

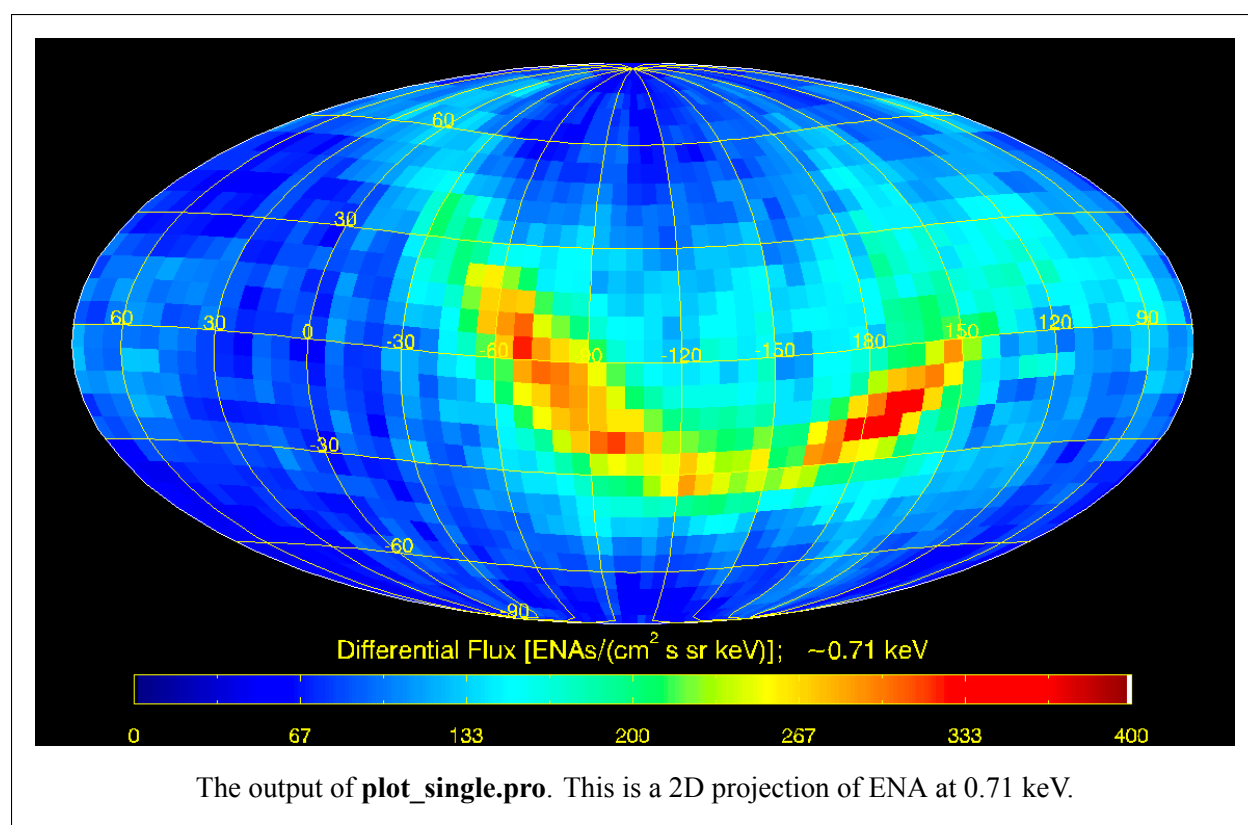
## USER GUIDE FOR IBEX PLOTTING ROUTINES

We provide basic routines in IDL to read and plot IBEX map data.

The main routine is: **plot\_single.pro**. This IDL procedure converts the 2D Energetic Neutral Atoms (ENA) array into a user-defined projection. It calls **read\_ibex\_ena\_skymaps.pro** to read the default ENA map data (e.g., hv60.hide-trp-flux100-hi-2-flux.txt). The main routine requires a few external dependencies listed below.

- **colorbar.pro** which defines and plots a colorbar
- **fsc\_color.pro**, a color brewer for easy color picking and
- **imdisp.pro**, a wrap-up of image viewing.

These files are available in the directory, **external\_routines** in the software package. Below is an example of the output of **plot\_single.pro**.



These IDL routines work well with IDL 8.4 and other versions are not tested. The routine displays the output and does not save into a file. Moreover, the routine is not generalized for all the data nor optimized for all the data ranges. Further, the path to the data (hv\*.txt file) need to be specified in the program or modify the code as required. These are the areas the User needs to pay attention to and modify the code as required. The following **plot\_single.pro** variables may require modification:

- **thispath** - path to data file
- **colorbar\_range** - color bar range
- **e\_value** - energy value
- **map\_file** - data file name (preended by *thispath*)
- **colorbar\_title** - title text