Subject: Re: label_date precision problem
Posted by R. Bauer on Wed, 01 Oct 1997 07:00:00 GMT
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mh wrote:
>
> Hello All,
>
> I've got some timeseries data every 15 minutes for a period of a
> couple of
> days, and I'd like to use the label_date routine to do the time
> (x) axis. In order
> to use label_date, I am converting my time axis into absolute Julian
> Day -
> a real number when you convert the time as well. For example,
> 2450717.5
> would be 12:00 on 9/25/1997. If I want 12:15, though, I get
> 2450717.5104.
> But, it appears IDL isn't maintaining the precision of a double when I
> plot, and
> the .5104 is getting truncated to .5. This makes for an ugly plot,
> with 4 or 5
> y-values collapsing onto one x-value.
>
> Right now, I'm working around it by pretending I'm in year -4710,
> which is
> basically the start year for -4713 (1/1/-4713 = Julian Day 1) in order
> to keep
> enough precision to get down to hours. It works, but, it's a cludge,
> and requires
> some thinking around leap years.
>
> Anybody have a suggestion how to make this work? Or another easy way
> of
> doing a time axis in IDL?
>
> Please respond via email.
>
> Thanks,
> Mike
>

Hi Mike

We are using therefore Ray Sterners definition of julian seconds (js)
It's defined: seconds since 2000-1-1 00:00:00 UTC.

Now you have a double precision negative value which will become

positive after 2000-1-1 00:00:00 UTC.

Ray has written a lot of routines to handle these timeformat.
He has lots of routines to transform times in and out to this format and
he has written routines like timeaxis and jsplot.

timeaxis makes whith julian seconds a time axis on a plot. jsplot is a
plot routine to do timeseries plots.

Please look at this documentation for more details.

http://fermi.jhuapl.edu/s1r/idl/s1rlib/time/time.html

I think it's a very good definition for time and the most of our data
are using this js time!

--
R.Bauer

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