Subject: Re: Making a 2D Array from 3 columns
Posted by Mark Hadfield on Fri, 25 Jul 2003 02:53:29 GMT
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astronomer wrote:
> Hello everyone, i just came to this newsgroup and already have two
> posts! Shows how much I love IDL!!
>
> Basically: Many programs such as contour programs or just 3-d
> graphing programs need a 2-array as an input.
> I do not have a 2-d array as input.
> What I do have is three 1d arrays. One of these has the x positions
> of several objects. Another has y positions of the same objects. The
> last array has the density or flux or something else of these objects.
> Note, only in the places of the xy field where there is an object do I
> have data. I have nothing for the other regions of the xy field.
> This to say that I do not have a continuous function z=f(x,y), mine is
> discrete....
>
> However, I would like to have contour plots of the density or flux, so
> I would need to make the famous 2-d array the programs use as input.

How are the (x,y) points defined by your x & y position arrays arranged? In a straight line? In a grid? Or scattered on the x-y plane? I'm guessing the latter, so you want to set up a 2D grid and generate plausible values for your field at each point on the grid.

In IDL this is done by the GRIDDATA function. (This was introduced in 5.5; before that there were various functions like TRIGRID, but GRIDDATA has made them redundant.) GRIDDATA is a multi-faceted complicated beast, but its documentation includes several examples, one of which you should be able to adapt.

Also check out the IDL demo under menu item Visualization/Gridding.

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