Subject: strange "eq" behaviour Posted by rogass on Mon, 15 Feb 2010 15:27:44 GMT

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Hi folks.

sometimes it's hard to understand IDL interprets, e.g.:

IDL> print,maxx 1.00000

IDL> help,maxx

MAXX FLOAT = 1.00000

IDL> if maxx eq 1. then print, 'true' else print, 'wrong' wrong

IDL> if maxx eq 1 then print, 'true' else print, 'wrong' wrong

IDL> if maxx eq float(1) then print, 'true' else print, 'wrong' wrong

IDL> if maxx eq maxx then print, 'true' else print, 'wrong'

IDL> if maxx[0] eq 1 then print, 'true' else print, 'wrong' wrong

IDL> if maxx[0] eq 1. then print, 'true' else print, 'wrong' wrong

IDL> if 5 eq 5. then print, 'true' else print, 'wrong' true

What's going wrong here? Has somebody an idea? Is this a bug or a feature;)

I use IDL 6.4.1 within Windows 7 x64 Pro

Thanks and regards

Chris

Subject: Re: strange "eq" behaviour Posted by Spon on Mon, 15 Feb 2010 16:18:44 GMT View Forum Message <> Reply to Message

On Feb 15, 3:54 pm, chris < rog...@googlemail.com > wrote:

- > Hi David.
- > maxx is the correlation coefficient of some data series. It should be
- > exactly 1 if two data vectors are equal but it isn't so now I run
- > into bigger problems with the inbuilt correlate function. Anyway,
- > thanks for your hint.

>

> CR

Hi David.

'It should be exactly one' is a tricky statement in floating point arithmetic.

Looks like a good time to trot out this old line again: http://www.dfanning.com/math_tips/sky_is_falling.html

Your specific problem (or something very similar) is dealt with this article:

http://www.dfanning.com/code_tips/comparearray.html

You might have more success comparing floats using this program: http://www.dfanning.com/programs/floats_equal.pro

Regards, Chris

Subject: Re: strange "eq" behaviour Posted by rogass on Mon, 15 Feb 2010 17:21:50 GMT View Forum Message <> Reply to Message

On 15 Feb., 17:18, Spon <christoph.b...@gmail.com> wrote: > On Feb 15, 3:54 pm, chris <rog...@googlemail.com> wrote: >> Hi David, >> maxx is the correlation coefficient of some data series. It should be >> exactly 1 if two data vectors are equal - but it isn't - so now I run >> into bigger problems with the inbuilt correlate function. Anyway, >> thanks for your hint. >> CR > Hi David, > 'It should be exactly one' is a tricky statement in floating point > arithmetic. > Looks like a good time to trot out this old line again:http://www.dfanning.com/math_tips/sky_is_falling.html > Your specific problem (or something very similar) is dealt with this article:http://www.dfanning.com/code_tips/comparearray.html >

> You might have more success comparing floats using this program:http://www.dfanning.com/programs/floats_equal.pro

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> Regards,

comp.lang.idl-pvwave archive

> Chris

Thank you for enlightening me. MAybe I have to do it in this way: round(value1*(10^(((pp=precision<lowest_precision_of_both_types))))) operator round(value1*pp) or I have to use the floats_equal.pro

Thanks and regards

CR