
Subject: Re: Strange array subscripting error
Posted by [greg.addr](#) on Tue, 07 Jul 2009 09:55:20 GMT
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On Jul 7, 11:27 am, robintw <r.t.wil...@rmpic.co.uk> wrote:

> Hi,
>
> I'm getting the error "% Out of range subscript encountered: VALUES.",
> but I can't work out why. I have three arrays (azimuths, zeniths and
> values) each of which is set to a size of 360 * 90 (which is 32400). I
> then have a loop which populates these arrays with values, but when
> the loop gets to 32398 it stops and gives the error above.
>
> I really can't understand what's going on here. I've made sure that
> the variable I'm using to keep the array_index in is a long, in case
> above 32398 it was going over a limit in a standard integer, but that
> didn't help. The only way I've found to get round it is to manually
> add three to my array declaration (ie. change it to fltarr((360*90) +
> 3)). That is obviously a very ugly hack, and ends up with me having
> some blank unused array values at the end.
>
> Does anybody have any ideas why this is happening and what I can do
> about it? I've attached the code below:
>
> PRO BRUNGER_HOOPER_MODEL, a0, a1, a2, a3, azimuths=azimuths,
> zeniths=zeniths, values=values, s_theta, s_phi
> sun_theta = s_theta*!DTOR
> sun_phi = s_phi*!DTOR
>
> ; Initialise arrays
> array_size = (360*90) + 3 ; BUG ALERT! When set to 360*90 (32400) it
> seems to overrun at 32398, this is an ugly fix
>
> azimuths = intarr(array_size)
> zeniths = intarr(array_size)
> values = fltarr(array_size)
>
> FOR phi=0, 360-1 DO BEGIN
> FOR theta=0, 90-1 DO BEGIN
> ; Convert the current phi and theta to radians
> view_phi = phi*!DTOR
> view_theta = theta*!DTOR
>
> value = CALCULATE_SKY_VALUE(a0, a1, a2, a3, view_theta,
> view_phi, sun_theta, sun_phi)
>
> array_index = long((90*phi) + theta)
>
>

```
> ; Put the value into the array
> values[array_index] = value
> azimuths[array_index] = phi
> zeniths[array_index] = theta
>
> ENDFOR
> ENDFOR
>
> ; Normalise the values
> values = values / MAX(values)
> END
```

If I comment out your calculate sky function it works fine on my machine. I can't see anything wrong with your index calculations. You didn't say in which line the error occurs - could it be in a loop in your function?

Is there a reason that you avoid 2-D arrays?

regards,
Greg
