
Subject: Re: Spectral Library Resampling Help!
Posted by [Peter Mason](#) on Tue, 14 Dec 1999 08:00:00 GMT
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"Kent Krumvieda" <kentkr@datafusion.com> wrote:

- > I am trying to use ENVI's Spectral Library Resampling ability. I
- > want to resample the usgs spectral libraries to AVIRIS. Has anyone
- > ever done this?
- > Can someone help me on this.

Hi Kent,

First you need the AVIRIS bandpass centre wavelengths and gaussian FWHMs. These are included in the third file of a standard AVIRIS distribution tape. (This is a binary file with 5 columns for each of the 224 channels. You need the first 2 columns here. It's floating point data, big-endian, and there's a 1000-byte header.) You need to write a 2-column ASCII file with these data. Here's a bit of code that should do it.

```
Junk=bytarr(1000)
Stuff=fltarr(5,224)
Openr,u,'third_file',/get_lun,/swap_if_little_endian
Readu,u,junk,stuff
Free_lun,u
stuff=stuff[0:1,]*0.001 ;go nm->um
openw,u,'aviris92.txt',/get_lun
printf,u,stuff
free_lun,u
```

Then, in ENVI, go Spectral Tools -> Spectral Libraries - > Spectral Library Resampling. Select the USGS speclib. (Note, BTW, that its wavelength units are micrometers.) In the next dialog tell it to resample wavelengths to "input ASCII file". After you click OK here, you'll get a pickfile dialog to select the ASCII file (the AVIRIS wavelength file you made earlier), and then you'll get a little dialog asking which column has what. Tell it wavelengths in column 1, FWHM in column 2. That's about it.

The only tricky bit is matching wavelength units. ENVI doesn't record wavelength units anywhere so it's entirely up to you to keep track. The simplest solution is to standardise if possible.

Good luck,
cheers
Peter Mason

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