
Subject: Re: idl readf error

Posted by [David Fanning](#) on Thu, 12 Feb 2009 20:19:48 GMT

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rollo.tomasi@hotmail.com writes:

> I have a file with 5 columns that looks like this (except for the
> column labels):
>
> [/color]
[color=blue]> T/F I/U Time Blocks Volume[/color]
[color=blue]> T I 7.12 227 11145.6[/color]
[color=blue]> F U 16.34 227 10914.9[/color]
[color=blue]> T I 21.43 232 11151.9[/color]
[color=blue]> T U 25.99 224 11364.1[/color]
[color=blue]> F I 37.13 199 7566.9[/color]
[color=blue]> [/color]
>
> Essentially I want to calculate the median for each time, blocks, and
> volume for the entire file, and then depending on T/F and I/U.
>
> I've gotten the script to work with the first three columns, but when
> I add the last two columns (blocks and volume) it returns an error.
> Can anyone tell me what I am doing wrong?

On this line:

```
readf,68, data, x1i, x2i, xxi, x3i, x4i, format='(2A2, G7.2)'
```

You are asking IDL to read five things, but you only told it how to read three of them. When it reads the first three, it then thinks, "Well, he didn't tell me anything, so I'll try to use the format statement over again." Thus, it tries to read a string, but it finds a float.

So, you have to fix your format statement. And I would be careful of this, because even though you said it worked when you had three variables rather than 5, that seems doubtful to me. Make sure you can read the first line properly, then you will be good to go.

Cheers,

David

--

David Fanning, Ph.D.

Coyote's Guide to IDL Programming (www.dfanning.com)

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

Subject: Re: idl readf error

Posted by [rollo.tomasi](#) on Fri, 13 Feb 2009 22:37:07 GMT

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Thanks for replying! I changed the format to (2A2, 3G7.2) and even (2A2, G7.2, G7.2, G7.2), but I get the same error: "Type conversion error: Unable to convert given STRING to Float."

There aren't any header lines or column labels in my input file. I actually use the script for 3 columns every week to do system performance reports, but I can't seem to add the extra columns without getting this error.

Maybe it is something trivial I am overlooking? I don't mind changing the script altogether if someone suggests a different approach.

Subject: Re: idl readf error

Posted by [David Fanning](#) on Fri, 13 Feb 2009 23:04:43 GMT

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rollo.tomasi@hotmail.com writes:

- > Thanks for replying! I changed the format to (2A2, 3G7.2) and even
- > (2A2, G7.2, G7.2, G7.2), but I get the same error: "Type conversion
- > error: Unable to convert given STRING to Float."
- >
- > There aren't any header lines or column labels in my input file. I
- > actually use the script for 3 columns every week to do system
- > performance reports, but I can't seem to add the extra columns without
- > getting this error.
- >
- > Maybe it is something trivial I am overlooking? I don't mind changing
- > the script altogether if someone suggests a different approach.

Maybe you could post the first five lines of your file for us:

```
openr, 1, 'yourfile.txt'
h = strarr(5)
readf, 1, h
close, 1
for j=0,4 do print, h[j]
```

You could also try using ReadCol from the NASA Astronomy Library, or even READ_BINARY from IDL, although you would think this would be so simple you wouldn't need any fancy programs. :-)

Cheers,

David

--

David Fanning, Ph.D.
Coyote's Guide to IDL Programming (www.dfanning.com)
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: idl readf error

Posted by [rollo.tomasi](#) on Fri, 13 Feb 2009 23:54:34 GMT

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Here's what I have:

```
IDL> openr, 1, 'file1.out'
IDL> h = strarr(5)
IDL> readf, 1, h
IDL> close, 1
IDL> for j=0,4 do print, h[j]
T    U    17.81 201   145225.9
T    U    37.67 191   98975.8
T    U    21.77 201  129774.9
T    I     0.65  1    69.5
T    I     0.36  1    69.3
```

By doing this I noticed that the values in the last column get pretty large, so I changed the format to
format='(2A2, G7.2, G7.2, G10.2)'

And I still get the same error.

The largest values in the numerical columns are:
column 3: 272.23
column 4: 1000
column 5: 145225.9

Subject: Re: idl readf error

Posted by [Chris\[6\]](#) on Sat, 14 Feb 2009 00:59:59 GMT

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Sometimes, I have similar issues when I use readf - they tend to go away with more explicit format keywords. Have you tried adding format codes like '3x' (to skip three spaces) to manually deal with the white space in between the columns?

I'm sure I probably don't use readf very efficiently, but I find most of my problems go away if I set up the format string so that every character (whitespace included) is accounted for.

chris

Subject: Re: idl readf error

Posted by [David Fanning](#) on Sat, 14 Feb 2009 04:17:02 GMT

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rollo.tomasi@hotmail.com writes:

```
> Here's what I have:
>
> IDL> openr, 1, 'file1.out'
> IDL> h = strarr(5)
> IDL> readf, 1, h
> IDL> close, 1
> IDL> for j=0,4 do print, h[j]
> T    U    17.81 201   145225.9
> T    U    37.67 191   98975.8
> T    U    21.77 201   129774.9
> T    I     0.65  1     69.5
> T    I     0.36  1     69.3
>
> By doing this I noticed that the values in the last column get pretty
> large, so I changed the format to
> format='(2A2, G7.2, G7.2, G10.2)'
>
> And I still get the same error.
>
> The largest values in the numerical columns are:
> column 3: 272.23
> column 4: 1000
> column 5: 145225.9
```

OK, well, as I expected, that format does not correspond to what is in the file. And I am still mystified as to why it worked (if it did) initially. The format looks to me to be something more like this:

```
format='(2(A1,7x),F5.2,3x,I3,5x,G8.2)'
```

Try that and see if you have better luck. :-)

Here is the code I used to read the first line:

```
IDL> openr, 1, file
IDL> a="" &b = "" & c=0.0 & d=8 & e=0.0
IDL> readf, 1, a, b, c, d, e, format='(2(A1,7x),F5.2,3x,I3,5x,G8.2)'
IDL> print, a, b, c, d, e
TU   37.6700   191   98975.8
```

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: idl readf error

Posted by [Vince Hradil](#) on Sat, 14 Feb 2009 14:35:48 GMT

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On Feb 13, 10:17 pm, David Fanning <n...@dfanning.com> wrote:

> rollo.tom...@hotmail.com writes:

>> Here's what I have:

>

>> IDL> openr, 1, 'file1.out'

>> IDL> h = strarr(5)

>> IDL> readf, 1, h

>> IDL> close, 1

>> IDL> for j=0,4 do print, h[j]

>> T U 17.81 201 145225.9

>> T U 37.67 191 98975.8

>> T U 21.77 201 129774.9

>> T I 0.65 1 69.5

>> T I 0.36 1 69.3

>

>> By doing this I noticed that the values in the last column get pretty

>> large, so I changed the format to

>> format='(2A2, G7.2, G7.2, G10.2)'

>

>> And I still get the same error.

>

>> The largest values in the numerical columns are:

>> column 3: 272.23

```

>> column 4: 1000
>> column 5: 145225.9
>
> OK, well, as I expected, that format does not correspond
> to what is in the file. And I am still mystified as to
> why it worked (if it did) initially. The format looks to
> me to be something more like this:
>
> format='(2(A1,7x),F5.2,3x,I3,5x,G8.2)'
>
> Try that and see if you have better luck. :-)
>
> Here is the code I used to read the first line:
>
> IDL> openr, 1, file
> IDL> a="" &b = "" &c=0.0 &d=8 &e=0.0
> IDL> readf, 1, a, b, c, d, e, format='(2(A1,7x),F5.2,3x,I3,5x,G8.2)'
> IDL> print, a, b, c, d, e
> TU    37.6700    191    98975.8
>
> 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.")

```

This thread makes me think... Can anyone compare and contrast this approach with the approach I usually use - that is:
 read each line into a string buf: buf = " \$ readf, lun, buf
 then use strsplit(buf,/extract) to chop up the buf
 then use fix, float, etc. to get the values.

I don't usually use format statements for reading, just writing.

Thanks,
 Vince

Subject: Re: idl readf error
 Posted by [David Fanning](#) on Sat, 14 Feb 2009 14:52:18 GMT
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Vince Hradil writes:

> This thread makes me think... Can anyone compare and contrast this

- > approach with the approach I usually use - that is:
- > read each line into a string buf: buf =3D " \$ readf, lun, buf
- > then use strsplit(buf,/extract) to chop up the buf
- > then use fix, float, etc. to get the values.
- >
- > I don't usually use format statements for reading, just writing.

Can you spell S-L-O-W? ;-)

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.")
