Three Quick Steps to Getting / Plotting EVE Data
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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 0C5 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:
```idl```
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/m²U²N/nm)"
Example Plot of EVE Level 2 Spectrum (Version 3)

Day 2010/125 at 18 UT

MEGS-A

MEGS-B

Irradiance (W/m²/nm)

Wavelength (nm)