

# 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](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