In order to facilitate Earth science data access, the NASA Goddard Earth Sciences Data Information Services Center (GES DISC) has developed a web prototype, the Remote Analysis and Visualization (RAV) tool. RAV builds on the Grid Analysis and Display System (GrADS), the widely-used and open-source visualization and analysis system developed by the National Center for Atmospheric Research (NCAR) for education and research. RAV is the first gridded data visualization tool that allows users to access terabytes of data and generate 2-D or time-series plots and animation without downloading any software and data.

HDAT includes data from the NASA Tropical Rainfall Measurement Mission (TRMM), the NASA Quick Scatterometer (QuikSCAT) and NCEP Reanalysis, and the NCEP/CPC half-hourly, 4-km Global (G04) IR dataset.

The GES DISC archive TRMM data. The daily global pixel product derived from the 3-hourly multi-satellite precipitation product (3B42 V6) is available in HDAT. The TRMM Microwave Imager (TMI) sea surface temperature from the Remote Sensing Systems is in HDAT as well. The NASA QuikSCAT ocean surface wind and the NCEP Reanalysis provide ocean surface and atmospheric conditions, respectively. The global merged IR product, also known as, the NCEP/CPC half-hourly, 4-km Global (G04) IR dataset, is one of TRMM ancillary datasets. They are globally-merged pixel-resolution IR brightness temperature data (equivalent blackbody temperatures), merged from all available geostationary satellites (G04-6/10, METEOSAT-10/12 & GOES). The GES DISC has collected over 10 years of the data beginning from February of 2000. The high temporal resolution (every 30 minutes) dataset not only provides additional background information to TRMM and other satellite missions, but also allows monitoring a wide range of meteorological phenomena from space, such as, hurricane, typhoon, tropical cyclones, mesoscale convection system, etc.

The GES DISC archives QuikSCAT data. The QuikSCAT ocean surface wind is derived from the QuikSCAT satellite using scatterometer data. The QuikSCAT ocean surface wind is available from January 1999 onward. QuikSCAT provides ocean surface wind and atmospheric conditions, respectively. QuikSCAT ocean surface wind is available in HDAT.

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Basic functionalities include selection of time of interest and time, single imagery, overlay of two different products, animation, and time-series plots. Functionality can be added in the future.

Tool Description
All images and plots in this tool are generated by using a widely used community software, the Grid Analysis and Display System (GrADS) developed for Land and Atmosphere (COLA). A form-based web interface (below) collects inputs from users to conduct online visualization and analysis of several remote sensing and model datasets for educational activities and research. RAV allows users to access terabytes of data and generate 2-D or time-series plots and animation without downloading any software and data.

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Abstract
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Above: Giovanni instances.

Other Resources for Hurricane Studies

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