

## Notes For Installing PSD

The power spectrum program *PSD* is written in low-level Fortran-77. There is, however, one nonstandard subroutine called `system` on lines 450, 451, 545 and 546. This subroutine initiates a call to the operating system to execute commands in the C-shell version of the Unix OS. *PSD* generates plots of the spectra by writing *plotxy* scripts; if your compiler and operating system support the `system` call, these graphs will be displayed immediately to the terminal, very convenient for interactive use. Users fortunate enough to be running OS-X on Apple MacIntosh computers should find this works immediately, provided that they have installed *plotxy* and put the executable in their `$path` list, and also have available the application `gv`. I assume that students in SIO-223 have these facilities, since that was part of the first homework assignment.

If your platform is not a MacIntosh computer you may be unable to take advantage of this instant display facility. Then you will have to delete all calls to `system` before compilation. *PSD* will still create *plotxy* scripts after each execution, but without `system` you will have to run *plotxy* followed by `gv` (or another PostScript display program) yourself whenever you wish to inspect the results. That can be done most conveniently by opening a second terminal window in the same directory as the one running *PSD*. As you will see in the *PSD* documentation, the default name for the *plotxy* script file is `fort.2` but this can easily be changed with the *PSD* `plot` command. One advantage of use *plotxy* scripts for display purposes is that they can be edited if you want to include additional information on graphs of the spectra.