

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

March 2015 Newsletter



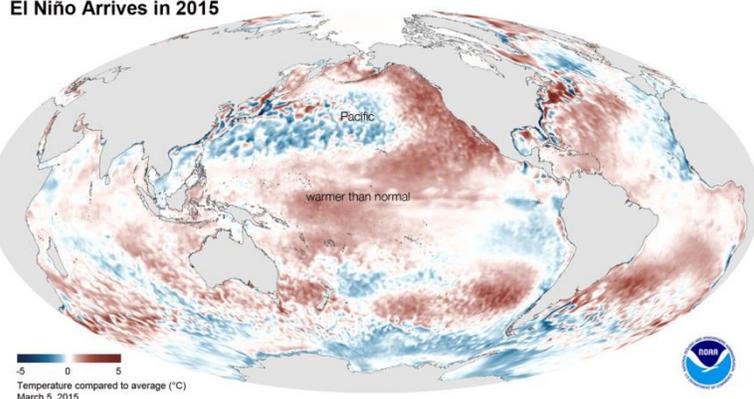
Operations – Volcanic Ash

Volcanic ash is a known hazard to aviation safety. NOAA, through international agreements, is responsible for providing satellite imagery of wind-transported volcanic ash across much of the Western Hemisphere for analysis and forecasting. The [Washington D.C. Volcanic Ash Advisory Center](#), operated by NOAA, has been using GOES satellite imagery to track volcanic ash from the [Fuego](#) volcano in Guatemala, which resulted in airport closures in Guatemala and Costa Rica, affecting cargo and passenger flights. NOAA is also monitoring volcanic eruptions in Mexico, Chile, and Ecuador that have caused flight diversions around ash boundaries identified in satellite imagery, resulting in increasing flight times and fuel costs. Imagery from GOES-R is anticipated to increase ash detection capabilities with more frequent imaging and multi-spectral analysis techniques.

On March 13, Dr. Michael Pavolonis, a scientist in NESDIS' Center for Satellite Applications and Research received the [NOAA David S. Johnson Award](#). He was recognized for his [work](#) developing innovative satellite-based methods to derive actionable information for mitigating hazards caused by volcanic eruptions. These new remote sensing techniques will be used to improve NOAA's operational timeliness and accuracy of volcanic ash cloud advisories that are used by U.S. and international aviation interests.

Image of the Month

El Niño Arrives in 2015



El Niño seen from Sea Surface Temperature Anomalies

[El Niño Arrives in 2015](#). This National Weather Service image shows the average sea surface temperature for February 2015 as measured by NOAA satellites and other in situ measurements. The large area of red (warmer than average) can be seen extending through the equatorial Pacific. Due to the weak strength of the El Niño this year, widespread or significant global weather pattern impacts are not anticipated. However, certain impacts often associated with El Niño may appear this spring in parts of the Northern Hemisphere, such as wetter-than-normal conditions along the U.S. Gulf Coast.

Spotlight – SIDAR

When [NOAA-19](#) was launched in February 2009, it carried two communications instrument suites: SARSAT and Argos Data Collection System (Argos DCS).

- Since [SARSAT](#) went operational in 1982, more than 37,000 people have been rescued worldwide, including 7,700 people in the U.S.; 240 people were rescued in the U.S. in 2014.
- A global operational system since 1970, [Argos DCS](#) has nearly 2,000 users who currently track more than 20,000 active platforms placed on wildlife, meteorological & oceanographic buoys, fishing vessels, and other sensitive commodities.

Both capabilities need to be replaced to provide continuity of service. SIDAR is NOAA's plan to accommodate SARSAT and enhanced Argos Advanced DCS (Argos ADCS) instruments for launch in 2019. SIDAR is an international partnership among the United States, the French Space Agency (CNES), and the Department of National Defence – Canada (DND). CNES and DND are jointly providing approximately USD \$100 million of support in the form of SARSAT and Argos ADCS instruments for the SIDAR program. NOAA is responsible for providing a spacecraft bus and launch services. NOAA is actively exploring with the U.S. Air Force use of its Hosted Payload Solution (HoPS) program to provide commercial launch of these instruments.

Message from Dr. Stephen Volz

Assistant Administrator for NESDIS

I had very good meetings with Congressional members and staff to discuss the highlights of the FY 2016 President's Budget request for NOAA's National Environmental Satellite, Data, and Information Service (NESDIS) portfolio. The [budget](#) request supports our ongoing operations to support our customers and users and provides needed funding for continuity of critical observations. Please contact [Josh Jankot](#) if you would like to meet to discuss this budget request.

I would like to invite you to participate in workshops and conferences to learn more about our work. The first opportunity is the [2015 NOAA Satellite Conference](#), April 27–May 1, taking place in Greenbelt, MD. We are also holding a [workshop on April 28](#) that will focus on how NESDIS can engage with the commercial sector. We have reserved a few spaces for Hill staff participation and [Josh](#) can assist if you would like to attend.

Finally, since [DSCOVER](#) was launched on February 11, it is now half way to its 1 million mile operational location. We are preparing for the [Jason-3 launch](#) in July 2015, [GOES-R](#) launch in March 2016, the first [COSMIC-2](#) launch in mid 2016, and [JPSS-1](#) in March 2017. Thank you for your continued support of these important missions.

GOES-R Series Program

GOES-R Coming to an Orbit Near You: One Year and Counting...



With eyes to the future of improved weather forecasting, the team behind NOAA's Geostationary Operational Environmental Satellite-R Series will launch its first satellite, [GOES-R](#), one year from now in March 2016.

GOES-R will be launched from NASA's Kennedy Space Center at Cape Canaveral, Florida, on board an Atlas V rocket into geosynchronous orbit, where it will have a view of the Western Hemisphere from 22,300 miles above Earth. In this position, the satellite will capture near-real-time observations of weather across the United States and the surrounding oceans.



What goes into building and launching a satellite? Go behind the scenes in this [video](#). Find the latest images of the GOES-R satellite under construction in [our Flickr gallery](#). The new observation capabilities that GOES-R will offer are in high demand. Once the satellite is on orbit, it will be operational throughout the typical checkout and validation phase. That means data will be available sooner for input into models and other tools used by NOAA's National Weather Service (NWS) meteorologists.

Want to know more about GOES-R? Here are the "[Top 5 Reasons Why NOAA's GOES-R Satellite Matters](#)."

For the latest developments and information about GOES-R visit www.goes-r.gov and follow NOAA's National Environmental Satellite, Data, and Information Service on [Facebook](#) and Twitter [@NOAASatellites](#).

National Centers for Environmental Information (NCEI) Highlights

Weather and Climate

First Release of [Alaska Climate Divisions Data](#):

- Announces geographical subsets coinciding with 13 unique Alaskan climatological regimes
- Includes maximum, minimum, and average temperatures, as well as average precipitation
- Enables NCEI and NWS to produce many operational products and services for the first time in this region
- Facilitates ability of other government agencies to create a myriad of valuable products from this regional information to support decision making
- Highlights the many years of collaborative work between NCEI, NWS, and the University of Alaska Fairbanks to develop this capability

Coasts, Oceans, and Geophysics

NCEI Publication Featured in March 2015 Special Issue of Progress in Oceanography titled "[Oceanography north of 60°N from World Ocean Database](#)"

- Features the new high-resolution regional ocean climatologies developed by NCEI in selected ocean regions north of 60°N
- Displays climatologies that show much greater detail than previously available, using information from NCEI's World Ocean Database, a collaborative international collection of profile data
- Discusses analyses that indicates the waters within those regions are warming as a whole, but there is complex sub-regional variability in the warming pattern.

Regional Update

Using NOAA [Climate Data Records](#) (CDRs) to anticipate extreme precipitation and drought in California, NCEI pursued:

- An inter-agency collaboration among NASA, NCEI, and the Cooperative Institute for Climate and Satellites–North Carolina (CICS-NC). The team:
 - Used the Precipitation Estimation from Remotely Sensed Information using an Artificial Neural Network ([PERSIANN](#)) CDR to improve seasonal forecasts of rainfall in California.
 - Demonstrated the utility of CDRs for seasonal water resource decision making and identified five atmospheric teleconnections that produced statistically significant changes to the probability of extreme seasonal precipitation
- Users include the Western Governors Association and regional water resource managers.

For additional information, please contact Josh Jankot at (202) 482-6140 or Josh.Jankot@noaa.gov