Access to DTU GPU nodes

- Get a guest-account from Peter (active until end of April 2021)
- Access via either
  - ThinLinc https://thinlinc.gbar.dtu.dk/main/
  - ssh to login2.hpc.dtu.dk)
- https://www.hpc.dtu.dk/?page_id=2129 has information on interactive nodes, choose one, e.g.
  - voltash -X
- Load McStas 3.0-dev from Peter's account by running
  ~pkwi/McStas/mcstas/3.0-dev/environment

  (! On first access, please write a local mcstas config by mcrun --write-user-config !)
- Load the Nvidia compilers
  module load nvhpc
- Optionally you can also load mpi via module load mpi/4.0.1-gcc-8.3.0
  (! not plug+play wrt OpenACC, needs manual addition of lib and include path in above config !)

Running an instrument on GPU

- Copy an instrument in
  cp $MCSTAS/examples/ISIS_GEM.instr .

- Compile for GPU
  mcrun -c --openacc ISIS_GEM.instr -n0

- Run as usual, gives e.g.

- GPU 1e7, -s1000 :
  Detector: monzns_I=52.7959 monzns_ERR=0.0702837 monzns_N=5.67842e+06
  "monzns_1618479351.A_t"
  Finally [ISIS_GEM: GPU_1e7]. Time: 6 [s]

- CPU 1e7, -s1000 :
  Detector: monzns_I=52.7959 monzns_ERR=0.0702837 monzns_N=5.67842e+06
  "monzns_1618479397.A_t"
  Finally [ISIS_GEM: CPU_1e7]. Time: 1.08333 [min]

mcplot output