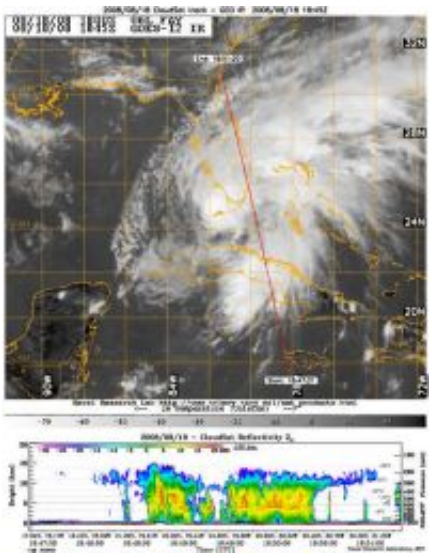
Fay Comes Ashore in Florida

August 19 2008



Credit: NASA/JPL/Colorado State University/Naval Research Laboratory-Monterey

(PhysOrg.com) -- NASA's CloudSat and Aqua satellites are just two of NASA's fleet keeping eyes on Tropical Storm Fay. NASA is using these data to see cloud height and cloud temperatures which give hints at whether or not Fay will strengthen or weaken.

At 8:00 a.m. EDT on Tuesday, August 19, 2008 Fay's center was located inland in south Florida near latitude 26.5 north and longitude 81.4 west. That puts its center 30 miles east-southeast of Fort Myers, Florida and 35 miles southwest of Moore Haven on the west side of Lake Okeechobee.

Fay's maximum sustained winds remain near 60 mph with higher gusts, and it's expected to weaken slowly as it continues to move inland. Fay is moving toward the north-northeast near 9 mph and this motion is expected to continue today, taking the center of Fay across the Florida peninsula. It's expected to slow down and turn to the north on Wed. Estimated minimum central pressure is 988 millibars.

CloudSat Looks at Fay Sliced in Half

NASA's CloudSat satellite's Cloud Profiling Radar captured a sideways look across Fay on Aug. 18 at 18:50 UTC (2:50 pm. EDT). For comparison, the top image is from the National Oceanic and Atmospheric Administration's Geostationary Operational Environmental Satellite (GOES-12) around the same time.

The red line through the GOES satellite image shows the vertical cross section of radar, basically what Fay's clouds looked like sideways. The colors indicate the intensity of the reflected radar energy. The top of Fay's clouds reach 14 kilometers, over 8.5 miles high.

The blue areas along the top of the clouds indicate cloud ice, while the wavy blue lines on the bottom center of the image indicate intense rainfall. Notice that the solid line along the bottom of the panel, which is the ground, disappears in this area of intense precipitation. It is likely that in the area the precipitation rate exceeds 30mm/hr (1.18 inches/hour) based on previous studies.

What Can Southern and East-Central Florida Expect?

Fay is expected to produce rainfall accumulations of 4 to 8 inches, with maximum storm total amounts of 10 inches across the southern and east-

central Florida peninsula accumulations of 3 to 5 inches are possible even as far east as the northwestern Bahamas. The tides are not expected to be greater than between 3 and 5 feet above normal along the southwestern coast of Florida. However, isolated tornadoes are still possible.

Where are the Cold, Highest Clouds in Fay?

This satellite image of Fay was created by data from the Atmospheric Infrared Sounder (AIRS) on NASA's Aqua satellite. It shows the temperature of Fay's cloud tops on Aug. 18, 18:41 UTC (2:41 p.m. EDT), around the same time the CloudSat captured its images of cloud heights. The lowest temperatures (in purple) are associated with high, cold cloud tops that make up Fay's center. There are large areas of strong convection (rising air and rainfall) shown here in purple. Where there are no clouds the AIRS instrument reads the infrared signal from the surface of the Earth (over both land and water), revealing warmer temperatures (red).

The AIRS data creates an accurate 3-D map of atmospheric temperature, water vapor and clouds, all of which are helpful to forecasters.

Fay Changing Course

Fay is now forecast to head up to Jacksonville, and curve back inland, and track along the Georgia/Florida border headed toward southern Alabama.

Provided by NASA