
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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