



Multi-Sensor Aerosol Products Sampling System (MAPSS)

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Multi-Sensor Aerosol Products Sampling System (MAPSS)

<http://giovanni.gsfc.nasa.gov/aerostat/>

- MAPSS is a portal for evaluating and comparing various aerosol datasets with AERONET

MAPSS: Multi-sensor Aerosol Products Sampling System

This user interface is used to obtain selected parameter statistics from the [MAPSS](#) database for a chosen location and time period. Time Series Plot is the available service. Plot output is rendered as a graph and is also available in ASCII format.

The screenshot displays the MAPSS web interface. At the top, there are tabs for 'Data Selection' and 'Results', along with a 'NEW' badge and a link to 'Try out the MAPSS Statistical Explorer'. Below this is a 'Plot Data' button and a row of buttons: 'Reset', 'Clear', 'Send Us Feedback!', and 'Help'. The main content area is divided into three sections: 'Select Station' with a text input field and a 'Browse' button; 'Select Plot' with radio buttons for 'Time Series' (selected) and 'Scatter Plot'; and 'Select Measurements' with radio buttons for 'Basic' (selected) and 'Advanced'. The 'Select Measurements' section contains four dropdown menus: 'Product' (listing AERONET aerosols L2, ver. 2; AERONET deconvolution L2, ver. 41; AERONET inversions L1.5, ver. 2; AERONET inversions L2, ver. 2; CALIPSO column and layer aerosols L2, ver. 3), 'Parameter', 'Layer', and 'Measurement'.



Step 1: Select a Station

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Select Station

Click 'Browse' button or type in comma separated names of sta

Station Picker

To make multiple selections, press 'Ctrl' (on Windows) or 'Command' (on Mac) key while making selections.

Select Filter Criteria

By Country By Network

Afghanistan
Algeria
Antarctica
Argentina

AERONET
BSRN
CBoM
EOS_Validation
GC_Net

Select Matching Stations (Reset)

AOE_Baotou
ARM_Barnstable_MA
ARM_Darwin
ARM_Gan_Island
ARM_Highlands_MA
ARM_HyytiäläFinland
ARM_Manacapuru
ARM_Nainital
ARM_Oliktok_AK
ATHENS-NOA
Abisko
Abracos_Hill
Abu_Al_Bukhoosh
Abu_Dhabi
Adelaida

Measurement

Enter a station name or click browse to make a selection using a map



Step 2: Select Plot Type and AERONET Measurement

The screenshot shows the MAPSS web interface. At the top, there is a navigation bar with 'EARTHDATA', 'Data Discovery', 'DAACs', 'Community', and 'Science Disciplines'. Below this is a blue header with the title 'MAPSS: Multi-sensor Aerosol Products Sampling System'. A sub-header indicates the interface is used to obtain parameter statistics from the MAPSS database. The main content area has a 'Data Selection' tab and a 'Results' tab. A 'Plot Data' button is highlighted in green, with 'Reset', 'Clear', 'Send Us Feedback!', and 'Help' buttons nearby. The 'Select Station' section shows 'Rimrock' selected. The 'Select Plot' section has two radio buttons: 'Time Series' and 'Scatter Plot', with the latter selected. A red arrow points from a box labeled 'Select: Scatter Plot' to the 'Scatter Plot' radio button. The 'Select Measurements' section has 'Basic' and 'Advanced' radio buttons, with 'Basic' selected. It contains four columns of selection lists: 'Product' (with 'AERONET aerosols L2, ver. 2' selected), 'Parameter' (with 'AOD - interpolated' selected), 'Layer' (with 'AOD at 550nm (interpolated)' selected), and 'Measurement' (with 'Mean' selected). Red boxes with arrows point to each of these selections, labeled 'Select: AERONET aerosols, Ver. 2', 'Select: AOD - interpolated', 'Select: AOD at 550 nm', and 'Select: Mean'. A large red arrow points from a box labeled 'Lastly, click: Add' to the 'Add' button at the bottom right of the 'Select Measurements' section.



Selected Measurements Will Appear

EARTHDATA Data Discovery DAACs Community Science Disciplines

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Data Selection Results **NEW** [Try out the MAPSS Statistical Explorer](#)

Plot Data Reset Clear Send Us Feedback! Help

Select Station
Rimrock Browse

Select Plot
Satellite Colocated with AERONET
 Time Series
 Scatter Plot

Select Measurements
Click each list below (beginning with the left-most list) to show the set of fully qualified measurements. Select a measurement and then click 'Add'. Repeat for additional measurements.
 Basic Advanced

Product	Parameter	Layer	Measurement
AERONET aerosols L2, ver. 2	AOD - interpolated	AOD at 532nm (interpolated)	Slope of fitted plane or line
AERONET deconvolution L2, ver. 41	Angstrom exponent	AOD at 550nm (interpolated)	Standard deviation
AERONET inversions L1.5, ver. 2	Water vapor	AOD at 555nm (interpolated)	Valid subsetting points
AERONET inversions L2, ver. 2		AOD at 558nm (interpolated)	Geometry
CALIPSO column and layer aerosols L2, ver. 3		AOD at 660nm (interpolated)	Row of central point

More about [AERONET aerosols L2, ver. 2](#) ... No additional information No additional information More about [Mean](#) ... Add

Selected Measurements
X-Axis: AERONET aerosols L2, ver. 2 : AOD - interpolated : AOD at 550nm (interpolated) : Mean
[No. of pixels with value](#) All >= 2 Delete



Step 3: Select Satellite Measurement

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Data Selection | Results | **NEW** [Try out the MAPSS Statistical Explorer](#)

Plot Data [Reset] [Clear] [Send Us Feedback!] [Help]

Select Station
Rimrock [Browse]

Select Plot
Satellite Colocated with AERONET
 Time Series
 Scatter Plot

Select Measurements
Click each list below (beginning with the left-most list) to show the set of fully qualified measurements. Select a measurement and then click 'Add'. Repeat for additional measurements.
 Basic Advanced

Product	Parameter	Layer	Measurement
MODIS 3km aerosols L2 (Aqua), ver. 006	AOD 550nm - combined	AOD 550nm - combined	Azimuth of fitted plane
MODIS 3km aerosols L2 (Terra), ver. 006	AOD at 3 bands (Deep Blue)		Central value
MODIS aerosols L2 (Aqua), ver. 006	AOD at 550 nm with all QA - land and oce...		Mean
MODIS aerosols L2 (Aqua), ver. 051	AOD at 550 nm with best QA - land and oc...		Median
MODIS aerosols L2 (Terra), ver. 006	AOD at 550nm (Deep Blue)		Multiple correlation

[Add]

Lastly, click: Add

Select: MODIS aerosols L2 (Aqua), ver. 006

Select: AOD 550nm-combined

Select: AOD 550nm-combined

Select: Mean



X and Y Axis Information Will Appear in the Selected Measurements Section

EARTHDATA Data Discovery DAACs Community Science Disciplines

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Data Selection Results **NEW** [Try out the MAPSS Statistical Explorer](#)

Plot Data Reset Clear Send Us Feedback Help

Select Station
Rinrock Browse

Select Plot
Satellite Colocated with AERONET
 Time Series
 Scatter Plot

Select Measurements
Click each list below (beginning with the left-most list) to show the set of fully qualified measurements. Select a measurement and then click 'Add'. Repeat for additional measurements.

Basic Advanced

Product	Parameter	Layer	Measurement
MODIS 3km aerosols L2 (Aqua), ver. 006	AOD 550nm - combined	AOD 550nm - combined	Azimuth of fitted plane
MODIS 3km aerosols L2 (Terra), ver. 006	AOD at 3 bands (Deep Blue)		Central value
MODIS aerosols L2 (Aqua), ver. 006	AOD at 550 nm with all QA - land and oce...		Mean
MODIS aerosols L2 (Aqua), ver. 051	AOD at 550 nm with best QA - land and oc...		Median
MODIS aerosols L2 (Terra), ver. 006	AOD at 550nm (Deep Blue)		Multiple correlation

Selected Measurements

X-Axis: AERONET aerosols L2, ver. 2 : AOD - interpolated : AOD at 550nm (interpolated) : Mean
[No. of pixels with value](#) All >= 2 Delete

Y-Axis: MODIS aerosols L2 (Aqua), ver. 006 : AOD 550nm - combined : AOD 550nm - combined : Mean
[No. of pixels with value](#) All >= 5 Delete

These are the two parameters that will be compared in the analysis



Step 4: Select a Date Range

Select Station
Rimrock

Select Plot
Satellite Colocated with AERONET
 Time Series
 Scatter Plot

Select Measurements
Click each list below (beginning with the left-most list) to show the set of fully qualified measurements. Select a measurement and then click 'Add'. Repeat for additional measurements.
 Basic Advanced

Product	Parameter	Layer
MODIS 3km aerosols L2 (Aqua), ver. 006	AOD 550nm - combined	AOD at 550nm - land and ocean
MODIS 3km aerosols L2 (Terra), ver. 006	AOD at 3 bands (Deep Blue)	
MODIS aerosols L2 (Aqua), ver. 006	AOD at 550 nm with all QA - land and oce...	
MODIS aerosols L2 (Aqua), ver. 051	AOD at 550 nm with best QA - land and oc...	
MODIS aerosols L2 (Terra), ver. 006	AOD at 550nm (Deep Blue)	

Selected Measurements

X-Axis	Y-Axis
AERONET aerosols L2, ver. 2 : AOD - interpolated : AOD at 550nm (interpolated) : Mean No. of pixels with value <input checked="" type="radio"/> All <input type="radio"/> >= 2	MODIS aerosols L2 (Aqua), ver. 006 : AOD at 550 nm with best QA - land and ocean : AOD at 550nm - land and ocean : Mean No. of pixels with value <input checked="" type="radio"/> All <input type="radio"/> >= 5

Select Date Range
 Date Picker Seasonal Search
Format: YYYY-MM-DD. Valid Range: 2000-02-18 to 2015-07-23
Date Range (UTC): to

Make sure both datasets are available for the selected range. You can verify this by clicking here



Step 5: Click Plot Data and Wait for Results

Select Station
Rimrock

Select Plot
Satellite Colocated with AERONET
 Time Series
 Scatter Plot

Select Measurements
Click each list below (beginning with the left-most list) to show the set of fully qualified measurements. Select a measurement and then click 'Add'. Repeat for additional measurements.
 Basic Advanced

Product MODIS 3km aerosols L2 (Aqua), ver. 006 MODIS 3km aerosols L2 (Terra), ver. 006 MODIS aerosols L2 (Aqua), ver. 006 MODIS aerosols L2 (Aqua), ver. 051 MODIS aerosols L2 (Terra), ver. 006 No additional information	Parameter AOD 550nm - combined AOD at 3 bands (Deep Blue) AOD at 550 nm with all QA - land and oce... AOD at 550 nm with best QA - land and oc... AOD at 550nm (Deep Blue) No additional information	Layer AOD at 550nm - land and ocean No additional information	Measurement Azimuth of fitted plane Central value Mean Median Multiple correlation More about Mean ... Add
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Selected Measurements

X-Axis: AERONET aerosols L2, ver. 2 : AOD - interpolated : AOD at 550nm (interpolated) : Mean
[No. of pixels with value](#) All >= 2

Y-Axis: MODIS aerosols L2 (Aqua), ver. 006 : AOD at 550 nm with best QA - land and ocean : AOD at 550nm - land and ocean : Mean
[No. of pixels with value](#) All >= 5

Select Date Range
 Date Picker Seasonal Search

Format: YYYY-MM-DD. Valid Range: 2000-02-18 to 2015-07-23
Date Range (UTC): 2012-07-01 to 2012-07-31



Exercise Questions:

- Which two parameters were compared?
- What is the location of the AERONET station you selected?
- Describe (correlation, slope, quality, etc.) the comparison of satellite AOD to AERONET in your region.

