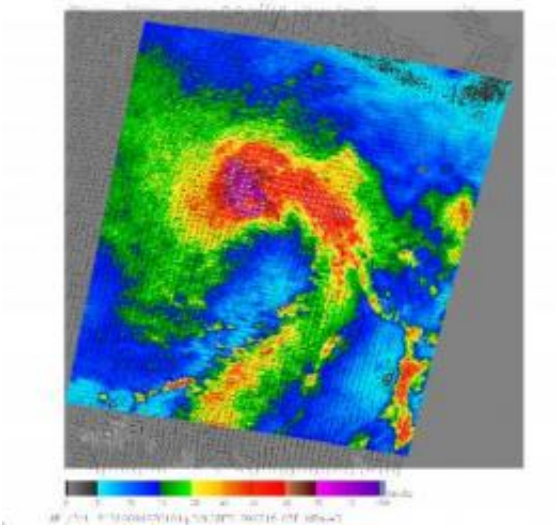
NASA satellites see remnant low Dolores go out kicking

July 17 2009



QuikScat saw Dolores' winds on July 16 when her winds were over 46 mph (in purple). QuikScat imagery is false-colored to show different wind speeds, the highest winds are always shown in purple, indicating winds over 40 knots (46 mph). Small barbs are used in the images to indicate wind direction and point to areas of heavy rain. Credit: NASA JPL, Pedro Falcon III.

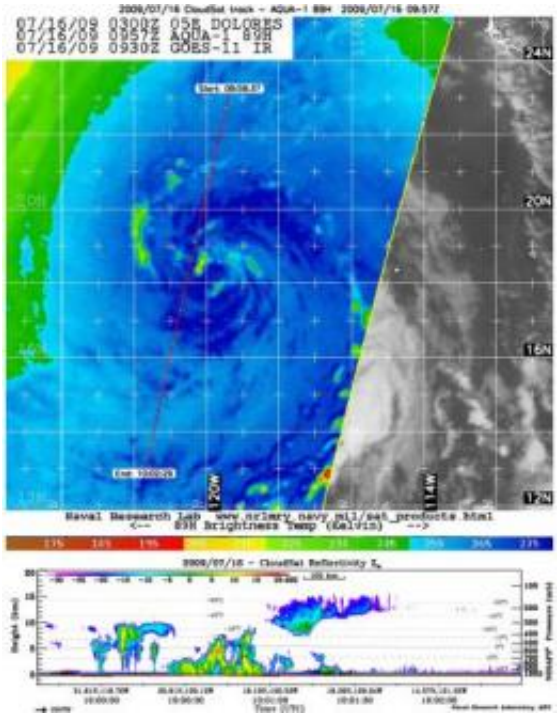
The remaining clouds and showers that were once tropical storm Dolores are fading at sea, more than 940 miles west of Cabo San Lucas, Mexico. Dolores has now weakened into a remnant low pressure area but continues to kick up 11 foot high waves at sea.

On Friday, July 17 at 6:30 a.m. EDT, Dolores' fragmented showers and

thunderstorms were located near 20 degrees north latitude and 125 degrees west longitude moving northwest near 15 knots (17 mph). Sustained winds were still around 20 knots (23 mph) and its minimum central pressure had gone up to 1006 millibars.

Two NASA satellites captured a good view of Dolores before she really started falling apart. NASA's Quick Scatterometer (QuikScat) captured Dolores' fading winds and CloudSat saw what Dolores' clouds looked like from a sideways view.

QuikScat saw Dolores' winds swirling inside her clouds by using microwaves to peer into them. It flew over Dolores and captured an image at 10:01 p.m. EDT on July 15 (0201 UTC July 16). QuikScat can actually determine the speed of a tropical cyclone's rotating winds using microwave technology. QuikScat imagery is false-colored to show different wind speeds, the highest winds are always shown in purple, indicating winds over 40 knots (46 mph). Small barbs are used in the images to indicate wind direction and point to areas of heavy rain.



A top-down combination GOES/Aqua satellite image (top) is compared to a CloudSat image (bottom). CloudSat shows clouds are over 8 miles high and between -40 and -76 degrees Fahrenheit. Credit: NASA/JPL/Colorado State Univ./NRL

NASA's CloudSat satellite has the unique capability of seeing a tropical storm from its side. CloudSat's Cloud Profiling Radar captured a sideways look across Dolores on July 16. It took a 3 minute scan across the storm from 4:59-5:02 a.m. EDT (09:59-10:02 UTC) to create an image of the entire storm.

For comparison CloudSat images are combined with other satellite images that show the storm from the top down. The recent CloudSat image was compared with an image from the National Oceanic and Atmospheric Administration's Geostationary Operational Environmental Satellite (GOES-11) combined with NASA's Aqua satellite around the same time.

The colors indicate the intensity of the reflected radar energy. The top of Dolores' clouds are over 14 kilometers (8.7 miles) high.

The blue areas along the top of the clouds indicate cloud ice. The highest clouds in Dolores at the time of the image were as cold as -40 Celsius (-40 Fahrenheit) to -60C (-76 Fahrenheit). CloudSat images show the ground or sea level as a solid line along the bottom. That line disappears where there is strong rainfall exceeding 30mm/hr (1.18 inches/hour).

Dolores is expected to make her final kick over the weekend and fade into the waters of the Eastern Pacific.

Source: JPL/NASA (news : web)