Subject: Re: Working with 2 partially overlapping images of different array sizes
Posted by Craig Markwardt on Tue, 15 Jan 2002 20:19:08 GMT

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aqueous0123@yahoo.com (aqueous) writes:

> Craig Markwardt <craigmnet@cow.physics.wisc.edu> wrote in message
news:<on8zb4gtao.fsf@cow.physics.wisc.edu>...
>>
>> What you are asking for is 100% what the function INTERPOLATE() will
>> do for you. The only trick is to make the X and Y arrays for the
>> interpolation. You are trying to interpolate IMAGE2 onto the grid for
>> IMAGE1, so what you want is an array of X values and Y values that
>> express the IMAGE1 grid in the coordinate system of IMAGE2.
>>
>>   ;; Length of image 2 in the X and Y directions
>>   lenx2 = max(lons2)-min(lons2) & leny2 = max(lats2)-min(lats2)
>>   ;; Pixel sizes of each image
>>   dx2 = lenx2/n_elements(lons2) & dy2 = leny2/n_elements(lats2)
>>
>>   x1 = (lons1-lons2(0))/dx2
>>   y1 = (lats1-lats2(0))/dy2
>>
>>   image3 = interpolate(image2, x1, y1, /grid)
>>
>> Based on what you said, you definitely don't want to use MISSING,
>> because you want nearest neighbor on the outskirts where IMAGE2 is not
>> defined. [If you really wanted to set to zero then you would say,
>> MISSING=0.]
>>
>> Good luck,
>> Craig
>
> Thanks Craig.
> I implemented your solution into the folowing fn.
>
> function testArrays, $
...
>   dx2 = xDelta2 / xSize2
>   dy2 = yDelta2 / ySize2

How about this instead?
  dx2 = xdelta2 / (xsize2-1)
  dy2 = ydelta2 / (ysize2-1)

...
> Huh?

I assume you can be responsible for debugging your own programs. :-)
In this case the place to look is at the values of X1 and Y1, which
should be the pixel values that go into INTERPOLATE. The above change
may solve your problem.

I think you will have to be more careful. Especially regarding
whether pixels are measured on-center, or on-corner. Also, does the
range [2,5] refer to the edges of the pixels or the centers?

Good luck,
Craig

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Craig B. Markwardt, Ph.D.   EMAIL: craigmnet@cow.physics.wisc.edu
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