Three Quick Steps to Getting / Plotting EVE Data
Tom Woods, 12/12/12

1) Download the data
Go to the EVE data web page and click on the "Data Link" of the type EVE data product that you need.

http://lasp.colorado.edu/home/eve/data/

After you click on the Data Link, your browser will list a FTP directory listing where the files are sorted by year and then by day of year for the EVE Level 2 products.

The EVE Level 2 products contain the MEGS spectra (EVS_L2*) and extracted emission lines (EVL_L2*) at 10-sec cadence, with each file containing 1 hour of data. The EVE Level 1 product (esp_L1*) contains the EVE broadband data at 0.25-sec cadence, with each file containing 24 hours of data. The EVE Level 3 product (EVE_L3*) is the daily averaged EVE spectra and broadband data; one can download a file per day or the full mission merged Level 3 data set. The space weather products (Level 0CS and Level 0C) are intended for real-time operations and are not recommended for science analysis.

The file name contains the YYYYDOY (year and day of year) and also the starting UT hour for the EVE Level 2 products.

Example file name for EVE L2 spectrum file for 2012/284 for 18-19 UT:
    EVS_L2_2012284_18_002_01.fit   for Version 2.01 file

2) Download the IDL reader software
The FITS file format is used for all of the EVE data products. There are many FITS file readers out there, but we recommend the EVE-specific reader. You can download the eve_read_whole_fits.pro procedure from:

http://lasp.colorado.edu/eve/data_access/software/eve_read_whole_fits.pro

Usage: data = eve_read_whole_fits(filename)
     where   filename is the file name of the EVE product (which can be compressed)
     and   data is the resulting data structure, including metadata

Additional documentation about EVE data products can be downloaded from:
    http://lasp.colorado.edu/home/eve/data/data-access/

3) Use the data (read, plot example)

Read an EVE L2 spectrum file
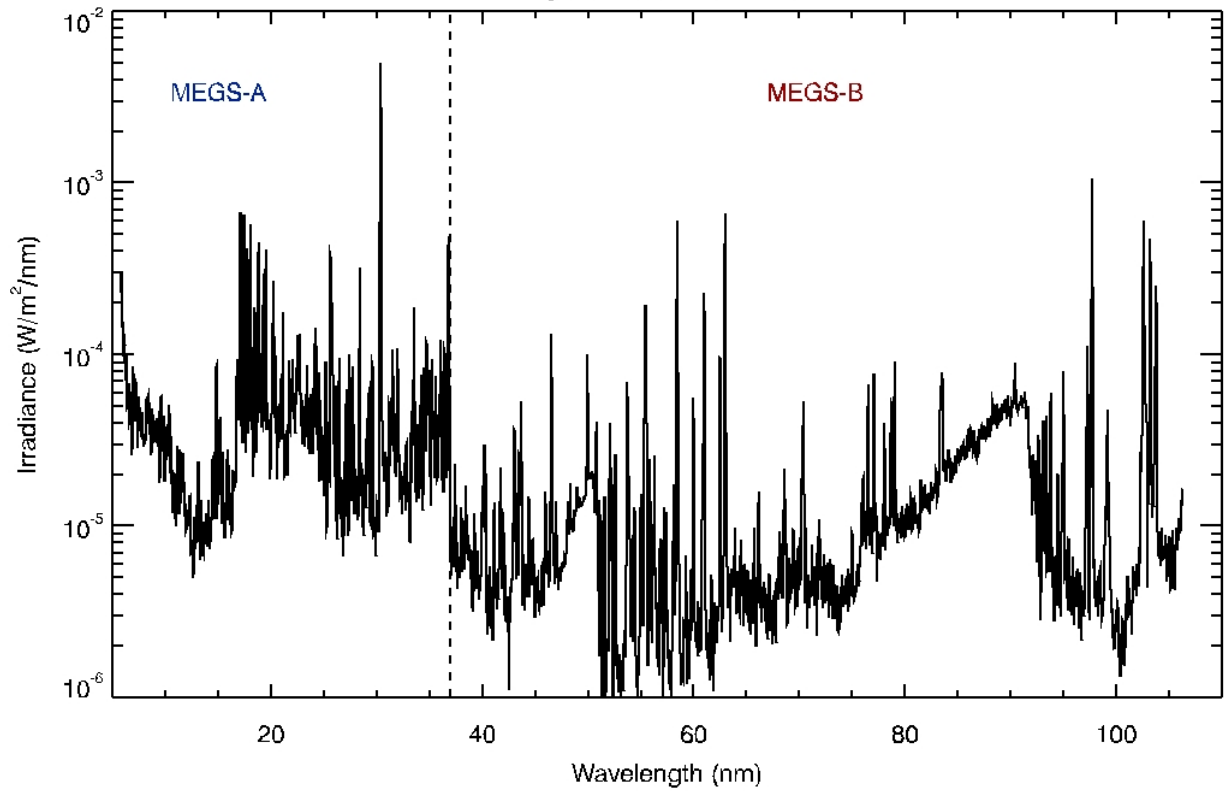IDL> data = eve_read_whole_fits("EVS_L2_2012284_18_002_01.fit")

Plot the first spectrum in file (first find valid data with the where() statement)
IDL> wg = where(data.spectrum[0].irradiance gt 0)
IDL> plot_io, data.spectrummeta[wg].wavelength, data.spectrum[0].irradiance[wg], xtitle="Wavelength (nm)", ytitle="Irradiance (W/m!U2!N/nm)"

Example Plot of EVE Level 2 Spectrum (Version 3)

Day 2010/125 at 18 UT