
Subject: Re: A strange error with WHERE
Posted by [David Fanning](#) on Fri, 31 Jul 2009 03:22:18 GMT
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Lindzen writes:

```
> I come across a strange error with WHERE function. Could you
> please help me to check it?
> Here is part of the code. I will explain below the code.
>
> outer1_begin: id_hr = where(r03_temp ge 50)
>                 n_hr = n_elements(id_hr)
>
> if (n_elements(id_hr) gt 1) then begin
>   id_max = where(r03_temp eq max(r03_temp))
>   lonc = lon_aoc(id_max)
>   latc = lat_aoc(id_max)
>
>   ii=0
>   outer2_begin: print,ii
>   ii=ii+1
>   lon_left = lonc-ii*0.5
>   lon_right = lonc+ii*0.5
>   lat_up = latc+ii*0.5
>   lat_down = latc-ii*0.5
>   id_box = where(lon_aoc ge lon_left)
>
> Here lon_left=117.25, is a float number. lon_aoc is a 80*30 matrix,
> with many values larger than 117.25.
> If I use id=where(lon_aoc ge 117.25), id returns right results.
> However, the above code returns -1 to id_box. It is really strange.
> Could anyone help me? Thank you very much!
```

There is nothing wrong with the WHERE function.
There is (certainly) something wrong with one
of your assumptions. You will need to discover
which one it is. The HELP and PRINT commands are
useful for this chore.

Cheers,

David

--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.

Subject: Re: A strange error with WHERE
Posted by [Lindzen](#) on Fri, 31 Jul 2009 03:33:35 GMT
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```
> Lindzen writes:
>> I come across a strange error with WHERE function. Could you
>> please help me to check it?
>> Here is part of the code. I will explain below the code.
>
>> outer1_begin: id_hr = where(r03_temp ge 50)
>>          n_hr = n_elements(id_hr)
>
>> if (n_elements(id_hr) gt 1) then begin
>>   id_max = where(r03_temp eq max(r03_temp))
>>   lonc = lon_aoc(id_max)
>>   latc = lat_aoc(id_max)
>
>>   ii=0
>>   outer2_begin: print,ii
>>   ii=ii+1
>>   lon_left = lonc-ii*0.5
>>   lon_right = lonc+ii*0.5
>>   lat_up = latc+ii*0.5
>>   lat_down = latc-ii*0.5
>>   id_box = where(lon_aoc ge lon_left)
>
>> Here lon_left=117.25, is a float number. lon_aoc is a 80*30 matrix,
>> with many values larger than 117.25.
>> If I use id=where(lon_aoc ge 117.25), id returns right results.
>> However, the above code returns -1 to id_box. It is really strange.
>> Could anyone help me? Thank you very much!
>
> There is nothing wrong with the WHERE function.
> There is (certainly) something wrong with one
> of your assumptions. You will need to discover
> which one it is. The HELP and PRINT commands are
> useful for this chore.
>
> Cheers,
>
> David
>
> --
```

- > David Fanning, Ph.D.
- > Fanning Software Consulting, Inc.
- > Coyote's Guide to IDL Programming: <http://www.dfanning.com/>
- > Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Thanks David.

However, there is nothing wrong with the assumption. I selected one case which fits the IF assumption, and checked the code line by line.

Even if I delete the IF line, the error still exist.

HELP, lon_left shows that lon_left is a flot.

PRINT,lon_left shows the exact value of 117.25.

That is why I think it is strange.

Lin

Subject: Re: A strange error with WHERE
Posted by [David Fanning](#) on Fri, 31 Jul 2009 03:44:05 GMT
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Lindzen writes:

- > However, there is nothing wrong with the assumption. I selected one
- > case which fits the IF assumption, and checked the code line by line.
- > Even if I delete the IF line, the error still exist.
- > HELP, lon_left shows that lon_left is a flot.
- > PRINT,lon_left shows the exact value of 117.25.
- > That is why I think it is strange.

Well, I think there are no values in lon_aoc that are greater than or equal to lon_left. Have you checked that? :-)

Cheers,

David

--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: A strange error with WHERE

Posted by [Lindzen](#) on Fri, 31 Jul 2009 03:50:51 GMT

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> Lindzen writes:

>> However, there is nothing wrong with the assumption. I selected one
>> case which fits the IF assumption, and checked the code line by line.
>> Even if I delete the IF line, the error still exist.
>> HELP, lon_left shows that lon_left is a flot.
>> PRINT,lon_left shows the exact value of 117.25.
>> That is why I think it is strange.

>

> Well, I think there are no values in lon_aoc
> that are greater than or equal to lon_left. Have
> you checked that? :-)

>

> Cheers,

>

> David

>

> --

> David Fanning, Ph.D.

> Fanning Software Consulting, Inc.

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

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

It's not that problem. Please see below:

```
PRINT, WHERE(lon_aoc ge 117.25)
1708 1799 .....
PRINT, WHERE(lon_aoc ge lon_left)
-1
PRINT, lon_left
117.25
```

Well. Maybe I need to check whether there exist strange characters in the code, although it is almost impossible.

Subject: Re: A strange error with WHERE

Posted by [David Fanning](#) on Fri, 31 Jul 2009 04:11:59 GMT

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Lindzen writes:

> It's not that problem. Please see below:

>

> PRINT, WHERE(lon_aoc ge 117.25)

```
> 1708 1799 .....
> PRINT, WHERE(lon_aoc ge lon_left)
> -1
> PRINT, lon_left
> 117.25
>
> Well. Maybe I need to check whether there exist strange characters in
> the code, although it is almost impossible.
```

OK, here is what I think is wrong, then.
I think lon_left is not a scalar. I think
it is a one-element array. It needs to be
a scalar. This will probably work:

```
PRINT, WHERE(lon_aoc ge lon_left[0])
```

Cheers,

David

P.S. This is known as the Gotcha That Gets You Every Time. :-)

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

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

Subject: Re: A strange error with WHERE
Posted by [Lindzen](#) on Fri, 31 Jul 2009 04:24:07 GMT
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```
> Lindzen writes:
>> It's not that problem. Please see below:
>
>> PRINT, WHERE(lon_aoc ge 117.25)
>> 1708 1799 .....
>> PRINT, WHERE(lon_aoc ge lon_left)
>> -1
>> PRINT, lon_left
>> 117.25
>
>> Well. Maybe I need to check whether there exist strange characters in
>> the code, although it is almost impossible.
>
```

> OK, here is what I think is wrong, then.
> I think lon_left is not a scalar. I think
> it is a one-element array. It needs to be
> a scalar. This will probably work:
>
> PRINT, WHERE(lon_aoc ge lon_left[0])
>
> Cheers,
>
> David
>
> P.S. This is known as the Gotcha That Gets You Every Time. :-)
>
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming:<http://www.dfanning.com/>
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Hi David,
Thank you very much. It is the problem!

Lin

Subject: Re: A strange error with WHERE
Posted by [Paul Van Delst\[1\]](#) on Fri, 31 Jul 2009 19:46:45 GMT
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David Fanning wrote:

> Lindzen writes:
>
>> It's not that problem. Please see below:
>>
>> PRINT, WHERE(lon_aoc ge 117.25)
>> 1708 1799
>> PRINT, WHERE(lon_aoc ge lon_left)
>> -1
>> PRINT, lon_left
>> 117.25
>>
>> Well. Maybe I need to check whether there exist strange characters in
>> the code, although it is almost impossible.
>
> OK, here is what I think is wrong, then.
> I think lon_left is not a scalar. I think
> it is a one-element array. It needs to be
> a scalar. This will probably work:

>
> PRINT, WHERE(lon_aoc ge lon_left[0])
>
> Cheers,
>
> David
>
> P.S. This is known as the Gotcha That Gets You Every Time. :-)

I enjoy watching you grok people's problems from afar. It's quite instructive when contemplating debugging in general.

Anyhoo....

cheers,

paulv
