Subject: Re: How to read ASTER in ENVI?
Posted by Mort Canty on Mon, 27 Aug 2007 11:37:57 GMT
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highstone schrieb:
> hello, I have a secen ASTER data named as "pg-

> other files that have the same filename with suffix such as ".met",
> and so on. When I read it by ENVI from "file----open image file" or
> "file ----open external file---eos---aster", all the bands can be
> showed in "available bands", and the DN of VIR band is float type and
> more than 1, which shows it is not reflectance. I want to know how to
> get the reflectance for visible or infrared bands and the radiance for
> Tir of such ASTER data in ENVI or ERDAS? please help me, thank you.
>

From the filename, I believe that you are looking at an ASTER image from 2003 processed to Level 1B: registered radiance at the sensor. See

http://lpdaac.usgs.gov/aster/ast_l1b.asp

That meaans that the float data are in units of
watts/meter^2/steradian/micrometer

In order to get ground reflectance you would either have to apply atmospheric correction yourself (e.g. with ENVI's FLAASH Addon) or order the corresponding product from LPDAAC.

-Mort

Subject: Re: How to read ASTER in ENVI?
Posted by Jeff N. on Mon, 27 Aug 2007 14:25:06 GMT
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On Aug 27, 3:21 am, highstone <gaolei...@gmail.com> wrote:
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Just as an FYI: just b/c your data have values greater than 1 does not necessarily mean you don't have reflectance data. FLAASH, for

example, commonly outputs "scaled reflectance" data, which is
reflectance x some scale factor (you choose it, but 10,000 is
common). But I think Mort's right about your data being radiance data
in this case.

Jeff

Subject: Re: How to read ASTER in ENVI?
Posted by James Kuyper on Mon, 27 Aug 2007 14:51:51 GMT
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Jeff N. wrote:
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> in this case.

MODIS L1B reflectances are also scaled. However, even after the
appropriate scale and offset are applied, the reflectances can still
be both greater than 1.0 or less than 0.0. They can be greater than
1.0 due to specular reflection like sunglint on the oceans being
analyzed as if it were diffuse reflection. They can be less than 0.0
due to background subtraction and statistical fluctuations in the
detected photon counts in very dim scenes - in such scenes, you should
include the negative values in averages over larger regions; otherwise
the average will be biased to the high side.
