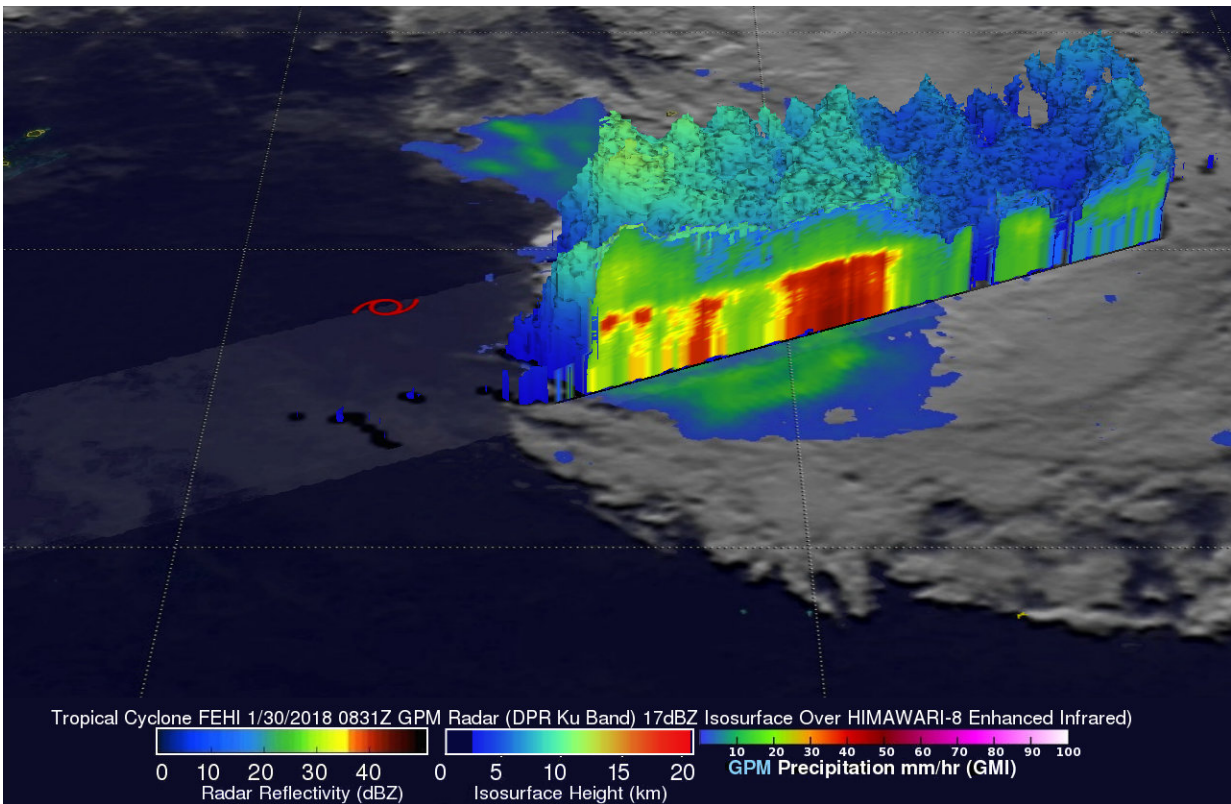


# NASA finds Extra-Tropical Cyclone Fehi sheared

January 31 2018, by Hal Pierce



GPM core satellite flew over Tropical Cyclone Fehi on January 30, 2018 at 3:31 a.m. EST (0831 UTC) and found a few powerful storms on the southern side that were dropping rain at a rate of over 164 mm (6.5 inches) per hour. Credit: NASA/JAXA, Hal Pierce

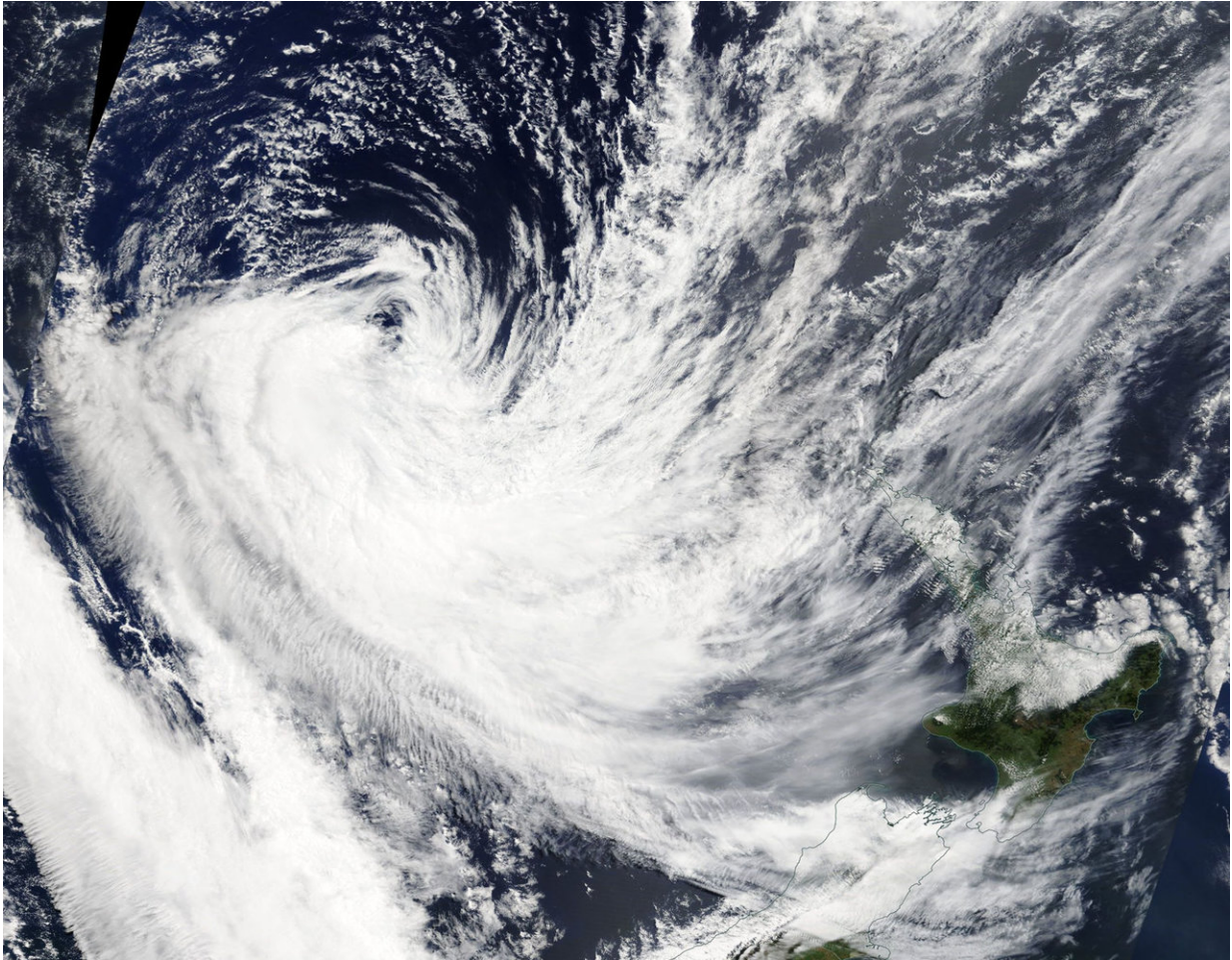
Tropical Cyclone Fehi has transitioned into an extra-tropical cyclone was

wind shear pushed the bulk of clouds and thunderstorms south of its center. NASA's Terra satellite and the NASA and Japan Aerospace Exploration Agency's GPM satellite confirmed the effect of wind shear as the storm triggered warnings in New Zealand.

The GPM or Global Precipitation Measurement Mission core observatory satellite flew over Tropical Cyclone Fehi on January 30, 2018 at 3:31 a.m. EST (0831 UTC).

GPM revealed that precipitation was only located around the southern side of Fehi's circulation. Strong vertical [wind shear](#) had caused the surface center of circulation to be displaced well to the north of the heaviest rainfall. The satellite found that some convective storms on the southern side of the tropical cyclone were still producing very heavy precipitation.

GPM's Microwave Imager (GMI) and Dual Frequency Precipitation Radar (DPR) instruments revealed rainfall in a few powerful storms on FEHI's southern side that were dropping rain at a rate of over 164 mm (6.5 inches) per hour. At NASA's Goddard Space Flight Center in Greenbelt, Md. a 3-D view of Fehi was produced using data captured by the GPM satellite's radar (DPR Ku Band) instrument. The 3-D view looking from the west toward the east showed the shearing of tropical cyclone Fehi's convective storms toward the south of the tropical cyclone's low level center of circulation. Some of the convective storm tops south of Fehi's center were found by GPM's radar to reach heights of above 13 km (8 miles).



NASA's Terra satellite captured this visible image of extra-tropical cyclone Fehi northwest of New Zealand on Jan. 31. Bands of thunderstorms extending far southeast of center were brushing northwestern New Zealand. Credit: NASA

On January 31, the Moderate Resolution Imaging Spectroradiometer aboard NASA's Terra satellite captured a visible image of extra-tropical [cyclone](#) Fehi northwest of New Zealand. Bands of thunderstorms extending far southeast of center were brushing northwestern New Zealand. The image showed northern quadrant of the storm was ringed by a small band of clouds, the image revealed an exposed center of circulation with the bulk of clouds pushed south of the [center](#).



The New Zealand Meteorological Service or MetService issued a marine weather bulletin on the system at 7:32 p.m. local time, Wednesday Jan 31, 2018. The MetService noted that former Tropical Cyclone Fehi "is approaching from the north tonight, and it is forecast to cross the South Island during Thursday, Feb. 1. It should then move away to the southeast on Friday. This [storm](#) will bring significant heavy rain and possible damaging winds to much of the South Island and parts of the lower North Island from late Wednesday to early Friday.

The heaviest rain is expected in the South Island (apart from Canterbury Plains and Kaikoura Coast), especially in Westland and Fiordland where 200 to 400 mm of rain could accumulate from tonight to early Friday. Heavy rain is also expected for Mt. Taranaki and Tararua Range. A Heavy Rain Warning is in force for these areas.

In addition, gale force winds are expected for southern and central New Zealand, initially from the north, but turning northwest then southwest later. The strongest winds are likely to be in Westland, Buller, Canterbury High Country, Nelson, Marlborough, Wellington and southern Taranaki, and a Strong Wind Warning is in force for these areas."

For updated forecast from MetService, visit: <http://www.metservice.com>

Provided by NASA's Goddard Space Flight Center

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