Notes for porting **rel2008** version of **FLOOXS** to a **RedHat linux** system. Feb. 11, 2016
Porting rel2011 required maybe a third or a half of the changes in the FLOOXS tab.
Both versions used all the same files in the support directory which was unchanged in the original release.

These notes are incomplete, so supplement with the instructions I used as a guide. This link for Ubuntu10.10 is off the main FLOOXS directory. It is the closest, or most updated I could find for this system:
http://www.flooxs.ece.ufl.edu/index.php/Installation_on_Ubuntu_10.10

Below is a listing of programs related to FLOOXS:
TCL
TK
BLT
BLAS
MPI
LAPACK
PETSC (optional, not used, see below)
SuperLU (optional, not used, see below)
UMFPACK
I refer to the link above, and to separate tabs in this file, for downloading, compiling, and linking these programs. Instructions for PETSC and SuperLU are incomplete because linking was never completed.

tcl8.6.4 and **tk8.6.4** are the most recent versions. I chose to update FLOOXS to be compatible to these versions. This required significant editing to the FLOOXS source as described in the FLOOXS tab. It requires some patience, but is fairly straightforward. I documented the changes except for some obvious changes ("const" keyword) that had to be made multiple times.

BLT is necessary for plotting. However BLT is not compatible with the 8.6.4 version of TCL and TK. For that I went with the recommendation from the link above: versions **tcl8.3.4** and **tk8.3.4.** I therefore downloaded two separate versions of TCL/TK into two separate directories: TCL_DIR and TCL_BLT_DIR which I defined in my .bashrc file.

Compatibility between rel2009 of FLOOXS and the version of PETSC I downloaded, petsc-**2.3.2-p7**, was giving me some difficulty. PETSC is used optionally to minimize computer time, and therefore is not absolutely necessary. UMFPACK will do a good job. So part way through this effort, and for the sake of keeping it simple, I decided to not use PETSC (or SuperLU). This required deleting references to these calls from the FLOOXS source code. The compiler will tell you where these are; and the function names will make it obvious.

Below is an excerpt from my .bashrc file. (SLU_DIR and PETSC_ARCH are not used.)

```
export FLXSHOME='~/Floops/rel2008'
export PETSC_DIR="$FLXSHOME/support/petsc-2.3.2-p7"
export PETSC_ARCH=linux-gnu-ia64-intel
export TCL_DIR='~/TCL'
export TCL_BLT_DIR='~/TCLblt'
export SLU_DIR='~/SuperLU_MT_3.0'
export PETSC_ARCH='linux-gnu'

# This is so bltwish and bltsh can find this dir. Don't define these unless you need to.
export LD_LIBRARY_PATH=~/TCLblt/lib:$FLXSHOME/lib:~/TCL/tk8.3.4/library
export CPLUS_INCLUDE_PATH=$PETSC_DIR/linux-gnu/include:/usr/lib64/openmpi/include
```

```
alias flooxs="$FLXSHOME/src/flooxs.new"
alias floods="$FLXSHOME/src/flooxs.new -device"
alias floops="$FLXSHOME/src/flooxs.new -process"
```