Inclusion of PAW PostScript (PS) Files in LATEX Files.

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The following may be of interest to people who wish to include PAW PostScript files in LATEX documents. The commands below, when included in your LATEX file will place the PS file in the document. The translations centre the plot and provide the correct vertical spacing.

```
\ begin { figure }
\ vspace { $Y_s \times P_h$ mm }
\ special { [dir]fname.ps $X_s$, $Y_s$, scale $X_t$ $Y_t$ translate }
\ caption { \ label { } title }
\ end { figure }
```

where

X_s - x-scaling value.
Y_s - y-scaling value.
P_h - plot height (mm).
P_w - plot width (mm).
T_w - text width (mm).
X_t - x-translation.
Y_t - y-translation.

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However, the translations X_t and Y_t are dependent on the machine and version of PAW used. They are calculated as follows.

On a VAX running PAW X11 under DecWindows or PAW GKS under UIS

$$X_t = \frac{1}{X_s} \times (1.418 \times (T_w - (X_s \times P_w))) - 0.25 \times ((-5.68 \times P_w) + 1175) \quad (1)$$

$$Y_t = -0.25 \times ((-5.68 \times P_h) + 1685) \quad (2)$$

On the IBM

$$X_t = \frac{1}{X_s} \times (1.418 \times (T_w - (X_s \times P_w))) - 22.5 \quad (3)$$

$$Y_t = -22.5 \quad (4)$$

This is fine for plots up to $190mm \times 190mm$, but although the default plot widths and heights in PAW are both $200mm$ it should be noted that they are scaled automatically within PAW so the default values for P_h and P_w to be used are

VAX PAW X11 - $190mm \times 190mm$.
VAX PAW GKS- $190mm \times 213mm$.
IBM   - $193mm \times 193mm$.

The scaling values X_s and Y_s allow the user to scale the plot. The default values to be used are $X_s = Y_s = 1$, but obviously, values of $X_s = Y_s = 0.5$ would produce a plot of half the original size.

comments to
SHFVS1::CARNEY or SHFVS1::PARKER
CARNEY @ UK.AC.SHEF.PH.V1 or PARKER @ UK.AC.SHEF.PH.V1