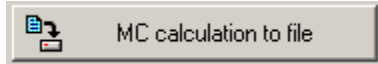


How to export LISE ray files from LISE MC to MOCADI

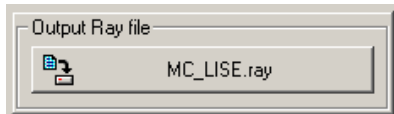
Helmut Weick, 11.08.2013

You can use LISE++ as alternative event generator for MOCADI.

Select writing Monte-Carlo data to file,



and then in the "rays generator" window chose the filename and path.



Write files with selection of the following 10 coordinates in the order as shown on the right, and run.



Afterwards copy the resulting file *.ray to LINUX and run the Perl script "MC_lise2mocadi.pl".

It converts the LISE *.ray data file to a MOCADI ascii data file. On GSI Linux just call:

```
/u/weick/mocadi/exe/MC_lise2mocadi.pl <input file> <output file>
```

The input file is the LISE MC *.ray file and the output a MOCADI data file in ascii format.

Example LISE *.ray file

```
! Last block "Stripper", setting fragment: 32816+.16+ (Projectile Fragme
! location #01 : Stripper
! N 01-X [cm] 01-X'(Theta) [mrad] 01-Y [cm] 01-Y'(Phi) [mrad] 01-Energy
1 0.02667 7.2542 0.26297 13.096 127.86 0.0034775 31.972 16 16 4.1574
2 0.17889 -18.904 0.044246 -11.829 133.4 0.0034181 31.972 16 16 4.1574
3 -0.1223 -12.134 0.25734 2.6495 138.78 0.0033831 31.972 16 16 4.1574
4 -0.11716 -5.7405 0.024248 -4.7519 135.89 0.0033946 31.972 16 16 4.1574
5 0.047219 3.8295 0.047613 8.626 136.81 0.003391 31.972 16 16 4.1574
6 0.16952 4.5373 0.50939 -9.718 130.15 0.0034522 31.972 16 16 4.1574
```

Converted to MOCADI *.asc file (only numbers for time and Q/electrons are different),

as LISE does not group fragments by species, all ions will be fragment 1 at save 1:

```
***** MOCADI ascii listmode input file imported from LISE++ ***** 0
*! after block "Stripper", setting fragment: 32816+.16+ (Projectile Fragmentation); N_fields=10; N_Rays=99^M
0.000 00 0.000000 0
**save point, fragment, teilchen(1-14): x[cm], x'[mrad], y[cm], y'[mrad], energy[AMeV], time[us], mass[amu], z, electrons.
1 1 -0.037038 -9.8328 -0.27464 13.142 135.52 3.3959e-06 31.972 16 0 0.0e+00 0.0e+0 0.0e+0 0.0e+0
1 1 -0.074671 18.258 -0.088056 16.284 133.12 3.4127e-06 31.972 16 0 0.0e+00 0.0e+0 0.0e+0 0.0e+0
1 1 -0.044421 3.3589 -0.10739 -1.5075 134.68 3.3994e-06 31.972 16 0 0.0e+00 0.0e+0 0.0e+0 0.0e+0
1 1 0.063958 31.38 -0.28687 1.8449 132.02 3.4348e-06 31.972 16 0 0.0e+00 0.0e+0 0.0e+0 0.0e+0
1 1 -0.089293 -31.171 -0.026361 11.155 128.75 3.4161e-06 31.972 16 0 0.0e+00 0.0e+0 0.0e+0 0.0e+0
1 1 -0.08927 -0.23751 -0.10174 5.7923 137.47 3.3879e-06 31.972 16 0 0.0e+00 0.0e+0 0.0e+0 0.0e+0
```

In MOCADI you can use this file with the READ command, which then replaces the BEAM command.

```
READ
14
MC_LISE.asc
5 1 1
```

14 (or usually more) = number of ions, filename, 5= ascii, save=1, fragment=1