Subject: tracing contours, how?
Posted by becker on Thu, 22 Jan 1998 08:00:00 GMT
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Hi,

I am trying to trace a special contour line in a 2D field, t, to
get the coordinates in data units. I tried

```
CONTOUR, t,  PATH_XY=xy, PATH_INFO=info, levels=contourlevels
k = 0
FOR i=0, (N_ELEMENTS(info) - 1 ) DO BEGIN
      FOR j=0,  info(i).n-1 DO BEGIN
        IF((info(i).value EQ tracecontourvalue)THEN BEGIN
           print, info(i).value, xy(0, k+j), xy(1, k+j)
        ENDIF
      ENDFOR
      k = j
ENDFOR
```

and was hoping that this would trace the polygons and give me all points
in normalized units if the contourvalue is tracecontourlevel. I got the
right contour, but the points it printed didn't really make sense. Why?
Did anybody solve this problem with IDL? Your help is greatly appreciated.
Thanks in advance

Thorsten

Thorsten W. Becker_____becker@fas.harvard.edu

Subject: Re: tracing contours, how?
Posted by davidf on Thu, 22 Jan 1998 08:00:00 GMT
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Thorsten Becker (becker@fas.harvard.edu) writes:

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>            ENDIF
>          ENDFOR
```

```
>           k = j
>    ENDFOR
>
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>  in normalized units if the contourvalue is tracecontourlevel. I got the
>  right contour, but the points it printed didn't really make sense.  Why?
>  Did anybody solve this problem with IDL?
```

Perhaps I don't understand this question, but why won't
this work:

```
   CONTOUR, t,  PATH_XY=xy, /Path_Data_Coords, $
     levels=tracecontourvalue
```

Cheers,

David

David Fanning, Ph.D.
Fanning Software Consulting
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Phone: 970-221-0438
Coyote's Guide to IDL Programming: http://www.dfanning.com/

Subject: Re: tracing contours, how?
Posted by Armand J. L. Jongen on Fri, 23 Jan 1998 08:00:00 GMT
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Thorsten Becker wrote:

```
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>                  ENDIF
>                ENDFOR
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>          ENDFOR
>
```

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> in normalized units if the contourvalue is tracecontourlevel. I got the
> right contour, but the points it printed didn't really make sense. Why?
> Did anybody solve this problem with IDL? Your help is greatly appreciated.

I think that for just getting the coordinates for one polygon at a
certain level the suggestion from David works best. So just do:

```
  CONTOUR, t,  PATH_XY=xy, /Path_Data_Coords, $
    levels=tracecontourvalue
```

Both probably you have some troubles that there are more polygons at the
same level generated and you want to seperate them. The way I did this
for selscting the longest polygon is:

```
; Here I set the desired thresholdvalue

   Levels=[ThresHoldVal]

   Contour, ImageData, /Follow, $
       Levels=Levels, /Closed, $
       Path_XY=xy, Path_Info=pathinfo, /Path_Data_Coords

; Check if there are results and then

If N_Elements(pathinfo) GT 0 Then Begin

; choose a selection-criterion
; I look for the longest polygon

   Dum = Max(pathinfo.N,IMax)

; Look at the manual pages for Contour. The returned Path_XY is NOT
; in device_coords but also needs a offset

   S = [INDGEN(pathinfo(IMax).N), 0]

; Here the area xy(*, pathinfo(IMax).Offset+S) contains the polygon
coords in
; /device for the selected polygon.

   PlotS, xy(*, pathinfo(IMax).Offset+S), /Device

Endif
```

I hope this helps. Remember to look at the manual page for Contour to
see how Path_XY and Path_Info are returned.

Cheers,

--

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