
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, siunt...@gmail.com wrote:

> On Tuesday, March 10, 2015 at 1:12:31 AM UTC-4, siunt...@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.
