Subject: Re: Number of points inside a contour curve
Posted by burkina on Thu, 21 Dec 2006 15:38:15 GMT
View Forum Message <> Reply to Message

On Dec 20, 3:58 pm, David Fanning <n...@dfanning.com> wrote:
> I note that HISTOGRAM_2D uses embedded FOR loops and that HIST_2D
> is written by JD Smith. That's enough for me. :-)

Ok, I'm using hist_2d. The results are similar, I was wrong...

> If you did a HISTOGRAM on the result of HIST_2D, then I should
> think you could find the level where a cumulative total of
> the HISTOGRAM result was 90% of the total (VALUE_LOCATE
> might be handy here). I'm mostly thinking out loud. There
> seem to be a few details missing here....But I think this
> might be a promising direction. :-)

Indeed, your suggestion to use histogram was good. However, I don't
need VALUE_LOCATE. This is how I solved the problem:

```
;density is the result from HIST_2D

maxvalue=max(density,maxpoint)
maxcoord=ARRAY_INDICES(density,maxpoint)
max_x=xmin+maxcoord[0]*xbinsize+xbinsize/2
max_y=ymin+maxcoord[1]*ybinsize+ybinsize/2
print, 'The maximum density is: ', maxvalue
print, 'It occurs at coordinates:'
print, max_x, max_y

tot_histo=total(density)
histoden=histogram(density)
n_histo=n_elements(histoden)
sum=0
k=0

while sum lt 0.9*tot_histo do begin

 sum = sum + histoden[n_histo-1-k] * (maxvalue-k)
 k = k+1

endwhile

maxlevel=histoden[n_histo-1-k] * (maxvalue-k)

contour, density, xabscissa,yabscissa,c_colors=fsc_color('red'),
levels=maxlevel, /overplot
xyouts, max_x, max_y, '+', /data, color=fsc_color('red')
```

Stefano