
Subject: Re: Printing Images

Posted by [n9140397](#) on Thu, 04 Aug 1994 16:24:24 GMT

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In article <31qsi4\$33v@reznor.larc.nasa.gov> tai@rockola.larc.nasa.gov (Alan Tai) writes:

> I'm having some problems printing an image to a Postscript device. By
> using the same dimensions for the image as the X display (240 x 260),
> the plot comes out larger than it should be (weird--I kind of expected

If you are saying device,xsize=240,ysize=260, then, yeah. I believe that the default units for PS are cms!

That in itself should be useful, but, to fill up a page, try

```
set_plot,'PS'  
device,/inches,xoffset=1, yoffset=1  
device,/inches,xsize=6.5, ysize=9
```

This sets up a standard 8.5"x11" paper with one inch margins. You can figure out the sizing you need for your case. Note that I believe specifying landscape will exchange the x and y axes.

Hope that helps.

Mike H.
UCSD SIO CRD

Subject: Re: Printing Images

Posted by [zawodny](#) on Thu, 04 Aug 1994 16:30:48 GMT

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In article <31qsi4\$33v@reznor.larc.nasa.gov> tai@rockola.larc.nasa.gov (Alan Tai) writes:

> I'm having some problems printing an image to a Postscript device. By
> using the same dimensions for the image as the X display (240 x 260),
> the plot comes out larger than it should be (weird--I kind of expected
> it to be a lot smaller). I tried re-scaling the image for the
> postscript device but ended up trying in vain to congrid a 12000 x
> 12000 byte array. Does anyone have any suggestions? Thanks.
>
>
> Alan

Congrid the image to the size that is appropriate for the amount of detail you wish to retain in the image (240x260 sounds like a good starting point). Then use the fact that PostScript has scaleable pixels and TV the image using the xsize, ysize, & /NORMAL keywords to scale the image correctly. This will probably entail some extra code (mostly CONVERT_COORD calls) to calculate

the correct values of xsize and ysize (as well as the x and y parameters to the TV call). I once tried to use the /DATA key to TV but this did not work as expected (maybe it does now). It also did not work when I was using log axes.

--

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Subject: Re: Printing Images
Posted by [sjt](#) on Thu, 04 Aug 1994 16:50:11 GMT
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Alan Tai (tai@rockola.larc.nasa.gov) wrote:

: I'm having some problems printing an image to a Postscript device. By
: using the same dimensions for the image as the X display (240 x 260),
: the plot comes out larger than it should be (weird--I kind of expected
: it to be a lot smaller). I tried re-scaling the image for the
: postscript device but ended up trying in vain to congrid a 12000 x
: 12000 byte array. Does anyone have any suggestions? Thanks.

: Alan

Let's suppose for the sake of argument you want your image to come out
10cm square on the print device and that it is in the array image, then a
suitable piece of code might be:

```
if (!d.flags and 1) eq 1) then tv, image, xsize=10., ysize=10, /centi $  
else                      tv, image
```

This checks if the device has scalable pixels (I think PS is currently
the only one that does, but it's as well to be general) [N.B. be careful
about the parentheses when working with !d.flags in this case it's O.K.
but for others missing them out will mess up precedences], and if the
pixels are scalable then it plots the image 10cm square, otherwise it
just plots it normally. The problem you were having is that for scalable
devices an image is by default plotted as big as possible.

--

James Tappin, School of Physics & Space Research
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"If all else fails--read the instructions!"

O
-- V

Subject: Re: Printing Images

Posted by [sbarrkum](#) on Mon, 08 Aug 1994 16:53:14 GMT

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In article <31qsi4\$33v@reznor.larc.nasa.gov> tai@rockola.larc.nasa.gov (Alan Tai) writes:

> I'm having some problems printing an image to a Postscript device. By

> 12000 byte array. Does anyone have any suggestions? Thanks.

I use a little routine to rescale the pixels according to the device.

PS devices are capable of high pixel density but the pixels can be rescaled.

Hence can make do with less pixels.

```
pro mak_plot, x1,y1,x2,y2
```

```
; x1, y1  Bottom left Normalised coordinates
```

```
; x2, y2  Top right Normalised coordinates
```

```
data=fltarr(26,14) ; array to hold the image
```

```
;Plot image
```

```
arr_size=convert_coord(x2-x1+(x2-x1)*2/24,y2-y1+(y2-y1)*2/12,/Normal,/To_device)
```

```
if arr_size(0) gt 1000.0 then arr_size(0)=26.0 * 50.0 ; If array too large when
```

```
if arr_size(1) gt 700.0 then arr_size(1)=14.0 * 20.0 ; using PS device use smaller dimensions
```

```
img=congrid(data,arr_size(0),arr_size(1))
```

```
if arr_size(0) ge arr_size(1) then smooth_width =0.1 * arr_size(1)
```

```
if arr_size(0) le arr_size(1) then smooth_width =0.1 * arr_size(0)
```

```
img=smooth(img, smooth_width)
```

```
tv, bytscl(img, tmin, tmax, top=255),x1, y1, /Normal, $
```

```
    xsize = x2-x1, ysize = y2-y1
```

```
;Plot lat long grid and Manus coast line
```

```
plot,[140.5, 164.5], [-5.5,6.5], /Nodata, Xrange=[140.5, 164.5], YRange = [-5.5,6.5], $
```

```
    /NOERASE, Linestyle=0, thick =3, XStyle=1, Ystyle=1, color=backcolor, $
```

```
    position=[x1,y1,x2,y2], charsize=0.6
```

```
end
```

```
=====
```

Hope this helps

Barr-Kumarakulasinghe
