Subject: Re: Sky is falling, maybe?
Posted by JohnSmith on Thu, 08 Oct 2009 19:04:31 GMT
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"Lasse Clausen" <lbnc@lbnc.de> wrote in message
news:771d3ad1-2210-4252-87ad-10af20c3f397@m1g2000vbi.googleg roups.com...
> I find the following odd but maybe the sky is just falling and one of
> you guys can explain why this happens. Try running
>
> power = randomu(1001, 150)
> power[77+lindgen(10)*3] = 1e+7
> help, where(~finite(power))
> plot, power, yrange=[.1, 10]
> loadct, 12
> oplot, smooth(power, 12, /nan), thick=3, color=20
> oplot, smooth(power, 12), thick=3, color=120
> end
>
> On my machine
>
> IDL> print, !version
> { x86_64 linux unix linux 7.0 Oct 25 2007 64 64}
>
> I see a distinct difference in the SMOOTH output after the very uppy-
> downy bit of the data. It seems the documentation should be changed
> from
>
> SMOOTH should never be called without the NAN keyword if the input
> array may possibly contain NaN values.
>
> to
>
> SMOOTH should never be called without the NAN. Period.

my guess, and I have not thought hard about it, is that
the NAN keyword forces smooth to work in double precision internally.

Note: the difference goes away if you put a
power = double(power)

right after the randomu() call.