
Subject: Re: Read particular band from air temperature image among MOD07 air products

Posted by [David Fanning](#) on Fri, 15 Jun 2007 18:15:11 GMT

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DirtyHarry writes:

> Goodday, Everyone! I would like to ask how to process MODIS 07 air
> product.

> In my opinion, there must be something wrong at this line shown
> below...

>
> "image =3D bytarr(ns, nl, nb)"

>
> However, I don't know how to solve this problem... I tried read_jpg,
> and read_gif instead of bytarr, but all of these trials were not so
> successful.

>
> Please give me any suggestions.

I think the problem might have occurred earlier, when you assumed satellite data would be packaged in a form that is easily digested by IDL.

My suggestion would be to get onto a MODIS web page and spend a few minutes reading about their data products. Who knows what useful information might turn up!

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Read particular band from air temperature image among MOD07 air products

Posted by [Jeff N.](#) on Fri, 15 Jun 2007 18:26:34 GMT

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On Jun 15, 2:00 pm, DirtyHarry <kim20...@gmail.com> wrote:

> Goodday, Everyone! I would like to ask how to process MODIS 07 air
> product.

>
> I am working on 3D-MOD07 image. As most of you may know, the dimension
> of this file is, at least in my knowledge....
>

>
> In order to get the map of band20, I wrote a source code below, but
> this procedure is not working properly.

>
> -----
> pro test
> close, /all
> ns = 270
> nl = 406
> nb = 20
> file = 'MOD072003001.0130_Ta_5km.img'
> openr, 1, file
>
> image = bytarr(ns, nl, nb)
> readu, 1, image
> close, 1
>
> tvscl, image(*, *, 19)
>
> end

>
> -----
> In my opinion, there must be something wrong at this line shown
> below...
>
> "image = bytarr(ns, nl, nb)"
>
> However, I don't know how to solve this problem... I tried read_jpg,
> and read_gif instead of bytarr, but all of these trials were not so
> successful.
>
> Please give me any suggestions. Thanks.
>
> Harry

At the very least, you also need to know the file's interleave, so
that you can make sure you are reading the data into memory in the
correct order.

Jeff

Subject: Re: Read particular band from air temperature image among MOD07 air products

Posted by [James Kuyper](#) on Fri, 15 Jun 2007 20:38:12 GMT

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DirtyHarry wrote:

> Goodday, Everyone! I would like to ask how to process MODIS 07 air
> product.
>
> I am working on 3D-MOD07 image. As most of you may know, the dimension
> of this file is, at least in my knowledge....
>

>
> In order to get the map of band20, I wrote a source code below, but
> this procedure is not working properly.

>
> -----
> pro test
> close, /all
> ns = 270
> nl = 406
> nb = 20
> file = 'MOD072003001.0130_Ta_5km.img'
> openr, 1, file
>
> image = bytarr(ns, nl, nb)
> readu, 1, image
> close, 1
>
> tvscl, image(*, *, 19)
>
> end

>
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> In my opinion, there must be something wrong at this line shown
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>
> "image = bytarr(ns, nl, nb)"
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> However, I don't know how to solve this problem... I tried read_jpg,
> and read_gif instead of bytarr, but all of these trials were not so
> successful.

Like all MODIS products, MOD07 is in HDF-EOS format, which is built on top of HDF. IDL provides wrappers for all of the HDF and HDF-EOS library functions, and you should be using those routines to read this file. It's format is laid out at <http://modis-atmos.gsfc.nasa.gov/MOD07_L2/format.html>. You'll see that it's far more complicated than

just a simple multi-dimensional array of a single data type.
