

PANOPLY TIPS

Open PANOPLY and then open a file such as

e5.moda.an.pl.128_130_t.11025sc.2021010100_2021120100

Double click on U_component Geo2D in the menu

From here you can choose from many different kind of plots. For each different type of plot you will usually need to start again by opening the data file. To make a meridional section click on “Color contour plot”, choosing lat for x axis and isobaric for y axis. Click on create.

In the PANOPLY tool bar under Window click on Plot Controls, where you can select from the following menu:

arrays – choose month 1 – 12

contours – default is fine

grid – customize your grid so that it spans -90 to 90 and 1000 to 1 hPa with log coordinate; to get the x axis labelled nicely you could try %f font and begin with major 2, minor 2, then change major to 18

labels – add a label at the top such as ERA 5 monthly mean temperature; July 2021

layout – default is fine

scale – play with min and max range and with major and minor ticks; it often works well to use multiples of 6 or 12 for the range, such as -120, 120 for U, with 12 and 2 for ticks

vectors – if you open two velocity component files you could use this function

Obtaining data from NCAR’S Research Data Archive

You might like to explore other years of ERA5 data or other data sets.

Navigate to rda.ucar.edu in your browser. Search and click on a data set such as

ERA 5 monthly means ds633.5 (PANOPLY can use GRIB1 or NETCDF)

Click on the web file listing

Choose date and variable

If you click on a filename it will download to your computer, probably to downloads

If you want to click on many files you may want to prompt rda to make a script. To do so click on CREATE unix script using Wget or Python.

Copy the generated script into a unix file using nedit or vi with a name such as script_era5,

make it executable with `chmod a+x script_era5`

then execute it in a terminal window with `./script_era5`

and it will automatically download lots of data files.