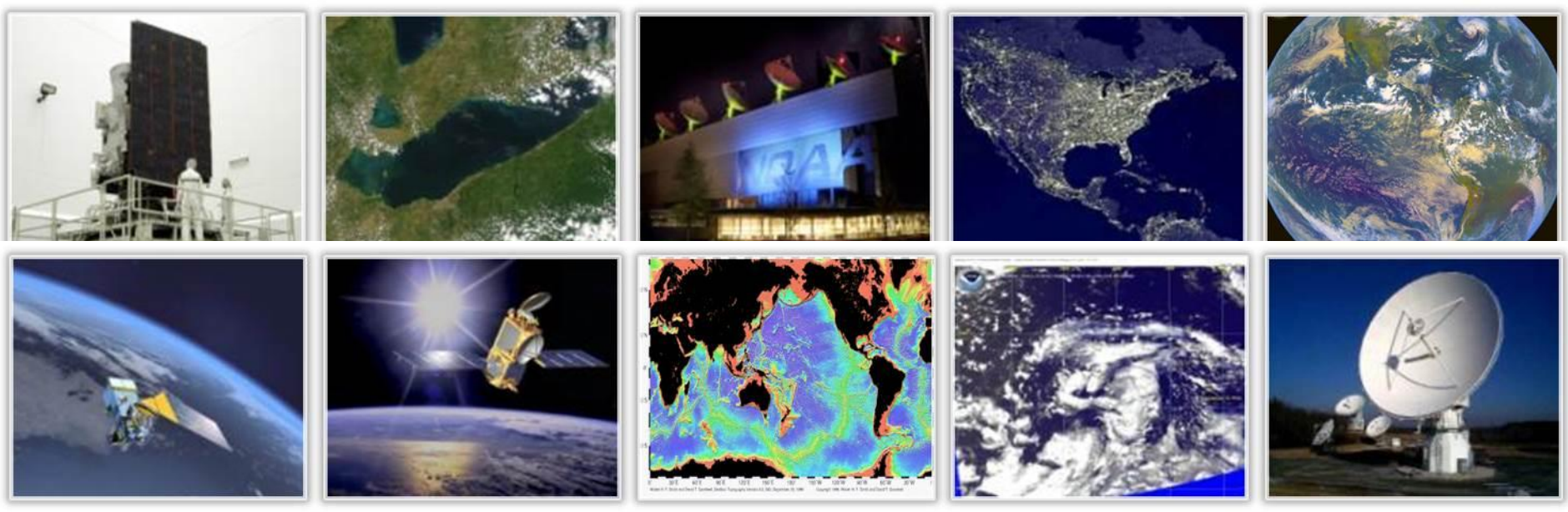


NOAA Satellite and Information Service

National Environmental Satellite, Data, and Information Service (NESDIS)



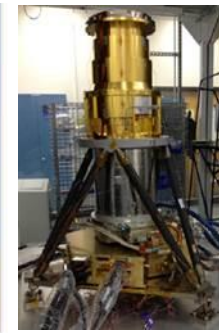
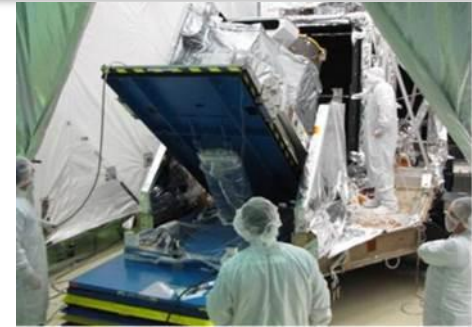
Status of Current and Future Systems (NOAA-PP-02)
Presentation to CGMS-41
July 2013



GOES-R Update

Synopsis

- ✔ GOES-R Maintains continuity of weather observations and critical environmental data from geostationary orbit
 - Provides faster scanning of entire hemisphere while simultaneously observing individual storms with greater resolution, provides a new lightning mapping capability for improved early warnings of severe weather, provides improved warning of solar events to minimize impact to communications, navigation systems, and power grids
- ✔ Program successfully completed its Mission Critical Design Review in November 2012
- ✔ Spacecraft development progressing well. All first instrument flight models will be completed by the end of 2013 (except for lightning mapper which will be completed in 2014)
- ✔ Ground system development is making good progress. New antenna systems are installed at Wallops, VA and Fairmont, WV



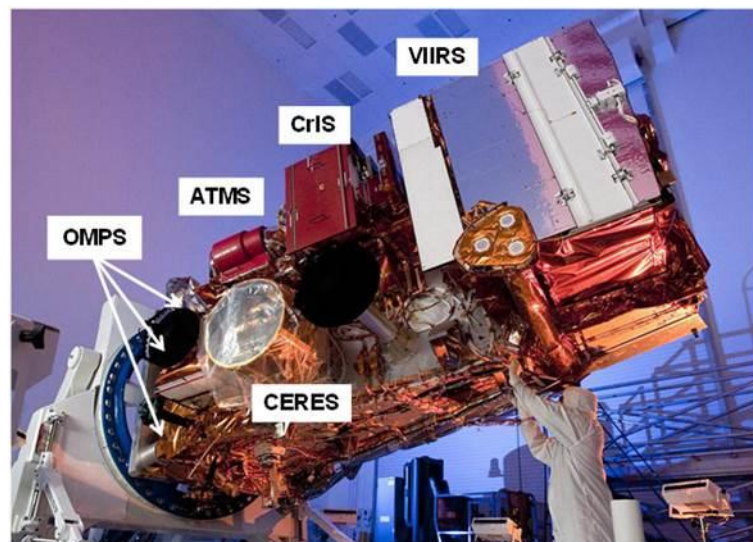
| | |
|---|--|
| GOES-R Launch Readiness Date | October 2015* |
| Program Architecture | 4 Satellites (GOES-R, S, T & U) 10 year operational design life for each spacecraft |
| Program Operational Life | FY 2017 – FY 2036 |
| Program Life-cycle (FY 2013 President's Budget) | \$10.860 billion |

*Launch Readiness Date based on FY 2013 President's Budget Request



Joint Polar Satellite System (JPSS) Update

- JPSS provides operational continuity of polar afternoon orbit satellite-based observations and products
- S-NPP operating well, spacecraft and instruments healthy, cal/val progressing well and on schedule, ATMS data being assimilated into operational weather models
- JPSS-1 instruments on schedule with instrument flight builds ranging from 65 to 100% complete; spacecraft development well underway; launch vehicle (Delta II) under contract
- RFO for free flyer spacecraft (FF1) released; supports SARSAT, data collection (ARGOS) and Total Solar Irradiance
- TSIS Calibration Transfer Experiment (TCTE) delivered and integrated onto STP-3

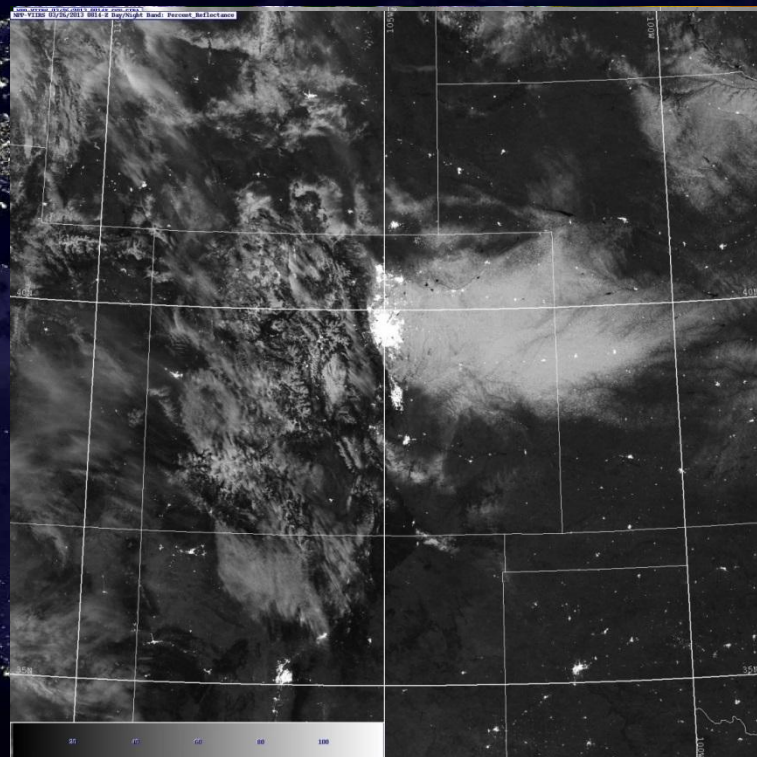
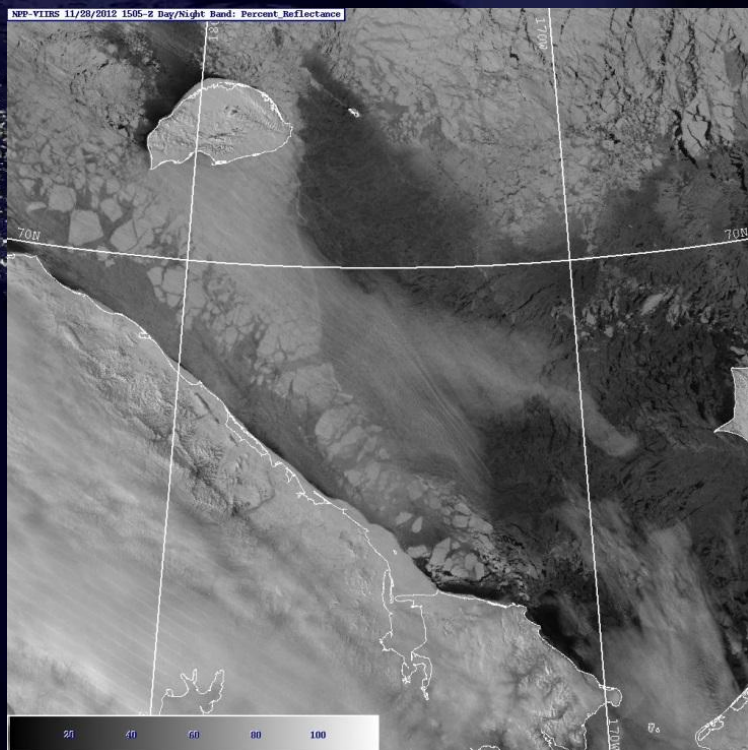


| | |
|--|-------------------------------------|
| Launch Readiness Date | FY 2017 (JPSS-1)*; FY 2022 (JPSS-2) |
| Program Architecture | 3 Satellites (SNPP, JPSS-1, JPSS-2) |
| Program Operational Life | FY 2013 – FY 2025 |
| Program Life-cycle FY 2014 President's Budget | \$11.3 billion |

*Launch Readiness Date based on FY 2014 President's Budget Request



Suomi NPP Day Night Band



Snow and Ice applications courtesy of Steve Miller (CIRA)





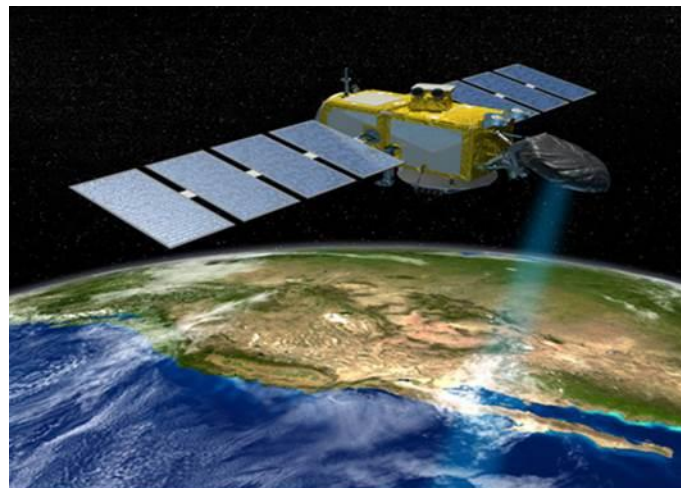
Jason-3 and DSCOVR Updates

Jason 3

- Jason-3 ensures the continuity of space-based altimetry (i.e., sea surface height) observations.
- NOAA instrument development is complete. Instruments integration to the spacecraft is planned for June 2013 at CNES's contractor Facilities in France
- Launch vehicle (Falcon 9) under contract to support launch NET Mar 2015

DSCOVR

- DSCOVR provides continuity of solar wind measurements in support of advanced warnings of geomagnetic storms.
- DSCOVR spacecraft and instrument refurbishment underway at NASA GSFC in support of launch NET 1st Quarter FY 2015.
- DSCOVR launch services awarded Nov 2012 to SpaceX by USAF/SMC – launch vehicle will be a Falcon 9.



*Launch Readiness Dates based on FY 2013 President's Budget Request



COSMIC Updates

❖ COSMIC-1

- ❖ In partnership with Taiwan NSPO, COSMIC-1 provides real-time global atmospheric temperature and moisture data that are valuable in improving weather forecast accuracy
- ❖ NOAA requires continuation of GPS radio occultation (GPSRO) data that it receives from the COSMIC-1 mission, currently operating beyond the end of mission design life (2011)

❖ COSMIC-2

- ❖ US & Taiwan signed a MOU in May 2010 to jointly develop a satellite program to deliver next-generation global navigation satellite system (GNSS) radio occultation (RO) data to users around the world.
- ❖ USAF is on contract to provide the first six COSMIC-2 primary payloads and the launch vehicle for the first 6 COSMIC-2 satellites.
- ❖ Taiwan's NSPO's spacecraft contractor Surrey Satellite Technology Limited (SSTL) UK, held a preliminary design review (PDR) in June
- ❖ Ground architecture study underway that is examining the use of existing infrastructure domestically and internationally to capture the RO data from COSMIC-2 to meet operational data latencies.
 - ❖ Actively investigating international partnerships for ground station support





NOAA Satellite and Information Service International Partnerships

- ✓ The U.S. National Space Policy recognizes the importance of international partnerships. International partnerships are crucial to obtaining continuity, providing global observations and filling gaps:
 - ✓ NOAA-EUMETSAT Joint Polar System agreements– polar orbiting satellite systems in complementary orbits, options for exchange of key instruments, sharing of data
 - ✓ NOAA, EUMETSAT, NASA, CNES and ESA agreements for Jason-2, Jason-3 ocean altimetry missions and discussion ongoing for Jason-CS (follow-on)
 - ✓ NOAA-JAXA agreement for JAXA Global Change Observation Missions
 - ✓ AIT-TECRO (Taiwan) for COSMIC-2 GPS radio-occultation mission
 - ✓ NOAA-EUMETSAT-JMA agreements for backup in case of failure of geostationary weather satellites
 - ✓ U.S., Canada, France, Russia International Cospas-SARSAT Programme agreements to support international search and rescue capability
 - ✓ NOAA-CNES- EUMETSAT agreements to exchange and operate Argos instruments on polar orbiting satellites
 - ✓ NOAA-NASA-ISRO agreements for Oceansat-2 scatterometer and ocean color
- ✓ NOAA also maintains a number of partnerships in CEOS through mechanisms like the Virtual Constellations

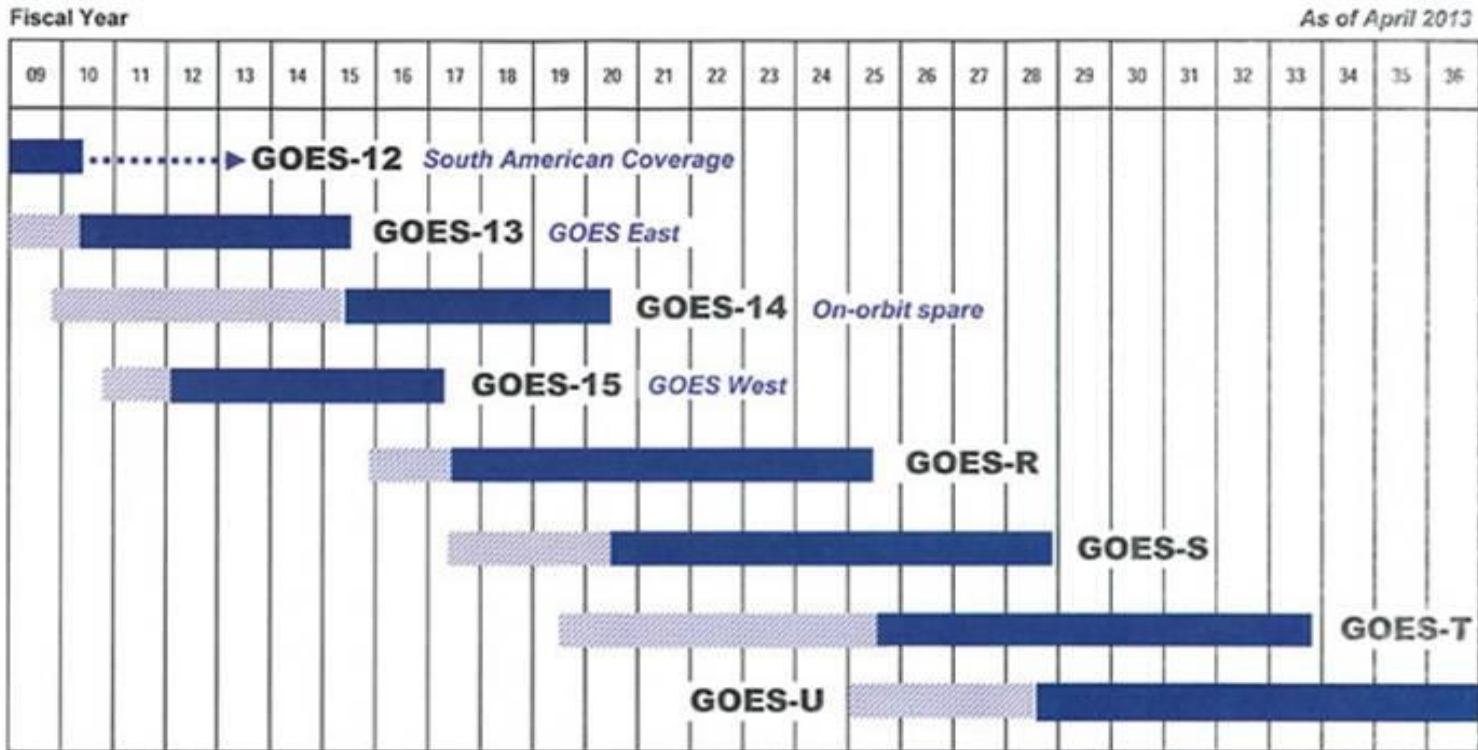
We continue to be mindful of our international partnerships in responding to our ongoing fiscal challenges



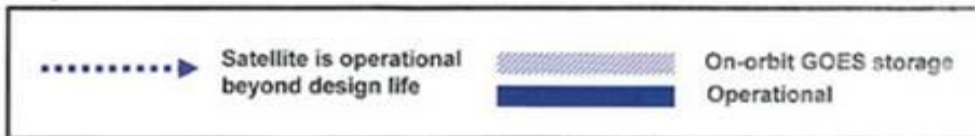
BACK UP



Continuity of NOAA's Geostationary Satellite Program



Key



Approved: Mary E. Fey
 Assistant Administrator for Satellite and Information Services





Continuity of NOAA's Polar Satellite Program

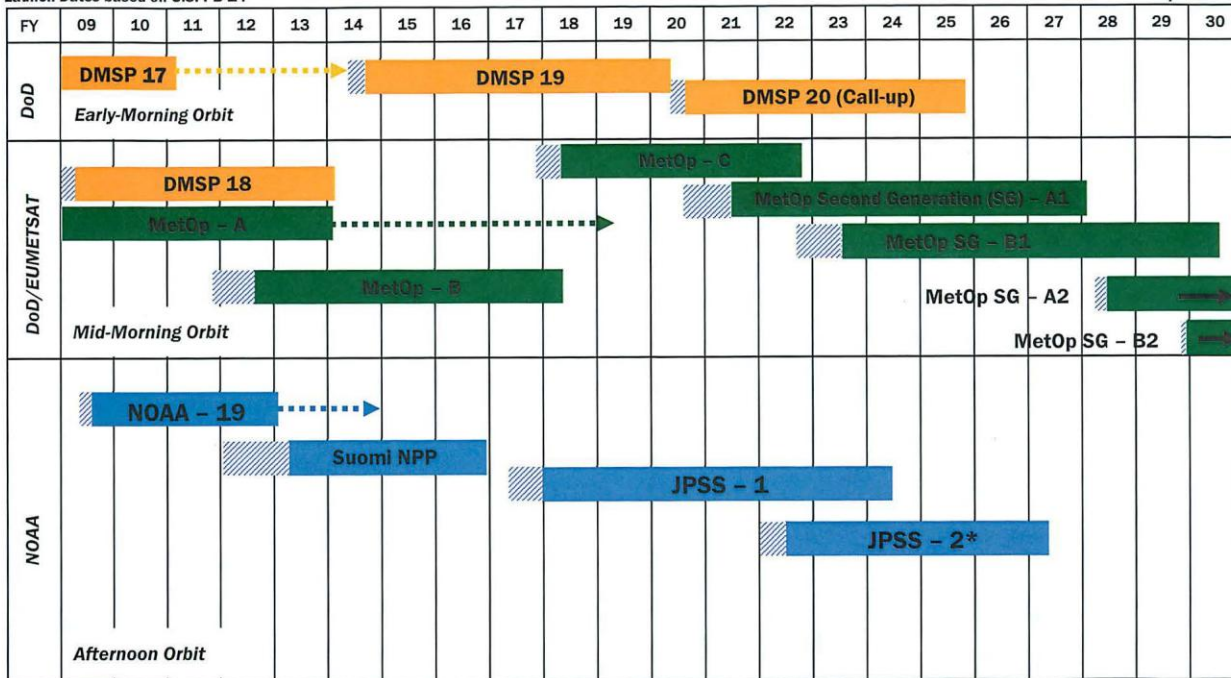


Continuity of NOAA's Polar (Primary) Operational Weather Satellite Programs



Launch Dates based on U.S. PB 14

April 2013



Approved: Maya E. H.
Assistant Administrator for Satellite and Information Services

DMSP: Defense Meteorological Satellite Program
 JPSS: Joint Polar Satellite Program
 Suomi NPP: Suomi National Polar Partnership
 ■■■▶ Operations beyond design life
 * Program funding provided through FY2025. The follow-on program will provide funding for operations post FY2025.

▨ Post Launch Test
 ■ Operational
 ▶ Operational beyond FY 2030

