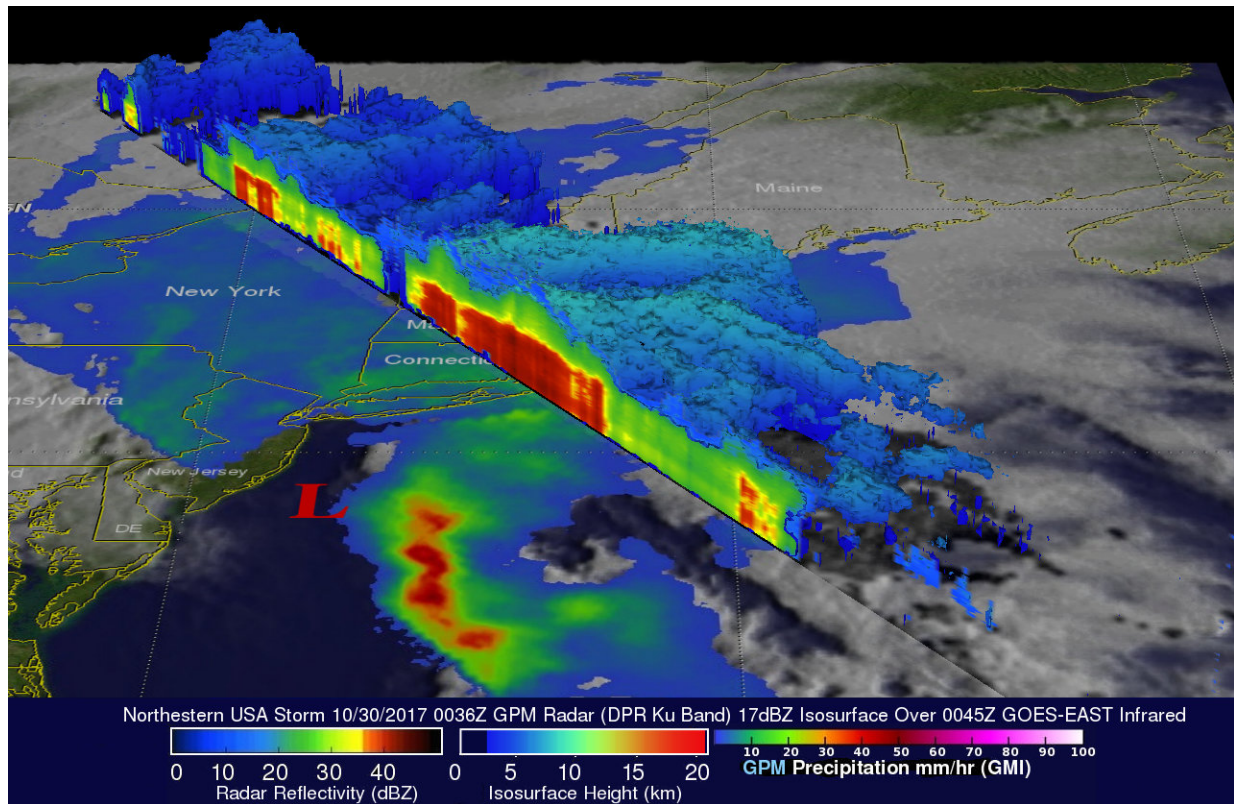


NASA examines the powerful US Northeast storm

October 31 2017



GPM passed over the northeastern US on Oct. 29 at 8:36 p.m. EDT. The approximate location of the storm's center at the time of the GPM pass is shown with a large red "L." A large area of intense rain was located in the Atlantic east of the low's center. GMI estimated that rain in that area was falling at rates of greater than 2 inches (51 mm) per hour. Credit: NASA/JAXA, Hal Pierce

The remnants of Tropical Storm Philippe had merged with another system and brought gusty winds and heavy rainfall to New England. The Global Precipitation Measurement mission or GPM core observatory satellite flew over the northeastern United States on Sunday, Oct 29, 2017 and gathered data on the powerful storm that was affecting the region.

GPM passed over the region on Oct. 29 at 8:36 p.m. EDT (Monday October 30, 2017 at 0036 UTC). GPM had a good view of rainfall associated with a rapidly deepening developing [low pressure](#) system off the Atlantic Coast.

The remnants of tropical storm Philippe, that formed on Saturday and dissipated on Sunday, were also merging with the intensifying low.

The GPM satellite showed the distribution and intensity of precipitation on the eastern side of the low pressure center. GPM's Microwave Imager (GMI) showed that a large area of intense rain was located in the Atlantic east of the low's center. GMI estimated that rain in that area was falling at rates of greater than 2 inches (51 mm) per hour. GPM's Precipitation Radar (DPR) instrument showed that the low was dropping rain at a rate of over 4.92 inches (125 mm) per hour in a small area along the Massachusetts coast.

GPM's radar data also showed the height of the freezing level in the storm. The average freezing level was indicated by DPR data to be at 2.1 miles (3.4 km). Those data indicated that the freezing level sloped from a little above .5 miles (.9 km) in southern Quebec to higher than 2.9 miles (4.7 km) in the Atlantic Ocean well east of the coast.

The 3-D images of the storm were produced at NASA's Goddard Space Flight Center in Greenbelt, Maryland using GPM's radar data (DPR Ku band). These probes by GPM's radar showed the location and structure

of precipitation within the low pressure system. The highest storm tops in the system were revealed by DPR to reach heights of about 5.6 miles (9 km).

Gusts of wind greater than 70 mph (61 knots) were reported within the [storm](#).

The [powerful storm](#) led to river and flash flooding. Over a million households reportedly lost electrical power in New England.

Provided by NASA's Goddard Space Flight Center

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