Subject: Re: Gradient idl
Posted by Jeremy Bailin on Tue, 10 Mar 2015 16:13:29 GMT
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On Tuesday, March 10, 2015 at 11:00:30 AM UTC-5, siumt...@gmail.com wrote:
> On Tuesday, March 10, 2015 at 1:12:31 AM UTC-4, siumt...@gmail.com wrote:
>> Hello all,
>>
>> How can calculate gradient a 2-Dimensional scalar field with missing data.
>>
>>
>>
>> Best regards
>
> do you mean to calculate gradient of a scalar function (2ddata) can be solved this way
>
> kernel = [ [-1,0,1],[-1,0,1]]
> result = CONVOL(2Ddata, kernel,/NAN)

No, you'll need two separate convolutions, one for the x-component of the gradient and one for the y-component:

result_x = CONVOL(Data, [-1,0,1], /NAN)
result_y = CONVOL(Data, TRANSPOSE([-1,0,1]), /NAN)

See the CONVOL help page for details about edge options, etc.

-Jeremy.