## Subject: Re: Problems with JULDAY and CALDAT Posted by John J. Boia on Wed, 07 Apr 1999 07:00:00 GMT View Forum Message <> Reply to Message Wayne, thanks for the references. Will have a look. I checked JULDAY just like your example and got different results from what you got! IDL> print, julday(4,7,1999,0) % Compiled module: JULDAY. 2451276.0 IDL> print, julday (4,7,1999,12) 2451276.5 IDL> print, !version { mipseb IRIX unix 5.0.2 Aug 19 1997} Wayne Landsman wrote: >> JULDAY seems to return Julian date values with an offset >> of 0.5 from the accepted definition, when hours, minutes, >> and seconds are passed in as arguments Integer julian >> day numbers correspond to 12:00 noon UT. > I'm not sure what you are referring to here -- I don't see any problems with > JULDAY. JULDAY should return an integer value when the hour is 12:00 noon --> which it does. > > IDL> print, julday(4,7,1999,0) 2451275.5 > IDL> print, julday(4,7,1999,12)

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Subject: Re: Problems with JULDAY and CALDAT Posted by landsman on Wed, 07 Apr 1999 07:00:00 GMT View Forum Message <> Reply to Message

In article <370B879B.41C6@iasdev1.gsfc.nasa.gov>, "John J. Boia" <jboia@iasdev1.gsfc.nasa.gov> writes...

2451276.0

> --Wayne Landsman

>

landsman@mpb.gsfc.nasa.gov

- > CALDAT does not correctly return the month/day/year
- > values for Julian day numbers that correspond to leap days
- > (Feb 29) in the leap years 1584 through 1604.

John,

As a replacement for CALDAT, you might look at DAYCNV.PRO available at http://idlastro.gsfc.nasa.gov/ftp/pro/astro/daycnv.pro. It passes your time test for all years except for the peculiar year 1582 itself.

(I don't know what the algorithm error in CALDAT is, since it uses a different algorithm from DAYCNV.PRO. But CALDAT does have a most un-IDL like programming style, with a special subroutine that only does scalar calculations that is called in a loop. Ugly.)

Although not directly to your question, you might also look the time utilities in IDL written by Bill Thompson at http://sohowww.nascom.nasa.gov/solarsoft/gen/idl/time/

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--Wayne Landsman

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