Subject: Re: Fill value problem in MODIS Processing...
Posted by David Fanning on Tue, 26 Jun 2007 20:24:56 GMT

DirtyHarry writes:

> Three weeks have passed since I faced this problem. I thought I could
> solve this problem by myself at first. I checked the source codes ->
> there was no problem. IDL/ENVI has been running perfectly...
> Therefore, I thought this problems was just nothing, but I got stuck
> for over 20 days... I believe it is time to listen to your
> suggestions.
>
> Is there anyone who experienced similar problem like this? Please give
> me any comments or suggestions.

If the program ran perfectly, then I think you can
assume the results are valid. It sounds as though
you don't think the results are valid. In that case,
I think I would start by re-evaluating my assumption
that a program that runs without errors runs "perfectly". :-)

Cheers,

David

"When you have eliminated all which is impossible, then whatever
remains, however improbable, must be the truth." -- Sherlock Holmes

--
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: Fill value problem in MODIS Processing...
Posted by MarioIncandenza on Wed, 27 Jun 2007 01:02:20 GMT

> I am currently retrieving aerosole optical thickness from MODIS04
> Aerosole product of 2003 (Level 2, collection 4, and bands of 470,
> 550, and 660 nm).
>
> There are 702 *.hdf files in 2003 and I processed these in a batch
> mode. After I ran IDL/ENVI with these data and opened the output
> file, I found about 550 of 702 lines were processed into fill value
> (-9999.99), 120 lines were N/I ("not included in the swath"). Only 30

> lines were reasonable values.

Hi Harry,

I have done a lot with MOD04_L2 files in IDL, and maybe I can help. I have some questions:

1) MOD04 Level 2, like all MODIS L2 products, is chopped into 5-minute granules, 288 per day. Thus 720 files is not quite 3 days of data. How are your 720 files selected?

2) What is your processing doing that it returns one value from each granule? The most obvious guess is that it is looking for a specific XY location in each granule. If so, your 4% rate of return might not be unreasonable, again depending on how the 720 files you are picking through were selected.

I have a routine for X|Y|T extraction of data from MOD04 files. If you have some proficiency with IDL, it can probably be adapted to your purposes, if you are interested.

Escape the common block!

--Edward H.

Subject: Re: Fill value problem in MODIS Processing...
Posted by kim20026 on Wed, 27 Jun 2007 01:55:29 GMT
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Yes, you are right!!!

IDL is not running perfectly in my case, but just running without errors.

Running 'perfectly' can be totaly different from running 'without errors'!

However, it is really hard to find the solution. No warnings, no error messages.

I feel like I am in a miry clay. Please get me out of this SWAMP...
(T.T)

Harry

Subject: Re: Fill value problem in MODIS Processing...
Posted by kim20026 on Wed, 27 Jun 2007 02:47:39 GMT
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Thank you Edward!!!

1) Sorry. Maybe the explanation for my data was not yet enough. My
mother tongue is not English, and sometimes I couldn't explain my
situation in detail. I will try one more time.

I am gathering various MODIS products overpassed near Korean peninsula
in 2003. the overpassing times of *.hdf files for this simulation are
as follows.

MOD04_L2.A2003001.0130.004.2003003124125.hdf
MOD04_L2.A2003001.0310.004.2003003134137.hdf
MOD04_L2.A2003002.0215.004.2003004030912.hdf
MOD04_L2.A2003003.0255.004.2003004220310.hdf
MOD04_L2.A2003003.0300.004.2003004220446.hdf
MOD04_L2.A2003004.0200.004.2003007020309.hdf
MOD04_L2.A2003004.0205.004.2003007020344.hdf
MOD04_L2.A2003004.0340.004.2003007023517.hdf
.
.
.
MOD04_L2.A2003360.0320.004.2003363162437.hdf
MOD04_L2.A2003361.0220.004.2003365003530.hdf
MOD04_L2.A2003362.0125.004.2003365190426.hdf
MOD04_L2.A2003362.0305.004.2003365213001.hdf
MOD04_L2.A2003363.0210.004.2004001173223.hdf
MOD04_L2.A2003363.0345.004.2004001183040.hdf
MOD04_L2.A2003364.0250.004.2004003030204.hdf
MOD04_L2.A2003364.0255.004.2004003030444.hdf

 As you can see, Terra overpassed near Korean peninsula sometimes
once, sometimes twice, sometimes three times a day in 2003. In
addition, I found some missing days, but I don't know why. Anyway, the
number of *.hdf files used for this simulation was 702. If you have
something not clear in my data explanation, please let me know. Then I
will explain in Korean!! (Just kidding! ^.^).

2) What I am trying to obtain from MOD04 are aerosole optical
thickness at three different wavelength (470, 550, 660 nm) for one
year 2003. That's all I need at this point. To do this, I am making
image files for every *.hdf files, and then getting these AOT data
from appr. 70 points in those images.

* If you can give me your routine, it will greatly helpful for me to
get out of this SWAMP!

Thanks, again!!!

Harry

Subject: Re: Fill value problem in MODIS Processing...
Posted by James Kuyper on Wed, 27 Jun 2007 15:35:14 GMT
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DirtyHarry wrote:
...
> As you can see, Terra overpassed near Korean peninsula sometimes
> once, sometimes twice, sometimes three times a day in 2003. In
> addition, I found some missing days, but I don't know why. Anyway, the

Korea is far enough north that, under normal conditions there should
be at least one MODIS day-mode overpass every single day. However,
< http://modaps.nascom.nasa.gov/services/production/outages_te rra.html>
lists a number of times in 2003 when conditions were not normal. Have
you seen any gaps not mentioned in that list?

Subject: Re: Fill value problem in MODIS Processing...
Posted by James Kuyper on Wed, 27 Jun 2007 17:22:52 GMT
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I should have mentioned this in my earlier message, but I didn't think
about it:

DirtyHarry wrote:
> I am gathering various MODIS products overpassed near Korean peninsula
> in 2003. the overpassing times of *.hdf files for this simulation are
> as follows.
...
> MOD04_L2.A2003004.0200.004.2003007020309.hdf
> MOD04_L2.A2003004.0205.004.2003007020344.hdf
> MOD04_L2.A2003004.0340.004.2003007023517.hdf

You must have used a large search region; the 03:40 file doesn't
really cover Korea, though it comes close: <http://
 ladsweb.nascom.nasa.gov/browse_images/high.html?fileID=45787 585 >.

...
> As you can see, Terra overpassed near Korean peninsula sometimes
> once, sometimes twice, sometimes three times a day in 2003. In
> addition, ...

Korea is far enough north that there will occasionally be two different orbits in which Terra MODIS day-mode data is available. Therefore, if the break between 5-minute granules in each orbit happens to occur while flying sufficiently near Korea, you could get as many as four granules of data in one day.