Subject: Re: End of File-Error message in simple readf routine - What's the problem?
Posted by britta.mey on Sun, 19 Aug 2007 11:28:59 GMT
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Without changing anything i get now following message:

IDL> .GO
% Loop limit expression too large for loop variable type.
  <LONG     (     2072757)>.
% Execution halted at: $MAIN$             57 E:\Dissertation
\IDL_Programme\spectral_calib.pro

Perhaps this helps identifying my mistake in the code. It seems, that there are too many values for my if-loop. Can someone tell me, how the code would be in the correct form?

Thank You.

Britta

Subject: Re: End of File-Error message in simple readf routine - What's the problem?
Posted by britta.mey on Sun, 19 Aug 2007 11:44:18 GMT
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Sorry for the third post in a row...

i changed "for i=0,n_pixel do begin" to "for i=0L,n_pixel do beginn"
and get again the end of file-error.

Subject: Re: End of File-Error message in simple readf routine - What's the problem?
Posted by David Fanning on Sun, 19 Aug 2007 12:57:25 GMT
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bmey@uni-mainz.de writes:

> i'm sorry to post a new message, but i did not find the answer to my
> question, when i searched for it (or i did not use the fitting words
> for the search).
>
> I try to read the values of a file with three columns and 2072758 rows
> (the file was created from a bmp-picture by the routine read_bmp).
>

> My code is as follows:
>
> file='E:\Dissertation\mz_cam\spectral_calib\dat-files
> \070807\run24\070807_24_0013.dat'
>
> n_pixel= 2072758

You will certainly need that "L" on your counting loop.
But my theory is that you do not have the compiler option
DEFINT32 on, so that your n_pixel value is being converted
to a short integer. In other words, 2072758 is being represented
in your program as the number 10650.

The best solution, I think, is to turn all integers into
32-bit integers with a compiler option. Then your counter
will be right automatically, too. Put this line at the
top of your code:

```
COMPILE_OPT DEFINT32
```

Or, you could make this n_pixel value a long integer directly:

```
n_pixel= 2072758L
```

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: End of File-Error message in simple readf routine - What's the problem?
Posted by Michael Galloy on Mon, 20 Aug 2007 00:41:21 GMT
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On Aug 19, 4:53 am, b...@uni-mainz.de wrote:
> Hello,
>
> i'm sorry to post a new message, but i did not find the answer to my
> question, when i searched for it (or i did not use the fitting words
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> file='E:\Dissertation\mz_cam\spectral_calib\dat-files
> \070807\run24\070807_24_0013.dat'
>
> n_pixel= 2072758
> n_channels=3
>
> dummy_ein=fltarr(n_channels)
> dummy = ''
>
> r=fltarr(n_pixel)
> g=fltarr(n_pixel)
> nir=fltarr(n_pixel)
>
> close, 1
> openr,1, file
>
> for i=0, n_pixel-1 do begin
>  readf, 1, dummy_ein
>  g(i)=dummy_ein(0)
>  r(i)=dummy_ein(1)
>  nir(i)=dummy_ein(2)
> endfor
>
> end
>
> Could the problem be related to the array length? I mean that there
> are too many values for an array? I checked the number of values
> several times, so i am quite sure that the number for n_pixel is
> correct.

To keep the loop, you definitely need the "L", that should fix the "loop expression too large for loop variable type." error.

You didn't mention what the original problem was though. You did mention later that there was an "end of file error." So I would make sure there really are n_pixel number of rows in the data file. (Use "nLines = file_lines(file)" to find out.)

By the way, you can do this without a loop:

file = 'E:\Dissertation\mz_cam\spectral_calib\dat-files
\070807\run24\070807_24_0013.dat'

n_pixel = 2072758
n_channels =3

```
data = fltarr(n_channels, n_pixel)

openr, lun, file, /get_lun
readf, lun, data
free_lun, lun

; if you need the data in separate arrays
g = data[0, *]
r = data[1, *]
nir = data[2, *]

Mike
--
www.michaelgalloy.com
```

---

Subject: Re: End of File-Error message in simple readf routine - What's the problem?
Posted by britta.mey on Mon, 20 Aug 2007 07:23:07 GMT
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On 20 Aug., 02:41, "mgal...@gmail.com" <mgal...@gmail.com> wrote:
> On Aug 19, 4:53 am, b...@uni-mainz.de wrote:
>
>
>
>> Hello,
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>> dummy_ein=fltarr(n_channels)
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>> end
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> \070807\run24\070807_24_0013.dat'
>
> n_pixel = 2072758
> n_channels =3
>
> data = fltarr(n_channels, n_pixel)
>
> openr, lun, file, /get_lun
> readf, lun, data
> free_lun, lun
>
> ; if you need the data in separate arrays
> g = data[0, *]
> r = data[1, *]
> nir = data[2, *]
>
> Mike

> --www.michaelgalloy.com

Hello,

oh yes, i forgot in the original post to mention my problem. Sorry.
I'll try to fix my problem with your suggestions.

Thank you,

Britta

---

Subject: Re: End of File-Error message in simple readf routine - What's the problem?
Posted by britta.mey on Mon, 20 Aug 2007 08:31:13 GMT
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On 20 Aug., 09:23, britta....@gmail.com wrote:
> On 20 Aug., 02:41, "mgal...@gmail.com" <mgal...@gmail.com> wrote:
>
>
>
>> On Aug 19, 4:53 am, b...@uni-mainz.de wrote:
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>>> Hello,
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>>> i'm sorry to post a new message, but i did not find the answer to my
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>>> My code is as follows:
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>>> dummy_ein=fltarr(n_channels)
>>> dummy = ''
>
>>> r=fltarr(n_pixel)
>>> g=fltarr(n_pixel)
>>> nir=fltarr(n_pixel)

>
>>> close, 1
>>> openr,1, file
>
>>> for i=0, n_pixel-1 do begin
>>>     readf, 1, dummy_ein
>>>     g(i)=dummy_ein(0)
>>>     r(i)=dummy_ein(1)
>>>     nir(i)=dummy_ein(2)
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>
>>> end
>
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>> \070807\run24\070807_24_0013.dat'
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>> n_pixel = 2072758
>> n_channels =3
>
>> data = fltarr(n_channels, n_pixel)
>
>> openr, lun, file, /get_lun
>> readf, lun, data
>> free_lun, lun
>
>> ; if you need the data in separate arrays
>> g = data[0, *]
>> r = data[1, *]
>> nir = data[2, *]
>
>> Mike
>> --www.michaelgalloy.com
>

> Hello,
>
> oh yes, i forgot in the original post to mention my problem. Sorry.
> I'll try to fix my problem with your suggestions.
>
> Thank you,
>
> Britta

Hello again,

i tried your suggestions, but i still get the "end of file-error".
Even if i tried the suggested code without the loop. Do you have any
idea what could be further wrong? I checked the number of lines with
"nLines = file_lines(file)". The number is correct :-( .

Yours,
Britta

---

Subject: Re: End of File-Error message in simple readf routine - What's the problem?
Posted by Conor on Mon, 20 Aug 2007 13:16:24 GMT
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On Aug 20, 4:31 am, britta....@gmail.com wrote:
> On 20 Aug., 09:23, britta....@gmail.com wrote:
>
>
>
>> On 20 Aug., 02:41, "mgal...@gmail.com" <mgal...@gmail.com> wrote:
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>>>> I try to read the values of a file with three columns and 2072758 rows
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>
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>>>>  n_pixel= 2072758
>>>>  n_channels=3
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>>>>  dummy_ein=fltarr(n_channels)
>>>>  dummy = ''
>
>>>>  r=fltarr(n_pixel)
>>>>  g=fltarr(n_pixel)
>>>>  nir=fltarr(n_pixel)
>
>>>>  close, 1
>>>>  openr,1, file
>
>>>>  for i=0, n_pixel-1 do begin
>>>>     readf, 1, dummy_ein
>>>>     g(i)=dummy_ein(0)
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>>>>  end
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>>>  n_channels =3
>
>>>  data = fltarr(n_channels, n_pixel)
>
>>>  openr, lun, file, /get_lun
>>>  readf, lun, data

>>>  free_lun, lun
>
>>>  ; if you need the data in separate arrays
>>>  g = data[0, *]
>>>  r = data[1, *]
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>>>  Mike
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>>  Hello,
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>  "nLines = file_lines(file)". The number is correct :-( .
>
>  Yours,
>  Britta

Another possibility is that there are not exactly three columns in
each line of text.  Is there any missing data?  Take the following
(common) example:

Contents of File:
1234 5678 9012
1234      9012
1234 5678 9012

```
data = intarr(3,3)
openr, lun, 'File', /get_lun
readf, lun, data
free_lun, lun
```

In this case you will also get an EOF error.  The reason is because
IDL is trying to read 8 values into a 9-element array.  By default,
IDL's read operation seems to be a string-split operation.  It splits
up the line wherever it encounters spaces.  So, when it reads the

second line it splits it up and only finds two values. Since it needs three values in a row, it goes ahead and continues to the next line and reads the first value in that line. Now, IDL will be one element ahead of the game, and when it tries to read in another three values for the third row of your data element, it prematurely reaches the end of the file because there are only two actual data values remaining in the file. The solution in this case is to replace the blank spaces with junk data that is easily recognizable as "no data". For instance:

New Contents of File:
1234 5678 9012
1234 -999 9012
1234 5678 9012

Then, IDL will no longer have an EOF error, and you simply select out any data less than -900

---

Subject: Re: End of File-Error message in simple readf routine - What's the problem?
Posted by britta.mey on Tue, 21 Aug 2007 08:14:28 GMT
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On 20 Aug., 15:16, Conor <cmanc...@gmail.com> wrote:
> On Aug 20, 4:31 am, britta....@gmail.com wrote:
>
>
>
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>  1234 5678 9012
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> instance:
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> New Contents of File:
> 1234 5678 9012
> 1234 -999 9012
> 1234 5678 9012
>
> Then, IDL will no longer have an EOF error, and you simply select out
> any data less than -900

Hello,

first, thank you all for your help.
The missing data was some kind of correct guess. Yesterday a colleague of mine suggested to try "data = read_ascii(file)& data=data.(0)". It worked but the resulting array had a different length. The routine read_bmp (the file was created with this routine) creates a blank line after each whole image line (image resolution 1920x1079 -> blank line after 1920 values), which i didn't detect before (because i was too lazy to scroll through 2072758 lines :-/ ). And this created the End of File error. The read_ascii has no problems skipping these blank lines.

Yours,

Britta