
Subject: postscript scaling

Posted by [mph280](#) on Fri, 26 Feb 1999 08:00:00 GMT

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Hello everyone,

I have a question that puzzled me for some time.
Basically I am plotting contour plots on pv-wave,
I need a reliable way of controlling the postscript
size of the plot area.

So far I have tried two ways of doing this:

1)device,xsize=12.,ysize=12./1 lets say for a square data
set or instead of one you can apply any scaling factor.

(incidentally the scale factor command that also exists
in postscript output doesn't seem to work)

The above line seem to work only if the scaling is other
than one!! I have to add here that postscript has an default
value of 12.7cm vertical offset and 17.78cm width,

ARE THESE VALUES THE PLOT AREA OR ARE THEY THE WHOLE POSTSCRIPT
AREA THAT MIGHT INCLUDE SOME PAGE AREA?

It is these values (17.78,12.7)that one changes to
(12,12)when applying the above line, note that the .(dot)
is required for more accuracy.

The printout of (12,12) is not square!

If one tries to correct the ratio by applying:

xsize=12./1.4,ysize=12./1 then we get a 'squashed'

printout that appears on postscript info to be (8.571,12)

When I tried the reverse,namely xsize=12./1,ysize=12./1.4

(which doesn't really make sense anyway, ie to reduce
the already smaller y axis!)

from info,/device

(we get postscript info 12,8.571)

then the printout is square!

My second method trying to solve this is by:

set_screen,!d.x_size/10.,!d.x_size/1.35,!d.y_size/10.,!d.y_size/1.

This will produce a printout which is square(for square array data
that is), note that we divide by 1.35 and not 1.4 for some reason
one needs to apply a second correction on the scale!

This line I placed in my programme before the contour command,
althought the printout is square, the info on postscript
becomes (12,8.571) as the second example above!

The size of my plot area on the printout is (77mm,77mm).

Clearly nothing that I applied really took place,

the above command had some 'force' on the postscript printout
but that doesn't show(from I understand these figures mean
anyway, when info,/device asked while in postscript

I can not make the connection between Size(x,y):(12,8.571)
and REAL printout postscript values, moreover I divided by

1.35 because initially by default postscript size is (17.78,12.7) therefore $17.78/12.7=1.4$ and when I printed that i realised that another correction needed(I don't know why!) to divide by 1.35 instead of 1.4 to get accurate square printout area.

Since I cannot make the connection, it is trial and error when we go to any non-square data tables, where for example I need x to be 1.2 times larger than y, because the array is so.

One might say multiply (1.2)to the 1.35(which I used to square the plot) but it doesn't always behave accurately, some other "rounding"must be going on even with the .(dot)included after the values...

Finally in this very long letter(SORRY!),
is set_screen command apply to all devices, ie the device you're on at the time or is it designed to work really for x and somehow I got some "result" for ps?

Many many thanks for any replies,

I am trying to solve this for ages and everytime something new appears to complicate things!

cheers

Yiannis
