
Subject: Re: FINITE function

Posted by [andeh](#) on Wed, 21 Jan 2015 12:14:54 GMT

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On Wednesday, 21 January 2015 12:00:29 UTC, g.na...@gmail.com wrote:

> Hi I used the FINITE() function as suggested to find out whether there are nans or infinity numbers in my array. The problem is that I cannot understand the output of that function. I set the keyword SIGN = 1 but I got -1 in the outcome.

>

> Below is a part of the code:

>

> DataArray ; contains the 3D data

>

> for i = 0, 199 do begin

> for j = 0, 199 do begin

> Barray = DataArray[* ,i,j] - Array[i,j]

> print, where(finite(Barray), /INFINITY, SIGN=1))

> endfor

> endfor

>

> I got the -1 value thousands of times maybe and I am not even able to figure out in which place of that array there are infinity or nans (if there are any)

>

> Can anyone help with this?

Your test is only looking for positive infinity so all finite numbers, negative infinities, and NaNs will not be flagged. e.g.

```
IDL> PRINT, FINITE( 1.0, /INFINITY, SIGN=1), WHERE(FINITE( 1.0, /INFINITY, SIGN=1))
```

```
IDL> PRINT, FINITE( !VALUES.F_NAN , /INFINITY, SIGN=1), WHERE(FINITE(
!VALUES.F_NAN , /INFINITY, SIGN=1))
0      -1
```

```
IDL> PRINT, FINITE( -!VALUES.F_NAN , /INFINITY, SIGN=1), WHERE(FINITE(
-!VALUES.F_NAN , /INFINITY, SIGN=1))
0      -1
```

```
IDL> PRINT, FINITE( 1.0 / 0.0 , /INFINITY, SIGN=1), WHERE(FINITE( 1.0 / 0.0, /INFINITY,
SIGN=1))
1      0
```

```
IDL> PRINT, FINITE( -1.0 / 0.0 , /INFINITY, SIGN=1), WHERE(FINITE( -1.0 / 0.0, /INFINITY,
SIGN=1))
0      -1
```

You are getting -1 values from WHERE(). This means that there are no matching elements in FINITE(Barray).

To search for all non-finite numbers, make your search
WHERE(~FINITE(Barray))
