Subject: Re: CalDat
Posted by Ben Tupper on Wed, 16 May 2001 15:48:56 GMT
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Thanks Mark and Martin,

I don't think the earlier discussion regarding float->double conversion had sunk in.

It would be nice if the documentation for CalDat made the behavior clear.

Ben

Martin Schultz wrote:

> 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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