

AEROSTAT ACTIVITY

AEROSTAT is a Giovanni instance that can be used to evaluate the quality of satellite retrievals. AEROSTAT allows you to compare AERONET data with coincident satellite data. This is a quick and effective way to evaluate the quality of the satellite retrieval at a particular location for any range of dates or season. The tool includes data from Terra, Aqua and MISR.

Clicking on the large “Help” button at the top of the page brings up a fairly complete explanation of how the system works. Go to <http://giovanni.gsfc.nasa.gov/aerostat/>

In this exercise we will create a scatter plots to compare AERONET data with MISR, Aqua Dark Target Land and Aqua Deep Blue at 550nm for a site in the Eastern U.S. and a site in the Mountain states.

1. In the “Select Plot” Box select Scatter Plot
2. In the “Select Station” Box click Browse. In the box that pops up click and drag over North America. Available sites will be shown on the list at the left. Select a site of interest.
3. Follow these selections in the “Select Measurements” box.

“AERONET L2 AOD, ver 2” → “Interpolated AOD” → 550 nm → mean - then click “Add”

Note that a box will show the selected parameters and the filtering applied to the data. Leave the default quality parameters.

“MISR L2 AOD, ver 0022 → AOD → 558 nm → mean “Add”

“MODIS Aqua L2 AOD, ver 051” → AOD Dark Target Land → 550 nm → mean “Add”

“MODIS Aqua L2 AOD, ver 051” → AOD Deep Blue at 550 nm → 550 nm → mean “Add”

4. In “Select Date Range” use the default “Date Picker” and click on “Show Data Temporal Coverage” . Use the box that pops up to select a two month span that includes data for all of the parameters from any year which includes both AERONET and Satellite data. If you cannot find a time that covers all parameters, plot one parameter at a time vs AERONET
5. Click “Get Plots”

Examine the scatter plots for this station or try other stations for data availability.

Try the time series plot for each instrument.

What are these plots telling you about the quality of the satellite data retrievals compared to the AERONET data?

Obtain satellite quality information for a station of your interest.