

LAADS Web Exercise

Objective:

Learn to access and use the web interface to the Level 1 and Atmosphere Archive and Distribution System (LAADS). LAADS Web is a portal for searching and ordering MODIS atmosphere data.

Depending on which case study you would like to work on, you should select one of the following sets of files to download using the instructions on the ftp section of the site, or from the browse imagery section.

Suggested regional air quality events:

1. Fires in Canada and Smoke Transport over US, June 09, 2015
http://earthobservatory.nasa.gov/IOTD/view.php?id=86011&eocn=image&eoci=related_image
2. Buffalo fires, Wyoming, August 13, 2016
<http://go.nasa.gov/2cWvi9z>
3. Saharan Dust Crosses the Atlantic, June 1, 2010
<http://earthobservatory.nasa.gov/NaturalHazards/view.php?id=44169>
4. Fires in Indonesia, September 24, 2015:
<http://earthobservatory.nasa.gov/NaturalHazards/view.php?id=86681>
5. Fires in Australia, February 10, 2014:
<http://earthobservatory.nasa.gov/IOTD/view.php?id=83117>
6. Haze over Eastern Asia, February 25, 2014:
<http://earthobservatory.nasa.gov/IOTD/view.php?id=83213>
7. Rush fire, CA, August 12, 2016
8. Soberanes fire – Santa Barbara, CA, July 22, 2016
9. Loma fire – San Jose, CA, September 20, 2016
10. Whitewater – Baldy Complex fire – NM, May 20, 2012
11. Fires in Quebec – July 9, 2013.

Search & Order

1. From the main LAADS Web page, select the **Search & Order** tab, this will take you to **Search for Data Products**.
2. For **Satellite/Instrument**: Select either Terra MODIS or Aqua MODIS. For this exercise, select Terra MODIS.

3. For **Group**: Select Level 1, Level 2, or Level 3 data. If you change the instrument selection you will have to reselect this. For this exercise, select **Terra Atmosphere Level 2 Products**.
4. For **Products** under **Group**, select:
 - a. MOD04_L2 – MODIS/Terra Aerosol 5-min L2 Swath 10km
 - b. MOD04_3K – MODIS/Terra Aerosol 5-min L2 Swath 3km
5. Under **Temporal Selection**, select the date of interest or select from one of the above suggested air quality events. Or select June 9, 2015.
6. In **Collection Selection**, select **6 – MODIS Collection 6 – L1, Atmos and Land** from the **Collection** drop-down menu. If this does not return any data, switch to **5.1 – MODIS Collection 51 – L1, Atmos and Land**
7. Under **Spatial Selection**, set **Coordinate System** to **Latitude/Longitude**. Either click and drag on the map, enter your coordinates, or use one of the “Predefined Regions.”

Or use following boundaries: 33N to 50N and 92W to 76W
8. Under **Coverage Selection**, make sure that only **Day (granules contain day data only)** is the only box selected
9. For this exercise, you can ignore the **Metadata Selection** but it can be useful for other purposes.
10. Click **Search**
11. To download a data file, click on the file name. Make sure to download both 10km (MOD04_L2) and 3 km (MOD04_3K) data files.
12. For each file there should be two images available. Explore some of the browse images. You can use these to help determine which files to download. You can add one or many files to the shopping cart for download.
13. After downloading, we will utilize Panoply tool to read and map the data sets.