

---

Subject: Re: positioning a TV image within plotting region

Posted by [Matthew](#) on Wed, 05 Oct 2011 17:26:50 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

On Sep 30, 11:34 am, David Fanning <n...@dfanning.com> wrote:

> Matthew writes:

>> position = [x0, y0, x1, y1] ;position in normal

>> coordinates

>> position[0] = floor(position[0] \* !d.x\_vsize)

>> position[1] = floor(position[1] \* !d.y\_vsize)

>> position[2] = floor(position[2] \* !d.x\_vsize)

>> position[3] = floor(position[3] \* !d.y\_vsize)

>> xsize = (position[2] - position[0]) - 1

>> ysize = (position[3] - position[1]) - 1

>> xstart = position[0] + 1

>> ystart = position[1] + 1

>

> I think these two lines:

>

>> position[2] = floor(position[2] \* !d.x\_vsize)

>> position[3] = floor(position[3] \* !d.y\_vsize)

>

> should use CEIL instead of FLOOR.

>

> But, I think this is essentially correct. I've changed

> the way I calculate the image size and start positions

> in cglImage this morning to this, and I like the results

> very much.

>

> ; Calculate the image size and start locations.

> xsize = Ceil((position[2] - position[0]) \* !D.X\_VSIZE)-1

> ysize = Ceil((position[3] - position[1]) \* !D.Y\_VSIZE)-1

> xstart = Round(position[0] \* !D.X\_VSIZE)+1

> ystart = Round(position[1] \* !D.Y\_VSIZE)+1

>

> You can test the "fit" by typing these commands and resizing

> the window:

>

> Loadct, 0, NColors=20

> cglImage, BytScl(Dist(20), TOP=19), /Axes, /Keep, \$

> Background='sky blue', /Erase, /Window

>

> Cheers,

>

> David

>

> --

> David Fanning, Ph.D.

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

Just a quick note... unless the aspect ratio of the postscript file is the same as that of the display (e.g. as is the case when using `psCONFIG()`), the variable pixel size will make the initial problem here persist. To fix the problem,

```
x_size_old = !d.x_size  
y_size_old = !d.y_size  
set_plot, 'PS'
```

```
x_size_ps = !d.x_size  
y_size_ps = !d.y_size
```

```
px_size_x = x_size_ps / x_size_old  
px_size_y = y_size_ps / y_size_old
```

```
position[0] = floor(position[0] * !d.x_vsize)  
position[1] = floor(position[1] * !d.y_vsize)  
position[2] = ceil(position[2] * !d.x_vsize)  
position[3] = ceil(position[3] * !d.y_vsize)  
xsize = (position[2] - position[0]) - px_size_x  
ysize = (position[3] - position[1]) - px_size_y  
xstart = position[0] + px_size_x  
ystart = position[1] + px_size_y
```

This has worked so far...

---