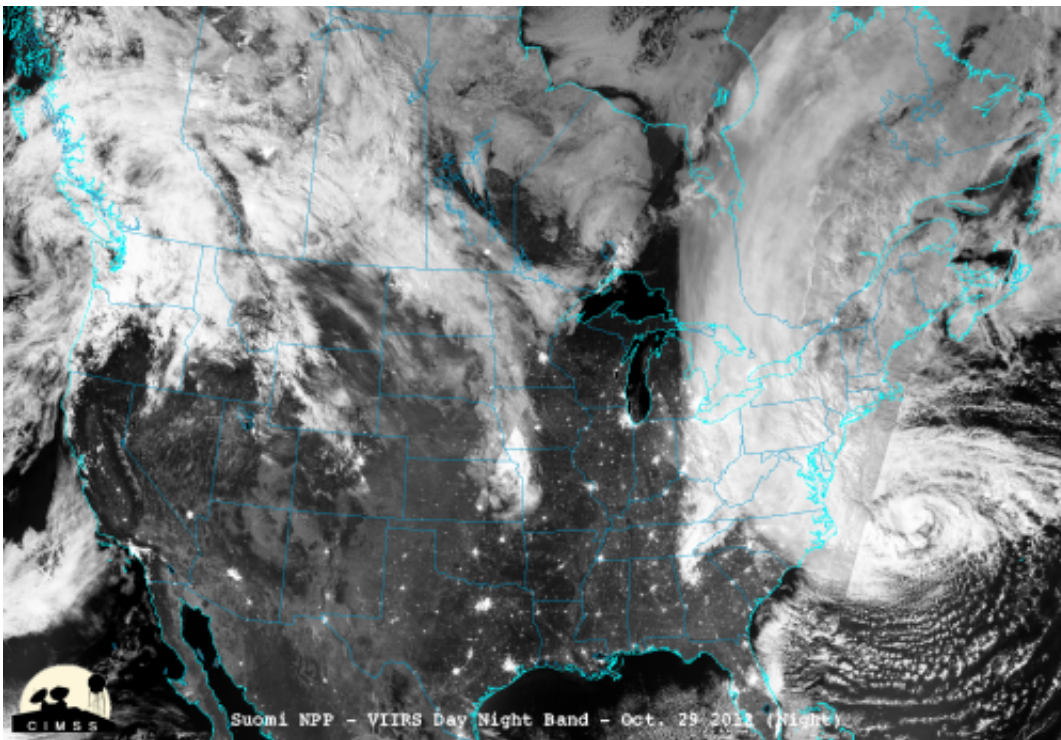


NASA/NOAA's Suomi NPP captures night-time view of Sandy's landfall

October 31 2012



As Hurricane Sandy made a historic landfall on the New Jersey coast during the night of Oct. 29, the Visible Infrared Imaging Radiometer Suite on NASA/NOAA's Suomi National Polar-orbiting Partnership satellite captured this night-time view of the storm. This image provided by University of Wisconsin-Madison is a composite of several satellite passes over North America taken 16 to 18 hours before Sandy's landfall. Credit: University of Wisconsin, CIMSS/NASA/NOAA

As Hurricane Sandy made a historic landfall on the New Jersey coast during the night of Oct. 29, the Visible Infrared Imaging Radiometer Suite (VIIRS) on NASA/NOAA's Suomi National Polar-orbiting Partnership (NPP) satellite captured this night-time view of the storm. This image provided by University of Wisconsin-Madison is a composite of several satellite passes over North America taken 16 to 18 hours before Sandy's landfall.

The storm was captured by a special "day-night band," which detects light in a range of wavelengths from green to near-infrared and uses filtering techniques to observe dim signals such as auroras, airglow, gas flares, city lights, fires and reflected moonlight. City lights in the south and mid-section of the United States are visible in the image.

William Straka, associate researcher at Cooperative Institute for Meteorological Satellite Studies, University of Wisconsin-Madison, explains that since there was a full moon there was the maximum illumination of the clouds.

"You can see that Sandy is pulling energy both from Canada as well as off in the eastern part of the Atlantic," Straka said. "Typically forecasters use only the infrared bands at night to look at the structure of the storm. However, using images from the new day/night band sensor in addition to the thermal channels can provide a more complete and unique view of hurricanes at night."

VIIRS is one of five instruments onboard Suomi NPP. The mission is the result of a partnership between NASA, the [National Oceanic and Atmospheric Administration](#), and the U.S. Department of Defense.

On Monday, Oct. 29, at 8 p.m. EDT, Hurricane Sandy made [landfall](#) 5 miles (10 km) south of Atlantic City, N.J., near 39 degrees 24 minutes north latitude and 74 degrees 30 minutes west longitude. At the time of

landfall, Sandy's [maximum sustained winds](#) were near 80 mph (130 kph) and it was moving to the west-northwest at 23 mph (37 kph). According to the National Hurricane Center, hurricane-force winds extended outward to 175 miles (280 km) from the center, and tropical-storm-force winds extended 485 miles (780 km). Sandy's minimum central pressure at the time of landfall was 946 millibars or 27.93 inches.

Suomi NPP was launched on Oct. 28, 2011, from Vandenberg Air Force Base, Calif. One year later, Suomi NPP has orbited Earth more than 5,000 times and begun returning images and data that provide critical weather and climate measurements of complex Earth systems.

Suomi NPP observes Earth's surface twice every 24-hour day, once in daylight and once at night. NPP flies 512 miles (824 kilometers) above the surface in a polar orbit, circling the planet about 14 times a day. NPP sends its data once an orbit to the ground station in Svalbard, Norway, and continuously to local direct broadcast users.

More information: For storm history, images and video of Hurricane Sandy, please visit the following websites:

www.nnvl.noaa.gov

[www.nasa.gov/mission_pages/hur ... 012/h2012_Sandy.html](http://www.nasa.gov/mission_pages/hurricane/012/h2012_Sandy.html)

cimss.ssec.wisc.edu/goes/blog/

[earthobservatory.nasa.gov/Natu ... s/event.php?id=79504](http://earthobservatory.nasa.gov/Natuu...s/event.php?id=79504)

Provided by NASA's Goddard Space Flight Center

Citation: NASA/NOAA's Suomi NPP captures night-time view of Sandy's landfall (2012, October 31) retrieved 26 April 2024 from <https://phys.org/news/2012-10-nasanoaa-suomi-npp-captures-night-time.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.