

PyTplot Documentation

Release

Laboratory for Atmospheric and Space Physics

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1 Introduction

Pytplot is a python package which aims to mimic the functionality of the IDL "tplot" libraries. The primary routine (tplot) generates HTML files for the specified plots, and automatically opens the files in a Qt interface.

These plots have several user interaction tools built in, such as zooming and panning. They can be exported as standalone HTML files (to retain their interactivity) or as static PNG files.

Pytplot can be used in python scripts, or interactively through IPython and the Jupyter notebook.

1.1 Install Python

You will need the Anaconda distribution of Python 3 in order to run pytplot.

Anaconda comes with a suite of packages that are useful for data science.

1.2 Running PyTplot

To start using pytplot in a similar manner to IDL tplot, start up an interactive environment through the terminal command:

```
ipython
```

or, if you prefer the jupyter interactive notebook:

```
jupyter notebook
```

then, just import the package by typing the command:

```
import pytplot
```

2 Storing Data in Memory

2.1 store_data

2.2 tplot_rename

2.3 del_data

3 Retrieving Data

3.1 get_data

3.2 get_timespan

3.3 get_ylimits

3.4 tplot_names

4 Setting Plot Options

4.1 options

4.2 tplot_options

4.3 timebar

4.4 timespan

4.5 timestamp

4.6 xlim

4.7 ylim

4.8 zlim

5 Plotting Data

5.1 tplot

6 Saving and Restoring Sessions

6.1 tplot_save

6.2 tplot_restore