Subject: question: IDL for incorporating text files in hyperspectral band math
Posted by jo on Tue, 19 Feb 2008 23:03:18 GMT
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Hello all,
I am a masters student working with hyperspectral imagery for benthic mapping. I am also a fresh beginner at IDL and have found myself at a wall for hyperspectral image processing in ENVI.

I am trying to perform a sun glint correction of a water surface in a hyperspectral (AISA) image. From the DN value of each visible band in each pixel, I must subtract the product of a coefficient (which is already calculated), and the DN of a single NIR band.

So again, in a single pixel: DNvis - (coefficient x DNnir) for all vis bands. Calculate for all pixels.

Obviously the vis and NIR DN values are contained within the hyperspectral image, but the coefficients are stored in a text file as a single column containing one coefficient for each of approx 400 bands. I know that the ENVI band math can be used for mathematics between 2 images of the same spatial and spectral dimension, but the issue is the intermediate step: getting ENVI to read the text file and apply one coefficient at a time to the NIR image. I need to use IDL for this, but have little experience with the script.

Could anybody offer some direction on this issue, or maybe somebody has already written a simple script that they wouldn't mind sharing for applying a text file to an image?

Thank-you in advance for your time!
Jenn

Subject: Re: question: IDL for incorporating text files in hyperspectral band math
Posted by wita on Thu, 21 Feb 2008 20:48:15 GMT
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Hi Jenn,

What you want to do seems a bit too complicated to perform in ENVI bandmath which was designed for relatively simple band operations. I would suggest to use ENVI's routines (ENVI_OPEN_FILE, ENVI_GET_SLICE, etc) to do the operations you want to do. This is a bit more work, but gives you much more flexibility in return. I can send you an example of how to do this later on; can't get to my IDL library from home right now.