Subject: Re: creating elliptically shaped images
Posted by condor on Wed, 03 Dec 2003 17:24:55 GMT
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mruschin@hotmail.com (mark) wrote in message
news:<a9116224.0311240712.618f4088@posting.google.com>...
> I'd like to form an image which has an elliptical shape and where all
> the pixels within this ellipse have values corresponding to any given
> function that I would specify, the simplest example being a uniform
> image (i.e. a value of 1 for all the pixels in the ellipse). Is there
> any nice way to do this in IDL or MATLAB other than looping through
> all the pixels and determining whether any given one lies within the
> ellipse?

In IDL at least, you can send raw strings to your output device.
Depending on the device, you could use that to send clipping
instructions.

If you were plotting into a PostScript file for example, this might
look vaguely like this:

```
;; Some random dots to plot:
  x=randomu(seed,5000)
  y=randomu(seed,5000)

  set_plot,'PS'
  device,/landscape

;; plot without clipping to show where the dots are:

  plot,x,y,psym=3

;; PS clipping path -- here vaguely elliptical, but could be anything:

  clipstring='currentpoint 37 rotate 1 .5 scale '+$
      'newpath 15000 5000 5000 0 360 arc clip '+$
      '1 2 scale -37 rotate newpath moveto'

  device,output=clipstring

;; plot again with different psym to illustrate clipping:

  oplot,x,y,psym=4

  device,/close
  set_plot,'X'
```