
Subject: Re: OPLOT fails intermittently, any ideas?

Posted by [Paul van Delst](#) on Mon, 16 Jul 2001 20:26:10 GMT

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Larry Bleau wrote:

>
>> It depends. It could be that every couple of days the values get *just* a little too big
>> for their difference (epoch-base_epoch) to "fit" in a single precision format, hence the
>> apparent intermittent failure. You only have 6 or 7 significant digits, e.g.

>>
>> IDL> x=8348374.3947d0
>> IDL> x2=8348374.3954d0
>> IDL> print, float(x2)-float(x)
>> 0.00000
>> IDL> print, float(x2-x)
>> 0.000700000

>
> Good example in the abstract, wrong in this particular case. We're doing a 4
> hour plot. The epoch time is in seconds. That means over the course of the
> plot the difference between first and last x-values will be 14400. We have no
> problem distinguishing these times on other plots. Indeed, the only problem we
> had with the single vs. double precision was labelling the x-axis: using the
> unscaled x values the time axis would be labelled 1100, 1159, 1300, 1359, etc.
> In other words, we'd sometimes be off 1 minute (numeric value of 60). Once we
> went to scaling (just subtracting a constant) the labelling problem was fixed.
>
> This is a different problem, long lasting, just doesn't happen very often.

O.k. Well, then you have a mighty weird error! I'm sure someone out there will have another idea. I'll post this to the ng so others will know it wasn't a precision problem.

(Crap, I just reread your original email where you specifically mention this! Man! Sorry for the run-around)

> Once we had this problem when there really wasn't any data for that time
> period: there was a gap in the data sent from the satellite. I checked that
> first thing, though, and while there is a 1-hour data gap, we still have 3
> hours of data; we'd need a 4-hour gap for that to be the cause.

paulv

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Paul van Delst A little learning is a dangerous thing;
CIMSS @ NOAA/NCEP Drink deep, or taste not the Pierian spring;
Ph: (301)763-8000 x7274 There shallow draughts intoxicate the brain,
Fax:(301)763-8545 And drinking largely sobers us again.
 Alexander Pope.