Subject: Re: MEDIAN and double?
Posted by Pavel A. Romashkin on Fri, 17 May 2002 21:38:16 GMT
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I always thought that MEDIAN in Double is just

print, (the_data[sort(the_data)])[n_elements(the_data)/2]

but I may be wrong.
Cheers,
Pavel

Craig Markwardt wrote:
>
> Is it true that MEDIAN only works in single precision? I've tried to
> use a /DOUBLE keyword and it doesn't have one. This is kind of a
> stumper since I certainly do use MEDIAN on double precision
> data... :-)
>
> Craig
>
> --
> ---------- ----------
> Craig B. Markwardt, Ph.D. EMAIL: craigmnet@cow.physics.wisc.edu
> Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
> ---------- ----------

Subject: Re: MEDIAN and double?
Posted by thompson on Fri, 17 May 2002 22:18:32 GMT
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That's very strange. It appears that MEDIAN always returns a floating point value, even if the input array is integer. I suspect this is because of the /EVEN keyword, where it interpolates between two values if the number of points is even. It should be smarter than that.

William Thompson

"Pavel A. Romashkin" <pavel_romashkin@hotmail.com> writes:

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Subject: Re: MEDIAN and double?
Posted by Craig Markwardt on Sat, 18 May 2002 02:49:01 GMT
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"Pavel A. Romashkin" <pavel_romashkin@hotmail.com> writes:

> I always thought that MEDIAN in Double is just
>
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That works for a single number, but the nice part about MEDIAN is that
it can be applied with a sliding window, as in,

```
ysmooth = median(y, window)
```

But, if your data have double precision then YSMOOTH is not always
high enough precision to respect the original data. Or, at least,
mine didn't.

For example, consider:

```
IDL> print, median(1d + 2.4d-9 + [0,0]) - 1
      0.00000
```

Whoops!

Craig

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Craig B. Markwardt, Ph.D. EMAIL: craigmnet@cow.physics.wisc.edu
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