
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, however, 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
