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Subject: Plotting double precision

Posted by [Jacques Basson](#) on Thu, 24 Feb 2000 08:00:00 GMT

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Hi all

Does anyone know how I can plot double precision values in IDL. The plot routine help says:

Plots created with PLOT are limited to the range and precision of single-precision floating-point values.

Unfortunately, this means that values which do not lie in the  $\pm 10^{+38}$  range can't be easily plotted. Of course as luck would have it, my values are of the order  $10^{(-39)}$ , and I'd rather not have factors of 10 in my labels. The other option would be to take logs before plotting rather than using the /ylog keyword, but I prefer the axis label to have the value of the variable, rather than its log.

Thanks

Jacques Basson

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Subject: Re: Plotting double precision

Posted by [Mark Goosman](#) on Fri, 10 Mar 2000 08:00:00 GMT

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I am happy to say that in IDL 5.4, scheduled for release this summer, will have support for displaying double precision values in both Direct Graphics and Object Graphics. In the case of Direct Graphics, extensive work has been done to prevent IDL from converting incoming data to single precision values. The work in Object Graphics addressed the limitations of OpenGL accepting only single precision values for input.

Research Systems is interested in working with any IDL user who is interested in participating in the IDL 5.4 Beta program which will begin in the next couple of months. Anyone who is interested in participating as an IDL 5.4 Beta Tester can contact me at Research Systems ([mgoosman@rsinc.com](mailto:mgoosman@rsinc.com)). We are always interested in making sure that changes and enhancements to any area of IDL, especially one as significant as the Direct and Object Graphics systems does not cause problems for existing IDL users and their applications.

Best regards,

Mark Goosman

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Jacques Basson <jfb37@NOSPAM.cam.ac.uk> wrote in message  
news:38B4FD5B.D776DF61@NOSPAM.cam.ac.uk...

> Hi all  
>  
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> routine help says:  
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> Unfortunately, this means that values which do not lie in the  
>  $\pm 10^{(+38)}$  range can't be easily plotted. Of course as luck would have  
> it, my values are of the order  $10^{(-39)}$ , and I'd rather not have factors  
> of 10 in my labels. The other option would be to take logs before  
> plotting rather than using the /ylog keyword, but I prefer the axis  
> label to have the value of the variable, rather than its log.  
>  
> Thanks  
> Jacques Basson

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Subject: Re: Plotting double precision

Posted by [Richard G. French](#) on Fri, 10 Mar 2000 08:00:00 GMT

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This has been a limitation in IDL since the beginning, and it surely  
seems that the time has long since come for RSI to update PLOT so that  
it can handle double precision. I understand the need for backward  
compatibility, so if they want us to add a /DOUBLE keyword, I'm willing

to do it. Can we band together and urge RSI to do something about this long-standing and unnecessary limitation?

Dick French

Jacques Basson wrote:

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> single-precision floating-point values.  
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> Unfortunately, this means that values which do not lie in the  
> +-10^(+-38) range can't be easily plotted. Of course as luck would have  
> it, my values are of the order 10^(-39), and I'd rather not have factors  
> of 10 in my labels. The other option would be to take logs before  
> plotting rather than using the /ylog keyword, but I prefer the axis  
> label to have the value of the variable, rather than its log.  
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> Thanks  
> Jacques Basson
```

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