Subject: Re: explain THIS one
Posted by cmancone on Mon, 04 Feb 2008 14:31:05 GMT
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On Feb 4, 9:29 am, cmanc...@ufl.edu wrote:
> I'm having an error in my code and I stop it to check out what is
> going on. Here's the three relevant lines of code:
>
> minmag = min(sims[mag,*],max=maxmag)
> nbins = (maxmag-minmag)/magbinsize
> magres = fltarr(3*nfilters,nbins)
>
> Here's some commands I type into a command line to investigate my
> issues:
>
> IDL> help,nbins
> NBINS FLOAT = 7.00000
> IDL> help,magres
> MAGRES FLOAT = Array[6, 6]
>
> Anyone see a problem here? nbins is a float of size 7.0, and yet
> magres ends up with 6 rows!!!! To add to the fun I then type the
> following:
>
> IDL> nbins = 7.0
> IDL> magres = fltarr(3*nfilters,nbins)
> IDL> help,magres
> MAGRES FLOAT = Array[6, 7]
>
> To summarize, my array is created with the wrong dimensions, so I re-
> assign one of the variables with the exact same value that it had
> before, recreate my array, and it works! ?????? Looks like a bug to
> me...

And in case anyone thinks this might be part of the problem:

IDL> help,nbins
NBINS FLOAT = 7.00000
IDL> help,nfilters
NFILTERS LONG = 2
IDL> magres = fltarr(3*nfilters,long(nbins))
IDL> help,magres
MAGRES FLOAT = Array[6, 6]

Subject: Re: explain THIS one
Posted by David Fanning on Mon, 04 Feb 2008 14:48:52 GMT

cmancone@ufl.edu writes:

> To summarize, my array is created with the wrong dimensions, so I re-
> assign one of the variables with the exact same value that it had
> before, recreate my array, and it works! ?????? Looks like a bug to
> me...

I think this article might shed some light:

  http://www.dfanning.com/math_tips/sky_is_falling.html

I'm thinking a ROUND() might solve some problems here. :-)

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: explain THIS one
Posted by Spon on Mon, 04 Feb 2008 14:51:36 GMT

On Feb 4, 2:31 pm, cmanc...@ufl.edu wrote:
> On Feb 4, 9:29 am, cmanc...@ufl.edu wrote:
>
>
>
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>> issues:
>
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> IDL> help,nfilters
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> IDL> magres = fltarr(3*nfilters,long(nbins))
> IDL> help,magres
> MAGRES FLOAT = Array[6, 6]

help,fltarr(6,6.99)
<Expression> FLOAT = Array[6, 6]

nbins = (maxmag-minmag)/magbinsize
If this ever returns a value just under 7.00000 it'll always be
rounded down when it's converted . I suspect this is what's happening
to you.

To test it, you could try:
magres = fltarr(3*nfilters,round(nbins))

Does this fix your problem?
Chris

Subject: Re: explain THIS one
Posted by cmancone on Mon, 04 Feb 2008 15:23:07 GMT
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On Feb 4, 9:51 am, Spon <christoph.b...@gmail.com> wrote:
> On Feb 4, 2:31 pm, cmanc...@ufl.edu wrote:
>
>

>
>> On Feb 4, 9:29 am, cmanc...@ufl.edu wrote:
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>> IDL> help,magres
>> MAGRES FLOAT = Array[6, 6]
>
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> <Expression> FLOAT = Array[6, 6]
>
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> If this ever returns a value just under 7.00000 it'll always be
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> to you.
>
> To test it, you could try:
> magres = fltarr(3*nfilters,round(nbins))
>
> Does this fix your problem?
> Chris

Arrgh!! I should have seen that one coming, I've read that article before and have even explained to others the dangers of floating-point representation. Oh well. Thanks for the help guys!
