
Subject: Re: plot_3dbox : array has too many elements
Posted by [David Fanning](#) on Wed, 16 Feb 2005 14:29:51 GMT
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Ralf Schaa writes:

> I like to use the plot_3dbox procedure to plot a satellite orbit. The
> cartesian positionvectors consists each of 27292 elements. I tried
> 27292L and 27292LL when initializing, but I keep getting the same error
> message : 'array has too many elements'.
>
> What to do?

I think I would rip those lazy SURFACE commands out
of PLOT_3DBOX and replace them with something a lot
more sensible, like SCALE3. :-)

Cheers,

David

--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Subject: Re: plot_3dbox : array has too many elements
Posted by [Paolo Grigis](#) on Wed, 16 Feb 2005 15:47:43 GMT
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Ralf Schaa wrote:

> Dear All,
>
> I like to use the plot_3dbox procedure to plot a satellite orbit. The
> cartesian positionvectors consists each of 27292 elements. I tried
> 27292L and 27292LL when initializing, but I keep getting the same error
> message : 'array has too many elements'.
>

Well, it looks like the program is trying to build an array (assuming
of float type) of 27292 by 27292 elements, which you just can't do in
idl on 32 bit systems:

```
IDL> a=fltarr(27292L,27292L)
% Array has too many elements.
```

To estimate the maximum size of an IDL array one can use the formula:

$maxsize = (2L^{31}-1) / typesize$

where typesize is the size of your datatype in byte (4 bytes for float, 2 bytes for integers, 8 bytes for doubles etc.).

This means that the maximum size in bytes of a single array should not be larger than 2GB.

Cheers,
Paolo

> What to do?
>
> Thanks already
>
> -Ralf

Subject: Re: plot_3dbox : array has too many elements
Posted by [Ralf Schaa](#) on Wed, 16 Feb 2005 17:12:48 GMT
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Paolo Grigis wrote:

>
>
> Ralf Schaa wrote:
>
>> Dear All,
>>
>> I like to use the plot_3dbox procedure to plot a satellite orbit. The
>> cartesian positionvectors consists each of 27292 elements. I tried
>> 27292L and 27292LL when initializing, but I keep getting the same
>> error message : 'array has too many elements'.
>>
>
> Well, it looks like the program is trying to build an array (assuming
> of float type) of 27292 by 27292 elements, which you just can't do in
> idl on 32 bit systems:
>
> IDL> a=fltarr(27292L,27292L)
> % Array has too many elements.

That's it.

Plot_3dbox calls: Surface, FltArr(Xcnt,Xcnt) with Xcnt are my 27292

elements.

Thanks.

-Ralf

> To estimate the maximum size of an IDL array one can use the formula:

>

> $\text{maxsize} = (2L^{31}-1) / \text{typesize}$

>

> where typesize is the size of your datatype in byte (4 bytes

> for float, 2 bytes for integers, 8 bytes for doubles etc.).

> This means that the maximum size in bytes of a single array should

> not be larger than 2GB.

>

>

> Cheers,

> Paolo

>

>

>> What to do?

>>

>> Thanks already

>>

>> -Ralf