

Build MCNPX 2.5.D on Power Mac G5 (OS X) with NAG compiler (version 4.2):

(1) Make a link for f95 and make sure this link is in your path:

```
mkdir bin
cd bin
ln -sf /Library/Receipts/NPAMP42NA_521.pkg/Contents/Resources/NAGWare_f95/bin/f95 f90
setnev PATH ~/bin:${PATH}:
```

(2) Apply the NAG patch:

- (a) Download the 2.5.D source file and unzip/untar. This will put the source in a directory called "v25d".
- (b) Copy the source tree to another directory:

```
cp -R v25d v25y
```

(c) Run the "apply_patch" perl script:

```
./apply_patch v25d patchnag v25y
```

This will end with some error messages, but move on to step (d).

(d) Due to a bug in the v25y/src/xsex3/xstalw.F identifiers, edit this file and replace "lp6e13.5" with "lp,6e13.5" (3 places).

(3) Edit v25y/config/Makefile.h.in and add "-s" to AR_CMD.

(4) Make a build directory and run configure:

```
mkdir v25y_bld
cd v25y_bld
../v25y/configure --with-FC=f90 --with-FOPT="-O1" --host=linux
--with-FFLAGS="-fpp -w -DUNIX=1 -DNAG=1"
--with-CFLAGS="-DUNIX=1 -DNAG=1 -DLINUX=1 -I/usr/X11R6/include"
```

(5) Edit various Makefiles (all in v25y_bld build tree):

- (a) Edit src/mcnp/mcnpf/Makefile and remove \${TARGET1}.\${STATSUF} from the "all" target (~line 112).
- (b) Edit src/mcnp/spabi/Makefile and add "blkdat.o" as a target by changing the following lines:

```
 ${TARGET}.${STATSUF} : ${OBJS}
    ${AR_CMD} ${TARGET}.${STATSUF} ${OBJS}
```

To (note the last 2 lines must start with a tab):

```
 ${TARGET}.${STATSUF} : ${OBJS} blkdat.o
    ${AR_CMD} ${TARGET}.${STATSUF} ${OBJS}
    ${CP} blkdat.o ..
```

- (c) Edit src/mcnp/cem/Makefile, src/mcnp/lcs/Makefile, src/mcnp/dedx/Makefile, src/mcnp/fluka89/Makefile, and src/mcnp/hexs/Makefile to replace the following line:

```
 ${AR_CMD} ${TARGET1}.${STATSUF} ${BDOBJS}
```

with (don't forget this line must start with a tab):

```
 ${CP} ${BDOBJS} ..
```

- (d) Edit src/mcnp/Makefile and add "*.o" to the link line (~lin 50 - note this line starts with a tab as well):

```
*.o ${PARALIB} ${XLIBS}
```

(6) Run "make".

(7) Run the test suite:

(a) Edit v25y_bld/src/Test/Makefile.h and set the following:

```
TARCH = sgi
```

```
TSYS = irix
```

```
TFC = f90
```

```
TCC = cc
```

(b) Run "make".

(c) Tracking differences will occur for INP12, INP110, HTP113, and HTP114. These are being investigated.