

Vitess "ESS-survival kit" via mcstas2vitess (obsolete since release 3.4 of Vitess)

This page contains a minimal user guide / information for a set of supplemental Vitess modules (tested with current Vitess 3.3a release), based on the following McStas 2.4.1 components/instruments:

- [ESS_butterfly.comp](#) - based on analytical fits to MCNP studies of the future BF1 moderator design
- [MCPL_input.comp](#) - reads MCPL event data from disk
- [MCPL_output.comp](#) - writes MCPL event data to disk
- [ESS_butterfly_MCPL_test.instr](#) - ESS source based on MCPL event data directly from MCNP runs of the future BF1 moderator design

Note: For more information about MCPL, please consult the [website](#) or [publication](#).

Please bear in mind that:

- 1) "This is not Vitess" - but just a set of user-contributed, minimally documented modules,
- 2) I (Peter Willendrup) have discussed the solution with [Klaus Lieutenant](#), who has on his mind/agenda to create a proper, official Vitess release with similar functionality at a later point

Download here: [ESS_2017_Modules_for_Vitess_0.99.tgz](#) or clone from the following repository https://github.com/McStasMcXtrace/Modules_for_Vitess

The tar.gz and the corresponding GitHub repo contain:

A) MODULES/ with binaries for Linux 64bit, Mac OS X (built on 10.12, should run on 10.9 and newer) and Windows (64 bit, should work on Win7 or newer) - corresponding to the following McStas components:

1. ESS_butterfly.comp -> mcstas_ess_butterfly
2. ESS_butterfly_MCPL_instr -> mcstas_ess_butterfly_mcpl
3. MCPL_input -> mcstas_mcpl_input
4. MCPL_output -> mcstas_mcpl_output

B) GUI/ contains a set of test Vitess gui files making use of the modules

C) SRC/ contains the original McStas code and some (light) documentation on the needed code changes

Installation:

1. Copy the modules corresponding to your platform from MODULES/ to your /where/ever/vitess/MODULES/
2. Copy GUI/usermodule.tcl to your /where/ever/vitess/GUI/

Usage:

Try the relevant .gui files found in subfolders of GUI/, respecting the following steps:

1. Change of directory to that folder (*i.e.* GUI/ from the downloaded or cloned folder)
2. The following "neutron-producing"/"neutron source" modules, will in the current version not produce any data when used from within the Vitess GUI:

- ESS_butterfly
- ESS_butterfly_mcpl
- MCPL_input

Please instead use the Vitess feature of File Export As to save a shell script or batch file, which you can afterwards execute from the command line.

On MacOS and Linux

- Save an sh shell script e.g. Untitled.sh
- Give execute permission to the shell script by e.g. `chmod u+x Untitled.sh`
- Execute by `./Untitled.sh`

On Windows

- Save a bat file, e.g. Untitled.bat
- Browse to the folder where the bat file is located
- Double-click the bat file

3. Please always specify a full path for the MCPL file when using the MCPL Input/Output modules
4. When using the ESS_butterfly_MCPL module, please place the relevant beamport MCPL file from <http://public.esss.dk/users/willend/MCPL/> in the simulation folder

It may also be relevant to look at the presentation below:



DEMO-MCSTAS-63.pdf