
Subject: Re: Newbie question concerning summations/loops in IDL

Posted by [Jeremy Bailin](#) on Wed, 30 Jul 2008 10:57:42 GMT

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On Jul 30, 4:33 am, Wox <nom...@hotmail.com> wrote:

> On Tue, 29 Jul 2008 23:19:19 -0700 (PDT), mbwel...@gmail.com wrote:

>> On Jul 29, 7:27 pm, Chris <beaum...@ifa.hawaii.edu> wrote:

>>> On Jul 29, 1:12 pm, mbwel...@gmail.com wrote:

>

>>>> Hello,

>

>>>> I have need of some experienced users with sort of a newbie question.

>

>>>> I am writing a code that needs a summation in it, this is what I have

>>>> thus far:

>

>>>> v= ; volume of region

>>>> a= ; area of region

>>>> o= 60*pi/180 ; fault dip angle

>>>> g= ; scaling factor

>>>> t= 150 ; elastic lithosphere thickness

>>>> h= ; depth of faulting

>

>>>> ind_small = where(thaext[1,*] lt t)

>>>> ind_large = where(thaext[1,*] ge t)

>>>> thaext_small = thaext[* ,ind_small]

>>>> thaext_large = thaext[* ,ind_large]

>

>>>> ens=(sin(o)*cos(o)/v)* ; horizonatal normal strain for small faults

>>>> enl=(cos(o)/a)* ; horizonatal normal strain for

>>>> large faults

>>>> evs=(-sin(o)*cos(o)/v)* ; vertical normal strain for small faults

>>>> evl=(-cos(o)/a)* ; vertical normal strain for large

faults

>

>>>> The summation needs to be after * in the ens, enl, evs and evl

>>>> fields.

>>>> It must be of the form:

>>>> summation N, i=0 [Di Li Hi] for small faults, where N = ind_small, Hi=

>>>> T/sin(o) and

>>>> summation N, i=0 [Di Li] for large faults, where N=ind_large

>

>>>> Could anyone provide any insight/guidance?

>

>>>> Thanks,

>>>> ~Matt

>

>>> I don't know what some of your variables are (Li? Di?), but you might

```
>>> want to look at TOTAL() to start- you can use that to do most
>>> summation tasks.
>
>> L and D are data from a ascii table that is already ready in, while i
>> is the indice of the summation. I've looked at total, but the examples
>> were sorely lacking. I was hoping that perhaps a useful example, given
>> my code and desire, could be supplied.
>
>> ~Matt
>
> I'm not sure what you mean with "summation N, i=0 [Di Li Hi] ... where
> N=ind_small". The index i goes from 0 to what? And what are you
> summing? D[i]*L[i]*H[i]?
```

Okay, if I understand it correctly, then what you're saying is that in ind_small you multiply by an extra factor of $t/\sin(o)$ inside the sum, but not in ind_large?

```
H = replicate(1., n_elements(D))
H[ind_small] = t/sin(o)
summation = total(D*L*H)
```

Is that what you're looking for?

(by the way, look up !RADEG).

-Jeremy.
