Subject: Splitting large for loop over multiple processors Posted by joellama on Wed, 09 Mar 2016 10:40:44 GMT

View Forum Message <> Reply to Message

Hi all,

I know, I know before I get lots of hate that I shouldn't have a for loop in my code...this isn't my code, it's code someone else wrote and I just haven't got the time go through and vectorise it.

Basically I have an output array that is say

```
out = fltarr(nx, ny, nz) where nx=ny=nz=100 each
```

The way the code is currently written it has

```
for i = 0, nx-1 do begin

for j = 0, ny-1 do begin

for k = 0, nz-1 do begin

.... a lot of calculations

endfor

endfor

endfor
```

Basically, all I want to do is split this over all the cores on my mac pro so that it does say

```
0 - nx/6 on cpu 1
nx/6 - 2*nx/6 on cpu 2 etc...
```

I saw this article http://www.exelisvis.com/Company/PressRoom/Blogs/TabId/836/ArtMID/2928/ArticleID/14744/Using-IDL-IDLBridge-to-run-multip le-processes-in-parallel.aspx

but the example isn't exactly easy to follow.

If anyone has any tips I would really appreciate it.

Subject: Re: Splitting large for loop over multiple processors Posted by Jeremy Bailin on Tue, 15 Mar 2016 15:30:56 GMT View Forum Message <> Reply to Message

```
On Wednesday, March 9, 2016 at 5:40:50 AM UTC-5, Joe Llama wrote:
```

```
> Hi all,
```

> I know, I know before I get lots of hate that I shouldn't have a for loop in my code...this isn't my code, it's code someone else wrote and I just haven't got the time go through and vectorise it.

```
> Basically I have an output array that is say
```

>

```
> out = fltarr(nx, ny, nz) where nx=ny=nz=100 each
  The way the code is currently written it has
>
> for i = 0, nx-1 do begin
     for j = 0, ny-1 do begin
>
       for k = 0, nz-1 do begin
  .... a lot of calculations
       endfor
    endfor
>
  endfor
  Basically, all I want to do is split this over all the cores on my mac pro so that it does say
>
> 0 - nx/6 on cpu 1
> nx/6 - 2*nx/6 on cpu 2 etc...
> I saw this article http://www.exelisvis.com/Company/PressRoom/Blogs/TabId/836/A
rtMID/2928/ArticleID/14744/Using-IDL-IDLBridge-to-run-multip le-processes-in-parallel.aspx
> but the example isn't exactly easy to follow.
> If anyone has any tips I would really appreciate it.
I'd suggest Michael Galloy's library:
http://michaelgalloy.com/2015/05/26/a-simple-multicore-libra ry-for-idl.html
-Jeremy.
```