Subject: Re: zonal means
Posted by Dan Bergmann on Mon, 16 Mar 1998 08:00:00 GMT
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Martin Schultz wrote:
>
> Hi everyone,
>
> this is part question, part answer - I just want to make sure there
> is nothing wrong with this:
>
> Q: How do you compute zonal means from a 3D data cube ?
> (example: A(72,46,14) is a data array with longitude, latitude, altitude
> as dimensions, and I want to compute the averages over longitude for
> each latitude and altitude)
>

bunch of complicated solutions deleted .....

Why not try

b = total(a,1)/72.

--
 ** ***
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 ** ***

Subject: Re: zonal means
Posted by Evilio del Rio on Mon, 16 Mar 1998 08:00:00 GMT
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Martin Schultz wrote:
> ...
> Q: How do you compute zonal means from a 3D data cube ?
> (example: A(72,46,14) is a data array with longitude, latitude, altitude
> as dimensions, and I want to compute the averages over longitude for
> each latitude and altitude)
>
> A: well, you can do it in a loop (buuuuuhh!!)
> for j=0,13 do begin
> for i=0,45 do begin
> b(i,j) = total(a(*,i,j)) / 72.
> endfor
> endfor

>
> Q: but I hate loops !!

Hi Martin,

In my opinion you should use the TOTAL function with a second argument:

```
IDL> help,a
A               FLOAT     = Array[72, 46, 14]
IDL> b = TOTAL(A,1) ; The argument 1 tells TOTAL to sum just in the
first dim.
B               FLOAT     = Array[46, 14]
```

then the average is just b/72.0 in this case.

Cheers,

P.S.: I also hate loops! ;-)

_____ _____
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"Anywhere you choose,/ Anyway, you're gonna lose"- Mike Oldfield