

The code for obtaining and analyzing diffuse scattering data is built according to the specifications of the makefile `./src/Makefile` under the home directory for the code. The code was developed on a SGI workstation running Irix 5.2, so the makefile may need to be modified to build the software on different systems. The shell environment variable `C_HOME`, which specifies the home directory for the package, needs to be defined for the makefile to work. For example, the command `setenv C_HOME ~/c` would need to be executed before running the makefile if the home directory were `~/c`.

Main source code is located in the `./src` directory – all files have the suffix `.c`. For the most part, this code only parses the shell command-line arguments, and makes library calls. Allocation and initialization of data structures, file i/o, and number crunching are, for the most part, handled by library calls. A list of the head of all of the main source code is in `c-src-head.txt`.

Library source and object code is in the `./lib` directory. All library file names begin with the letter `l` to distinguish them from the main routines. Source code file names end in `.c`, while object code file names end in `.o`. The library `libmw.a` contains all of the object files. A list of the head of all of the library source code is in `c-lib-head.txt`.

Executable binaries are in the `./bin` directory. Programs are executed by typing the file name at the shell prompt. If arguments are improperly specified, a program will terminate with a short description of their use. A quick way to find out how to use a program is to simply type its name at the prompt – longer descriptions are found at the top of the main source code by the same name as the executable.

The master header file is in the `./include` directory, and is called `mwmask.h`. In this header, standard header files are included, initialization defaults are defined, and data structures are defined. Presently, it is necessary to specify some experimental parameters in this header file, so that each time data from a new experiment is analyzed, the parameters must be changed in the `mwmask.h` file, and the code must be recompiled. The relevant parameters are those enclosed in a series of `#ifdef/#else` statements near the top of the file, and are selected by defining the relevant label for the codename of the data set at the top of the file. To make this more friendly, the code which mainly needs to be modified is that dealing with mapping diffraction images to a lattice, such as `map2lat` and `genlat`, although other routines may need to be changed, too.