Subject: Re: Testing for NODATA presence in a dataset
Posted by thompson on Thu, 26 Dec 2002 20:58:53 GMT
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Hmmm, you're right. This seems to be a Windows versus Unix thing. I just tried it myself on my workstation and my laptop, both in IDL 5.4, and the behavior under Windows was as you describe. I guess that means you have to use the FINITE() function after all.

Looking up the documentation, I realize that the keywords /NAN and /INFINITY were added in IDL version 5.2, so that FINITE(X,/NAN) is equivalent to X NE X, except that it also works under Windows.

In older versions of IDL, I guess you'd have to check explicitly for infinities to distinguish them from NaNs. Fortunately, there are only four different infinity values, as opposed to 9E15 different NaNs.

Sorry for giving wrong information,

William Thompson

David Fanning <david@dfanning.com> writes:

> Tom McGlynn (tam@lheapop.gsfc.nasa.gov) writes and
> Bill Thompson confirms:

>> That doesn't distinguish NaN from the infinities.
>> The standard trick in any language for looking for NaN's is
>>
>> if x ne x then begin
>> print,'This is a NaN'
>> endif else ...

> Humm, well, consider this little test in IDL 5.5 or 5.6
> for Windows:

> IDL> a = [1.0, 2.0, !Values.F_NAN, 4.0, !Values.F_NAN]
> IDL> print, a
> 1.00000 2.00000 NaN 4.00000 NaN
> IDL> print, a(1)
> 2.00000

> All well and good so far. Test the algorithm.

> IDL> if a(1) ne a(1) THEN print, 'NAN' ELSE print, 'Number'
> Number

> Perfect. Working fine. Now text NAN.

>   IDL> print, a(2)
>   NaN
>   IDL> if a(2) ne a(2) THEN print, 'NAN' ELSE print, 'Number'
>   Number
>   % Program caused arithmetic error: Floating illegal operand

> Oh, oh. What's up with that? And a floating illegal operand to
> boot. :-(

> How about the array in general?

>   IDL> print, array ne array
>   0   0   0   0   0
>   % Program caused arithmetic error: Floating illegal operand

> Humm. I presume you guys have a reason for thinking
> like you do. Any insights?

> Cheers,

> David
> --
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