

GENIE Super-quick-start Guide

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1. To get a (read-only) copy of GENIE; from your home directory in the SSH Shell Window (~), type:

```
$ svn co https://svn.ggy.bris.ac.uk/subversion/genie/tags/rel-2-5-0
--username=genie-user genie
```

NOTE: All this must be typed continuously on ONE LINE, with a S P A C E before '--username', and before genie. You may (or may not!) be asked for a password – if so, it is: g3n1e-user. (Don't mix up the ONE ('1') with an 'el' ('l') ...)

2. Change directory (see: Appendix I) to ~/genie/genie-main and type:

```
$ make
```

This compiles the default configuration of GENIE. It serves to check that you have the software environment correctly configured. If you are unsuccessful here ... too bad. Try editing user.mak or user.sh which are located in ~/genie/genie-main and which set the environment.

3. Next:

```
$ make assumedgood
```

This creates a 'gold standard' set of experimental results for GENIE-2 (GENIE with the dynamical (ICGM) atmosphere), against which your version of GENIE-2 can subsequently be checked to ensure that you have not broken it in any way.

4. There are a bunch of tests that check the integrity of the code and results, but you can assume that the tagged-release you have installed has already been extensively checked and is good to go. (The tests are: `make test` – short tests that check against your newly created 'assumed good' experimental results; `make testebgogs` – the EMBM-based climate model; `make testbiogem` – climate model plus ocean biogeochemistry (BIOGEM). Because the results of the EMBM-based climate model are not chaotic, these tests compare the result against a 'known good' set of results files that are held on SVN and installed along with the code in ~/genie/genie-knowngood.) Run just a single test for now:

```
$ make testbiogem
```

There may be some 'Warnings' reported (== sloppy programming) but these are not detrimental to the ultimate science results (we hope!). 'Success' of this test is indicated at the end if you get:

```
**TEST OK**
```

and you can then be certain that the model you have installed is producing identical (within tolerance) results to everyone else in the World who has ever installed GENIE.

5. At this point, the science modules are currently compiled in a grid and/or number of tracers configuration that is unlikely to be what you want for running experiments. Clean up (remove) all the compiled GENIE modules, ready for re-compiling afresh from the source code by typing:

```
$ make cleanall
```

6. That is it as far as basic installation goes. Except to read the *user manual* ;) You will be using a script (mini program, if you like to think of it in that way) that carries out some basic configuration tasks and packages up the results – `old_rungenie.sh`, which can be downloaded from mygenie.seao2.org, and under 'GENIE resources: MODEL CONFIGURATIONS AND EXPERIMENTAL DESIGNS'. This file should be installed in your home (~) directory, and **MUST** have executable permissions (`chmod u+x old_rungenie.sh`). Note that you run `old_rungenie.sh` from your home directory, **NOT** ~/genie/genie-main (which confusingly is where the tests are run from).

7. Finally – for running GENIE-1 using 'rungenie', create (see: Appendix I) the following directories:

```
~/genie_archive
~/genie_forcings
~/genie_log
~/genie_userconfigs
```