

---

Subject: Re: Image reading

Posted by [Helder Marchetto](#) on Mon, 10 Dec 2012 10:41:15 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

On Monday, December 10, 2012 11:31:10 AM UTC+1, Dry in water wrote:

> Hello all,

>

> I'm really having a hard time reading tif images. I have extracted a tif image using ENVI software. Then I import this really huge tif image (4526,12879,7) into IDL using 2 different ways; The one I used is importwizard to import this image into IDL as a variable. In this case, the following info are displayed on the locals window. The type of image is STRUCT, value is ANONYMOUS. What does this info tell me? Does it mean this image didn't read?

>

> The other one is to use read\_tif command. In this case, I get "variable is undefined: READ\_TIF. Execution halted at: \$MAIN\$". Then I checked the file exists in a folder by file\_test command like this, ok=file\_test('D:\tmp\temp\_opp\tmp\_exam.tif'). It gave me 1. It exists in a folder. So what is the problem? Variable is undefined.

>

> Thank you very much

There are two things you should try:

1) use Read\_tiff instead of Read\_tif (two "f"s)

2) Try the Query command:

Result = QUERY\_TIFF ( Filename [, Info] [, GEOTIFF=variable] [, IMAGE\_INDEX=index] )

Check then the content of the Info variable. One would guess that if you don't get a positive result from Query\_tiff, you will not be able to use Read\_tiff

Regards,  
Helder

---

---

Subject: Re: Image reading

Posted by [Dry in water](#) on Mon, 10 Dec 2012 12:24:34 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

> There are two things you should try:

>

> 1) use Read\_tiff instead of Read\_tif (two "f"s)

>

>

>

> 2) Try the Query command:

>

> Result = QUERY\_TIFF ( Filename [, Info] [, GEOTIFF=variable] [, IMAGE\_INDEX=index] )

>

> Check then the content of the Info variable. One would guess that if you don't get a positive result from Query\_tiff, you will not be able to use Read\_tiff

>  
>  
>  
> Regards,  
>  
> Helder

firstly, I tried first method you said. Output was "READ\_TIFF: D:\tmp\temp\_opp\temp\_exam.tiff:  
Cannot open  
% Execution halted at: \$MAIN\$

Secondly, when I tried your second suggestion. Description of output (info, variable, index) were all undefined. And 'result' type is LONG and value is 0.

I tried to extract tiff images from different softwares again and again. It is so strange all tiff images cannot be read in IDL.

---

Subject: Re: Image reading  
Posted by [Dry in water](#) on Mon, 10 Dec 2012 12:25:43 GMT  
[View Forum Message](#) <> [Reply to Message](#)

Do you have any suggestion for file format?

---

Subject: Re: Image reading  
Posted by [Helder Marchetto](#) on Mon, 10 Dec 2012 12:37:55 GMT  
[View Forum Message](#) <> [Reply to Message](#)

On Monday, December 10, 2012 1:25:43 PM UTC+1, Dry in water wrote:  
> Do you have any suggestion for file format?

I never had trouble with reading tif files as long as I was sure that these were tif files. If Query\_tiff gives zero, then the file type is not a Tiff or cannot be read by IDL.  
Just a guess... the support for BigTIFF files was added to IDL in Version 8.2. What version of IDL do you have?

Use  
print, !version  
to find out and you should get something like  
{ x86\_64 Win32 Windows Microsoft Windows 8.2.1 Aug 20 2012 64 64}

Do you know "how" the file was produced? With which command and version was it produced?

Regards,  
Helder

Subject: Re: Image reading  
Posted by [Dry in water](#) on Mon, 10 Dec 2012 13:24:07 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

IDL version on my PC is following  
{ x86\_64 Win32 Windows Microsoft Windows 6.3 Mar 23 2006 64 64}

This is a temperature image. I have set of point data with coordinate information. Second, I did interpolation in ARCGIS to produce raster image covering whole study area. Third, as I said, I export it into raster image by setting the same cell size with other image that I have. Fourth, I subsetting this image using country boundary shapefile to eliminate other area except study area. Then I want to read this image in IDL. Because tiff is a main file format of ARCGIS. I tried to produce tiff image that can be read in IDL using other 2 programm which were ENVI and ERDAS. Results were same cannot be read.

---

Subject: Re: Image reading  
Posted by [Helder Marchetto](#) on Mon, 10 Dec 2012 14:22:17 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

On Monday, December 10, 2012 2:24:07 PM UTC+1, Dry in water wrote:

> IDL version on my PC is following  
>  
> { x86\_64 Win32 Windows Microsoft Windows 6.3 Mar 23 2006 64 64}  
>  
>  
>

> This is a temperature image. I have set of point data with coordinate information. Second, I did interpolation in ARCGIS to produce raster image covering whole study area. Third, as I said, I export it into raster image by setting the same cell size with other image that I have. Fourth, I subsetting this image using country boundary shapefile to eliminate other area except study area. Then I want to read this image in IDL. Because tiff is a main file format of ARCGIS. I tried to produce tiff image that can be read in IDL using other 2 programm which were ENVI and ERDAS. Results were same cannot be read.

Hi,  
you might have to wait for some experts or some Tiff-experienced users to answer your question. My guess would be that if you cannot query the file, you cannot read the file. I never had problems importing tiff. I did this for 8-bit and 16-bit images, for black and white and for 24 color images.

Do you have any idea what type of data you have in the image?  
How big is your image? About 380 Mb or 740 Mb?  
Do you have enough free RAM to read that much data?  
Have you tried using the SUB\_RECT keyword for Read\_tiff, to check if that is a memory issue?

Sorry, I'm just making questions and have no ready answer...

Success,  
Helder

---

---

Subject: Re: Image reading  
Posted by [David Fanning](#) on Mon, 10 Dec 2012 14:34:51 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Helder writes:

> My guess would be that if you cannot query the file, you cannot read the file.

If IDL, ENVI, ERDAS, and MATLAB can't read this as a TIFF image, I would think this is pretty conclusive evidence that this is not a well formed TIFF image (at the very least), if it is a TIFF image at all. :-)

Cheers,

David

--  
David Fanning, Ph.D.  
Fanning Software Consulting, Inc.  
Coyote's Guide to IDL Programming: <http://www.idlcoyote.com/>  
Sepore ma de ni thue. ("Perhaps thou speakest truth.")

---

---

Subject: Re: Image reading  
Posted by [David Fanning](#) on Mon, 10 Dec 2012 14:51:38 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

David Fanning writes:

> If IDL, ENVI, ERDAS, and MATLAB can't read this as a TIFF  
> image, I would think this is pretty conclusive evidence  
> that this is not a well formed TIFF image (at the very least),  
> if it is a TIFF image at all. :-)

In fact, if we use Occam's Razor here to choose the simplest hypothesis consistent with the known facts, I think the working hypothesis would have to be that this proprietary ARCGIS image was converted to a TIFF file by changing its file extension to "tif".

Are there any better options out there? :-)

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

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

---

Subject: Re: Image reading

Posted by [Dry in water](#) on Mon, 10 Dec 2012 15:57:43 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

On Monday, December 10, 2012 10:34:51 PM UTC+8, David Fanning wrote:

> Helder writes:

>

>

>

>> My guess would be that if you cannot query the file, you cannot read the file.

>

>

>

> If IDL, ENVI, ERDAS, and MATLAB can't read this as a TIFF

>

> image, I would think this is pretty conclusive evidence

>

> that this is not a well formed TIFF image (at the very least),

>

> if it is a TIFF image at all. :-)

>

>

>

> Cheers,

>

>

>

> David

>

>

>

>

>

>

>  
>  
> --  
>  
> David Fanning, Ph.D.  
>  
> Fanning Software Consulting, Inc.  
>  
> Coyote's Guide to IDL Programming: <http://www.idlcoyote.com/>  
>  
> Sepore ma de ni thue. ("Perhaps thou speakest truth.")

Hello,

Arcgis, ENVI, ERDAS can read this image properly. But matlab and IDL can't read it. What I mean was the tiff image exported from those program (Arcgis etc) couldn't be read in IDL and matlab correctly.

---

---

Subject: Re: Image reading  
Posted by [Dry in water](#) on Mon, 10 Dec 2012 16:07:04 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

> Hi,  
>  
> you might have to wait for some experts or some Tiff-experienced users to answer your question.  
>  
> My guess would be that if you cannot query the file, you cannot read the file.  
>  
> I never had problems importing tiff. I did this for 8-bit and 16-bit images, for black and white and for 24 color images.  
>  
>  
>  
> Do you have any idea what type of data you have in the image?  
>  
> How big is your image? About 380 Mb or 740 Mb?

> Do you have enough free RAM to read that much data?  
>  
> Have you tried using the SUB\_RECT keyword for Read\_tiff, to check if that is a memory issue?  
>  
>  
>  
> Sorry, I'm just making questions and have no ready answer...

>  
>  
>  
> Success,  
>  
> Helder

Hello,

Yes, I know interior value of this image should be between -1.7 and 27.6. I saw it using Arcgis. The size of file is 1.36 GB. I'm working on PC with 8 GB RAM and 64 bit operating system. Disks space are more than 50GB.

Anyway, thanks you very much Helder.

---

---

Subject: Re: Image reading

Posted by [David Fanning](#) on Mon, 10 Dec 2012 16:08:13 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

Dry in water writes:

> Arcgis, ENVI, ERDAS can read this image properly. But matlab and IDL can't read it. What I mean was the tiff image exported from those program (Arcgis etc) couldn't be read in IDL and matlab correctly.

This still doesn't totally convince me it is a TIFF file, although I suppose it could be a TIFF file with proprietary TIFF tags that are getting in the way of the "standard" TIFF reading mechanism.

I would be more convinced if you saved the file as a TIFF file from within ENVI and then tried to read \*that\* file in IDL.

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

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

---

---

Subject: Re: Image reading

Posted by [Norbert Hahn](#) on Mon, 10 Dec 2012 16:43:19 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

Dry in water <ndugarsuren@gmail.com> wrote:

> IDI version on my PC is following

> { x86\_64 Win32 Windows Microsoft Windows 6.3 Mar 23 2006 64 64}

>

> This is a temperature image. I have set of point data with coordinate information. Second, I did interpolation in ARCGIS to produce raster image covering whole study area. Third, as I said, I export it into raster image by setting the same cell size with other image that I have. Fourth, I subsetting this image using country boundary shapefile to eliminate other area except study area. Then I want to read this image in IDL. Because tiff is a main file format of ARCGIS. I tried to produce tiff image that can be read in IDL using other 2 programm which were ENVI and ERDAS. Results were same cannot be read.

You may run tiffinfo on the file and post the results here.

About tiffinfo:

<http://www.remotesensing.org/libtiff/tools.html>

Norbert

---

---

Subject: Re: Image reading

Posted by [Jim Pendleton](#) on Mon, 17 Dec 2012 16:23:42 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

On Monday, December 10, 2012 9:07:04 AM UTC-7, Dry in water wrote:

>> Hi,

>

>>

>

>> you might have to wait for some experts or some Tiff-experienced users to answer your question.

>

>>

>

>> My guess would be that if you cannot query the file, you cannot read the file.

>

>>

>

>> I never had problems importing tiff. I did this for 8-bit and 16-bit images, for black and white and for 24 color images.

>

>>

>

>>

>  
>>  
>  
>> Do you have any idea what type of data you have in the image?  
>  
>>  
>  
>> How big is your image? About 380 Mb or 740 Mb?  
>  
>  
>  
>  
>  
>> Do you have enough free RAM to read that much data?  
>  
>>  
>  
>> Have you tried using the SUB\_RECT keyword for Read\_tiff, to check if that is a memory issue?  
>  
>>  
>  
>>  
>  
>>  
>  
>>  
>  
>> Sorry, I'm just making questions and have no ready answer...  
>  
>>  
>  
>>  
>  
>>  
>  
>> Success,  
>  
>>  
>  
>> Helder  
>  
>  
>  
> Hello,  
>  
> Yes, I know interior value of this image should be between -1.7 and 27.6. I saw it using Arcgis.  
>  
> The size of file is 1.36 GB. I'm working on PC with 8 GB RAM and 64 bit operating system.  
Disks space are more than 50GB.

>  
>  
>  
> Anyway, thanks you very much Helder.

Try the QUERY\_IMAGE function in IDL. It will march down through a series of image format types and attempt to open the image with each in turn until it is successful or it runs out of options, ignoring the "hint" provided by the file name extension. If this function returns a 1, then you can check the INFO.TYPE structure tag that's returned through a positional argument to see what type the file really is.

You could also try the READ\_IMAGE function if you don't trust your file extensions.

Finally, you could simply open up the file in IDL and read the "magic number" from the start of the file. Most image file formats have magic numbers.

```
IDL> openr, lun, /get_lun, dialog_pickfile()
IDL> b = bytarr(4)
IDL> readu, lun, b
IDL> print, b, b, string(b), format = '(4z,4i,z4)'
IDL> free_lun, lun
```

Standard TIFFs should begin with "MM\*" or "II\*", in ASCII, depending on the byte order of the data. If the file is indeed a TIFF you should see output resembling

```
49 49 2a 0 73 73 42 0 II*
```

If you have some other byte sequence at the start of your file, you don't have a standard TIFF.

---

---

Subject: Re: Image reading  
Posted by [karo03de](#) on Tue, 18 Dec 2012 20:47:12 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Am Montag, 10. Dezember 2012 13:24:34 UTC+1 schrieb Dry in water:

>  
>  
> firstly, I tried first method you said. Output was "READ\_TIFF: D:\tmp\temp\_opp\temp\_exam.tiff:  
Cannot open  
>  
> % Execution halted at: \$MAIN\$  
>

My remark might be silly: but extension tiff is quite unusual, especially on PCs. Are you sure with the extension? tif would be better

Karsten

---