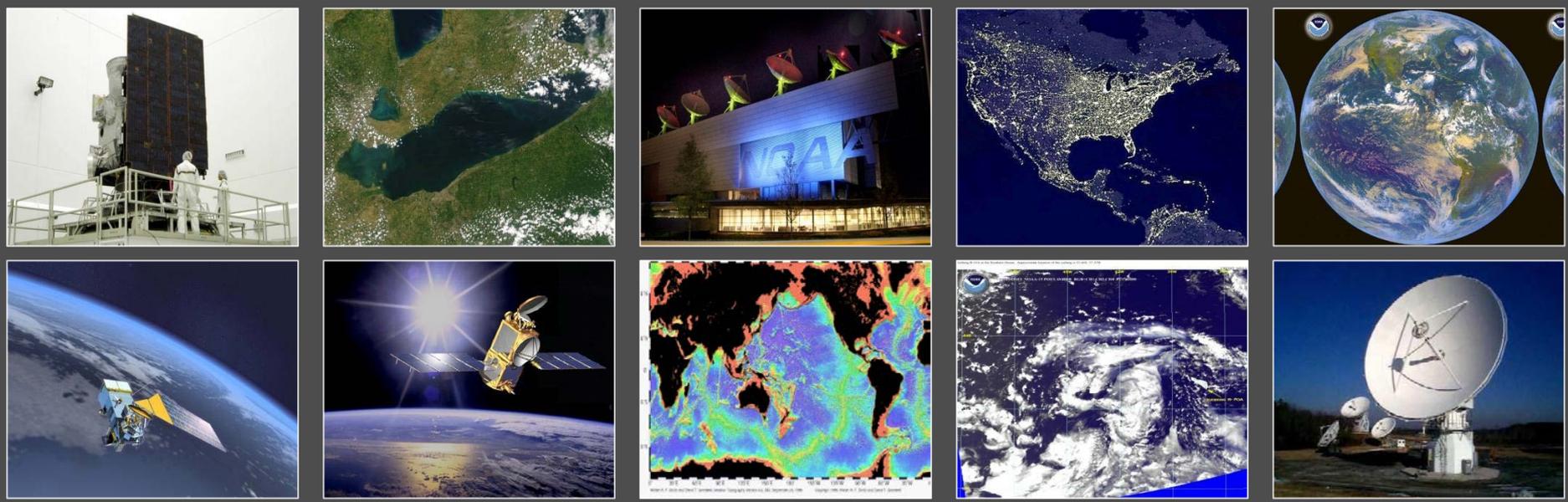




OSPO COPC Brief



Richard (Greg) Marlow
Deputy Director
Office of Satellite and Product
Operations (OSPO)
Spring 2017



Agenda

- **NOAA NESDIS Organization**
- **OSPO Facilities**
- **Operations Summary**
- **Current Program Highlights**
- **Future NOAA Mission Update**
- **Update – Ops Floor Renovation**

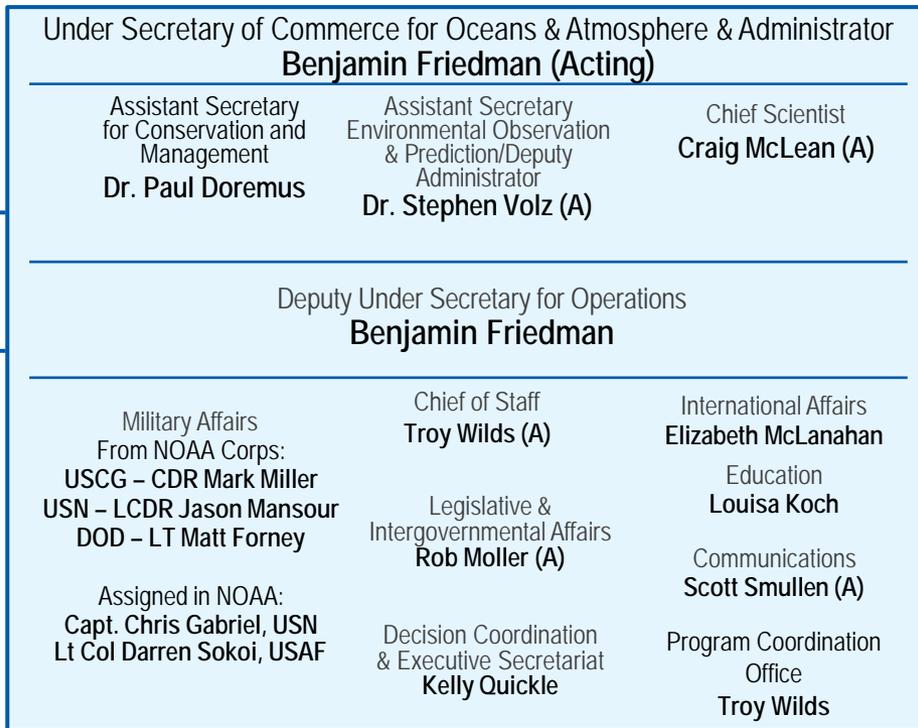


NOAA Organizational Chart

CORPORATE FUNCTIONS

Deputy Assistant Secretary for International Fisheries
Sam Rauch (A)

Federal Coordinator for Meteorology
William Schulz



General Counsel
Jeff Dillen (A) and Kristen Gustafson

Acquisition & Grants
Mitchell J. Ross
 Chief Administration Officer
Edward Horton
 Chief Financial Officer
Mark Seiler
 Chief Information Office/HP Computing & Communications
Zach Goldstein
 Workforce Management
Kimberlyn Bauhs

LINE OFFICES

Assistant Administrator National Marine Fisheries Service (NMFS)
Sam Rauch (A)
 Deputy Assistant Administrator for Operations
Dr. Paul Doremus
 Deputy Assistant Administrator for Regulatory Programs
Samuel Rauch
 Director of Scientific Programs & Chief Science Advisor
Dr. Cisco Werner (A)

Assistant Administrator National Ocean Service (NOS)
Dr. Russell Callender (A)
 Deputy Assistant Administrator
Nicole LeBoeuf

Assistant Administrator National Environmental Satellite, Data & Information Service (NESDIS)
Dr. Stephen Volz
 Deputy Assistant Administrator
Mark S. Paese

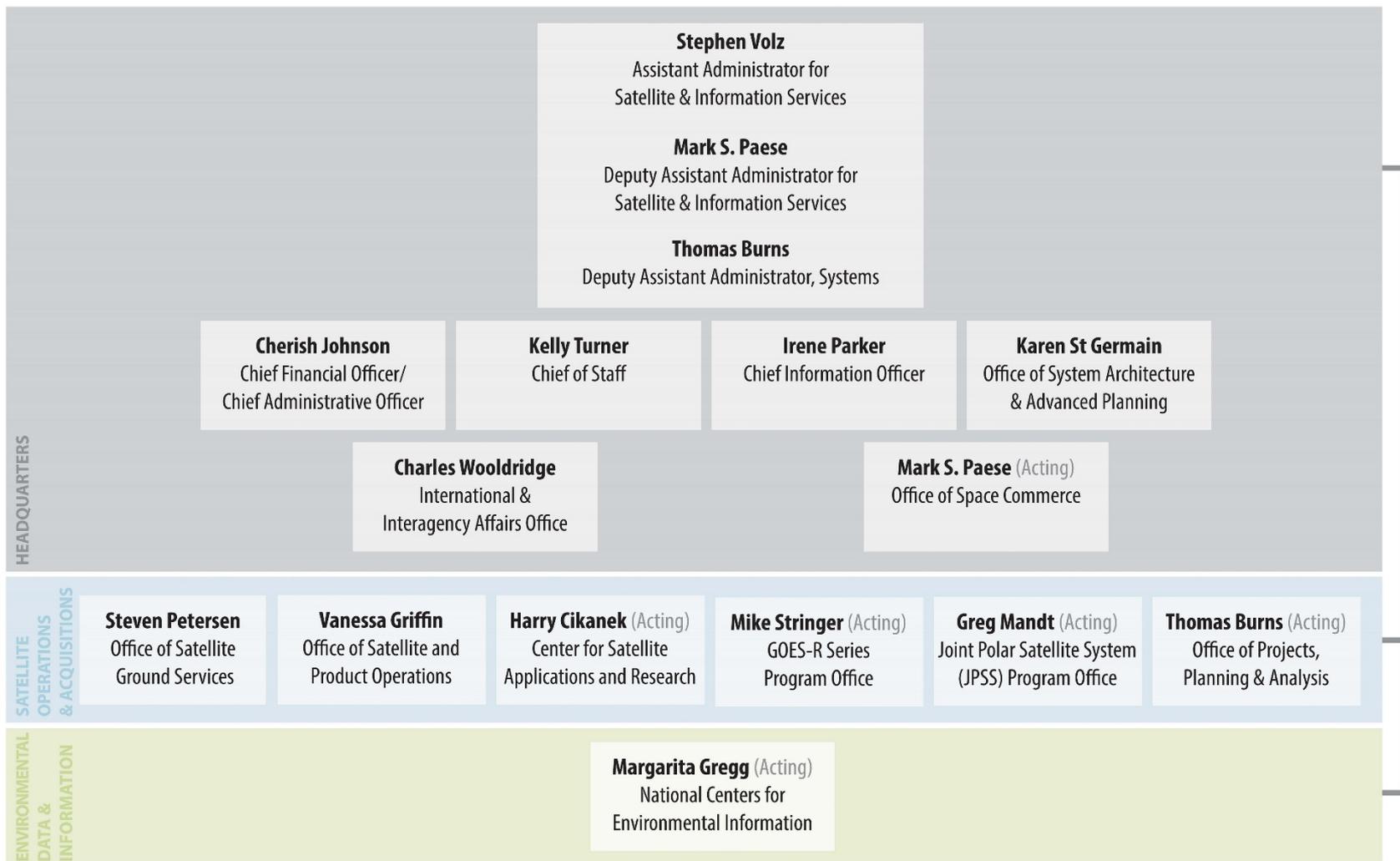
Assistant Administrator Oceanic & Atmospheric Research (OAR)
Craig McLean
 Deputy Assistant Administrator for Laboratories & Cooperative Institutes
Dr. Gary Matlock (A)
 Deputy Assistant Administrator for Programs & Administration
Ko Barrett

Assistant Administrator National Weather Service (NWS)
Dr. Louis Uccellini
 Deputy Assistant Administrator
Mary Erickson

Director Office of Marine & Aviation Operations (OMAO) & Director, NOAA Commissioned Officer Corps
RADM David A. Score
 Deputy Director for Operations and Deputy Director, NOAA Commissioned Officer Corps
RDML Anita Lopez

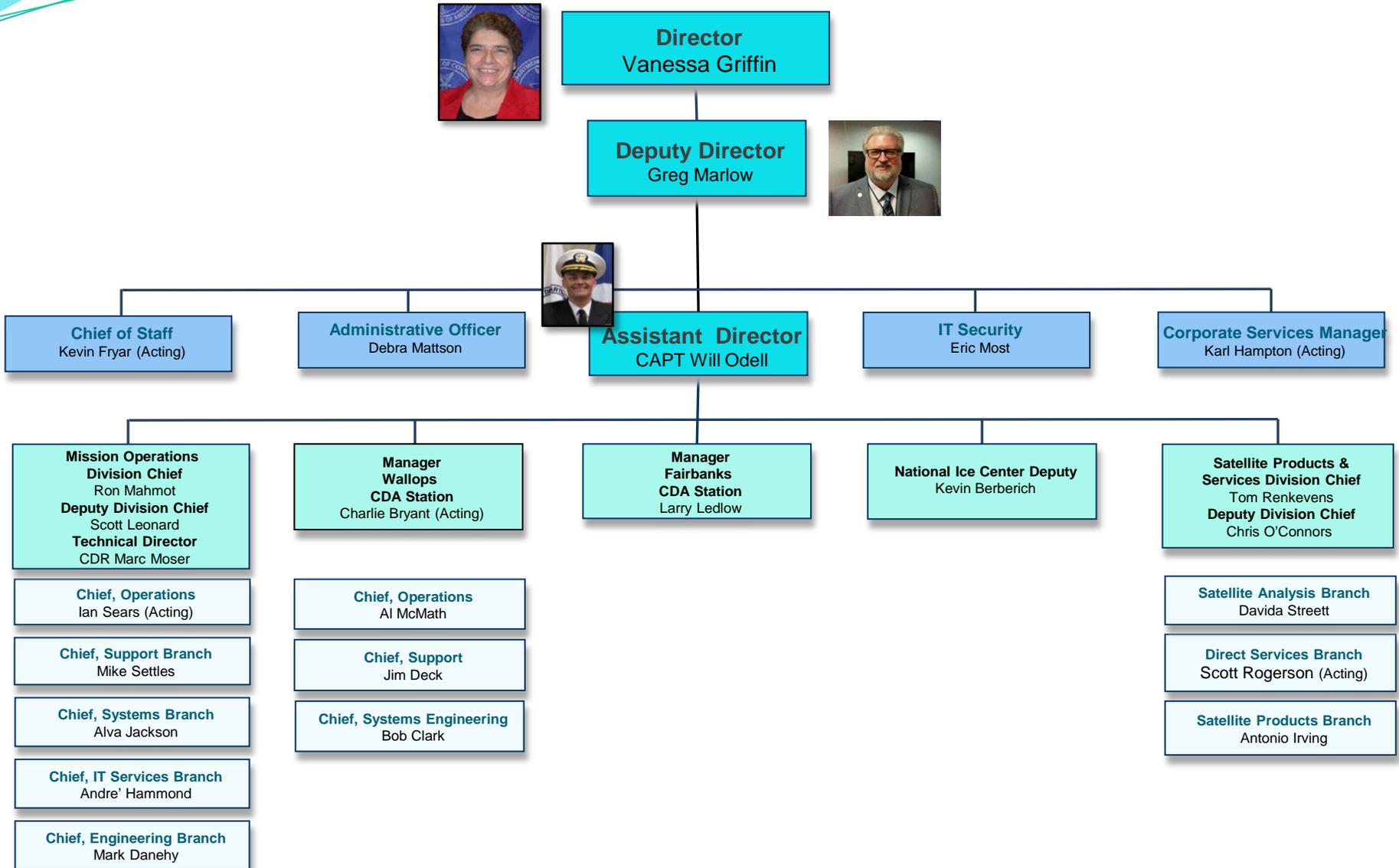


NOAA Satellite and Information Services Organizational Chart





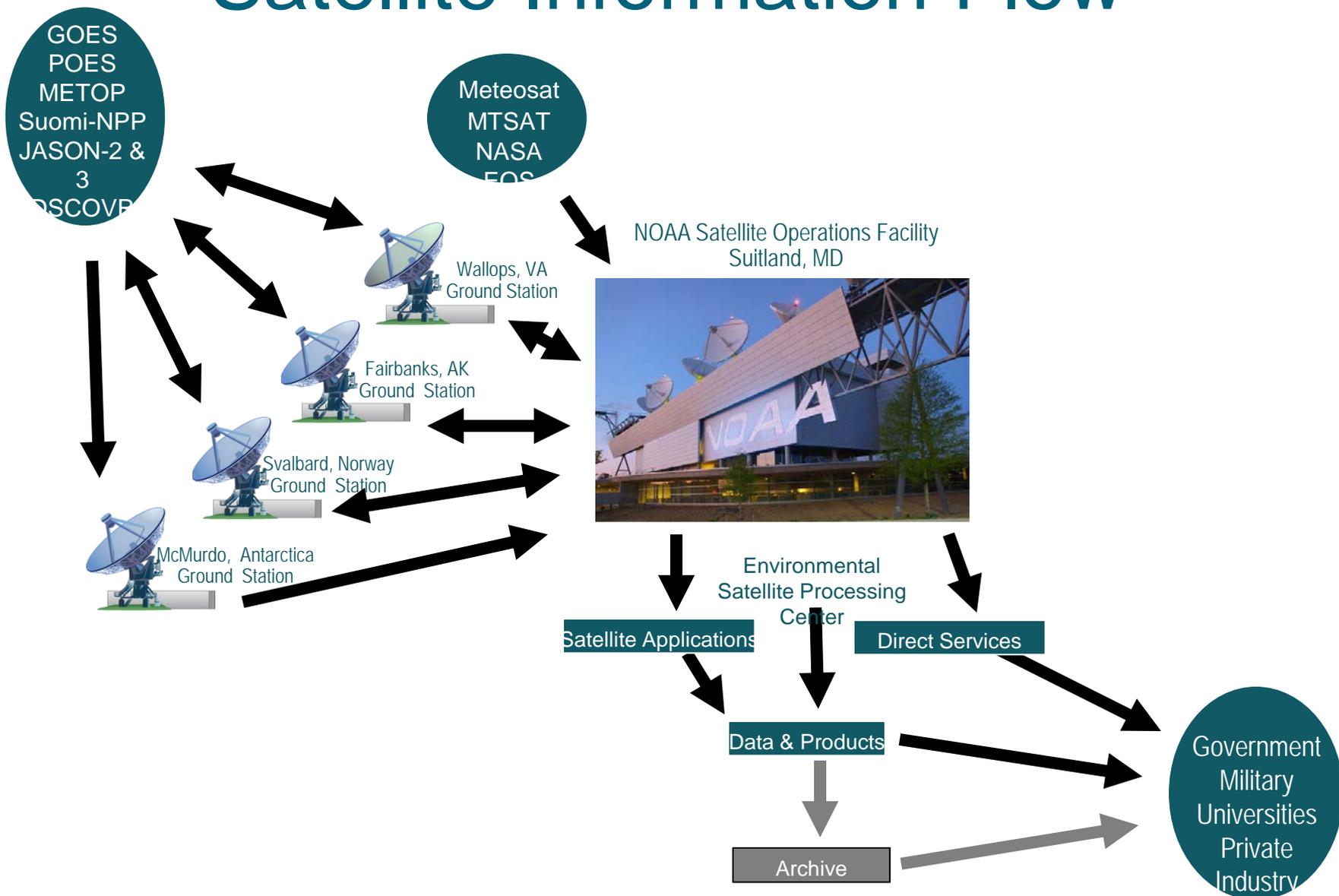
OSPO Organizational Chart



5/1/2017



Satellite Information Flow



OSPO Facilities



Suitland, MD



College Park, MD



Asheville, NC



Fairmont, WV*



Wallops, VA



Fairbanks, AK

* GOES-R and JPSS Backup Facility under construction



Operations Summary

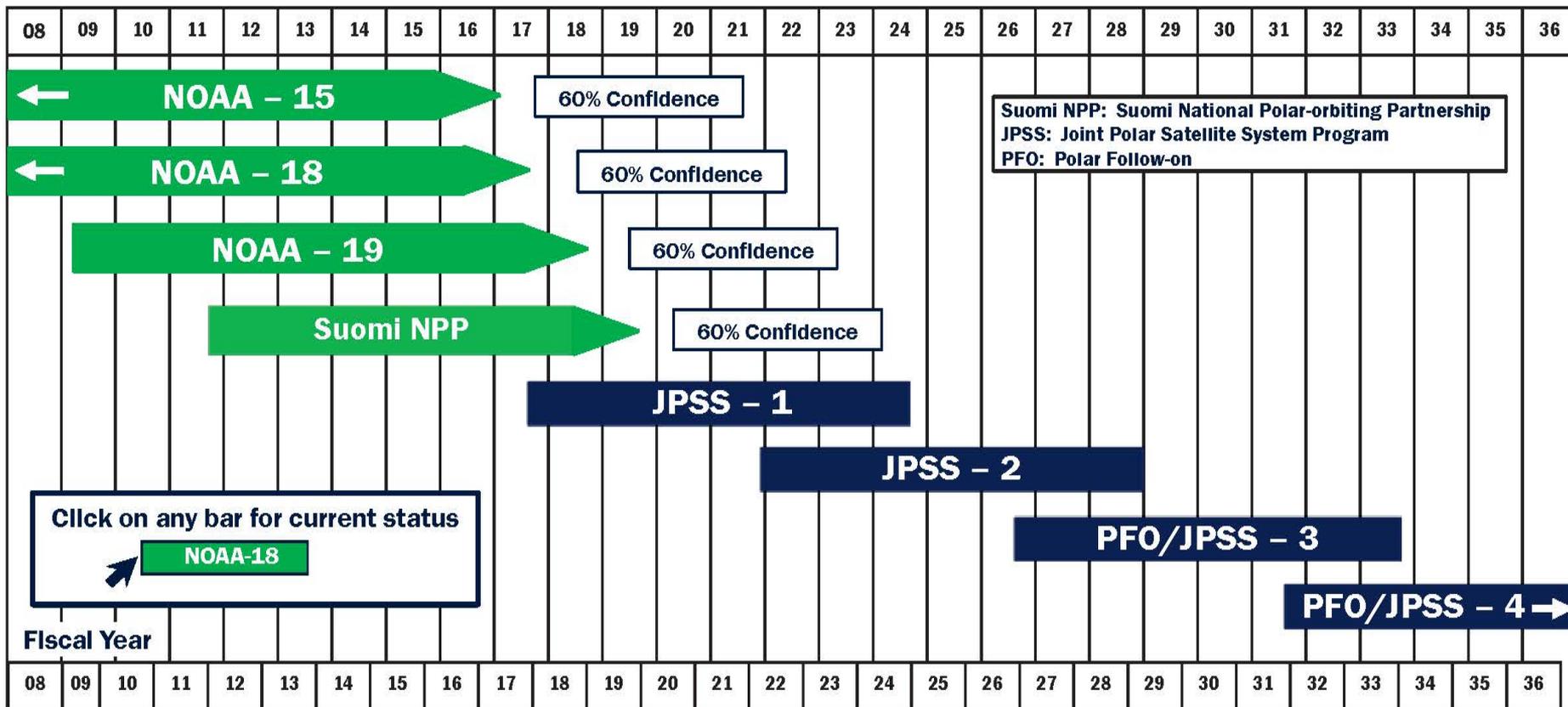
- JPSS – Block 2.0 (Data Ops) transitioned to operations on March 08, 2017
 - Block 2.0 (Flight Ops) ORR scheduled for May 23, 2017
 - Launch scheduled for September 21, 2017.
- GOES-R – Launched November 19, 2016.
 - Operational Handover to NOAA scheduled for June 23, 2017
- Performance of legacy systems is nominal; satellites and ground systems are aging.
- NSOF Ops Floor Reconfiguration underway, scheduled completion end of June 2017



NOAA Polar Satellite Programs Continuity of Weather Observations

Calendar Year

As of March 2017



Fiscal Year

Approved: Stephen [Signature]
Assistant Administrator for Satellite and Information Services

- In orbit and operating
- Planned Mission Life, from Planned Launch Date
- Launched before Jan 2008
- Planned Mission Life Beyond 2036
- Reliability analysis-based extended weather observation life estimate (60% confidence) for satellites on orbit for a minimum of one year – Most recent analysis: July 2016

Suomi National Polar-orbiting Partnership (S-NPP)

Performance Status – March 28, 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

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

 Operational (or capable of)

 Operational with limitations (or in standby)

 Operational with degraded performance

 Not functional

 Functional but turned off

 No status reported



Additional Notes:

1-May-2017: All instruments operating normally and are meeting/exceeding their established performance specifications. ATMS scan drive motor currents and temperatures returned to pre anomaly levels on April 3rd, 2017

Monitoring of the ATMS scan drive motor current loads and temperatures is ongoing.

ATMS Instrument - Routine execution of twice an orbit ATMS scan drive motor reversal activities been ongoing since 18 Aug 2016 – this activity will continue indefinitely. These 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.

Note - The purpose of the ATMS scan driver motor reversal is to extend the bearing life. During each reversal activity, expect up to a one minute ATMS data outage. ATMS data resumes normally after each scan drive motor reversal activity is completed.

Polar Operational Environmental Satellite (POES) Performance Status – March 28, 2017

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(19)
HIRS	G	Y(32)	O (31)	R (3)	R (5)
AMSU-A1	O (30)	Y (36)	G	P (33)	Y(20)
AMSU-A2	G	G	G	G	G
AMSU-B	N/A		N/A	N/A	R (11)
MHS	G	G	Y (6)	G	N/A
SEM	G	G	G	G	G
SBUV	N/A		S/C (9)	R(27)	N/A
Spacecraft Subsystems					
Telemetry, Command & Control	G	G	G	G	G
ADACS	G	G	G	G	O (10)
EPS	G	G	G	G	G
Thermal Control	G	G	G	G	Y(21)
Communications	Y (1)	G	G	G	Y(22)
APT/LRPT	R (2)	G	G	G	G
DCS	N/A	N/A	N/A	G	G
ADCS	G	O(29)	Y(34)	N/A	N/A
SAR: SARR & SARP	G	Y(35)	G	G	Y(23)

Operational	G
Spacecraft Issue but No User Impact	S/C
Investigating Performance Issue which will Impact Users	P
Operational with Limitation	Y
Operational with Degradation	O
Non-Operational	R
Not Applicable	

Defense Meteorological Satellite Program Spacecraft Status

March 24, 2017

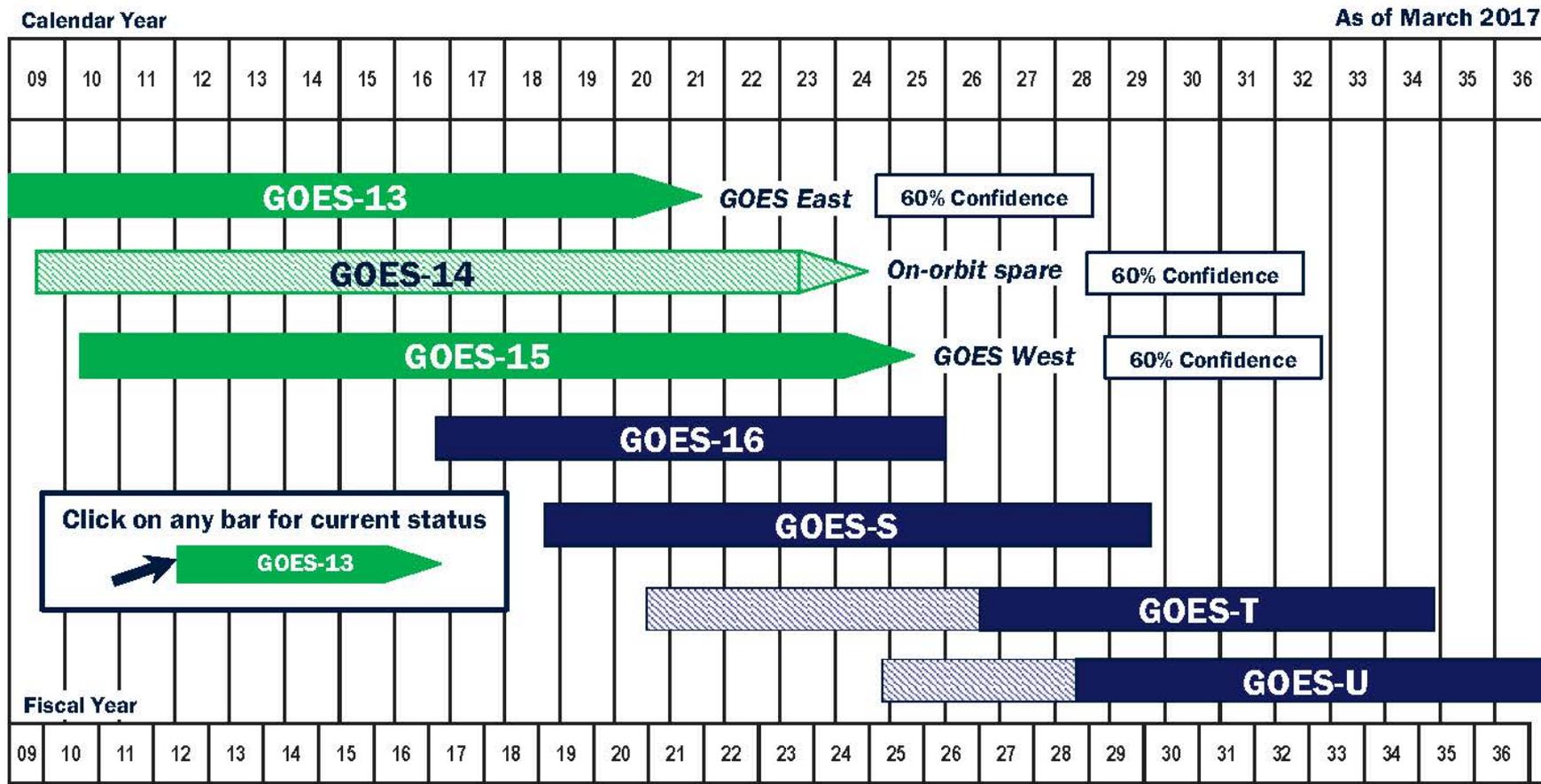
Spacecraft Subsystem Status Change**

Flight Number	F-14		F-15		F-16		F-17		F-18		F-19	
Operations Number	48		49		54		51		53		52	
LTAN (+/- 5 Mins)	1635		1439		1557		1827		1839		1836	
Launch Date	4/4/1997		12/12/1999		10/18/2003		11/4/2006		10/18/2009		4/3/2014	
Spacecraft Subsystems [Bus]												
Command & Control	Green		Green		Green		Green		Green		Red	
Power	Yellow		Green		Green		Green		Green		Green	
Attitude Control	Green		Yellow		Yellow		Yellow		Green		Yellow	
Communications	Yellow		Yellow		Yellow		Green		Green		Red	
Primary sensors & recorders												
Visible/IR Imager (OLS)	Green		Green		Green		Green		Green		Yellow	
Individual Recorder Status	1	2	1	2*	1*	2*	1*	2*	1*	2*	1*	2*
	3	4	3	4*	3*	4*	3*	4*	3*	4*	3*	4*
Microwave Imager/Sounder (SSMI/SSMIS)	Red		Green		Yellow		Yellow		Yellow		Red	
Microwave Temp Sounder(SSMT1)	Red		Green		Grey							
Microwave Water Vapor Sounder(SSMT2)	Red		Red		Grey							
Spacecraft transmitters												
Transmitter Status	DDT	PDT1	DDT	PDT1	DDT	PDT1	DDT	PDT1	DDT	PDT1	DDT	PDT1
		PDT2	<i>RAD</i>	PDT2		PDT2		PDT2		PDT2		PDT2
	EDT1	EDT2	EDT1	EDT2	EDT1	EDT2	EDT1	EDT2	EDT1	EDT2	EDT1	EDT2
Secondary sensors												
X/Gamma Ray Detector(SSB-X family)	Green		Grey									
Magnetometer (SSM)	Green		Red		Green		Green		Green		Yellow	
Ionosphere (SSI-ES2/-ES3)	Green		Green		Green		Yellow		Yellow		Green	
Electron/Proton (SSJ4/SSJ5)	Red		Red		Green		Green		Green		Green	
UV Limb Imager (SSULI)	Grey				Red		Red		Green		Blue	
UV Spectrographic Imager (SSUSI)	Grey				Red		Yellow		Green		Blue	

** NOTE: Spacecraft subsystem status changes will be reported for each spacecraft regardless of overall mission OPSCAP



NOAA Geostationary Satellite Programs Continuity of Weather Observations



Click on any bar for current status

GOES-13

Approved: Stephen [Signature]
Assistant Administrator for Satellite and Information Services

	In orbit, operational		Planned in-orbit Storage
	In orbit, storage		Planned Mission Life
	Reliability analysis-based extended weather observation life estimate (60% confidence) for satellites on orbit for a minimum of one year – Most recent analysis: March 2017		

Geostationary Operational Environmental Satellite (GOES)

Performance Status – March 28, 2017

<i>Payload Instrument</i>	GOES-13 (East) Launch: May 06 Activation: Apr 10	GOES-14 (Standby) Launch: Jun 09 Activation:	GOES-15 (West) Launch: Mar 10 Activation: Dec 11
Imager	G	G	G
Sounder	R (4)	G	Y (3)
Energetic Particle Sensor (EPS)	G	G	G
Magnetometers	G	G	G
High Energy Proton and Alpha Detector (HEPAD)	G	G	G
X-Ray Sensor (XRS)	Y (1)	G	G
Solar X-Ray Imager (SXI)	Y (2)	G	G
<i>Spacecraft Subsystems</i>			
Telemetry, Command & Control	G	G	G
Attitude and Orbit Control	G	G	G
Fuel for Inclination Control	G	G	G
Propulsion	G	G	G
Mechanisms	G	G	G
Electrical Power	G	G	G
Thermal Control	G	G	G
Communications Payloads	G	G	G

Key
Operational G
Operational with limitations Y
Non-operational R

Deep Space Climate Observatory (DSCOVR)

Performance Status – March 28, 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

NESDIS OSPO – Monthly Product Status NOAA

Operational Satellites March 2017

	METOP-B	NOAA-19	S-NPP*	GOES-13	GOES-15
Launch Date	Sept 2012	Feb 2009	Oct 2011	May 2006	March 2010
Operational Date	April 2013	Jun 2009	Sept 2013 (NDE)	April 2010	December 2011
Mission Data Category	Primary (AM)	Secondary (PM)	Primary (PM)	GOES-East	GOES-West
Product Areas					
Imagery	G	G	G	G	G
Radiances	G	G	G (CrIS/ATMS)	G	G
RadBud/Emissivity	G	G	G (Emissivity)	G	G
Soundings	G	G	G (CrIS/ATMS Moist and Temp Profiles)	R	G
Winds	G	G	G (VIIRS PW)	G	G
Sea Surface Temp	G	G	G (VIIRS SST)	G	G
Precipitation	G	G	G (MIRS RR+TPW)	G	G
Volcanic Ash	G	G	Future	G	G
Tropical Products	G	G	G(NTCP)	G	G
Ozone	G	G	G (OMPS TC/Profile + CrIS Ozone)	N/A	N/A
Fire and Smoke	G	G	G(Active fires and AOT)	G	G
Snow and Ice	G	G	G (Binary Snow Cover)	G	G
Vegetation	G	G	G (VIIRS Green Vegetation Fraction)	N/A	N/A
Broadcast Services	G	G	G	G	G

*NPP Products includes only those deemed operational since NDE handover Sept 26, 2013

Operational	G	Future S-NPP products	
Operational with Issues During Reporting Period	Y	Operational with Degradation	
Non-Operational	R	Not Applicable	N/A

NESDIS OSPO – Monthly Product Status Backup NOAA Satellites

March 2017

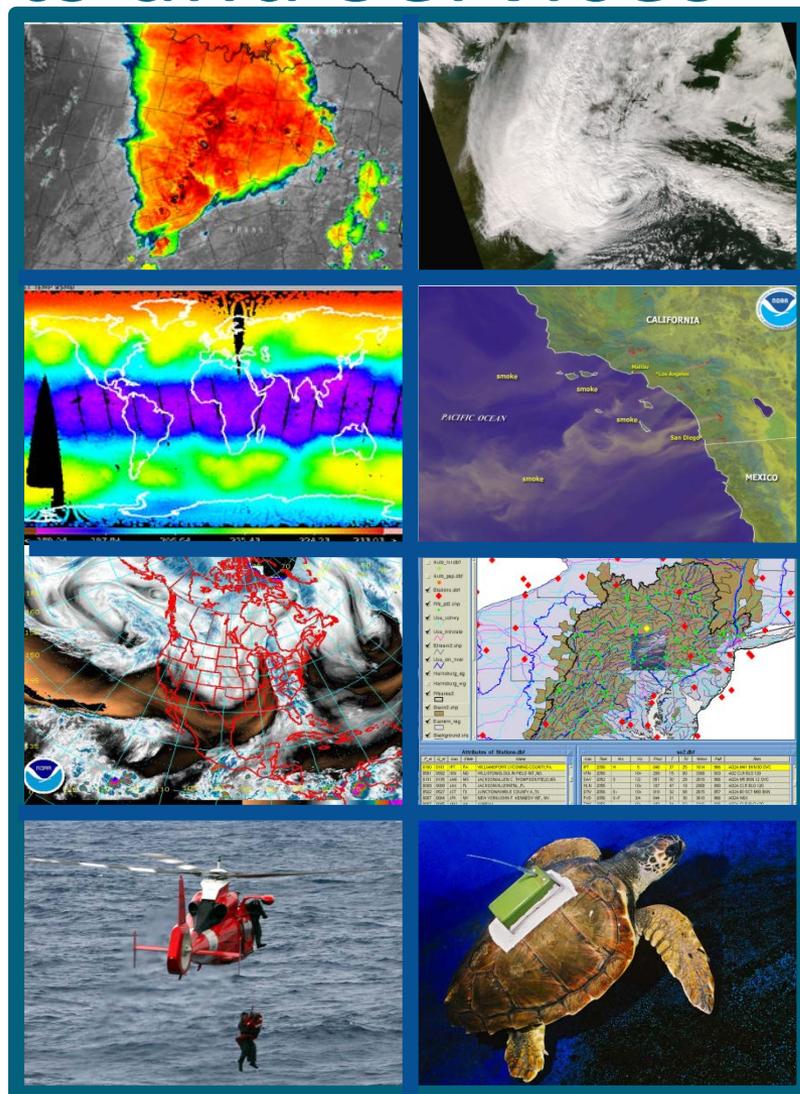
	METOP-A	NOAA-18	NOAA-15	GOES-14
Launch Date	Oct 2006	May 2005	May 1998	June 2009
Operational Date	May 2007	Aug 2005	Dec 1998	N/A
Mission Data Category	Secondary (AM)	Secondary (PM)	Secondary (AM)	Storage / Space Weather
Product Areas				
Imagery	G	G	G	N/A
Radiances	G	Y	Y	N/A
Radiation Budget/Emissivity	G	G	G	N/A
Soundings	Y	R	R	N/A
Winds	G	G	G	N/A
Sea Surface Temp	G	G	R	N/A
Precipitation	G	G	Y (TPW Only)	N/A
Volcanic Ash	G	G	N/A	N/A
Tropical Products	G	G	G	N/A
Ozone	G	Y	R	N/A
Fire and Smoke	G	G	G	N/A
Snow and Ice	G	G	G	N/A
Vegetation	G	G	R	N/A
Broadcast Services	Y*1	G	G	N/A

1. *2Metop-A AHRPT does not support full global coverage due to earlier failure of part of the AHRPT system

Operational	G		
Operational with Issues During Reporting Period	Y	Operational with Degradation	
Non-Operational	R	Not Applicable	N/A

Satellite Products and Services

- Provides 24x7 interpretive analyses of satellite data
 - Hurricane intensity and position
 - Significant Precipitation
 - 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





SARSAT Search and Rescue

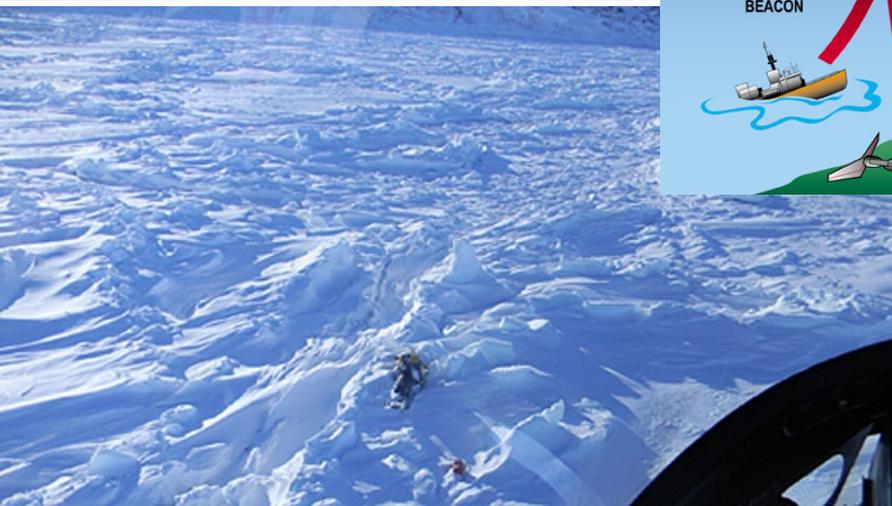
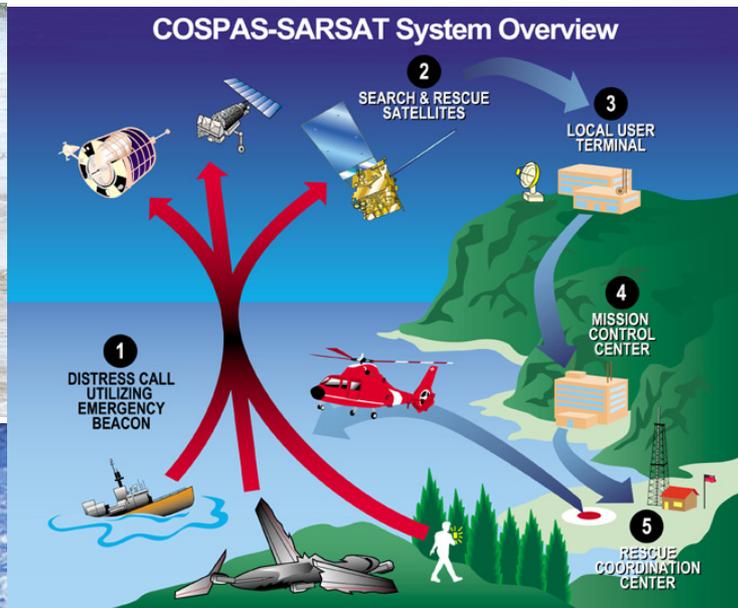
Rescues since 1982:

World-wide: over 39,000

United States: over 7,700

Rescues in 2016:

United States: 306

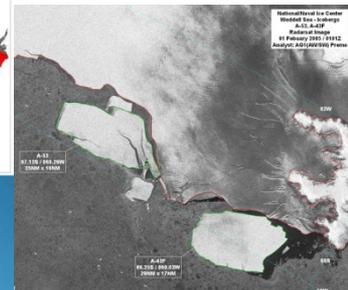
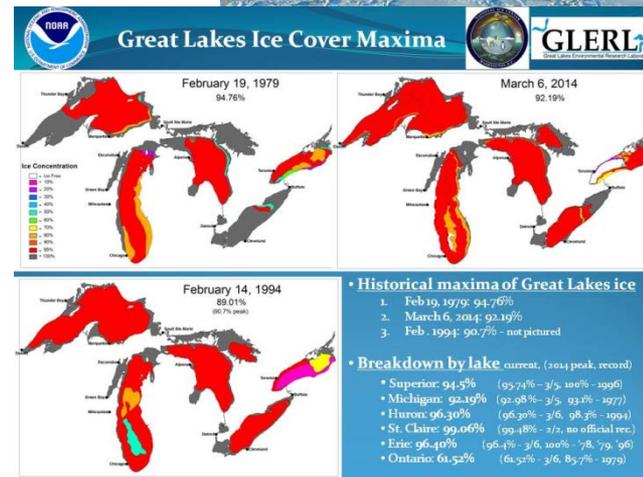




National Ice Center (NIC)



- Tri-agency activity with NOAA, U.S. Navy and U.S. Coast Guard
- Numerous international partners
- Supports National Weather Service operations in Alaska, the Great Lakes, and the northeast.
- Provides snow and ice data for National Centers for Environmental Prediction (NCEP) weather and climate prediction models
- Directly supports U.S. Navy SubForce arctic operations, U.S. Coast Guard icebreaking operations in Arctic and Great Lakes, and National Science Foundation operations (Arctic and Antarctic)





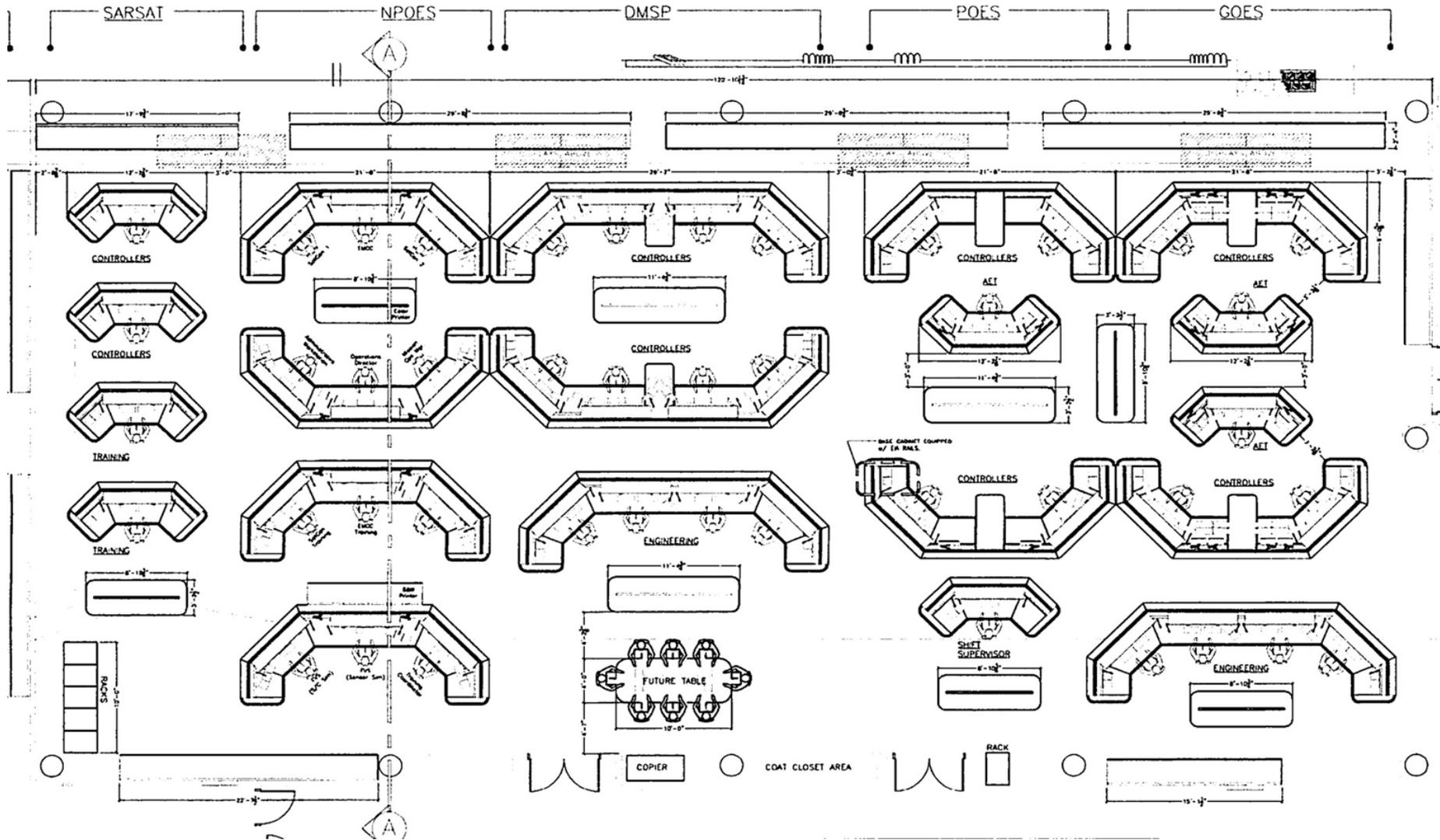
Future Missions/Events

Mission	Date
JPSS Block 2.0 (Flight Ops) ORR	May 23, 2017
GOES -16 operational handover to NOAA	June 23, 2017
JPSS-1 Launch	September 21, 2017
GOES-16 in operational position	November 19, 2017
COSMIC-2 Launch	NET December 15, 2017
GOES-S Launch	4th Quarter FY 2018
JPSS-2 Launch	1st Quarter FY 2022

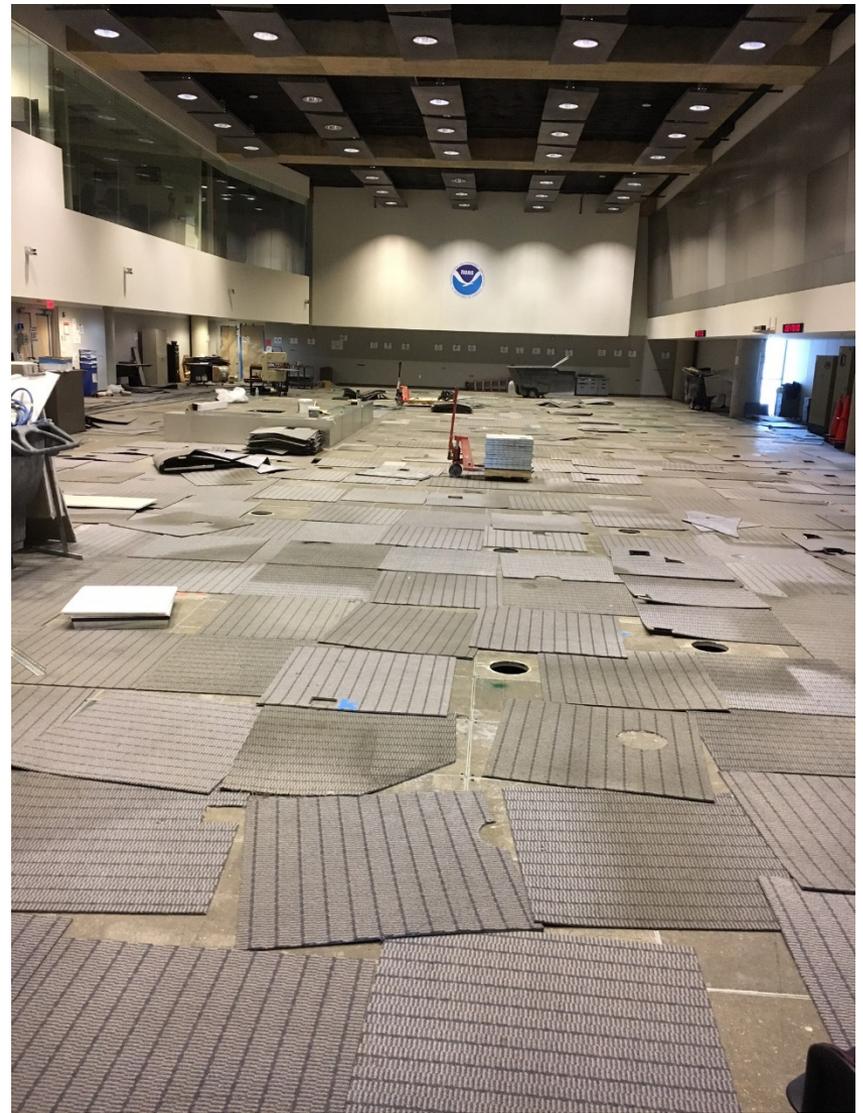
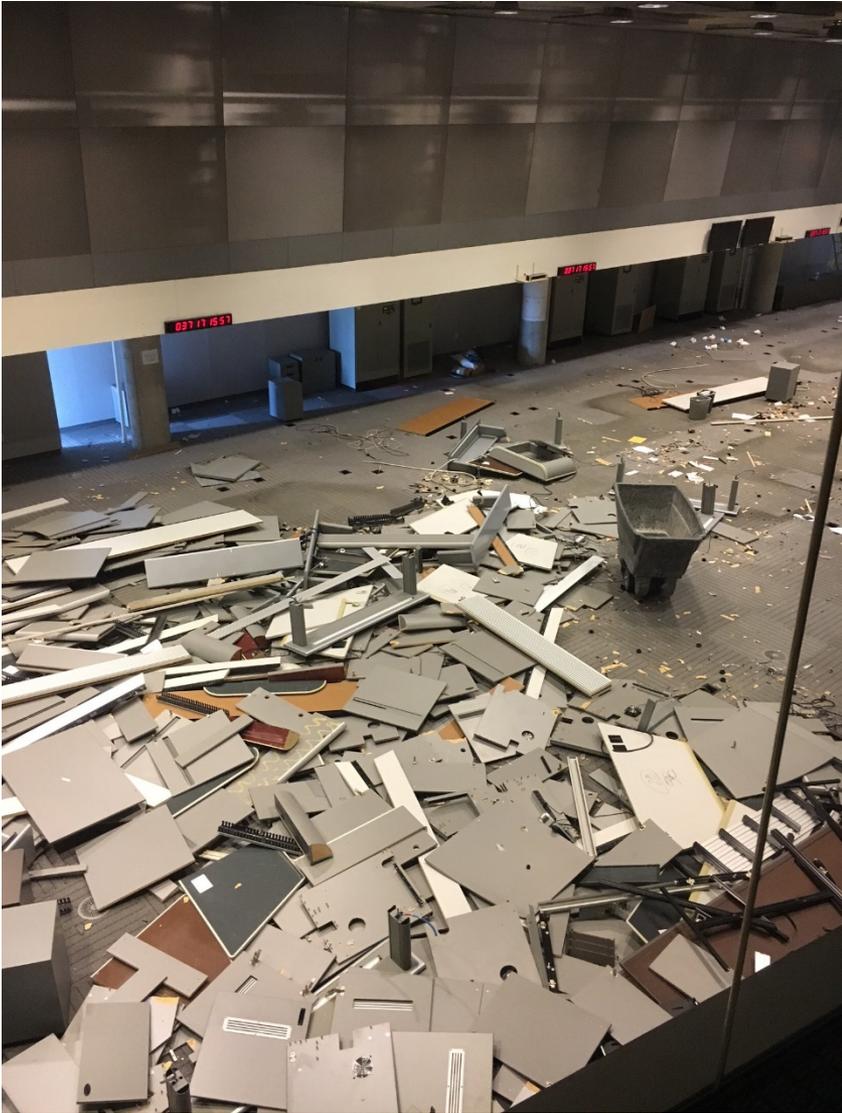
OPS Center Reconfiguration (Previous)



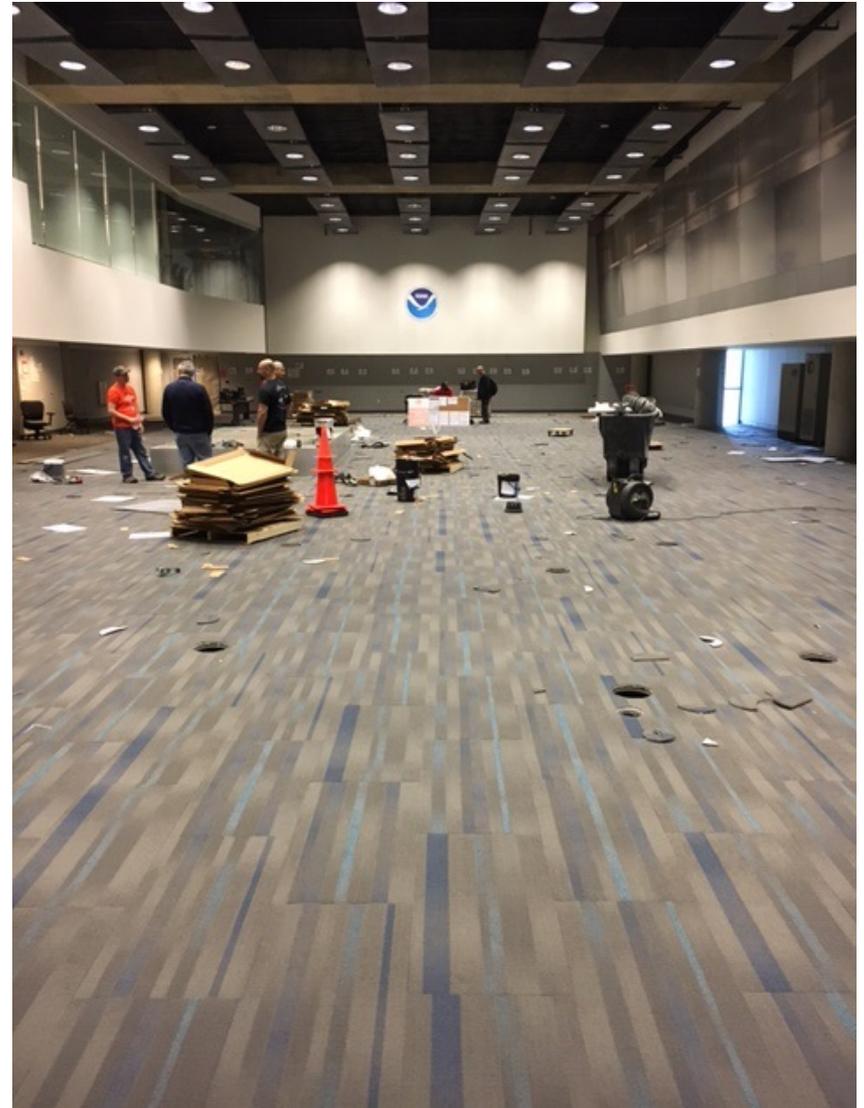
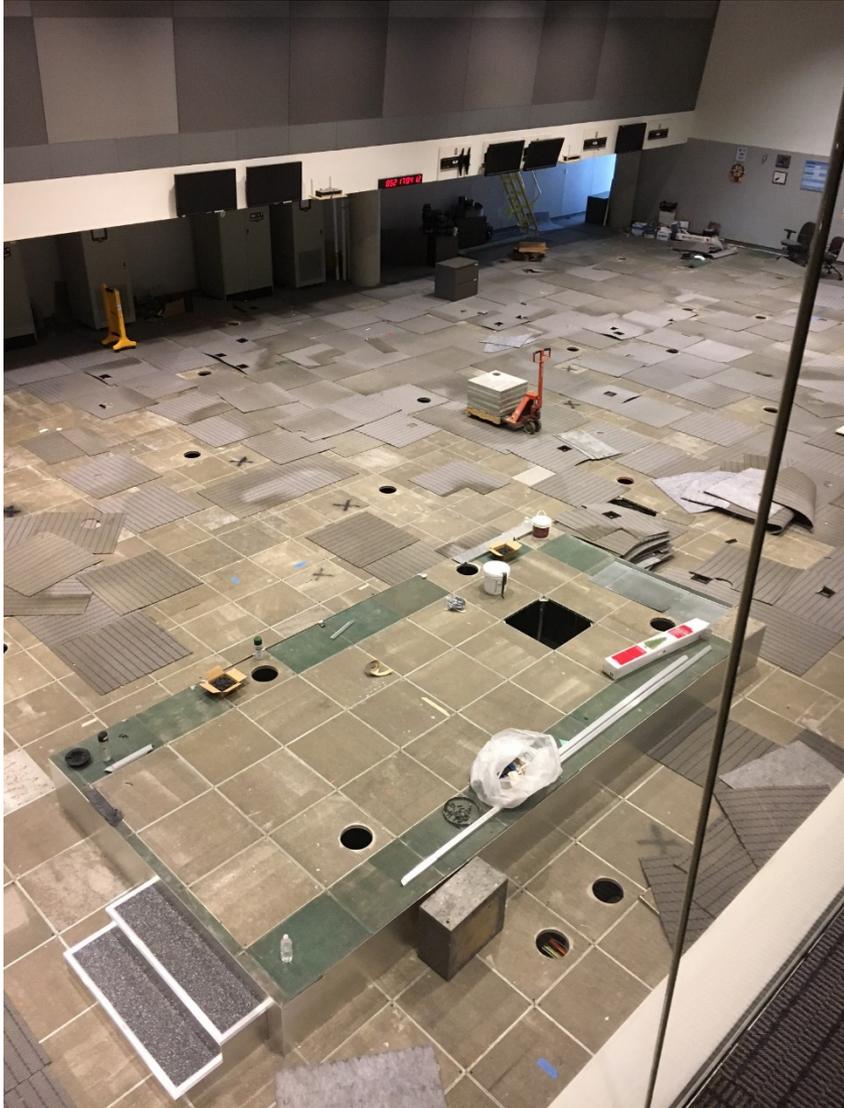
OPS Center Reconfiguration (Previous)



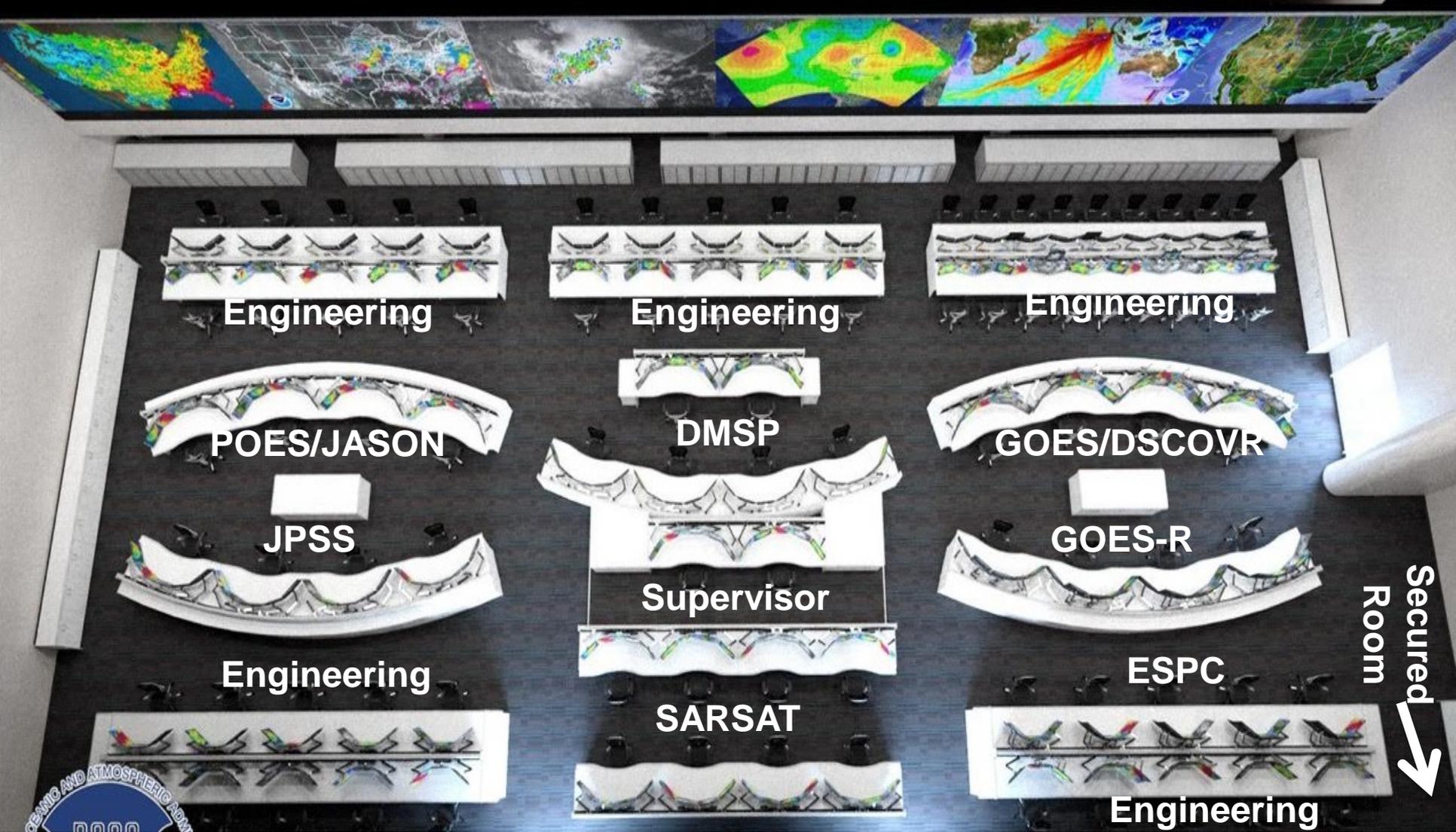
OPS Center Reconfiguration Construction



OPS Center Reconfiguration Construction



OPS Center Reconfiguration Future



OPS Floor Project Schedule

Task	2016			2017									Start	End
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Movement of SOCC Operations to swing space areas (overall)													11/30/2016	1/27/2017
Movement of SNPP Operations into the swing space													11/30/2016	12/5/2016
SOCC OPS Floor console demolition													2/2/2017	2/7/2017
Secure room buildout and underfloor skirt install													2/2/2017	4/6/2017
New SOCC OPS Floor console construction													5/8/2017	5/23/2017
Movement of SOCC Operations from swing space areas to the SOCC OPS floor (overall)													5/23/2017	6/28/2017
Movement of SNPP Operations from the swing space back to the SOCC OPS floor													6/15/2017	6/21/2017
Movement of GOES-R Operations from the LCR back to the SOCC OPS floor													5/24/2017	5/31/2017

 Blue triangle indicate Task's planned completion ahead of original schedule