

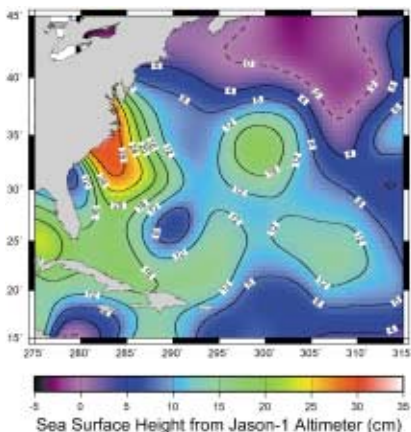
Monitoring Hurricane Isabel

Hurricanes are among the most frequent catastrophic events in warm seas. Altimetry contributes to the forecast of their path by collecting sea level, wave height and wind speed data.



Map of ocean color from SeaWiFS satellite on September 15, 2003

Hurricane Isabel struck the East coast of the United States on September 15, 2003. Born over the Atlantic Ocean, this hurricane was monitored by all available satellites: visible and near infrared for meteorological and ocean color (e.g. SeaWiFS), scatterometers for measurements of near sea-surface wind speed, sea surface temperature sensors, radiance and cloud height measurements.



Sea level observed by Jason-1 between September 15 and 18, 2003. The low atmospheric pressures of Isabel raised sea level noticeably.

This hurricane's signature can also be seen in altimetric satellite measurements (Jason-1 or Envisat), which provide data on sea level anomalies, wind speed and wave height. Since heat in the upper layer of the ocean plays a major role in hurricane generation and development, cold and warm eddies seen by altimeters can modify the path and intensity of hurricanes.

Left: Wind speed measured by the Jason-1 altimeter centered on September 15, 2003. Altimeters also provide wave height data (e.g. Envisat, right).

