Subject: Re: CalDat
Posted by Martin Schultz on Wed, 16 May 2001 08:11:26 GMT
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m.hadfield@niwa.cri.nz ("Mark Hadfield") writes:

> But what about this:
>
> CALDAT, double(2529161.36), Month, Day, Year, Hour, Minute, second
> print, Month, Day, Year, Hour, Minute, second
> ; 7 4 2212 18 0
> 0.00000000
>
> i.e. CALDAT gives the same result for double(2529161.36) as it does for
> 2529161.36.

Well, of course it should. The number 2529161.36 cannot be accurately
represented as float. You can test this with
IDL> print,float(2529161.36d0),format='(f15.6)'
 2529161.250000

> I suggest that there is nothing wrong with CALDAT, but that floats have
> inadequate precision to represent Julian dates. The following shows that
> they are only accurate to ~0.3 days.
>
> ma = machar() & print, 2529161.36*ma.eps
> ; 0.301500
>

That hits the nail right on.

Martin

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