Subject: Re: help - speeding up a loop
Posted by Burch on Wed, 13 Jan 2016 14:26:23 GMT
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On Monday, January 11, 2016 at 11:29:42 AM UTC-6, nata wrote:
> Hi guys,
>
> I am trying to implement a circular smooth on an irregular x, y grid.
> The following loop takes too much time. How do you think I could make it faster?
>
> for i=0L, n_rang-1 do for j=0L, n_azim-1 do begin
>
> distkm=sqrt((xx-xx[i,j])^2. + (yy-yy[i,j])^2.)
>
> ww=where(distkm lt 5.,nn_w)
> if nn_w gt 0 then data_res[i,j]=total(data[ww]) / nn_w
>
> endfor
>
> Thank you for your help,
> nata

There are some quick changes that can be made for modest speed improvements. For example, compare this with the original:

```
for i=0L, n_rang-1 do for j=0L, n_azim-1 do begin

  deltaX = xx - xx[i,j]
  deltaY = yy - yy[i,j]
  distkm_squared=(deltaX*deltaX + deltaY*deltaY)
  ww=where(distkm_squared lt 25.,nn_w)
  if nn_w gt 0 then data_res[i,j]=total(data[ww]) / nn_w

endfor
```

-Jeff