### How to run egs5

# Hideo hirayama and Yoshihito Namito KEK, High Energy Accelerator Research Organization

- 1. All necessary files need to run sample user code including a script like egs5run are put at the kek\_sample directory.
- 2. Modification of 'egs5run'

Script to run egs5, egs5run and re\_egs5run, must be modified depending on her/his cygwin circumstance.

1-1 Change BASKET in egs5run

In egs5run, directory of egs5.0\_beta is assigned as BASKET.

Scd egs5.0\_beta

\$pwd

/home/\*\*\*\*/egs5.0\_beta

Change BASKET in egs5run to the directory obtained above.

BASKET=/home/\*\*\*\*/egs5.0\_beta

Change MY\_MACHINE from sparc, Cygwin-Linux or Linux.

Delete # infront of corresponding MY\_MACHINE and put # other ones.

Default is Cygwin-Linux.

#### 3. Run egs5run

By executing egs5runscript, followings are performed.

- (1) Delete various files and links made by pervious run.
- (2) Display system name and compiler.
- (3) Ask to key-in user code name (suppose as user\_code).

File type of the user code must be 'f'. You must key-in without file type.

If file does not exit, script will stop.

(4) Add files of which file type are 'f' in the following directory to the user code.

 $user\_auxcode/*.f: default \ subroutines \ and \ user \ defined \ subroutines.$ 

\$BASKET/egs/\*.f:egs5

\$BASKET/auxcode/\*.f: subroutines normally used together with gs5.

\$BASKET/pegs/\*.f: subroutines related pegs.

(5) Link to the following directories.

\$BASKET/include: header file and include common for egs5.

\$BASKET/auxcommons: include common for auxcode subroutines.

\$BASKET/pegscommons: include common for pegs.

(6) Ask to key-in data file name from unit 4.

File type must be 'data'. You must key-in without file type.

If file exits, copy to egs5job.inp.

If file does not exits including not specified, check user\_code.data. If user\_code.data exits, copy it to egs5job.inp.

Otherwise, make dummy egs5job.inp file.

(7) Ask to key-in data file name from unit 25 as an input data for pegs

File type must be 'inp'. You must key-in without file type.

If file exits, copy to pgs5job. pegs5inp.

If file does not exits including not specified, check user\_code.inp. If user\_code.inp exits, copy it to egs5job.pegs5inp.

Otherwise, stop script.

(8) Link to to following directory.

\$BASKET/data

(9) Compile program and execut.

# 4. How to use re\_egs5run

If you want to run same user code with different data both for unit 4 and 25, you can run egs5 without compile by using run5again.

If you save egs5job.exe as the other file name having the file type 'exe', you can use this in re\_egs5run.

## Run run5again

- (1) Delete various files and links made by pervious run.
- (2) Ask to key-in data file name from unit 4 (d4file)

File type must be 'data'. You must key-in without file type.

If file exits, copy to egs5job.inp.

If file does not exits including not specified, make dummy egs5job.inp file.

(3) Ask to key-in data file name from unit 25 as an input data for pegs

File type must be 'inp'. You must key-in without file type.

If file exits, copy to pgs5job. pegs5inp.

If file does not exits including not specified, check d4file.inp. If d4file.inp exits, copy it to egs5job.pegs5inp.

Otherwise, stop script.

(4) Ask to key-in execute file

File type must be 'exe'. You must key-in without file type.

If file exits, execute program.

If file does not exits including not specified, run egs5job.exe.

File system (it is supposed to install at home/hirayama)

