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Subject: Re: julday() and fractional days

Posted by [ben.bighair](#) on Wed, 31 Oct 2007 02:20:51 GMT

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On Oct 30, 8:02 pm, Ed Hyer <ejh...@gmail.com> wrote:

```
> OK, if you search c.l.i-p for this you'll find a post from Craig
> Markwardt wherein he laments that JULDAY "doesn't handle fractional
> days". Someone replies to say yes it does, but I think that person
> misunderstood.
>
> IDL> print,julday(12,31,2005,0,0,0)
>      2453735.5
> IDL> print,julday(12,31.2,2005,0,0,0)
>      2453735.5
>
> I'm really unhappy with IDL right now.
```

Hi Ed,

Would this work for you?

```
IDL> print,eh_julday(12,31,2005,0,0,0)
      2453735.5
IDL> print,eh_julday(12,31.2,2005,0,0,0)
      2453735.7
```

\*\*\*BEGIN

FUNCTION EH\_JULDAY, mon, day, year, hour, min, sec

case N\_PARAMS() of

```
  6: j = JULDAY(mon, day, year, hour, min, sec)
  3: j = JULDAY(mon, day, year)
  ELSE: MESSAGE, '3 or 6 arguments required'
```

endcase

```
return, j + (day - FLOOR (day))
```

end

\*\*\*END

Ben

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Subject: Re: julday() and fractional days

Posted by [Craig Markwardt](#) on Wed, 31 Oct 2007 15:49:35 GMT

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Ed Hyer <ejhyer@gmail.com> writes:

> OK, if you search c.l.i-p for this you'll find a post from Craig  
> Markwardt wherein he laments that JULDAY "doesn't handle fractional  
> days". Someone replies to say yes it does, but I think that person  
> misunderstood.  
>  
> IDL> print,julday(12,31,2005,0,0,0)  
> 2453735.5  
> IDL> print,julday(12,31.2,2005,0,0,0)  
> 2453735.5  
>  
> I'm really unhappy with IDL right now.

I mostly use my own simple Julian day routine just to avoid all these annoying surprises.

But in your case it would \*almost\* be easy enough to work around it with something like,

```
IDL> print,julday(12,31,2005,0,0,0) + .2  
2453735.7
```

or programmatically,

```
IDL> print,julday(month,floor(day),year,0,0,0) + (day-floor(day))
```

But the annoyance is in taking the time to discover these quirks, and to remember them.

Craig

--

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Craig B. Markwardt, Ph.D. EMAIL: craigmnet@REMOVEcow.physics.wisc.edu  
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response  
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Subject: Re: julday() and fractional days  
Posted by [Bob\[3\]](#) on Wed, 31 Oct 2007 16:16:26 GMT  
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Perhaps I'm missing something but why would one expect a JULDAY function that is passing hour, minute and second data to also accept fractional days?

I can understand that if you did: print,julday(12,31.2,2005) one might expect the fractional days to be handled, but not when the smaller time units are explicitly present.

What would the correct output of, say,  
print,julday(12,31.2,2005,6,0,0) be?

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Subject: Re: julday() and fractional days

Posted by [Craig Markwardt](#) on Thu, 01 Nov 2007 14:39:02 GMT

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Bob Crawford <Snowman42@gmail.com> writes:

> Perhaps I'm missing something but why would one expect a JULDAY  
> function that is passing hour, minute and second data to also accept  
> fractional days?

>

> I can understand that if you did: print,julday(12,31.2,2005) one might  
> expect the fractional days to be handled, but not when the smaller  
> time units are explicitly present.

>

> What would the correct output of, say,  
> print,julday(12,31.2,2005,6,0,0) be?

I don't know, but because of IDL JULDAY()'s insane behavior, I can  
tell you that it would be different than,

```
print,julday(12,31.2,2005) + 0.25
```

Craig

--

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Craig B. Markwardt, Ph.D.    EMAIL: [craigmnet@REMOVEcow.physics.wisc.edu](mailto:craigmnet@REMOVEcow.physics.wisc.edu)  
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response  
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