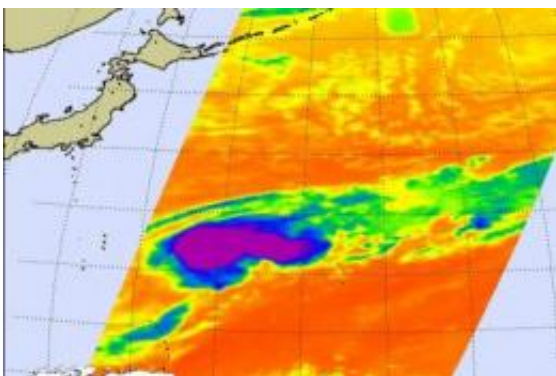


Tropical Storm Nepartak becoming extra-tropical at sea

October 13 2009



NASA's AIRS imagery revealed that Nepartak had some high, strong thunderstorms in the center of its circulation on Oct. 12 at 11:35 a.m. EDT. The storm started to develop an elongated shape indicating transition into more of a frontal system. Credit: NASA JPL, Ed Olsen

Tropical Storm Nepartak is now speeding in a northeasterly direction in the northwestern Pacific Ocean, where it is becoming extra-tropical and developing frontal qualities.

The last official position of Napartak from the U.S. Navy's Joint [Typhoon](#) Warning Center was on October 13 at 6 a.m. EDT, when the storm was 605 nautical miles east-northeast of the island of Chichi Jima, Japan. That's near 31.5 North and 154.3 East. Nepartak was speeding to the northeast at 33 mph (29 knots) and it had maximum sustained winds near 46 mph (40 knots).

Animated multispectral imagery showed Nepartak was beginning to develop frontal characteristics, which is a sign that the circulation will soon fade. Before it becomes a front, however, it is expected to continue transitioning into an extra-tropical storm, and dry air in the mid-levels of the atmosphere is helping that happen.

The Atmospheric Infrared Sounder (AIRS) flies on NASA's Aqua satellite and captures infrared images of tropical cyclones take the temperatures of thunderstorm's cloud top temperatures to determine their strength. Aqua and AIRS flew over Nepartak on October 12 at 11:35 a.m. EDT, and noticed that the [storm](#) was already starting to take on an elongated shape, indicating a transition to more of a frontal system.

How does infrared imagery know how high clouds are in the sky? The coldest ones are higher in the sky (because in the [troposphere](#), the lowest layer of [atmosphere](#) where weather happens, temperatures fall the higher up you go until you get to the stratosphere).

The highest clouds are as cold as or colder than 220 Kelvin or minus 63 degrees Fahrenheit (F) and second highest level of clouds are about 240 Kelvin, or minus 27F. The colder the [clouds](#) are, the higher they are, and the more powerful the thunderstorms are that make up the cyclone. Although Nepartak still had some strong convection, it is expected to wane soon with the transition into extra-tropical status. Nepartak is forecast to continue speeding northeast in the next day or two, when the transition should be complete and Nepartak will be no more.

Source: JPL/NASA ([news](#) : [web](#))

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