Subject: Re: Longword plotting problems...
Posted by R. Bauer on Tue, 23 Jun 1998 07:00:00 GMT
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Geraint H. Jones wrote:

> Hi,
>
> I'd be glad of any help with this...
>
> I'm handling data files (well, trying to!) in which the time is recorded
> as the number of seconds since the beginning of 1950 (I know it's not
> the easiest format to deal with, but it's what I have to work with). In
> order to get precision to the level of seconds, I have to use longword
> arrays.

We are using julian seconds defined by Ray Sterner.The start point is
2000-01-01 00:00:00.

Julian Seconds are by now negative double precision values and they have a
precision better then 1 milli second +- 500 years.

Ray and we too are having a lot of plotting and conversion routines from
"julian seconds" to other time formats.

Look at these pages to get more information about his idea

WWW Home page: http://fermi.jhuapl.edu/s1r/idl/s1rlib/time/time.html
Specially the point: Working with time series data

>
>
> This is all fine, but the problem is plotting using the longword arrays.
> Whatever plot ranges I choose, the time values in the plots are
> quantized, i.e. they do not increase smoothly, even though the values
> in the array itself increase smoothly. I've attached a short piece of
> example code below to demonstrate this...

For example:
After you converted your long words to Julian Seconds

jsplot will do the plots for you.

You are able to format the time labels on the x-axes like
1998-Jun-23!C11:00:00

or 1998-Jun-23 or 11:00 ...

>
>
> I know I can get around this by converting the times to other units, but
> I'd really like a solution which would let me use seconds since 1950.0.
>
> (I'm running IDL Version 5.0 (sunos sparc)).
>
> Thanks for any help,
> Geraint Jones
>
> ; Example code
>
> time=lindgen(10)+13254100
>
> data=findgen(10)
>
> plot,time,data
>
> ; Just to show that time should increase smoothly in the plot
>
> print,time

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