Subject: JULDAY trivia
Posted by K. Bowman on Tue, 27 Mar 2001 19:45:40 GMT
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I've been updating some of my own date and time routines and found myself perusing the JULDAY man page. As an example, the man page gives Julian day numbers bracketing the period when the changeover from the Julian to Gregorian calendar was carried out:

```
PRINT, JULDAY(10,4,1582), JULDAY(10,5,1582), JULDAY(10,15,1582)

2299160 2299161 2299161
```

If I understand correctly, October 5-14 of 1582 never existed. JULDAY, howver, gives the following:

```
IDL> FOR day = 4, 16 DO PRINT, day, JULDAY(10, day, 1582)
      4     2299160
      5     2299161
      6     2299162
      7     2299163
      8     2299164
      9     2299165
     10     2299166
     11     2299167
     12     2299168
     13     2299169
     14     2299170
     15     2299161
     16     2299162
```

Not that I'm ever likely to ask for the Julian day of 5 October 1582, but shouldn't JULDAY choke here, as it does if you use year = 0?

```
IDL> PRINT, JULDAY(1,1,0)
% JULDAY: There is no year zero.
% Error occurred at:  JULDAY            87
  /flow0/local/rsi/idl_5.3/lib/julday.pro
```

Especially since CALDAT will not invert JULDAY during this period:

```
IDL> CALDAT, JULDAY(10, 10, 1582), month, day, year
% Compiled module: CALDAT.
IDL> PRINT, month, day, year
         10         20       1582
```

Ken

Subject: Re: Julday
Posted by R.Bauer on Mon, 24 Jun 2002 06:37:32 GMT
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Wolfgang Koppe wrote:
>
> Dear members,
>
> I would like to convert ASCII data-sets with the Julday function. I
> havenï¿½t got a lot of experience with IDL. I can convert 1 date like
> this:
> PRINT, JULDAY (2000,11,6,12,35,12)
> -->1784427.0,
> but I want to convert a whole ASCII file with dates.
> Do I have to write a whole programm?
> Is it possible to use programm VIP (visual IDL programming)?
>
> Thanks a lot.
>
> Wolfgang

Dear Wolfgang

idl is an array orientated language.
Most functions are programmed to use arrays too.

The following example show vectors of data
all with the same length defining two dates.

If you take a look into the online help of julday

Result is of type double-precision if Hour, Minute, or Second is
specified, otherwise Result is of type long integer. If all arguments
are scalar, the function returns a scalar. If all arguments are arrays,
the function matches up the corresponding elements of the arrays,
returning an array with the same dimensions as the smallest array

year=[2000,2001]
month=[11,2]
day=[6,4]
hour=[12,10]
min=[35,10]
sec=[12,10]

print,julday(year,month,day,hour,min,sec)

1784427.0 1783718.9

regards

Reimar

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Reimar Bauer

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a IDL library at ForschungsZentrum Juelich
http://www.fz-juelich.de/icg/icg1/idl_icglib/idl_lib_intro.h tml
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