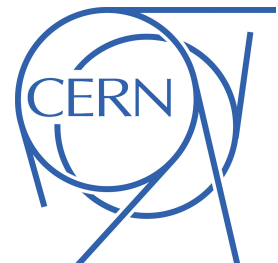


Updated radial profiles

- π & e
- FTFP_BERT & _EMY & _EMZ
- QGSP_BERT & _EMY & _EMZ



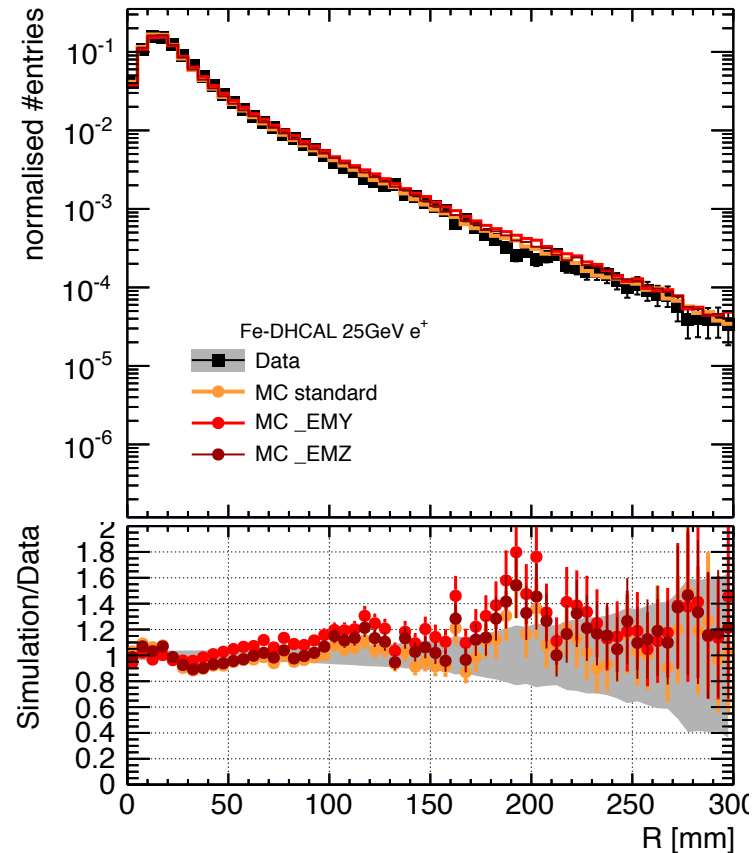
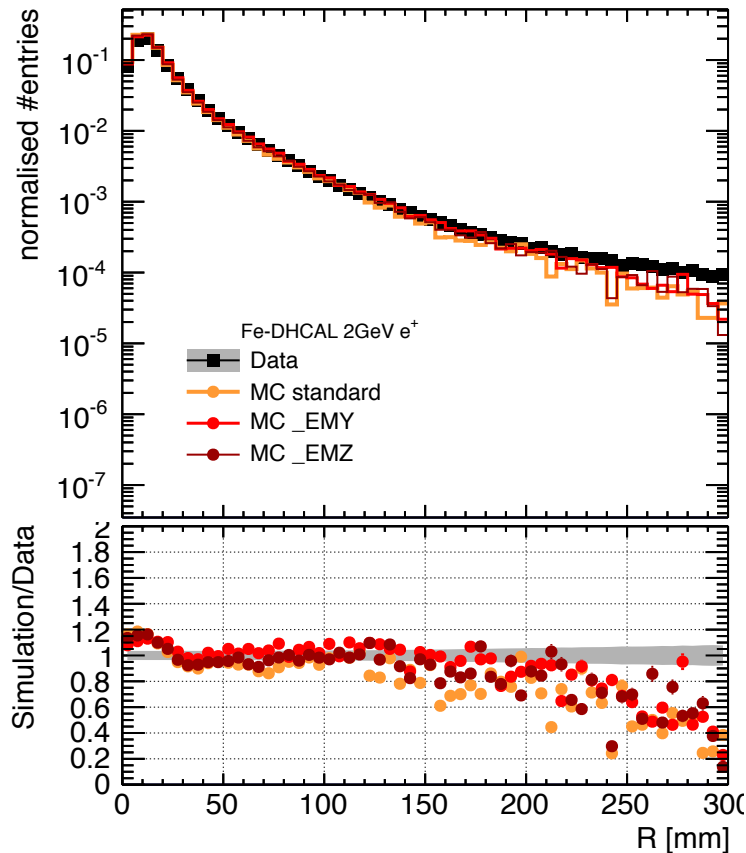
Coralie Neubüser
02.09.2016



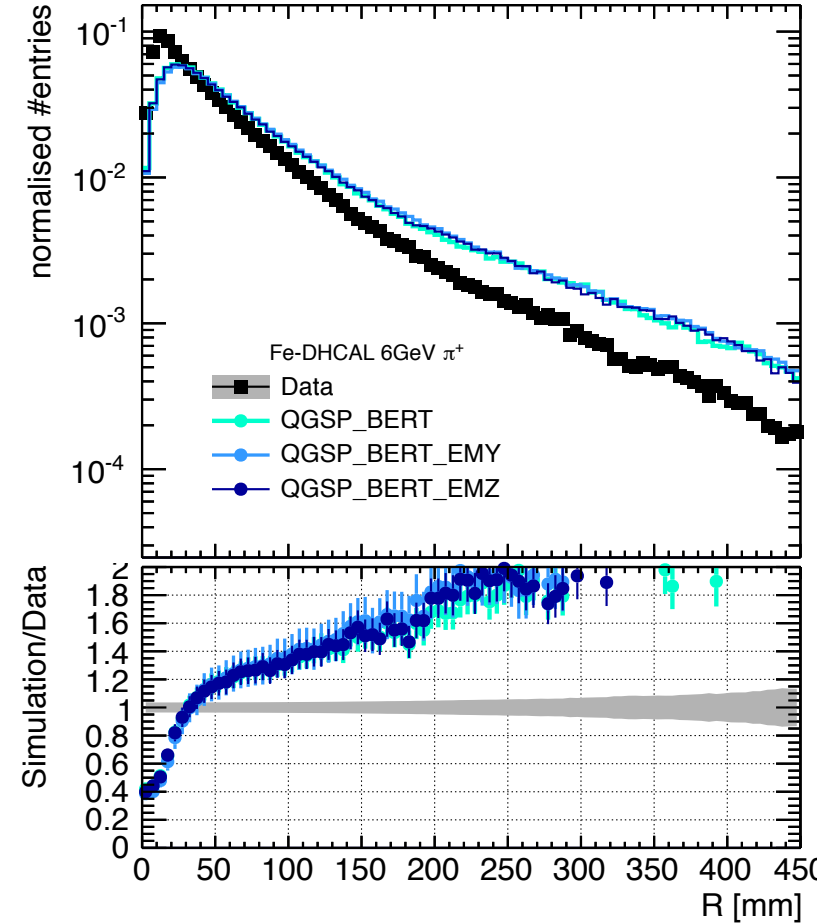
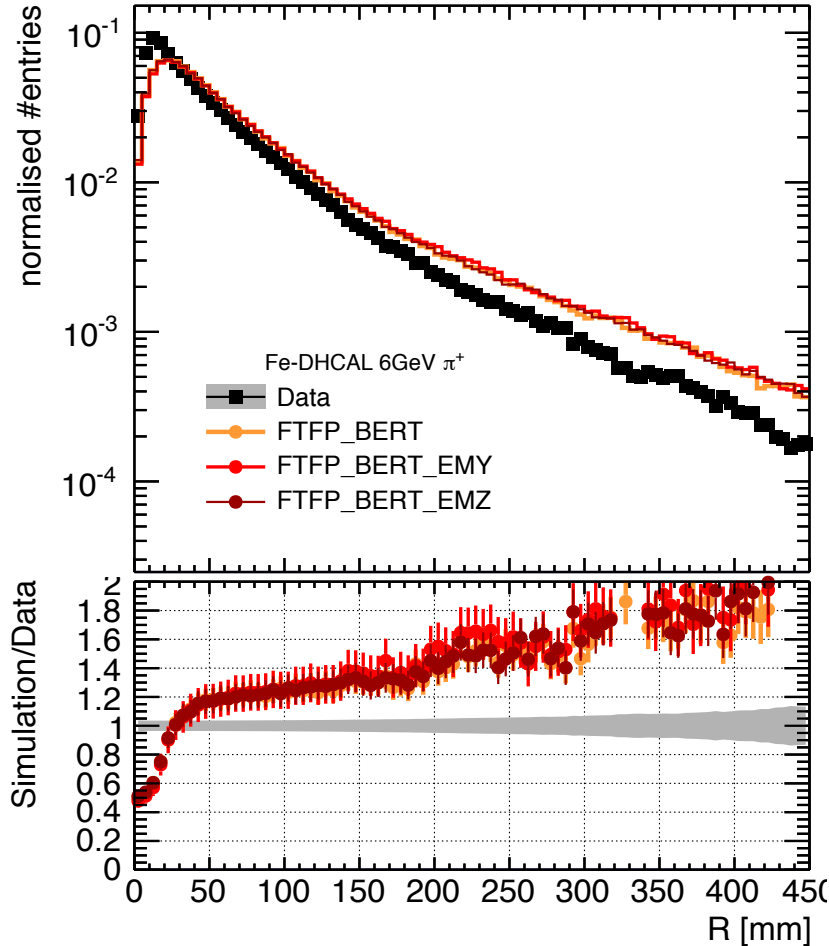
Definition

- Distance of every hit j in event i from center of gravity of that event in x-y

$$R_{i,j} = \sqrt{(x_{i,j} - CoG_{x,i})^2 + (y_{i,j} - CoG_{y,i})^2}$$



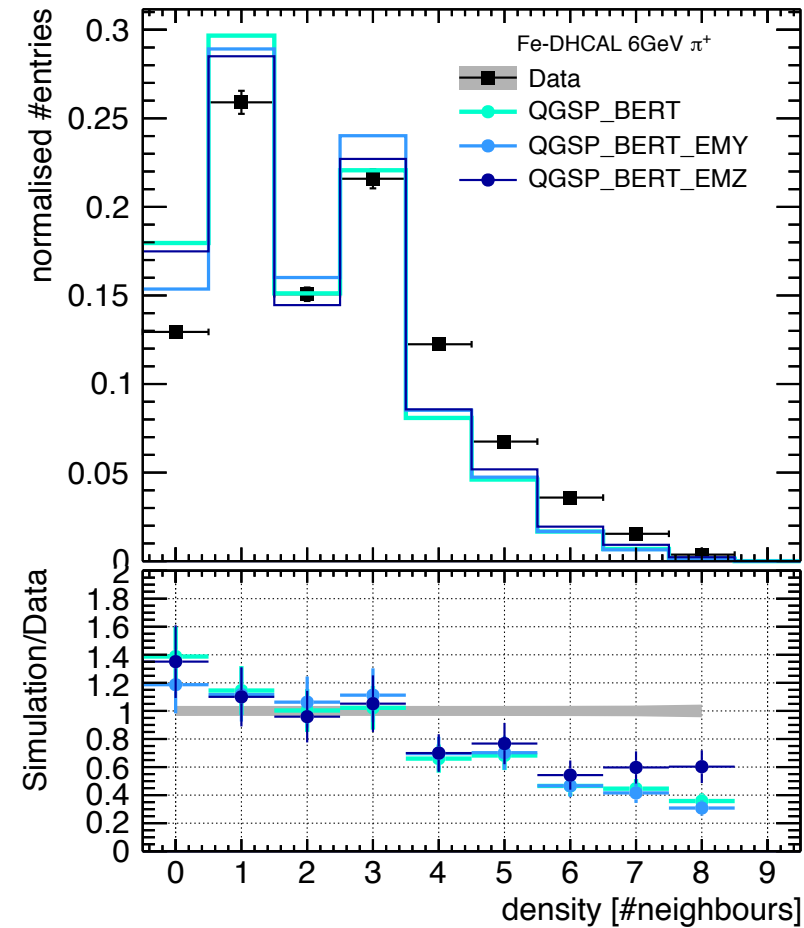
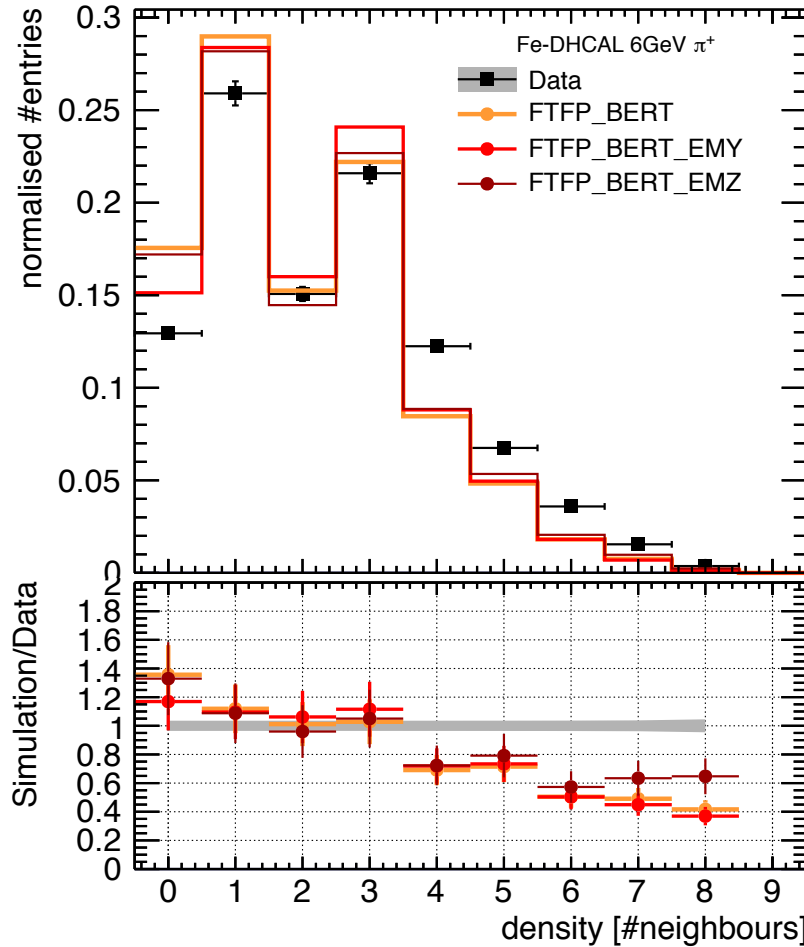
Radial profiles for pion showers – 6GeV



- Better, but still not perfect description of energies $<10\text{GeV}$ by Fritiof model of FTFP_BERT than Bertini model of QGSP_BERT



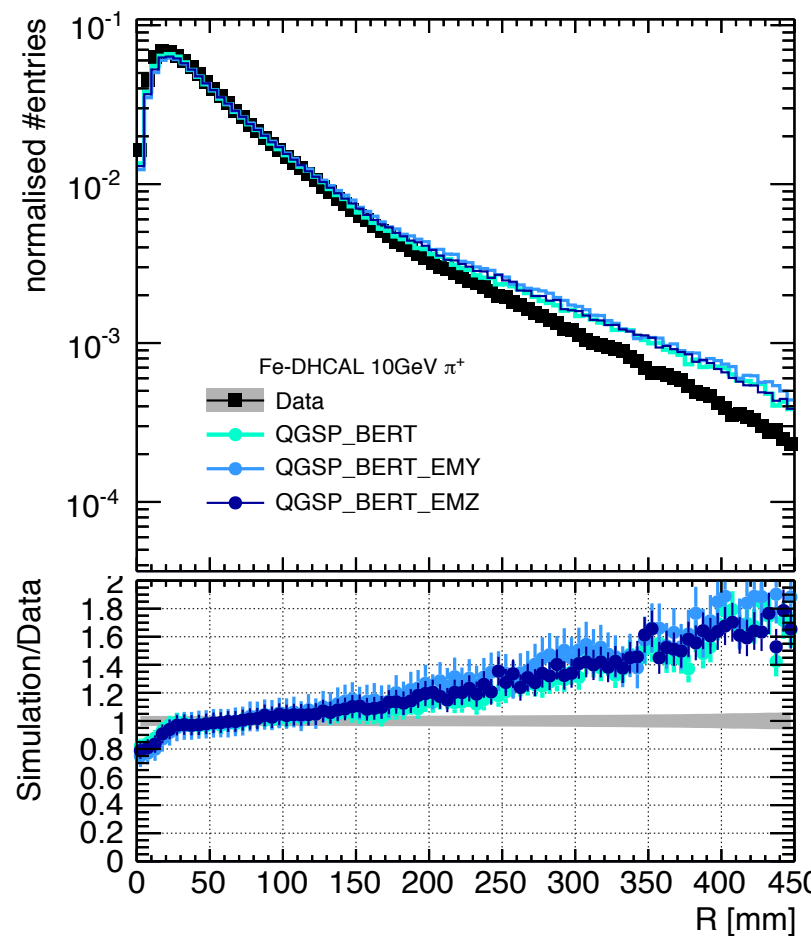
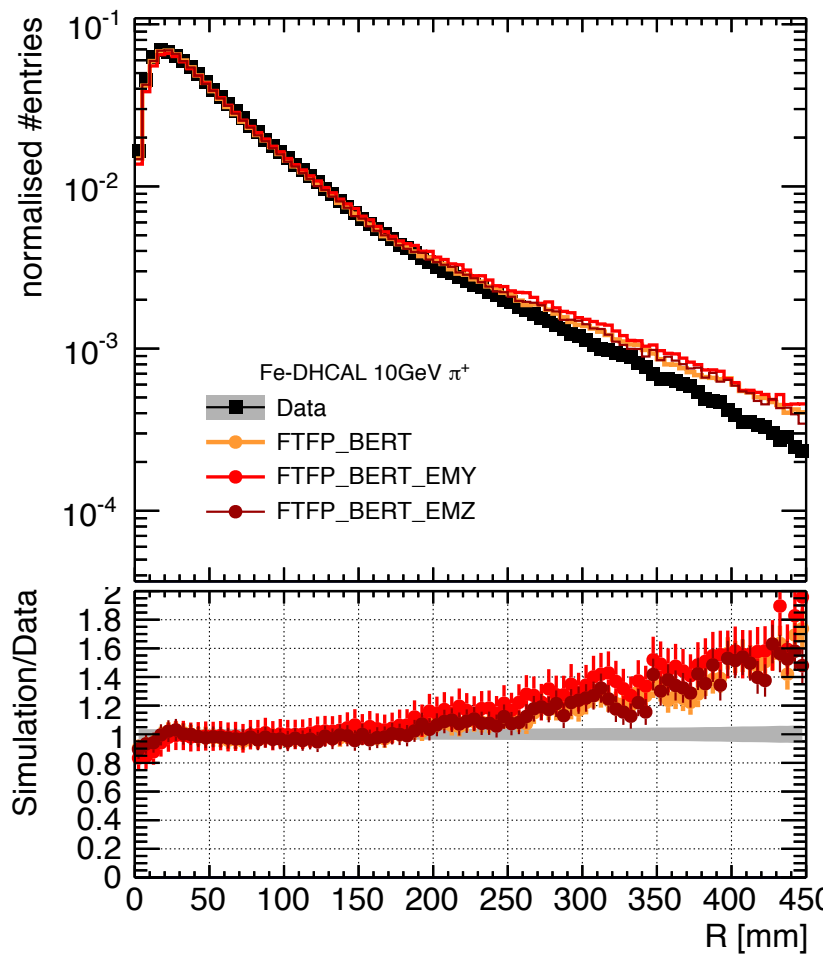
Radial profiles for pion showers – 6GeV



➤ Consistent with observations in hit densities

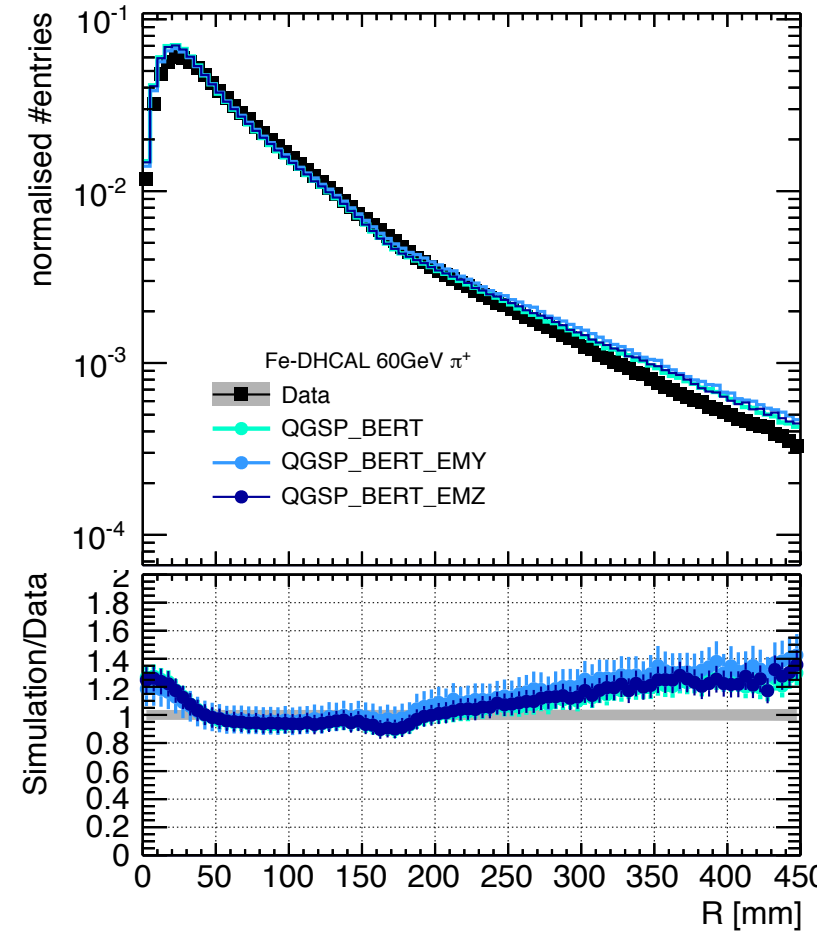
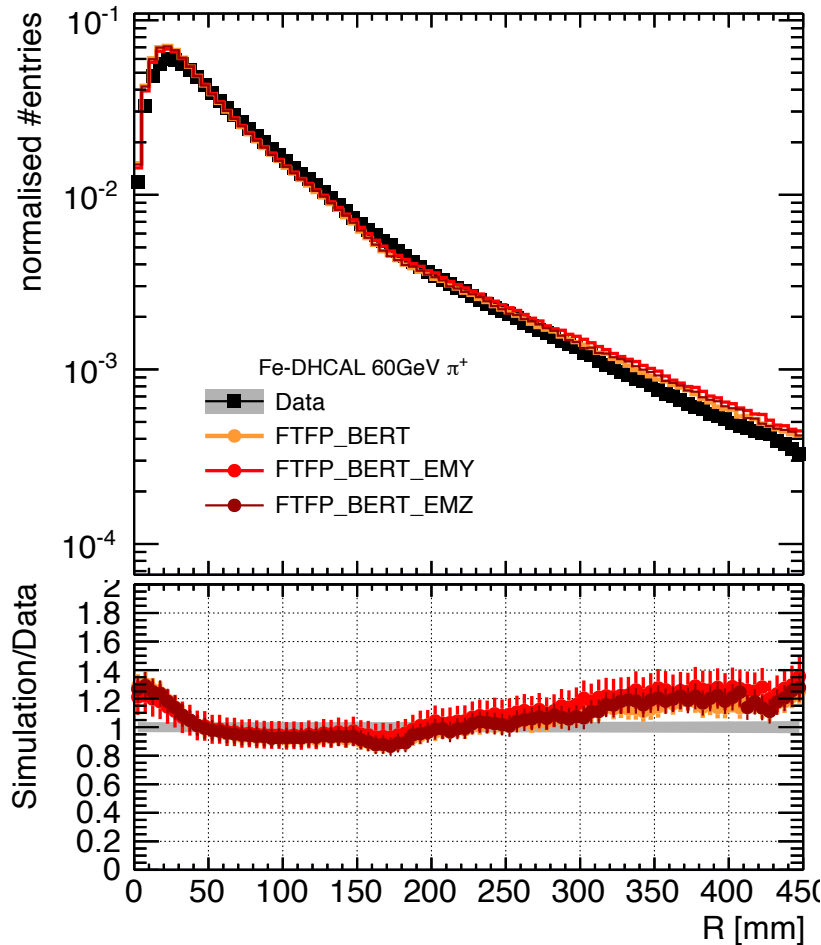


Radial profiles for pion showers – 10GeV



➤ Fritiof model of FTFP_BERT better than LEP model of QGSP_BERT

Radial profiles for pion showers – 60GeV



- Better description at high energies
- Slightly better agreement of FTFP_BERT



Reminder physics lists

