Subject: Re: Overplot contour on previously stablished coordinates
Posted by David Fanning on Fri, 01 Mar 2013 20:04:52 GMT
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mairan.teodoro@gmail.com writes:

> This is the part of the code that does the plot:
>
> cgplot, findgen(100),title=strtrim(string(((w[i+j]-lref)/lref)*a.c/1 d5,form='(I10)'),2),$
> xsty=1, ysty=1, charsize=0.8,$
> xrange=[reform(astro[0,0,0]),reform(astro[size[1]-1,size[2]- 1,0])],$
> yrange=[reform(astro[0,0,1]),reform(astro[size[1]-1,size[2]- 1,1])],$
> /nodata, position=p
>
> ;;; this is my iso-velocity image
> cgimage, bytscl(rot(img, 0, missing=0), min=mindisplay, max=maxdisplay), position=p,
/overplot,$
> xrange=[reform(astro[0,0,0]),reform(astro[size[1]-1,size[2]- 1,0])],$
> yrange=[reform(astro[0,0,1]),reform(astro[size[1]-1,size[2]- 1,1])]
>
> ;;; normalized intensity colorbar
> cgColorBar, position=[p[2]+0.005, p[1], p[2]+0.02, p[3]],$
> /vertical, /right, charsize=0.8,$
> range=[mindisplay,maxdisplay]
>
> ;;; this is just to show the axis in white in my iso-image
> cgplot, findgen(100),$
> xsty=1, ysty=1, xtickformat='(A1)', ytickformat='(A1)', axiscolor=cgcolor('white'),$
> xrange=[reform(astro[0,0,0]),reform(astro[size[1]-1,size[2]- 1,0])],$
> yrange=[reform(astro[0,0,1]),reform(astro[size[1]-1,size[2]- 1,1])],$
> /nodata, /noerase, position=p, charsize=0.8
>
> ;;; this is the contour obtained from a FITS image
> ;;; with astrometric solution stored in header.
> ;;; The size and orientation are not the same as
> ;;; that of my iso-velocity image.
> cgcontour, rot(data_img, 0.), levels=[0.9,5,8],$
> color='white', background='black',$
> label=0, olevels=olevels, /onimage, /missing
>
> The result for one image can be seen in this link:
>
> https://dl.dropbox.com/u/6573328/teodoro.png

OK, well, a couple of things. You are contaminating your color table
because you are working in indexed color. You see this by the white line
in your color bar. I would fix this by doing all your graphics in
decomposed color. (The other alternative would be to load your color

tables again just before you draw the color bar.) But, I would bracket your graphics commands with this code, then you don't have to worry about contaminating anything:

```
SetDecomposedState, 1, Current=currentState
  graphics commands here...
SetDecomposedState, currentState
```

I can't tell why your contour plot is rotated, but I note that the data you display as an image and the data you are contouring are not the same data set. Are they suppose to be?

I also note that your contour plot isn't specifying the X and Y location of the values you are trying to contour. This is probably the main reason you are having problems. You are not telling IDL where the contours are suppose to go! In other words, you are calling the contour plot like this:

```
cgContour, data, /overplot
```

And you should be calling it like this:

```
cgContour, data, x, y, /overplot
```

The X and Y vectors are absolutely REQUIRED if you are overplotting. Otherwise, there is no information to do the overplotting. If you don't have these vectors, you can make them like this:

```
s = Size(rot(data_img, 0.), /Dimensions)
x = Scale_Vector(Findgen(s[0]), reform(astro[0,0,0]), $
      reform(astro[size[1]-1,size[2]-1,0]))
y = Scale_Vector(Findgen(s[1]), reform(astro[0,0,1]),$
      reform(astro[size[1]-1,size[2]-1,1]))
```

Cheers,

David
--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
Sepore ma de ni thue. ("Perhaps thou speakest truth.")