Subject: Re: Calculate gradient
Posted by James[2] on Sat, 13 Mar 2010 08:35:54 GMT
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You could use the SOBEL operator. This convolves the image with kernels like so:

```
-1 0 1     1  2  1
-2 0 2     0  0  0
-1 0 1    -1 -2 -1
```

to get approximations of the x and y gradient respectively. IDL's built-in SOBEL routine returns the magnitude, i.e. the sum of the absolute values of each of these convolutions. It would be simple to make the kernels yourself and use CONVOL if you want to keep the x and y gradients separate.

I don't know much about contour plotting in IDL, but the CONTOUR function is probably a good place to start...

On Mar 12, 1:41 pm, mslarkin <enhlw...@gmail.com> wrote:
> Hi IDL experts,
> I have a 2-D array (2708x4060), containing reflectance data. Is it
> possible to calculate the reflectance gradient (i.e. the rate of
> reflectance change over distance or array grid) throughout the array,
> and then draw lines of equal gradient (note that they’re NOT contour
> lines)?
> Thank you very much for your help!
> IDL beginner