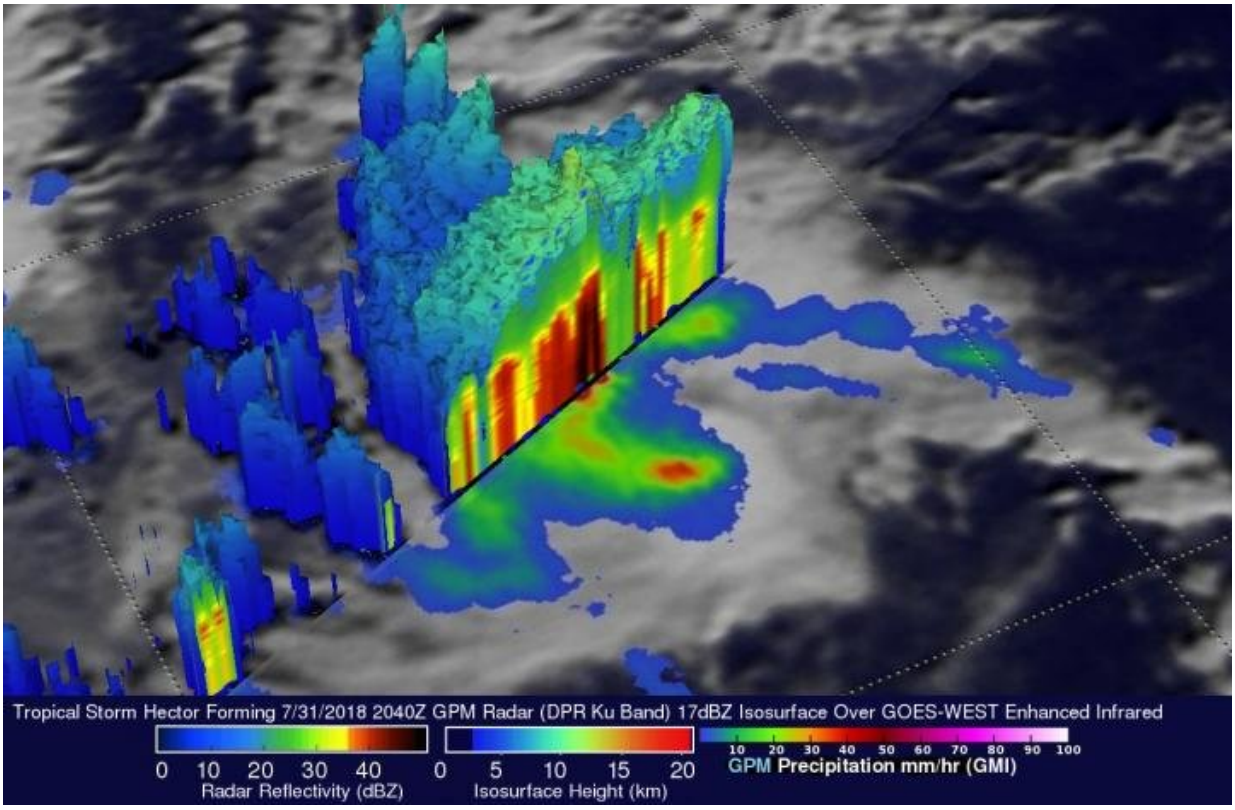
NASA's GPM sees Tropical Storm Hector forming

August 1 2018, by Rob Gutro



Powerful convective storms were wrapping around the western side of the deepening tropical low's center of circulation when GPM observed Hector on July 31 at 1:40 p.m. PDT (2040 UTC). GPM found rain in some of these storms was falling at a rate of almost 198 mm (7.8 inches) per hour. Storm tops in that area were found by GPM to reach heights above 12 km (7.4 miles). Credit: NASA/JAXA, Hal Pierce

Tropical storm Hector was forming in the eastern Pacific Ocean southwest of Mexico when the GPM core observatory satellite passed over on July 31.

The Global Precipitation Measurement mission, or GPM, core satellite observed Hector on July 31, 2018, at 1:40 p.m. PDT (2040 UTC). GPM is a joint mission between NASA and the Japan Aerospace Exploration Agency, JAXA.

At that time GPM passed overhead, Hector's maximum sustained winds were estimated to be about 30 knots (34.5 mph). Powerful convective storms were wrapping around the western side of the deepening tropical low's center of circulation. GPM's Dual-Frequency Precipitation Radar (DPR) instrument collected data showing that rain in some of these storms was falling at a rate of almost 198 mm (7.8 inches) per hour.

At NASA's Goddard Space Flight Center in Greenbelt, Maryland, the GPM satellite's radar data (DPR Ku Band) were used to create a 3-D structure of precipitation within the forming tropical storm. This cross-section view, looking toward the northwest, showed that powerful convective storms to the west of the forming tropical storm's center of circulation contained very intense downpours. Radar echoes measuring over 57dBZ were returned to the satellite. Storm tops in that area were found by GPM to reach heights above 12 km (7.4 miles).

At 11 a.m. EDT (1500 UTC) on Aug.1, the center of Tropical Storm Hector was located near 13.8 degrees north latitude and 120.4 degrees west longitude. That's about 930 miles (1,500 km) southwest of the southern tip of Baja California, Mexico.

The National Hurricane Center said that Hector was moving toward the west-northwest near 13 mph (20 kph), and this general motion is expected today. A turn toward the west is forecast tomorrow, with the

westward motion likely lasting a few days. Maximum sustained winds have increased to near 45 mph (75 kph) with higher gusts.

The National Hurricane Center (NHC) predicts that Hector will move west-northwesterly. Despite slightly increasing vertical shear, Hector is predicted to become a hurricane as it moves toward the Central Pacific. The NHC predicts that Hector will become even more powerful early next week with maximum sustained winds reaching 80 knots (92 mph).

Provided by NASA's Goddard Space Flight Center