Subject: Re: help with clipping in IDL V3.0
Posted by sjt on Thu, 08 Dec 1994 11:52:21 GMT
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Patti Twigg (stpat@lepvax.gsfc.nasa.gov) wrote:
: Hi! I am trying to get my program to ignore any points outside
: of the plot window, but based on my reading of the manual,
: this seems to be impossible - there seems to be only 2 choices:
: 1) clip plot to axis, where point outside is joined to first
: point inside starting at the axis, and 2) point outside is
: joined with line extending beyond the axis. I hope maybe I
: missed something in the manual - is there any way to get
: the plot to ignore points outside the axes?? (In Version 1.0,
: there was an option to do this, called IGNORE).

: Thanks for any help!!

: Patti Twigg
: stpat@lepvax.gsfc.nasa.gov
: (pg 162, misc.kids pa)

: *the account I post from is under the name of my supervisor*
: *opinions expressed are mine alone! *

You can do it manually, but it's a bit tedious.

Let us suppose:
X & Y are the data arrays (very original).
XMIN, XMAX, YMIN and YMAX are the limits you want to clip to.

First: set up your axes, transformations etc.

```
PLOT, /nodata, xrange=[xmin,xmax], yrange=[ymin,ymax], fltarr(2), $
 xsty=1, ysty=1
```

Next: Determine the locations of the points to be omitted.

```
clips = where(x lt xmin or x gt xmax or $
      y lt ymin or y gt ymax, nclips)
clips = [-1, clips, n_elements(x)]
```

Then: Plot it a segment at a time

```
for jclip = 0, nclips do begin
   js = clips(jclip)+1
   je = clips(jclip+1)-1
   if (js le je) then oplot, x(js:je), y(js:je)
endfor
```

Not wondrously clever but I think it'll do the job. Based on a procedure
I use to leave gaps in plots where end times and start times don't meet.

--

 +----------------------+---------------------------------- --+---------+
James Tappin,	School of Physics & Space Research	O__
sjt@star.sr.bham.ac.uk	University of Birmingham	-- \/`
"If all else fails--read the instructions!"	
 +-- --+---------+

Subject: Re: help with clipping in IDL V3.0
Posted by sterner on Thu, 08 Dec 1994 17:37:50 GMT
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stpat@lepvax.gsfc.nasa.gov (Patti Twigg) writes:

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> missed something in the manual - is there any way to get
> the plot to ignore points outside the axes?? (In Version 1.0,
> there was an option to do this, called IGNORE).

  Normal IDL plots are clipped correctly with no problem.
  To see this generate some data:

```
  a=findgen(50)*144/!radeg
  r=findgen(50)*10
  x=r*cos(a)
  y=r*sin(a)
  plot,x,y,xran=[-200,200],yran=[-200,200]
```

  What may be confusing is that PLOTS, unlike PLOT, does not
  by default clip to the plot window. To see this:

```
  erase
  plots, x, y
```

  Setting the NOCLIP keyword to 0, NOCLIP=0, enables clipping
  (you might expect to do /CLIP, but CLIP is used to set the
  clipping window (which defaults to the plot window)).

```
  erase
```

plots,x,y,noclip=0

Take a loop at the keywords NOCLIP and CLIP.

Ray Sterner sterner@tesla.jhuapl.edu
The Johns Hopkins University North latitude 39.16 degrees.
Applied Physics Laboratory West longitude 76.90 degrees.
Laurel, MD 20723-6099
WWW Home page: ftp://fermi.jhuapl.edu/www/s1r/people/res/res.html

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Subject: Re: help with clipping in IDL V3.0
Posted by candey on Thu, 08 Dec 1994 17:57:57 GMT
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In article <3c6s1l$j6m@sun4.bham.ac.uk>, sjt@xun8.sr.bham.ac.uk (James Tappin) wrote:

> Patti Twigg (stpat@lepvax.gsfc.nasa.gov) wrote:
> : Hi! I am trying to get my program to ignore any points outside
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> : Thanks for any help!!
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> : Patti Twigg
> : stpat@lepvax.gsfc.nasa.gov
> : (pg 162, misc.kids pa)
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>
> You can do it manually, but it's a bit tedious.
>
> Let us suppose:
> X & Y are the data arrays (very original).
> XMIN, XMAX, YMIN and YMAX are the limits you want to clip to.
>
> First: set up your axes, transformations etc.
>
> PLOT, /nodata, xrange=[xmin,xmax], yrange=[ymin,ymax], fltarr(2), $
> xsty=1, ysty=1
>

> Next: Determine the locations of the points to be omitted.
>
> clips = where(x lt xmin or x gt xmax or $
>   y lt ymin or y gt ymax, nclips)

########
;You could also use the maxvalue keyword
yy = y
if (nclips gt 0) then yy(clips) = ymax+1
oplot, x, yy, max=ymax
########

> clips = [-1, clips, n_elements(x)]
>
> Then: Plot it a segment at a time
>
> for jclip = 0, nclips do begin
>   js = clips(jclip)+1
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>
> --
> +------------------------+---------------------------------- --+---------+
> | James Tappin, | School of Physics & Space Research | O__ |
> | sjt@star.sr.bham.ac.uk | University of Birmingham | -- \/` |
> | "If all else fails--read the instructions!" | |
> +-- --+---------+