

Introduction to LAS

Welcome to the Live Access Server (LAS). LAS is a highly configurable web server designed to provide flexible access to geo-referenced scientific data. It can present distributed data sets as a unified virtual data base through the use of `opendap_networking`. Ferret is the default visualization application used by LAS.

LAS enables the web user to:

- Visualize data with on-the-fly graphics
- Request custom subsets of variables in a choice of file formats
- Access background reference material about the data (metadata)
- Compare (difference) variables from distributed locations
- Use Google Earth® to visualize data
- Easily create animations

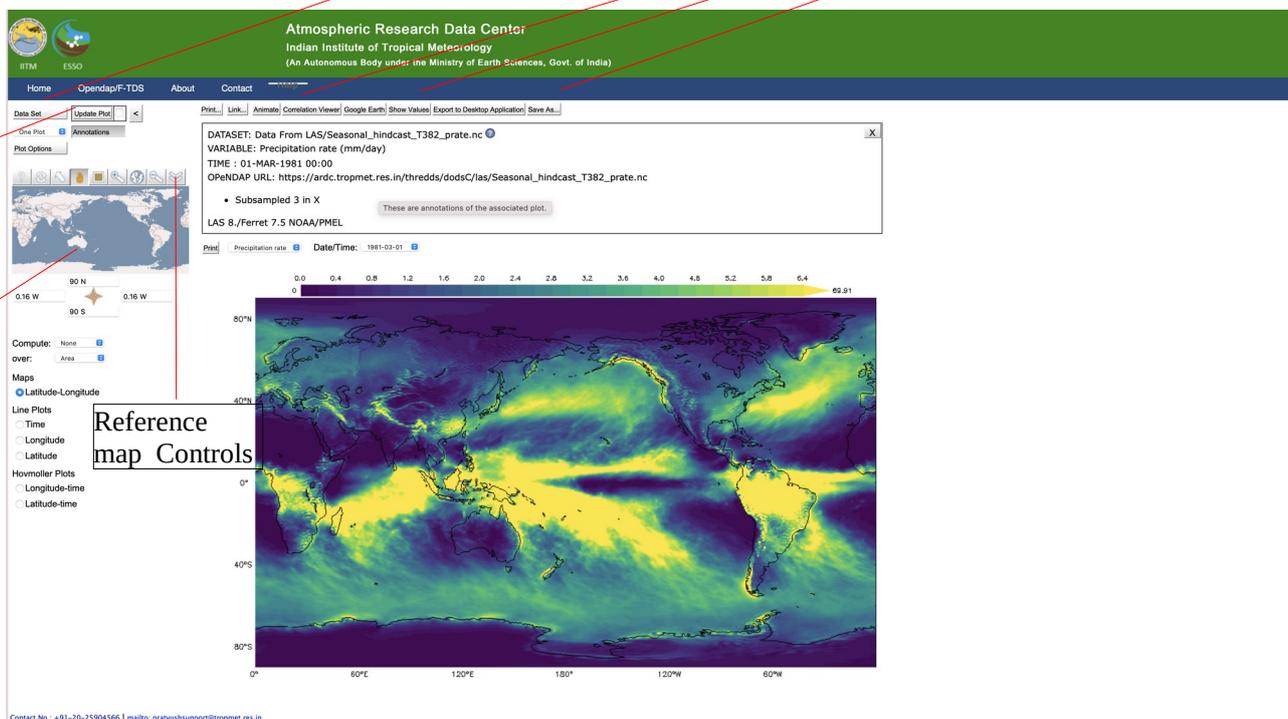
LAS enables the data provider to:

- Unify access to multiple types of data in a single interface
- Create thematic data servers from distributed data sources
- Offer derived products on the fly
- Remedy metadata inadequacies (poorly self-describing data)
- Offer unique products (e.g. visualization styles specialized for the data)
- Provide data access to gridded as well as in-situ datasets

Introduction and Overview

Select data

Product Selectors

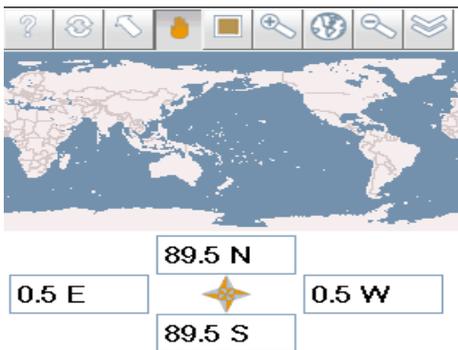


Above is the LAS User Interface.

Finding your way around

The buttons across the top bar are for opening menus, requesting a new plot, or requesting products such as animations. When a menu is open you will often see this small icon  next to an item. Click on this icon for information. When it is next to a dataset in a dataset menu, this will bring up further information about the dataset. In an options menu, clicking the info icon brings up an explanation of the option.

The reference map in the upper left has its own controls along the top. In the LAS interface, hover the mouse over each for a short description, and click the ? for more help with these controls. The longitude and latitude widgets below the map may be used to enter the X and Y region desired.



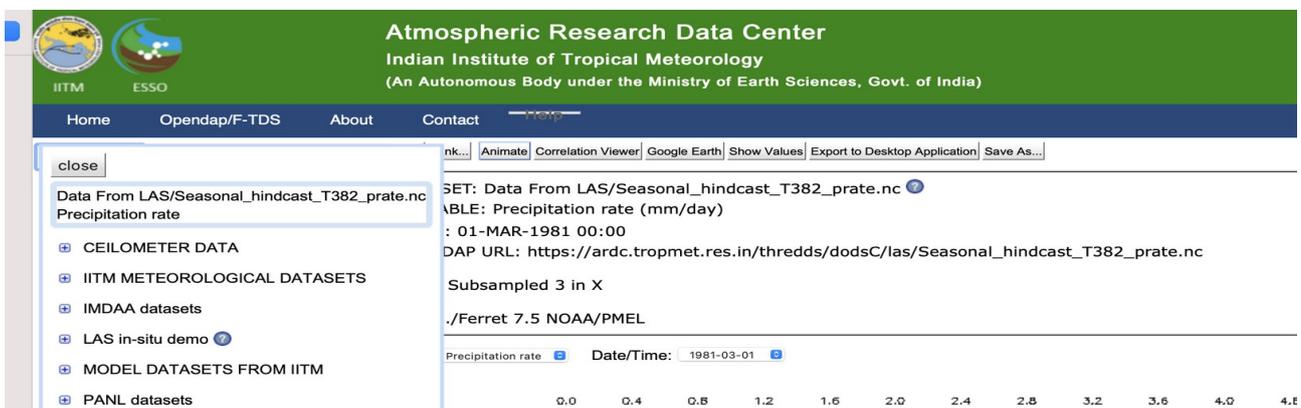
Getting images and data from LAS

Example: Create a 2D xy color plot

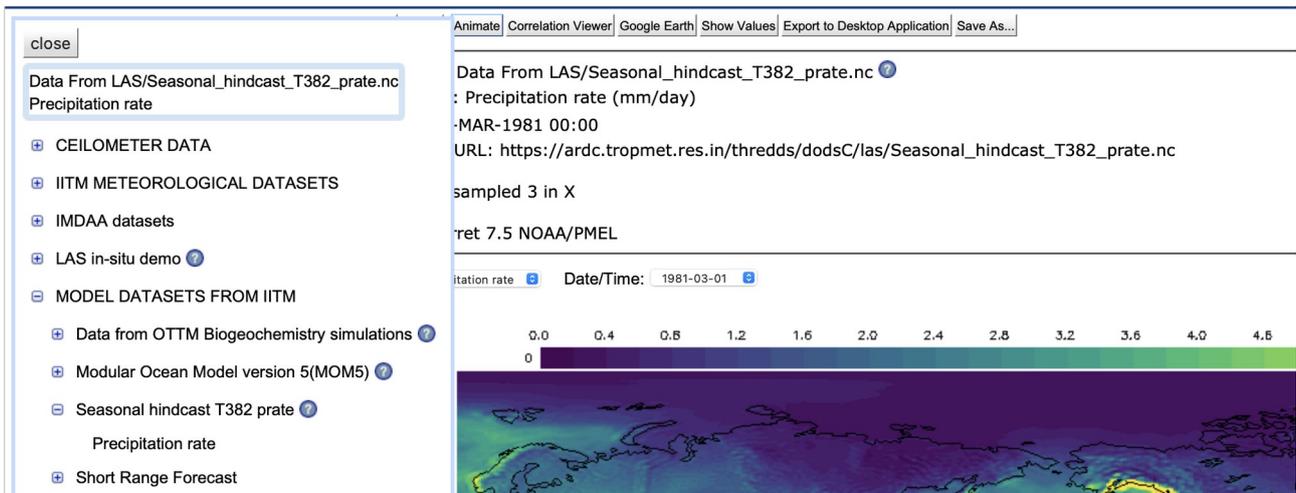
Click on the "Data set" button:



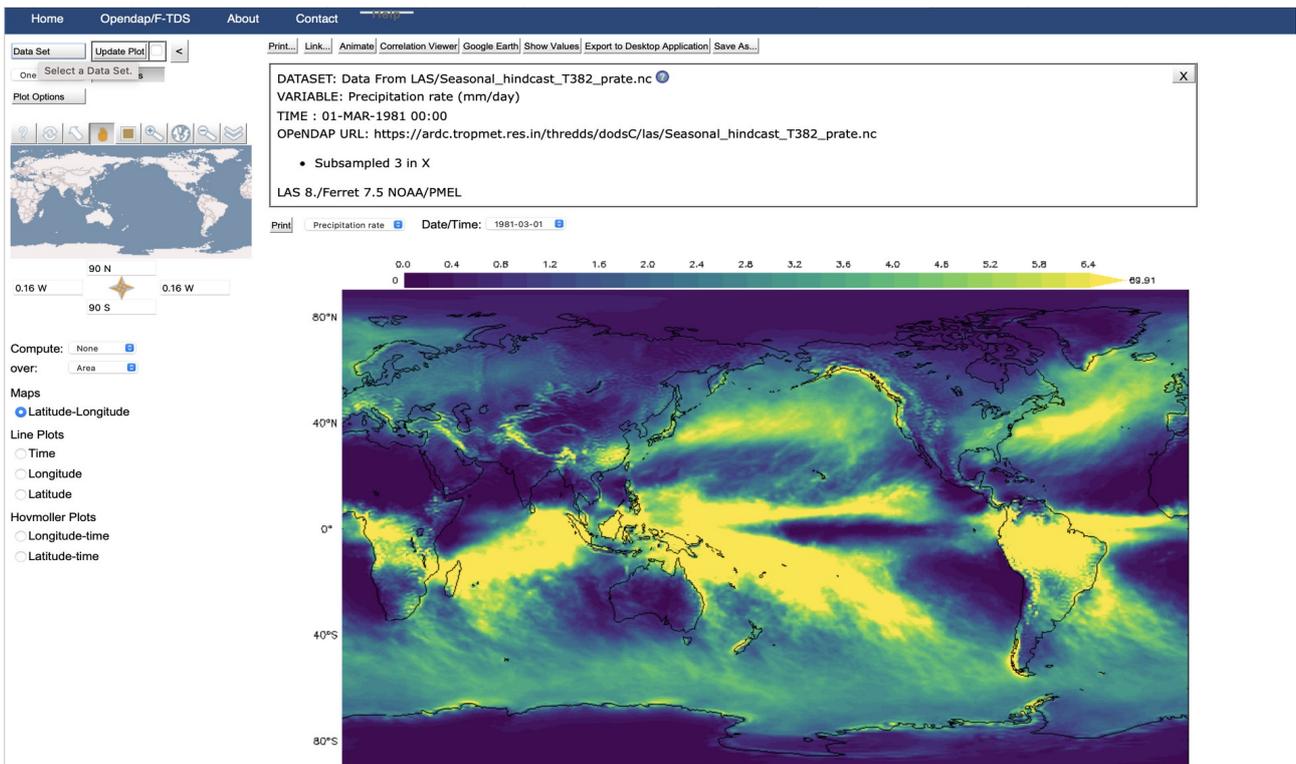
The Dataset selection tree will open.



and then click “MODEL DATASETS FROM IITM” then Seasonal hindcast T382 prate and the precipitation rate.

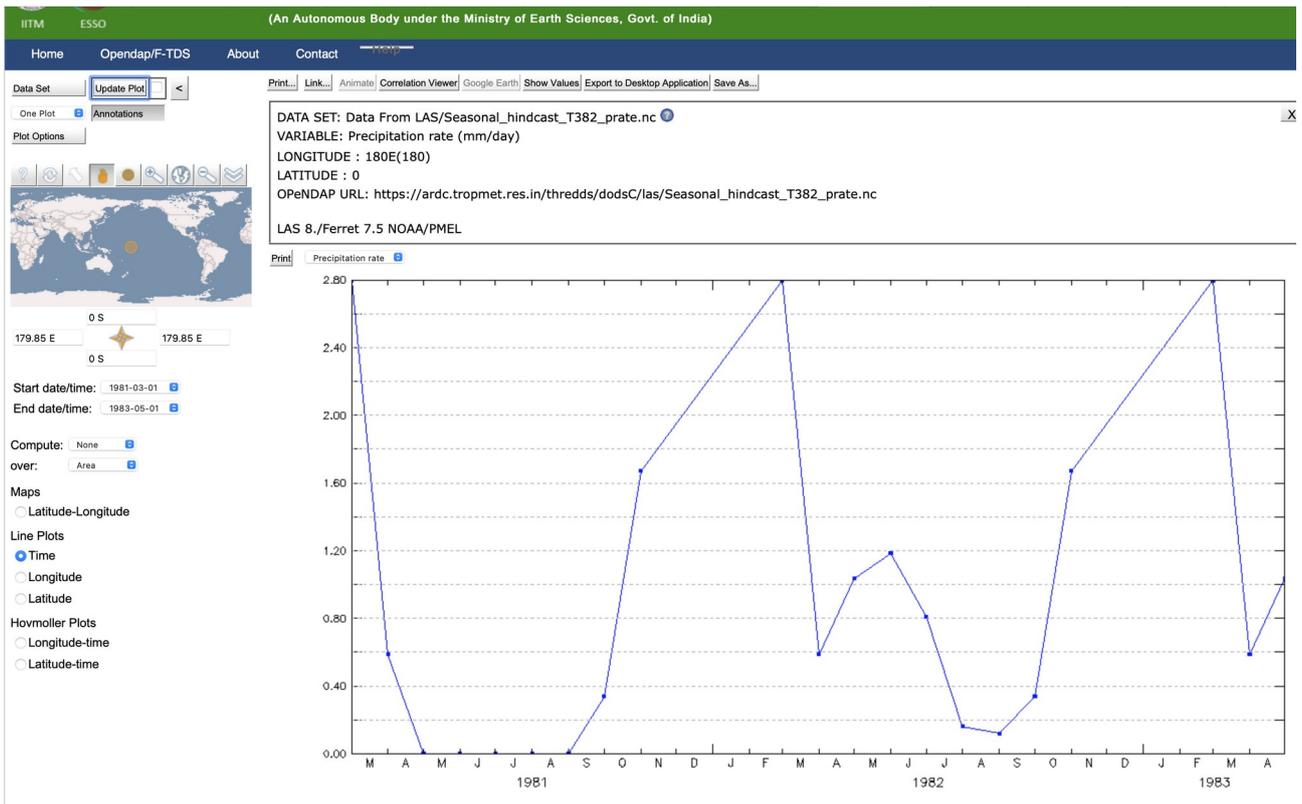


LAS will use your choice of data and variable and create a Latitude-Longitude map by default:



Using the zoom and pan reference map, you may refine the latitude and longitude displayed by the reference map; and using the selection tool the user can change the region selected. Then that region will be used when you update the plot or ask for data.

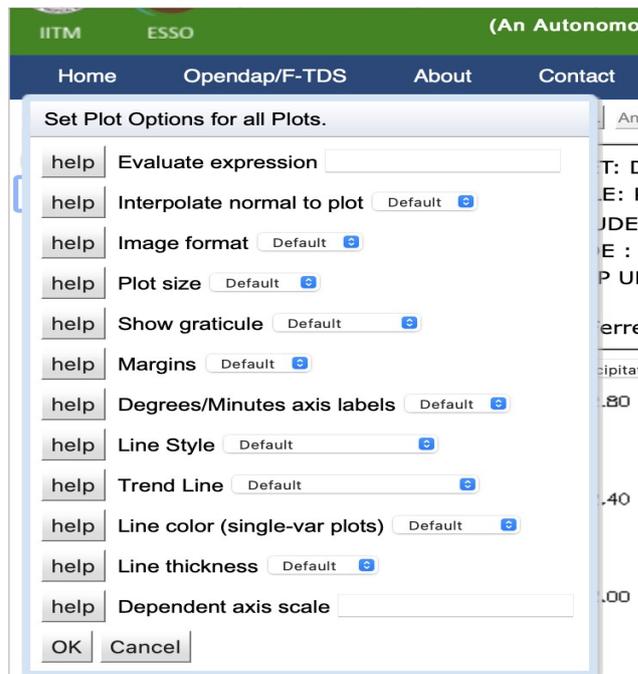
Longitude-latitude images are also interactive. This means that you can click and drag to zoom into a particular region on the image itself. Use the browser's "Back" button to return to earlier plots. You are now free to begin interacting with LAS. For example, clicking "Time" on the left side of the interface will result in this image:

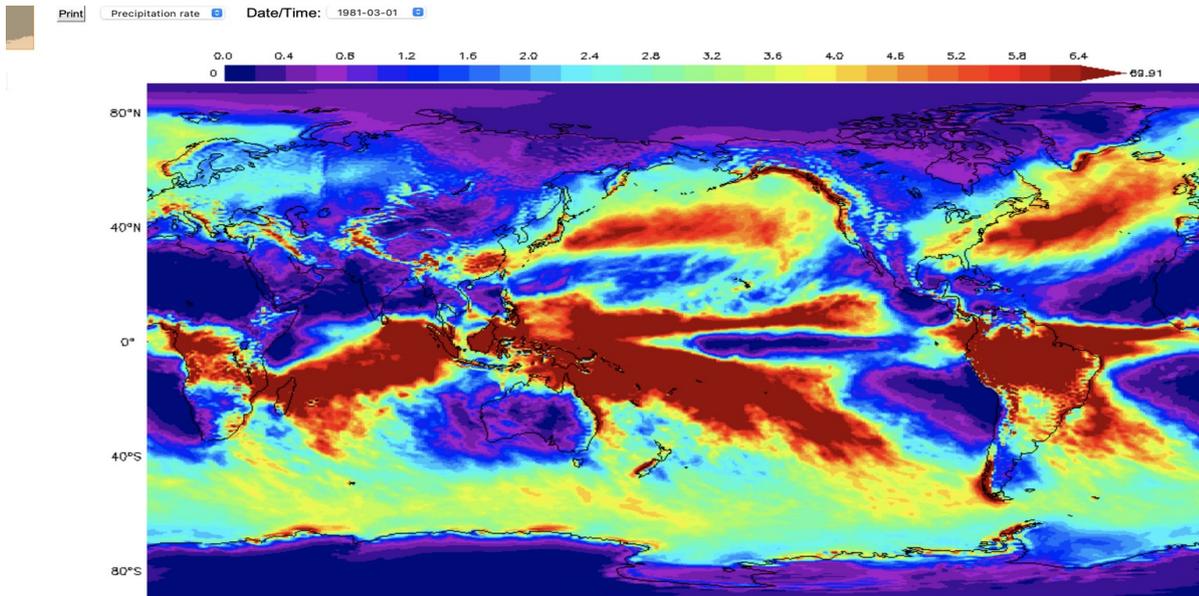


Customizing what you get from LAS

Example: How to modify the default values LAS uses to create an image.

In this example, we will change the specified color palette for our plot.





There are many other options that you can play with, and it's important to note that these options can be "view" specific or possibly even dataset specific.

Animations from LAS

From the v7.1 UI, it is also quite easy for you to view data as an animation or movie. Clicking the "Animation" button will bring up a dialog for you to specify the desired length of the animation.

Viewing and Saving data

Two buttons let you view data values or download data. "Show Values" creates a formatted listing of the currently selected variable, including a header describing the dataset, variable and subset in space and time. After choosing some data, click on "Show Values",

To see the following listing:

```
VARIABLE : Precipitation rate (mm/day)
FILENAME : Seasonal_hindcast_T382_prate.nc
FILEPATH : https://ardc.tropmet.res.in/thredds/dodsC/las/
SUBSET : 1154 by 577 points (LONGITUDE-LATITUDE)
TIME : 01-MAR-1981 00:00
... listing every 12th point
0E 3.74999E 7.49999E 11.24998E 14.99998E 18.74998E 22.49997E 26.24996E 29.99996E 33.74995E 37.49995E 41.24994E 44.99994E 48.74994E 52.49993E 56.24992E 59.99992E
63.74991E 67.49991E 71.2499E 74.9999E 78.74989E 82.49989E 86.24989E 89.99988E 93.74987E 97.49987E
101.24986E104.99986E108.74986E112.49985E116.24984E119.99984E123.74983E127.49982E131.24982E134.99982E138.74982E142.4998E 146.2498E 149.9998E
153.74979E157.49979E161.24979E164.99977E168.74977E172.49977E176.24976E179.99976E183.74976E187.50026W165.00026W161.25027W157.50027W153.75027W150.00029W146.25029W142.50029W138.750
31W135.00031W131.25031W127.50032W123.75032W120.00032W116.25034W112.50034W108.75034W105.00035W101.25037W97.50037W 93.75037W 90.00037W 86.25037W 82.50037W 78.7504W 75.0004W 71.2504W
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433 445 457 469 481 493 505 517 529 541 553 565 577 589 601 613 625 637 649
661 673 685 697 709 721 733 745 757 769 781 793 805 817 829 841 853 865 877
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```

To save data in a file in NetCDF, ASCII, CSV or arcGrid format, use the "Save As" button. This brings up a dialog to select the format of the file to be written, and the range to save in the dimensions not chosen on the main page. In this example, ranges of Time may be chosen.

Specify your data's requirements and then click "Save" to download.

Selected Region:

Longitude range: [-0.155, 359.845]

Latitude range: [-90, 90]

Select a Data Format:

NetCDF

Select Time:

Start date/time: 1981-03-01

End date/time: 1981-03-01

Save

The result will be a file to download.

The remaining button at the top of the User Interface is "Export to Desktop Application". This button shows you a page showing the OPeNDAP URL for the data selected and how it can be opened with Ferret, GrADS, and Matlab to point to the current variable and region in space and time.