Subject: Re: Julian Day Numbers
Posted by Craig Markwardt on Tue, 14 Nov 2000 08:00:00 GMT
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Hi Ben--

You need to be careful with your notations. Jan 1, 1900, 12noon, is different from Jan 0, 1900, 12noon. In fact, Jan 0 is the same as Dec 31 of the previous year, since we normal humans start our day-numbering system with 1. So in fact the IDL JULDAY function is operating correctly.

There are a lot of astronomy-related julian date calculators which can be found on the U of W search page. You might trust these a little more than RSI's since they are used by real scientists :-) I have my own which I can send along if desired. However they all will still give 2415021 for the example you reported.

Good luck,
Craig

Ben Tupper <pemaquidriver@tidewater.net> writes:

> Hello,
>
> You may have heard the proverb, 'A person with two watches
> doesn't know what time it is.' It seems to be true for me.
>
> I have been tinkering with making tidal predictions which,
> of course, are dependent upon time. A number of benchmark
> dates
> are used to establish the phase difference for each harmonic
> component calculated. One of the benchmark dates is Noon,
> Jan 1, 1900.
>
> IDL> Print, JulDay(1,1,1900,12,0,0)
> 2415021.0
>
> However, this is just in from a reliable source...
>
> * From the "Explanatory Supplement to the Astronomical
> Ephemeris" 1992, p.699
> * 1900 JAN 0.5 = JD 2415020.0.
>
> Note the one (1) Julian Day difference. Ugh!
>
> There are a couple of things I could do I guess:

>
> (1) Assume that RSI is ahead of its time, and just charge
> ahead.
> (2) Reduce the Julian Day number by one (I hate to do that
> since I don't know why I need to.)
> (3) Pass different arguments to JULDAY ...
> IDL> Print, JulDay(1,0.5,1900)
> 2415020
> This item is really just like (2) since JULDAY converts
> the input arguments to long integers before processing.
> (4) Use the paper tide table published by the local
> fishermen's cooperative.
> (5) Post a timely (sorry) question to the newsgroup
> regarding what to make of the 1 day difference.
>
>
> Thanks,
>
> Ben
>
> P.S.
> The IDL JULDAY code cites the following reference, but I
> don't have it handy to check into.
> ; Translated from "Numerical Recipies in C", by William H.
> Press,
> ; Brian P. Flannery, Saul A. Teukolsky, and William T.
> Vetterling.
> ; Cambridge University Press, 1988 (second printing).
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