
Subject: Re: subset a 2d array

Posted by [David Fanning](#) on Thu, 14 Aug 2008 16:34:23 GMT

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xiao writes:

```
> Sorry David, I still got problems here. I printed out all the values
> in the array and i found the center value which is -28.0011 but when I
> tried to do this :
>
> index=where(lat eq -28.0011,count)
> xy = array_indices(lat, index[0])
> subarray = lat[xy[0]-400:xy[0]+400, xy[1]-400:xy[1]+400]
>
>
> It cannot find the index number...Why is that? Thank you?
> PS :THIS ARRAY IS A FLOAT ARRAY.
```

Yeah, I thought I would let you solve one problem at a time. :-)

The "problem" is that computers cannot represent numbers "exactly". At least most numbers they can't. (They do a reasonable job with integers. :-)

http://www.dfanning.com/math_tips/sky_is_falling.html
http://www.dfanning.com/math_tips/razoredge.html

Typically, if we are looking for floating values, we have to add/subtract a small "delta" to the number to be able to find it. How big should the delta be? Big enough to allow you to find the number you are looking, but not too big to add ambiguity to your search. You could try something like this, for example"

```
delta = 1e-3
index = Where(array GE (2.5-delta) AND array LE (2.5+delta), count)
```

Or, if you are just looking for the center of the array, you could always do this:

```
s = Size(array, /Dimensions)
xcenter = s[0]/2
ycenter = s[1]/2
targetValue = array[xcenter, ycenter]
```

Cheers,

David

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Coyote's Guide to IDL Programming (www.dfanning.com)

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