Subject: Re: VALUE_LOCATE and NaNs
Posted by Craig Markwardt on Thu, 25 Oct 2012 14:30:22 GMT
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On Thursday, October 25, 2012 5:14:47 AM UTC-4, Fab wrote:
> Dear IDLers,
>
> I am quite an adept of using NaNs as missing values for my data, because
> many IDL routines go along with them. However, some of the routines are
> not really documented about how they handle NaNs.
>
> See the following example:
> IDL> data = FINDGEN(10) & data[0] = !VALUES.F_NAN
> IDL> p = VALUE_LOCATE(FINDGEN(10), data) & print, p[0]
> -1
> IDL> p = VALUE_LOCATE(INDGEN(10), data) & print, p[0]
> 0
> % Program caused arithmetic error: Floating illegal operand
>
>
>
> Which is quite dangerous! If I didn't debug my code to find the origin
> of the Floating illegal operand warning, value_locate's output would be
> wrong.
>
>
>
> Someone else than me thinking of this as a bug?

NAN is neither greater than or less than any other finite number. For the purposes of VALUE_LOCATE(), there is no way to indicate "complete failure" other than the message you saw. I think the results of VALUE_LOCATE() are undefined, but this should be documented more explicitly in the reference documentation.

The lesson is: you can't use NAN's with VALUE_LOCATE().

Craig