



Graphical Programs For The Validation Of Satellite Sounding Products With The NOAA Products Validation System (NPROVS)

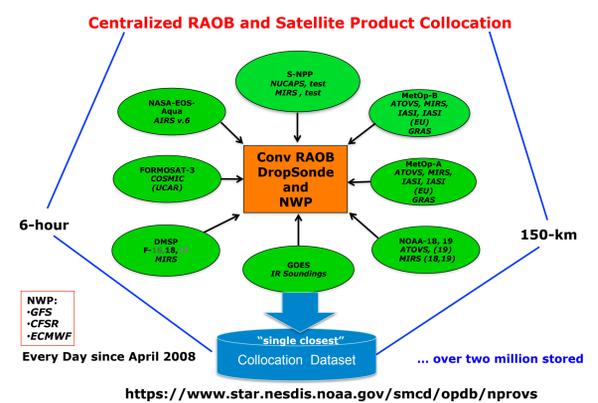


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NPROVS

The NOAA Products Validation System (NPROVS) was designed within the NOAA/NESDIS Office of Satellite Applications and Research (STAR) to compare, evaluate and monitor the performance of multiple satellite systems.



Selected sounding footprints from a variety of satellites and other processing systems are collocated with ground truth data, typically radiosonde data, by locating a footprint that is closest to the ground truth in space and time. Once collocated, the system data can be compared to the ground truth and to other systems.

The collocated data can be accessed by anyone interested in characteristic performance of the satellite derived products. Daily, weekly and monthly collocation files are made available in binary and netCDF formats.

As part of NPROVS, a set of graphical programs was developed to allow users to view and compare the NPROVS data. The **NPROVS Archive Statistics (NARCS)** provides a long-term view of the performance of each system. **ProfileDisplay (PDISP)** shows individual collocation data and computes vertical accuracy statistics of temperature and moisture profiles. The **Orbital Display System (ODS)** shows images of associated orbital data.

Accessing And Running The Programs

All of the graphical programs are written in Java and can be run on a variety of operating systems including Macintosh OS X, Linux and Windows. For most people, accessing and running the programs is as simple as copying the program to a local computer and double-clicking the icon. More information about running the programs is available in the Quick Start Guide for each program.

Links to the programs and quick start guides for each one are available on the STAR NPROVS web site. The pages for each program also contain links (via anonymous FTP) to the data files used by the graphical programs.

The main NPROVS page: <http://www.star.nesdis.noaa.gov/smcd/opdb/nprovs/index.php>

Orbital Display System (ODS): <http://www.star.nesdis.noaa.gov/smcd/opdb/nprovs/ods.php>

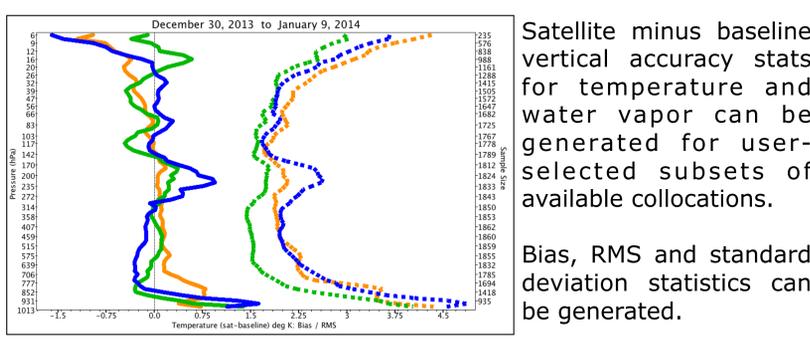
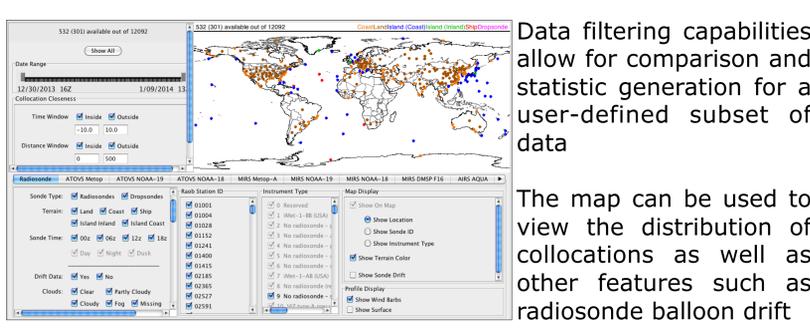
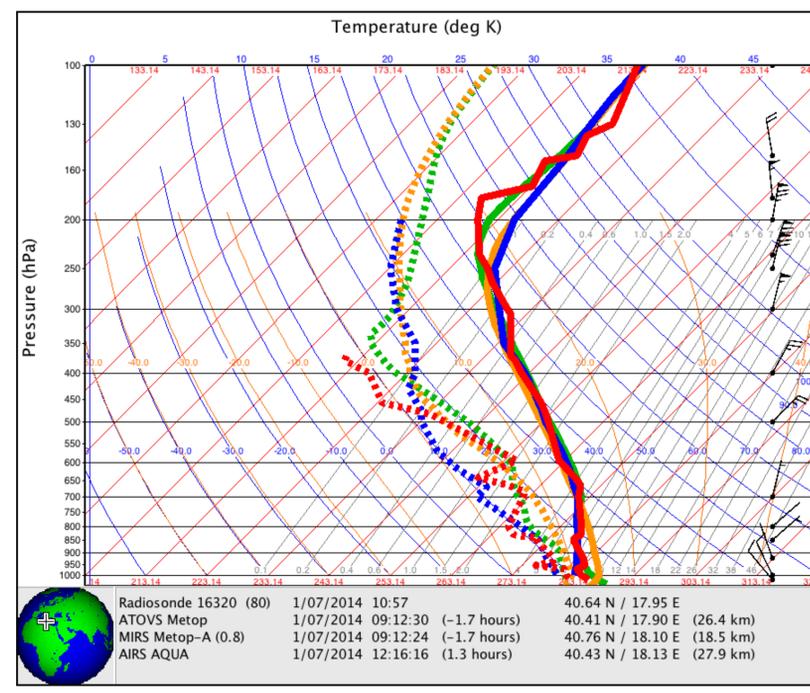
ProfileDisplay (PDISP): <http://www.star.nesdis.noaa.gov/smcd/opdb/nprovs/pdisp.php>

NPROVS Archive Statistics (NARCS): <http://www.star.nesdis.noaa.gov/smcd/opdb/nprovs/narcs.php>

Questions about NPROVS and specific requests for data access can be directed to Tony.Reale@noaa.gov

ProfileDisplay (PDISP)

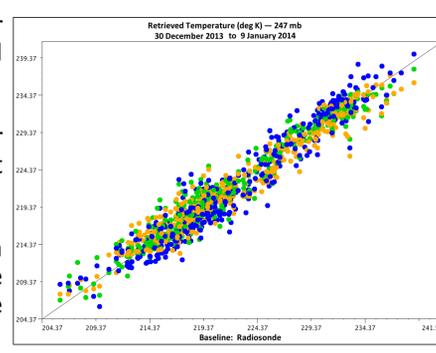
Displays temperature and moisture profiles for the ground truth (RAOB) and every collocated processing system. All available raw data produced by each system and the associated ground truth can be viewed both graphically and as raw text.



Scatter plots are available for user-selected satellite, ground profile data and collocations

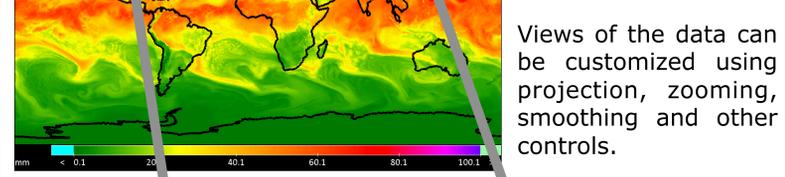
These plots are available for temperature and moisture at every pressure level

Any collocation on the plot can be selected to quickly view the graph of the profiles from the collocation

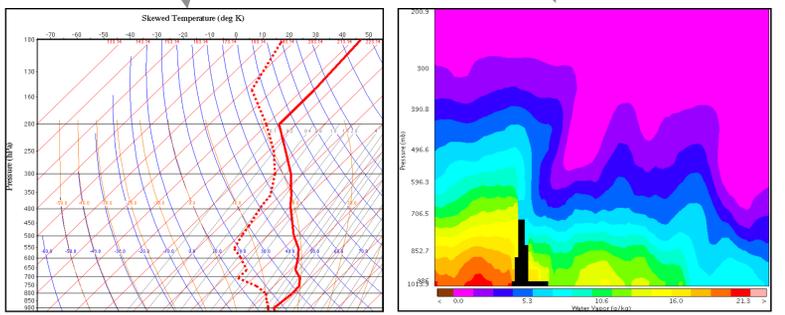


Orbital Display System (ODS)

Graphical display of data from every product system used by NPROVS.



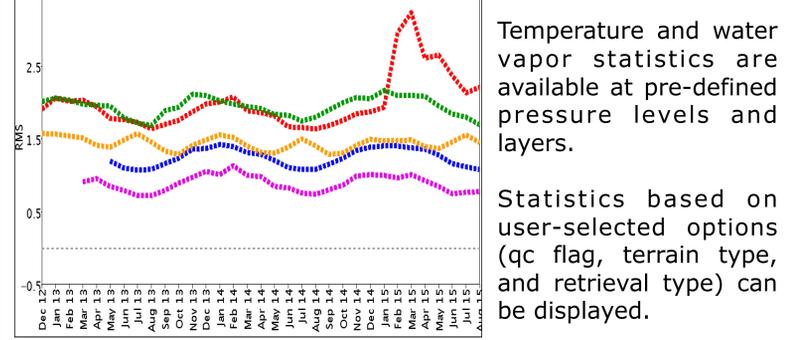
Views of the data can be customized using projection, zooming, smoothing and other controls. Any location on the image can be clicked to display a graph that shows profiles and raw data from the selected location. A vertical cross line can be drawn across an image to display sections of the atmosphere.



Two parameters from the same system or from different systems can be compared by using built-in math functions to subtract one image from another. White shows areas of agreement while red/blue show areas of disagreement.

NPROVS Archive Statistics (NARCS)

Provides long-term trends of satellite minus baseline differences. Includes daily, weekly and monthly statistics of bias, standard deviation and rms.



Temperature and water vapor statistics are available at pre-defined pressure levels and layers. Statistics based on user-selected options (qc flag, terrain type, and retrieval type) can be displayed.

