Subject: Re: reading envi file in IDL
Posted by Jeff N. on Thu, 23 Aug 2007 17:48:43 GMT
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On Aug 23, 12:09 pm, robinson....@gmail.com wrote:
> Dear All,
> I created a file using ENVI and its header file is below. Does
> somebody could show me how to read that file in IDL?
> In advance thank you very much
> Robinson Juarez
>
> ==========
> ENVI
> description = {
> File Resize Result, x resize factor: 1.000000, y resize factor:
> 1.000000.
> [Wed Aug 22 10:02:17 2007]}
> samples = 400
> lines = 400
> bands = 5
> header offset = 0
> file compression = 1
> file type = ENVI Standard
> data type = 4
> interleave = bsq
> sensor type = Unknown
> byte order = 0
> x start = 1323
> y start = 714
> map info = {UTM, 1.000, 1.000, 694231.500, 9759973.000, 2.8500000000e
> +001, 2.8500000000e+001, 20, South, WGS-84, units=Meters}
> wavelength units = Unknown
> band names = {
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> 1152):MAO20071001_test1.em),
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> 928):MAO20071001_test1.em),
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> 4199):MAO20071001_test1.em),
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> 2415):MAO20071001_test1.em),
> Resize (RMS Error:MAO20071001_test1.em)}
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Well, if you look at the ENVI help files you'll see what all these
header values mean. The dimensions of the image are the samples,
lines, and bands. The bsq interleave tells you that the dimensions
are (400,400,5). The data type of 4 means float data (i'm pretty

sure, double check this). Header offset = 0 means the binary file is all data, no header bytes.

So, in this case it would normally boil down to a simple readu:

```
img = fltarr(400,400,5)
openr, lun, image_file_name, /get_lun
readu, lun, img
free_lun, lun
```

I say it *would* boil down to the code above b/c i've never seen the "file compression = 1" line in an envi header. If the file is compressed you're going to have to deal with the compression, however that was done.

Also check to make sure the byte order matches your machine (if you created the image file on the same machine you're reading it with, it shouldn't be an issue).

Hope that helps,
Jeff

Subject: Re: reading envi file in IDL
Posted by Jean H. on Thu, 23 Aug 2007 17:49:17 GMT
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Robin,

if you just have this one file, you can do:

```
data = read_binary('c:\test\yourFile',data_Start = 0,data_Type=4,
data_Dims=[400,400,5])
```

From the top of my head, I can't remember where/how to specify the band interleave.... though in your case you have the default option, so it would work!

If you have other files, I can send you/here a function that, with the help of ENVI, opens the file and return the header info in a structure...

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> 2415):MAO20071001_test1.em),
> Resize (RMS Error:MAO20071001_test1.em)}
> ========== ======
>

Subject: Re: reading envi file in IDL
Posted by robinson.inj on Thu, 23 Aug 2007 17:55:22 GMT
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On Aug 23, 10:48 am, "Jeff N." <jnett...@utk.edu> wrote:
> On Aug 23, 12:09 pm, robinson....@gmail.com wrote:
>
>
>
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> all data, no header bytes.
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> So, in this case it would normally boil down to a simple readu:
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> readu, lun, img
> free_lun, lun
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> I say it *would* boil down to the code above b/c i've never seen the
> "file compression = 1" line in an envi header. If the file is
> compressed you're going to have to deal with the compression, however
> that was done.
>
> Also check to make sure the byte order matches your machine (if you
> created the image file on the same machine you're reading it with, it
> shouldn't be an issue).
>
> Hope that helps,
> Jeff

Jeff, I tried that before post my ad., but did not work.
Robinson

Subject: Re: reading envi file in IDL
Posted by robinson.inj on Thu, 23 Aug 2007 18:14:36 GMT
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Hi Jean, thanks for your assistance. I got this error:
Error occurred at: READ_BINARY 132 C:\RSI\IDL63\lib
\read_binary.pro
Robinson

On Aug 23, 10:49 am, "Jean H." <jghas...@DELTHIS.ucalgary.ANDTHIS.ca>
wrote:
> Robin,
>
> if you just have this one file, you can do:
>
> data = read_binary('c:\test\yourFile',data_Start = 0,data_Type=4,
> data_Dims=[400,400,5])
>
> From the top of my head, I can't remember where/how to specify the band
> interleave.... though in your case you have the default option, so it
> would work!
>
> If you have other files, I can send you/here a function that, with the
> help of ENVI, opens the file and return the header info in a structure...
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> Jean

>
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>> data type = 4
>> interleave = bsq
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>> map info = {UTM, 1.000, 1.000, 694231.500, 9759973.000, 2.8500000000e
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>> ========== ======

Subject: Re: reading envi file in IDL
Posted by Jeff N. on Thu, 23 Aug 2007 19:29:26 GMT
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On Aug 23, 2:14 pm, robinson....@gmail.com wrote:
> Hi Jean, thanks for your assistance. I got this error:
> Error occurred at: READ_BINARY 132 C:\RSI\IDL63\lib

> \read_binary.pro
> Robinson
>
> On Aug 23, 10:49 am, "Jean H." <jghas...@DELTHIS.ucalgary.ANDTHIS.ca>
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>
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>> From the top of my head, I can't remember where/how to specify the band
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I really think you need to figure out what's going on with the file
compression issue. The code I posted for you will work for normal
(uncompressed) envi images - i've used code like this many, many, many
times myself.

Jeff

Subject: Re: reading envi file in IDL
Posted by Michael Galloy on Thu, 23 Aug 2007 19:46:14 GMT
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On Aug 23, 11:55 am, robinson....@gmail.com wrote:
> Jeff, I tried that before post my ad., but did not work.
> Robinson

This is basically a guess, but try:

```
im = fltarr(400, 400, 5)
openr, lun, filename, /get_lun, /compress, /swap_if_big_endian
readu, lun, im
free_lun, lun
```

Besides the compression, I think everything is correct. My guess is to
just try the COMPRESS keyword and hope it works. I don't have a data
file to try this on, so let me know what happens.

Mike
--
www.michaelgalloy.com

Subject: Re: reading envi file in IDL
Posted by robinson.inj on Thu, 23 Aug 2007 20:09:42 GMT

On Aug 23, 12:29 pm, "Jeff N." <jnett...@utk.edu> wrote:
> On Aug 23, 2:14 pm, robinson....@gmail.com wrote:
>
>
>
>> Hi Jean, thanks for your assistance. I got this error:
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>
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>>>> data type = 4
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> (uncompressed) envi images - i've used code like this many, many, many
> times myself.
>
> Jeff

Jeff, you were right. The "file compression =1" was the issue. The /
Compress keyword in the opening procedure solved the problem.
Robinson

Subject: Re: reading envi file in IDL
Posted by robinson.inj on Thu, 23 Aug 2007 20:16:02 GMT
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Thank you very much Mike. That works
Robinson

On Aug 23, 12:46 pm, "mgal...@gmail.com" <mgal...@gmail.com> wrote:
> On Aug 23, 11:55 am, robinson....@gmail.com wrote:
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> Mike
> --www.michaelgalloy.com

Subject: Re: reading envi file in IDL
Posted by Jeff N. on Thu, 23 Aug 2007 20:26:40 GMT
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>> times myself.
>
>> Jeff
>

> Jeff, you were right. The "file compression =1" was the issue. The /
> Compress keyword in the opening procedure solved the problem.
> Robinson

Good deal...i was puzzled by that compression setting, i'd never heard of it being done before. Glad you got it worked out!

Jeff
