Subject: Re: JULDAY-CALDAT problem
Posted by btupper on Thu, 26 Feb 2004 14:52:37 GMT
View Forum Message <> Reply to Message

On Thu, 26 Feb 2004 07:19:10 -0700, David Fanning <david@dfanning.com>
wrote:

> Luciano writes:
>
>> Hi, maybe somebody has a clue about the following:
>>
>> IDL> aa=JulDay(11,18,1990,2,0,0)
>> IDL> Caldat,aa,m,d,y,h,mi,s
>> IDL> print,m,d,y,h,mi,s
>> 11 18 1990 2 0 5.3644181e-005
>>
>> Why does s=5.3644181e-005 and not s=0 as it should be?
>
> I think it is a question of using a computer to do the
> calculations rather than your fingers. :-)
>
> Floating point numbers have about 7 significant figures.
> Assuming 60 seconds in a minute, this number starts to
> vary in the seventh place. So, about as close to zero
> as you gonna get, I think.
>
> For a more complete explanation, see this article:
>
> http://www.dfanning.com/math_tips/sky_is_falling.html
>

Hello,

One additional thing to add to David's explanation is that JULDAY adds
a small offset to the seconds argument. I forget why, but the reason
is described in the documentation for JULDAY. You could test it out
by editing the JULDAY function so it does not add the offset. I'll
bet you still will not get the answer you expect because of the
condition David describes.

Ben