
Subject: Re: Correlate function (bug?)

Posted by [wmc](#) on Mon, 16 Mar 1998 08:00:00 GMT

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In article 9AA03CE1@fz-juelich.de, Theo Brauers <Th.Brauers@fz-juelich.de> writes:

> I was facing a problem with the correlate function

> which is demonstrated by the following IDL procedure:

> pro testc

> x=[1.D-5, 1.D-6, 0.0]

> y=[1.D-5, 1.1D-6, 0.0]

> print, correlate(x,y, /double)

> giving the following result:

>

> NAN

The problem is due to stupid programming in the correlate function.

You can look at the source in \$IDL_DIR/lib/correlate.pro.

There is a tolerance (set to 1e-12 at /double, or 1e-6 otherwise) and if

$\|x\|^2\|y\|^2$ is less than this, NAN is returned. Double precision should be good for a lot better than 1e-12, and anyway its more the ratio between x and y that would matter not the absolute value. Ho hum.

Just take the code and insert tol=0 in the appropriate place...

ps - the documentation doesn't mention this tolerance factor, presumably to avoid worrying our pretty little heads...

- William

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