
Thermal Control	G	G	G	G	Y(22)
Communications	Y (1)	G	G	G	Y(23)
APT/LRPT	R (2)	G	G	G	G
DCS	N/A	N/A	N/A	G	G
ADCS	G	Y(31)	G	N/A	N/A
SAR	G	Y(31)	G	G	Y(24)

POLAR Operational Environmental Satellite (POES) Operations Status (July 2017)

METOP-A	Loss of Redun-dancy	Failure Within Lifetime	Failure Beyond Lifetime	Action Taken	Impacts
1. HRPT limited usage	✓			• Operated on a limited basis to extend life. HRPT available over Europe and North Atlantic	•Limited coverage and availability for CONUS. Both Ascending and Descending orbit HRPT is available at this time
2. No LRPT	✓			•Transmitter off	•No data available
37. HIRS Filter Wheel Noise			✓	•Operations continue with close monitoring of the filter wheel noise	• Products generated with minimal impact.

Please Note: HRPT Extension of Service began 18 Jan 2011. WCDA will be able to see a few more pass for METOP-HRPT

POLAR Operational Environmental Satellite (POES)
Operations Status (July 2017)

METOP-B	Loss of Redun-dancy	Failure Within Lifetime	Failure Beyond Lifetime	Action Taken	Impacts
31. ADCS/SAR RF Loss of around 10 dB		✓		• Operations continue with on-going investigation on a limited basis	• Limited coverage with around 35% less availability for Data Collection.
33. HIRS Long Wave Channels 5, 6 soon to be out of spec, Ch10 out of spec		✓		• Operations continue with close monitoring due to several IR Channels Noise Increases	• Products generated with minimal impact. •Filter Wheel Performance has improved
36. AMSU A1 Ch. 15 Failure Ch. 7 Noisy				• Investigation Complete. Channel 15 has been declared inoperative/failed. Instrument remains operational, though performance degraded •Ch 7 was taken out of service do to noisy data. Noise has reduced, return to service uncertain.	•MHS Ch. 1 is the same frequency as AMSU A1 Ch. 15 so MHS data can be used in its place. •Ch 7. Metop-A is also out of spec, no mitigation

POLAR Operational Environmental Satellite (POES) Operations Status (July 2017)

NOAA-19	Loss of Redun-dancy	Failure Within Lifetime	Failure Beyond Lifetime	Action Taken	Impacts
8. MHS H3 have stabilized; operating dynamic ranges decreased		✓		•MHS H3 remains out of spec	•Adverse impact on products
9. SBUV Lamp Door Anomaly		✓		•Lamp door potentially stuck. Discontinued commanding lamp door for calibration.	•Potential impact if calibrations are discontinued, so far no adverse impact for users.
32. HIRS Long Wave Channel Noise Increased			✓	•Filterwheel motor in Hi power mode and filterwheel housing heater turned on.	•Adverse impact on products. STAR scientist and user community are re-evaluating for options.
34. ADCS RX1 produces TLM corruption				• Operations continue with on-going investigation on a limited basis	• Redundancy is lost

POLAR Operational Environmental Satellite (POES)
Operations Status (July 2017)

NOAA-18	Loss of Redun-dancy	Failure Within Lifetime	Failure Beyond Lifetime	Action Taken	Impacts
7. MIMU not reliable	✓		✓	•Backup unit in use	•No redundancy of a critical component for attitude control.
3. HIRS long wave channel noise		✓		•Health and safety monitoring is nominal but users report science data degraded	•Inconsistent quality of IR channels seen shortly after launch. Some users discontinued usage.
29. Chopper Motor stalled			✓	•Macro commands loaded in CPU to toggle power on/off to the motor with temperature limit criteria	•No usable data is generated.

POLAR Operational Environmental Satellite (POES) Operations Status (July 2017)

NOAA-15	Loss of Redundancy	Failure Within Lifetime	Failure Beyond Lifetime	Action Taken	Impacts
20. AVHRR Scan Motor past anomalies but nominal at present			✓	• Health and safety monitoring	• No major impact as users use METOP-A
6. HIRS Filter Wheel stalled.			✓	• Filter Wheel Motor power and thermal cycles via macro commands were disabled	• No major impact as users use NOAA-17/METOP-A
21. AMSU-A1 Ch11 & Ch14 failed				• Health and safety monitoring	• No major impact as users use METOP-A
22. Thermal Control TCE 24L & TCE 25L failed		✓	✓	• Pre-Launch Failure • Power cycle via macro with no response	• Spacecraft Performance Nominal
23 Communication STX1 & 3 failed, STX2 HRPT, STX4 PB			✓	• Evaluation and testing completed for all data types • Health and safety monitoring	• No major impact as users use NOAA-17/METOP-A • Limited amount of data retrieved per pass
24. SARR 121 MHh decommisioned, 243 MHz intermitent			✓	• SARR receiver commanded off at request of SARSAT	• 406 MHz Receiver in operation
10. Loss of 2nd Gyro			✓	• Backup attitude control mode resulting in large geo-pointing errors	• No major impact as users use METOP-A • Severely degraded data for products
12. AMSU-B Antenna Scan Motor Failed			✓	• Power cycles used but no response of Antenna movement. • Macro Power cycle is activated once a week via Stored CMDs beginning Aug 23, 2011	• No major impact as users use METOP-A MHS • No products are available

ESPC Notifications, Status, and Contacts

24/7 Help Desk	ESPCOperations@noaa.gov
ESPC Messages	http://www.ssd.noaa.gov/PS/SATS/messages.html
WMO GTS Bulletins	Urgent: http://www.weather.gov/view/validProds.php?prod=ADM&node=KNES Routine: http://www.weather.gov/view/validProds.php?prod=ADA&node=KNES
User Services	SPSD.UserServices@noaa.gov
Data Access	NESDIS.Data.Access@noaa.gov
Webmaster	SSDWebmaster@noaa.gov
Facebook	www.facebook.com/NOAANESDIS
Twitter	www.twitter.com/noaasatellites
Satellite Ops Status	http://www.oso.noaa.gov/daily-news/index.asp
Press releases	http://www.nesdis.noaa.gov/news_archives/
Web	www.ospo.noaa.gov