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Subject: Re: Strange WHERE issue?

Posted by [David Fanning](#) on Fri, 27 May 2011 02:01:46 GMT

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polystethylene writes:

```
>
> Wonder if anybody can help me with this...
>
> Essentially I'm just varying a parameter (1st column) and testing chi
> squared (2nd column), and I want to find chi squared minimum + 1 in
> order find my 1 sigma error bars...
>
> I have the following code:
>
>     c = WHERE(chisqarr_ph[1,*] EQ MIN(chisqarr_ph[1,*]))
>
>
>     d = WHERE(chisqarr_ph[1,*] LE (chisqarr_ph[1,c]+1))
>
>
>
> I have a problem with the line d = WHERE(chisqarr_ph[1,*] LE
> (chisqarr_ph[1,c]+1)), which returns -1.
```

This is one of the classic Where gotchas:

[http://www.idlcoyote.com/misc\\_tips/noidea.html](http://www.idlcoyote.com/misc_tips/noidea.html)

You are only comparing the \*first\* value in your array, because the value on the right of the Boolean expression is a vector of one element.

And, you should be VERY careful using these WHERE expressions with floating values. You will not get the results you expect at least some of the time. See, for example, this article:

[http://www.idlcoyote.com/math\\_tips/razoredge.html](http://www.idlcoyote.com/math_tips/razoredge.html)

You might want to have a look at the program Floats\_Equal in the Coyote Library:

[http://www.idlcoyote.com/programs/floats\\_equal.pro](http://www.idlcoyote.com/programs/floats_equal.pro)

Cheers,

David

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Coyote's Guide to IDL Programming: <http://www.idlcoyote.com/>

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

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