Subject: Re: help with data points of contour.
Posted by Ben Tupper on Tue, 24 Aug 1999 07:00:00 GMT
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<!doctype html public "-//w3c//dtd html 4.0 transitional//en">
<html>
Peter Brooker wrote:
<blockquote TYPE=CITE>Consider the following simple program.
<p>nn=101

x=findgen(nn)-(nn-1.)/2.

y=x

z=fltarr(nn,nn)

for i=0,(nn-1) do begin

for j=0,(nn-1) do begin

   z(i,j)=sqrt(x(i)^2+y(j)^2)

   endfor

   endfor

contour,z,x,y,levels=[10,20,30,40]

end
<p>I now want to determine the x,y data points that form the z=20 contour.

How do I do this. The manual is rather cryptic on this.
<p>thanks-Peter Brooker</blockquote>
The contour positions can be written to a variable using the PATH_INFO
and PATH_XY.

<p>Something like this...
<p>pro test

<p>nn=101

x=findgen(nn)-(nn-1.)/2.

y=x

z=fltarr(nn,nn)
<p>for i=0,(nn-1) do begin

for j=0,(nn-1) do begin

   z(i,j)=sqrt(x(i)^2+y(j)^2)

   endfor

   endfor

<p>contour,z,x,y,levels=[10,20,30,40],Path_XY = Path_XY,Path_Info = Path_Info
<p>; the Path_info contains such as number of verticies and how far down
the list in Path_XY they start

; level 20 is index #1 in this case
<p>help, Path_Info[1], /struct
<p> ;it should apears like this

;IDL> help,path_info[1],/struct

;** Structure CONTOUR_PATH_STRUCTURE, 6 tags, length=16:

;   TYPE   &n
bsp;

BYTE   &n bsp;   1

;   HIGH_LOW   &a mp;nbsp;
BYTE   &n bsp;
0

;   LEVEL   &
nbsp;
INT   &nb sp;   &nb sp;
3

;   N
;   ;
LONG   &n bsp;   &n
bsp;
308

;   OFFSET   &amp ;nbsp;
LONG   &n bsp;   &n
bsp;
5

;   VALUE   & nbsp;
FLOAT   & nbsp;   40.0000
<p>Offset = Path_Info[1].Offset   ; start at index Offset

N = Path_Info[1].N   &n bsp;   &n
bsp;
; there are N verticies
<p> ; to get the XY pairings of the verticies
<p>XY20 = Path_XY[*,Offset:Offset+N-1]
<p>help, XY20
<p>;IDL> help,XY20

 ;XY20   & nbsp;
FLOAT   = Array[2, 308]

<p>stop

end

<pre>--
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