

# Running simulations Manual

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## 1 Introduction

With these scripts you can run simulations on UrQMD and vHLLE models.

## 2 How to use

Firstly you have to make programs in `work/template/programs`, change paths in scripts (`run-UrQMD.qsub` and `run-vHLLE.qsub`).

### 2.1 UrQMD simulations

To run jobs you have to type

```
./run_jobs_UrQMD energy number_of_jobs
```

1. energy: With which energy you want to run jobs. Use only integer numbers!
2. number\_of\_jobs: How many simulations you want to run.

Parameters for simulations are in `inputfile`. Default set is:

```
pro 197 79  
tar 197 79
```

```
nev 200  
imp 5.
```

```
ecm typed_as_first_argument  
tim 200 200  
eos 0
```

You can change `inputfile` in `work/template/programs/makeinputfile.cpp`. If you change `inputfile` please save your simulations in different folder from `/eos/nica/mpd/data/UrQMD.energyGev`. You can change it in `run_jobs_UrQMD.qsub`.

## 2.2 vHLLC simulations

Firstly you have to set parameters in vHLLC.C macro in downloaded package in vHLLC/macro. Set energy you want to run. Remember to set SetOutputDirectory as `"/"` in this macro.

To run jobs you have to type

```
./run_jobs_vHLLC energy_set_in_macro number_of_jobs
```

1. energy\_set\_in\_macro: Use energy typed in macro!
2. number\_of\_jobs: How many simulations you want to run.

## 3 Summary

Data is stored in `/eos/nica/mpd/data`, each energy and simulation model have separate folder. You can run only 200 jobs at the same time. In every `model.energyGev` folder there is unique number from queue system. Inside it you have `gen` folder with simulation files and output (or `TestEvUqmd` for UrQMD simulations) folder where reconstructed data is stored - `evetest.root` (output from `runMC.C`), `mpddst.root` (output from `reco.C`).