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.