LADSWEB Exercise

This is a brief exercise to help you become familiar with Laadsweb, a portal for searching and ordering MODIS atmosphere data.

Go through this exercise to learn the features of the LADSWEB site.

Depending on which case study you would like to work on later this week 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.

Primary Event for This Training
Air Quality Incident June 26 - 27, 2012
Julian Date 178
Terra Level 2: 1710 UTC
Aqua Level 2: 1845, 1850, 2025 UTC

Julian Date 179
Terra Level 2: 1615, 1755 UTC
Aqua Level 2: 1930 UTC

Secondary Event for This Training
Dust Transport August 7 – 8, 2013
Julian Date 219
Aqua Level 2: 1850, 1855 UTC

Julian Date 220
Terra Level 2: 1620, 1625, 1800 UTC
Aqua Level 2: 1935 UTC

   1. Go to the LAADSWEB page: http://ladsweb.nascom.nasa.gov

Part I - Visual Searches for Individual Files

   2. Find and order or download the files for one of the events listed above.
        a. Click on the *Images* tab near the top of the page link and click on *Granule Browser*.

           This tool only allows you to search for granules for one day at a time but provides you with greater ability to browse the products to find specific criteria before ordering.

        b. Enter the date.

           Under collection select "51 – MODIS Collection 5.1". Under parameter choose "Aerosol Optical " and then hit "Update". In the map click and drag the yellow square over your area of interest. You can also enter your coordinates manually.

     c. Use the buttons to switch between Terra and Aqua

     d. ***Click*** on "get granule images". Select a granule of interest to you and click on the image. You can click on the file name at the top to download the file.

     e. ***Click*** on "view side by side parameter comparison" and select the parameter you would like to compare with.

Part II Direct FTP file downloads

Make sure you save the files in a known location. It is best to make a directory in the C:/Cygwin/usr/local directory to save your files.

3.

     a. Download the aerosol files for the case you did not choose above and obtain them directly via ftp. Go back to the ***DATA*** link and then ***FTP*** Site. Find the link for ***ALLDATA → 51*** then go to the directory with the name of the level 2 file type you want (i.e. MYD04_L2) then find your file by its date.

            NOTES: If you are in the Terra directory for the correct day you can substitute MYD into the url to quickly access the Aqua files.

     b. Obtain Level 1B files for one of the cases above.

            You can move quickly into the level 1B file directory MOD021KM or MYD021KM in the url instead of the directory containing the aerosol file type to go directly to the directory you need. Now switch to the collection 6 directory. Almost all level 2 products are on line and available for immediate download. Some level 1B data will not be available and should be ordered.

PART III

4. **Batch Searching:**

From the Laadsweb main page select the ***DATA*** link and then ***Search***.

DATA CONTROLS:

Product Selection:
Make sure you always make the following selections:

     a) **Satellite/Instrument** - click in the circle to select either Terra MODIS or Aqua MODIS

For this exercise you can select either Terra or Aqua

b) **Group** - Select Level 1, Level 2 or Level 3 data. If you change instrument selection you will have to select this again.
Select Level 2

c) **Products** – After selecting the product group you must click on the product name.
Select the Level 2 Aerosol Product
Make a notation of the product name at the beginning of the selection line.

d) **Temporal Selection:** Select a range of a few days around your target date(s).

e) **Temporal Type** – Date and Time Range requires date and time in the default format shown in the selection boxes. (This exercise will cover other options later.)

Select a 5-day range around your date of interest.

Collection Selection:

Select "Collection – "51 – collection 5.1" If this does not return any data then switch to "5 Coll5 AQUA/Terra Forward and Reprocessing".

Spatial Selection

Select Latitude/Longitude. Either click and drag on the map or enter your coordinates or use one of the "Predefined Regions".

Select an area of a few degrees around your area of interest.

Coverage Options

Select "Day" only.

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5. **Examine results:**

Click Search.

Clicking on a file name will initiate a download of the data file.

For each file there should be two browse 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.

6.

   a. **Refine search and additional features to explore:**

      Click refine search. See if you can save and load your search.

   b. **Metadata Selection:**

      You can use these selection parameters to limit results to data that has a higher percentage of data returned.

      In the "SuccesfulRetrievalPct_Land" select a start number somewhere between 20 and 80 and leave the end number as 100. Select "yes" next to Filter?

      Click search.

      Compare the number of retrievals obtained this way to your earlier searches. If you obtain no results lower the starting percentage.

   c. **Seasonal searches**. One very powerful option on ladsweb is the ability to create a "seasonal search" encompassing many years of data with only a single search. Select "Subset of Days in Date and Time Range" from the "Temporal Type" menu.

      You will see "start month" and "start day" and "end month" and "end day" selection menus. If you wanted to do a seasonal search for all dates from the first week of September over the years 2006 - 2009 you would use the start and end month and day boxes to specify Sept 1 – Sept 7 to select your "season" and the "Start Date and Time and End Date and Time" boxes to enter 09/01/2006 00:00:00 and 09/07/2009 23:59:59 to select your range of years. Try this now with any selected week of your choosing.

   d. **Time window searches**

      Select "refine your search." In the "Temporal Selection" box select "Subset of Hours in Date and Time Range" and use the "Start Hour" and "End Hour" boxes to limit the search to 18 to 19 hours. Note that this gives you results from a two hour window

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Part IV IF YOU HAVE TIME OR FOR LATER EXPLORATION
Search for File Names. Go back to the beginning search for Level 1 products page and click the "search for file names" link at the top of the page. Enter the file name for your search up through the time field. Search a second time using this function but instead of the complete time field just enter the hour and wild card symbol i.e. _19*