

**United States Department of Commerce  
National Oceanic and Atmospheric Administration  
(NOAA)**

**NOAA Meteorological Satellite Update**



**Presented to:  
UN Committee on Peaceful Uses of Outer Space  
Scientific and Technical Subcommittee  
February 19, 2013**

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NOAA Satellite and Information Service (NESDIS)**

# NOAA Satellite and Information Service (NESDIS)

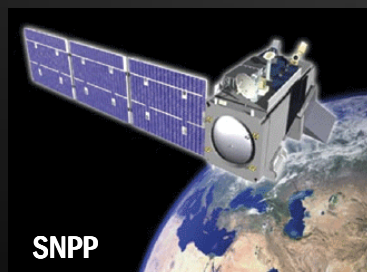


**Our mission is to deliver accurate, timely, and reliable satellite observations and integrated products and to provide long-term stewardship for global environmental data in support of the NOAA mission**



# Current NOAA Satellites

- Geostationary satellites (GOES) – 4 on orbit
- Polar-orbiting satellites (POES & Suomi NPP) – 6 on orbit
- Defense Meteorological Satellite Program (DMSP) – 6 on orbit
- Jason-2 Altimetry satellite – NOAA operates for EUMETSAT, CNES, and NASA



# Satellite Partnerships

- **Provide ground system support for**
  - **Advanced Composition Explorer (ACE) – Solar Wind**
  - **Constellation Observing System for Meteorology, Ionosphere, and Climate (COSMIC) – radio occultation and space environment**
- **Rebroadcast services**
  - **Emergency Manager’s Weather Information Network**
  - **Data Collection Platform data**
  - **Imagery & other products**
- **COSPAS – SARSAT**

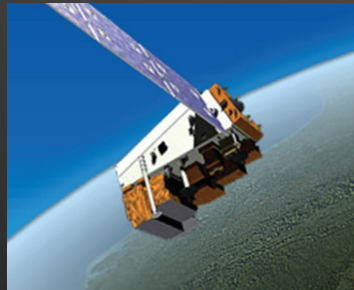


# Future Satellite Programs

- **GOES-R (late 2015)**
- **Joint Polar Satellite System (JPSS) (early 2017)**
- **Solar Wind Spacecraft (DSCOVR) (early 2015)**
- **Jason-3 (early 2015)**



GOES-R



JPSS



DSCOVR



Jason-3



# GOES-R and JPSS – A Closer Look

## GOES-R

- Maintains 40-year continuity of weather observations and critical environmental data from geostationary orbit
- Faster scanning of entire hemisphere while simultaneously observing individual storms
- New lightning mapping capability for improved early warnings of severe weather
- Improved warning of solar events to minimize impact to communications, navigation systems, and power grids

## JPSS

- Provides continuity of polar-orbiting satellite-based observations
- Key partnerships with EUMETSAT, JAXA, and the U.S. Department of Defense
- 22-band imager replaces 5-band imager first flown in 1978
- New infrared and microwave sounders provide more detailed profiles and higher resolution
- Ozone mapping of spatial resolution, coverage and vertical profiling
- Climate sensors for energy budget and spectral irradiance measurements



# DSCOVR and Jason-3 – A Closer Look

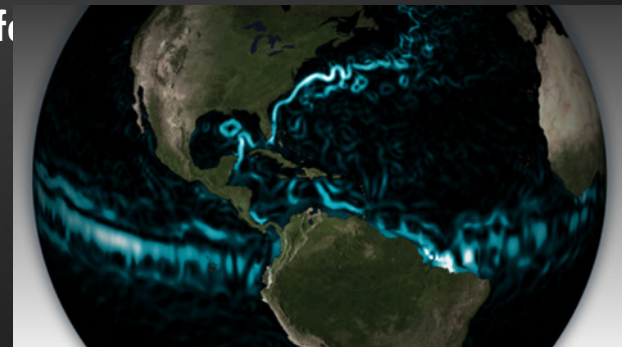
## DSCOVR

- Solar wind measurements at Earth-Sun Lagrange Point 1
- Enables 1-3 day early warning of geomagnetic storm intensity
- Replaces the NASA Advanced Composition Explorer (ACE) spacecraft in orbit since 1997
- Downlinked via International Real Time Solar Wind Network (RTSWnet)



## Jason-3

- Continues partnership with NASA, CNES, and EUMETSAT for cooperative ocean surface topography observations
- Key data for monitoring sea level rise, El Niño, La Niña, and for shipping industry
- Contributes to marine meteorology; hurricane forecasting and tracking; fisheries management and ship routing, and climate research and fo



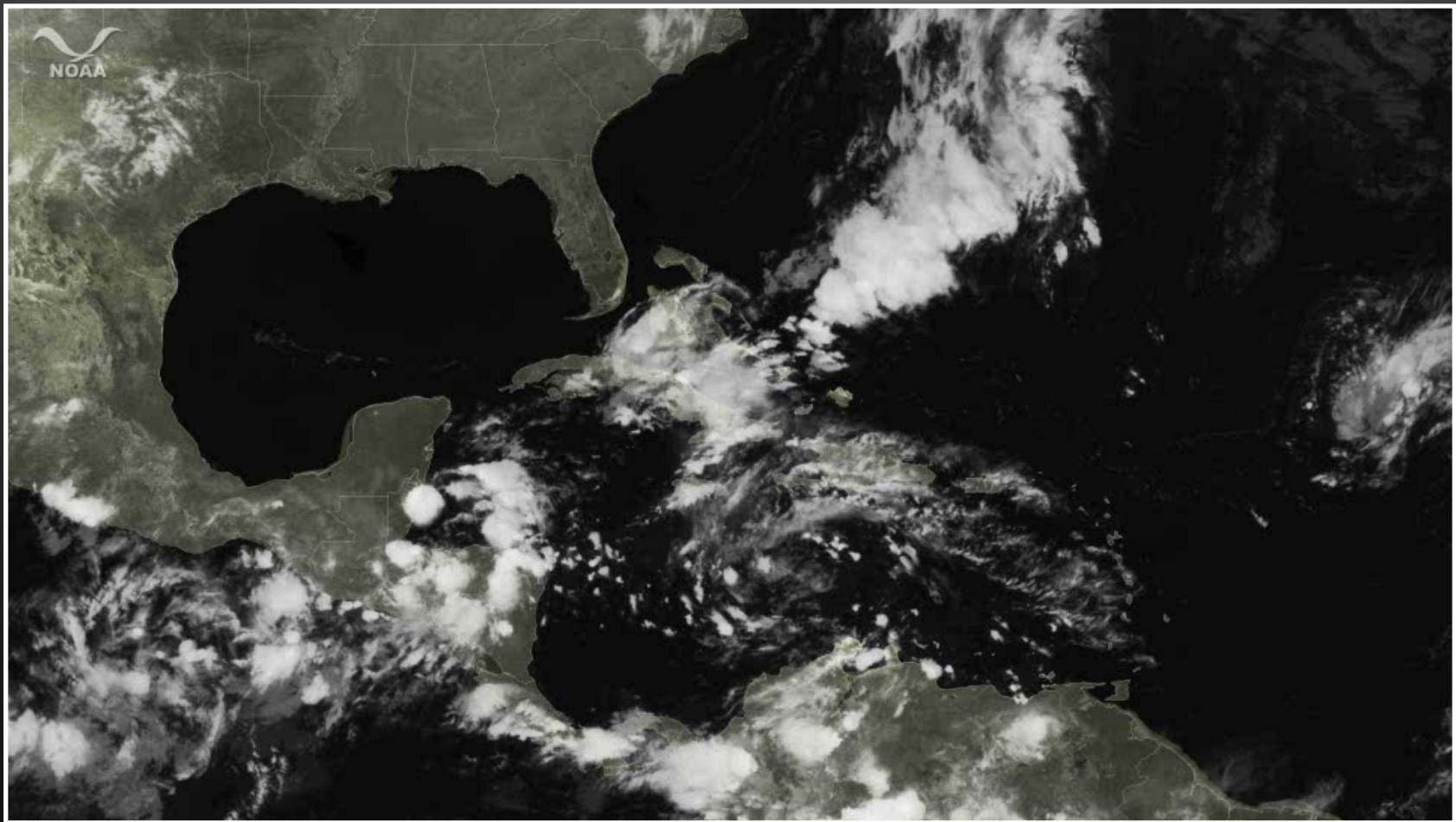
# Significant NOAA Satellite Events in 2012

- **GOES-13 instrument outage required NOAA to bring GOES-14 into operations**
  - GOES-13 recovered as Hurricane Sandy was forming in the Caribbean
  - GOES-14 remained operational during the storm and collected valuable imagery
- **New international partner environmental satellites in orbit**
  - MetOp-B and Meteosat-10 (EUMETSAT)
  - GCOM W-1 (JAXA)
- **Decommissioning of GOES-7 (PEACESAT)**





# International Contributions to Hurricane Sandy Forecasting

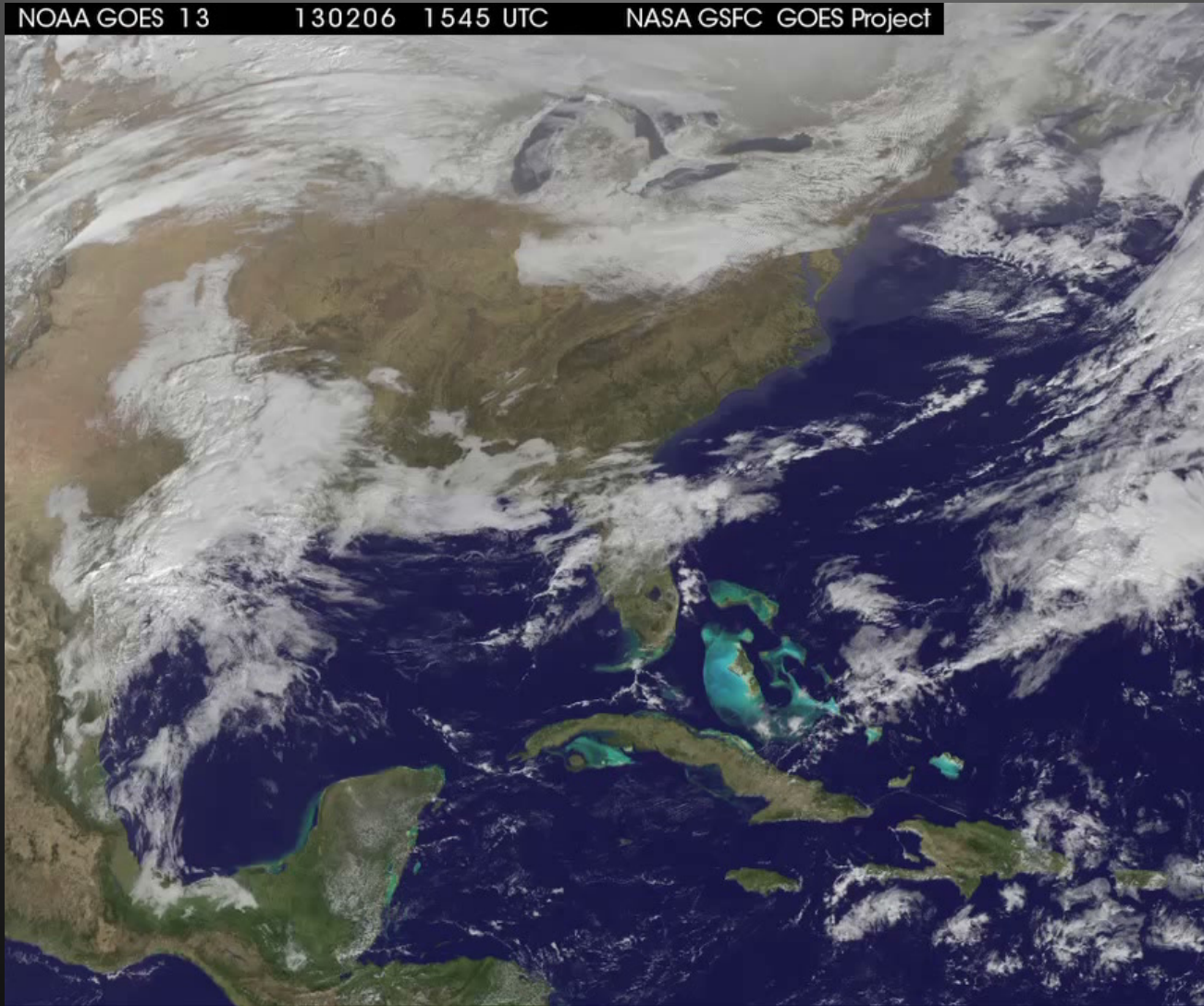


# North American Blizzard 2013

NOAA GOES 13

130206 1545 UTC

NASA GSFC GOES Project



# Events Planned In 2013

- Suomi NPP handover from NASA to NOAA
- Decommissioning of NOAA-17
- Decommissioning of GOES-12



April 8-12: NOAA Center for Weather and Climate Prediction (NCWCP), College Park, Maryland, USA

*Strengthening Partnerships to Enhance User Readiness, Reception, and Utility*

<http://satelliteconferences.noaa.gov/2013/>



# Thank You!

