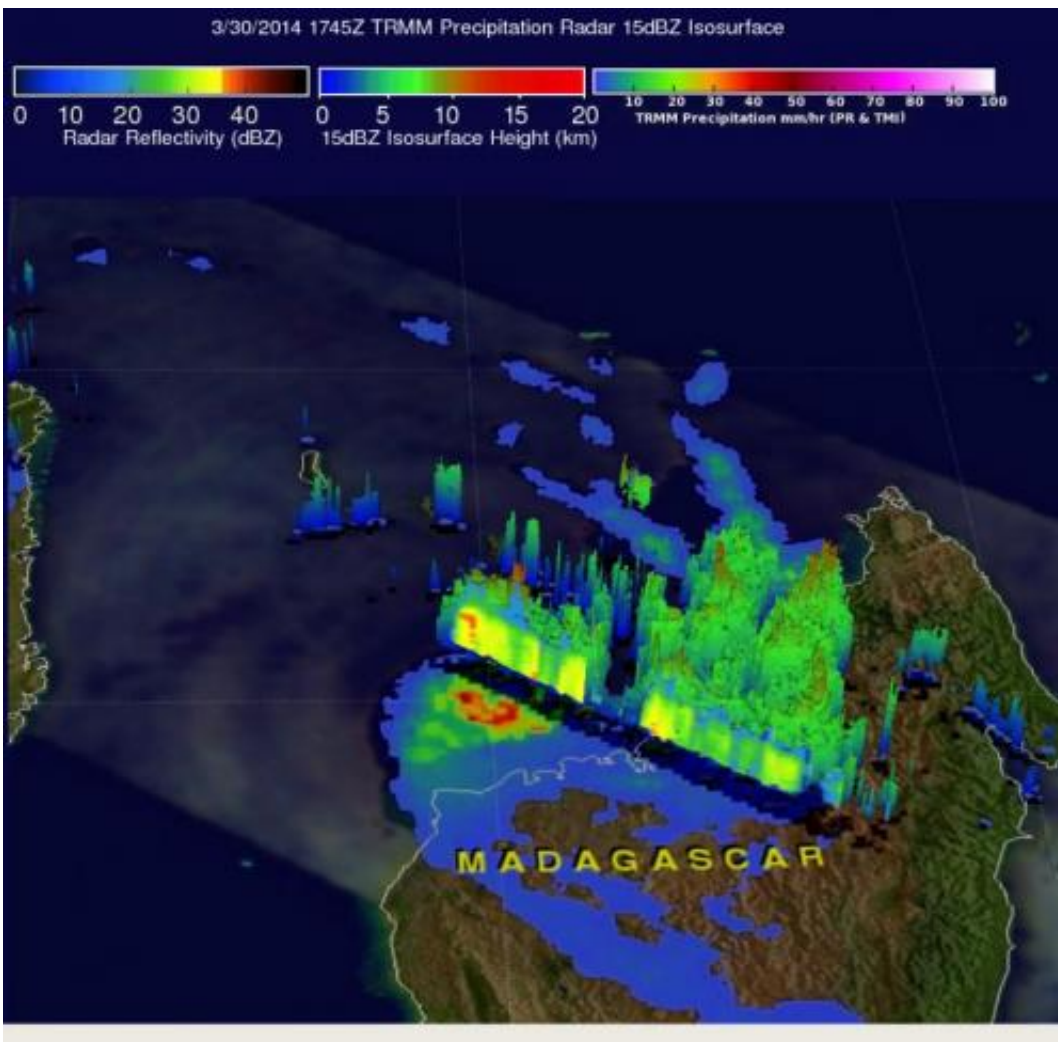


# NASA caught Tropical Cyclone Hellen's rainfall near peak

April 1 2014



On March 30, the TRMM satellite showed some powerful storms in Hellen's eye wall were reaching heights of over 13 km/8 miles. Credit: SSAI/NASA, Hal Pierce

When Tropical Cyclone Hellen was near the "peak of her career" NASA's TRMM satellite picked up on her popularity in terms of tropical rainfall. Hellen was a very heavy rainmaker in her heyday with heavy rain rates. Hellen weakened to a remnant low pressure area by April 1, but has now re-emerged in the Mozambique Channel.

Tropical Cyclone Hellen formed in the Mozambique Channel northwest of Madagascar on March 28, 2014. Hellen became a very powerful tropical cyclone with peak sustained winds of 130 knots/about 150 mph/241 kph on March 30, 2014. Hellen's eye came ashore in northwestern Madagascar on March 31 with winds predicted to be about 95 knots/109 mph/176 kph.

NASA and the Japan Aerospace Exploration Agency's Tropical Rainfall Measuring Mission satellite known as TRMM passed above Hellen on March 30, 2014 at 17:47 UTC/1:47 p.m. EDT when the tropical cyclone was close to peak power.

A TRMM rainfall analysis that was derived from TRMM's Microwave Imager (TMI) and Precipitation Radar (PR) data collected found that rain was falling at a rate of over 44 mm/1.7 inches per hour near the eye. Bands of moderate to heavy rain were shown moving over the northwestern coast of Madagascar.

TRMM PR data were collected at the same time in a swath that passed near the northern edge of tropical cyclone Hellen's eye wall. Those data were used to create a simulated 3-D view of Hellen's precipitation and also revealed that some powerful storms in Hellen's eye wall were reaching heights of over 13 km/8 miles.

Hellen seemed to run out of steam over Madagascar and the Joint Typhoon Warning Center issued the final warning on the tropical low pressure area on April 1 at 0300 UTC/March 31 at 11 p.m. EDT. AT

that time, Hellen was centered near 17.0 south latitude and 46.1 east longitude, about 130 nautical miles/~150 miles/~241 km north-northwest of Antananarivo, Madagascar. Hellen was trudging to the south-southeast at 5 knots/5.7 mph/9.2 kph as it continued weakening.

Thirty minutes after the last warning from the JTWC, Hellen's remnants had moved back over water in the Mozambique Channel. The JTWC noted that because of favorable conditions such as warm water and low wind shear, the storm could regenerate in the next couple of days.

Provided by NASA's Goddard Space Flight Center

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