New MC Positron/Electron Results

- LUXE biweekly meeting
- Tuesday , 21.05.

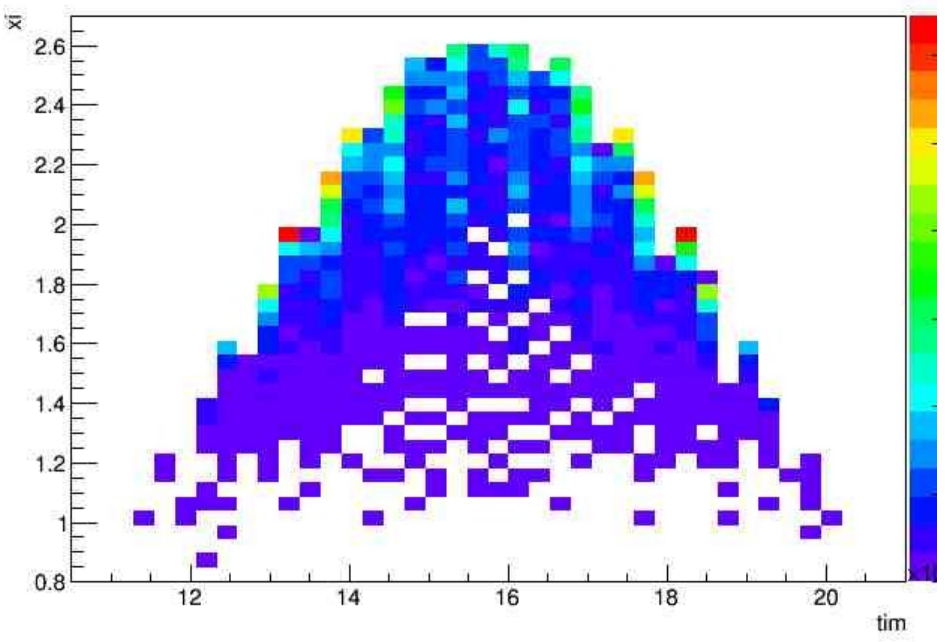
Comparison of old and new MC

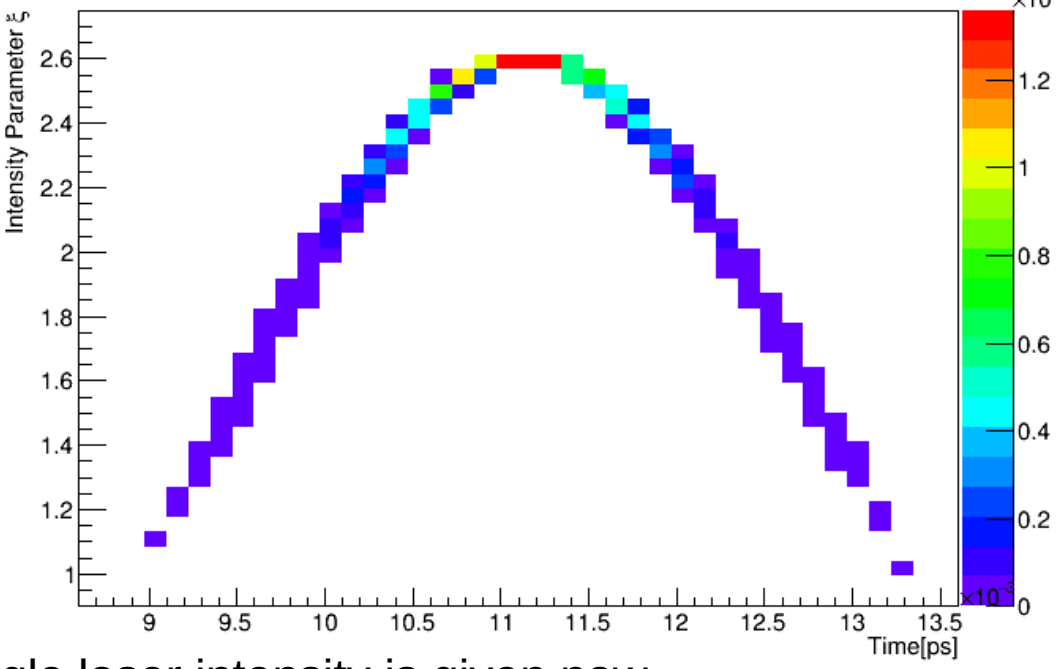
- For phase0 (=0.35J) and phase0.5(=1.0J)
- 5mDistance Foil/IP
-

Temporal xi distribution

New MC

Old MC

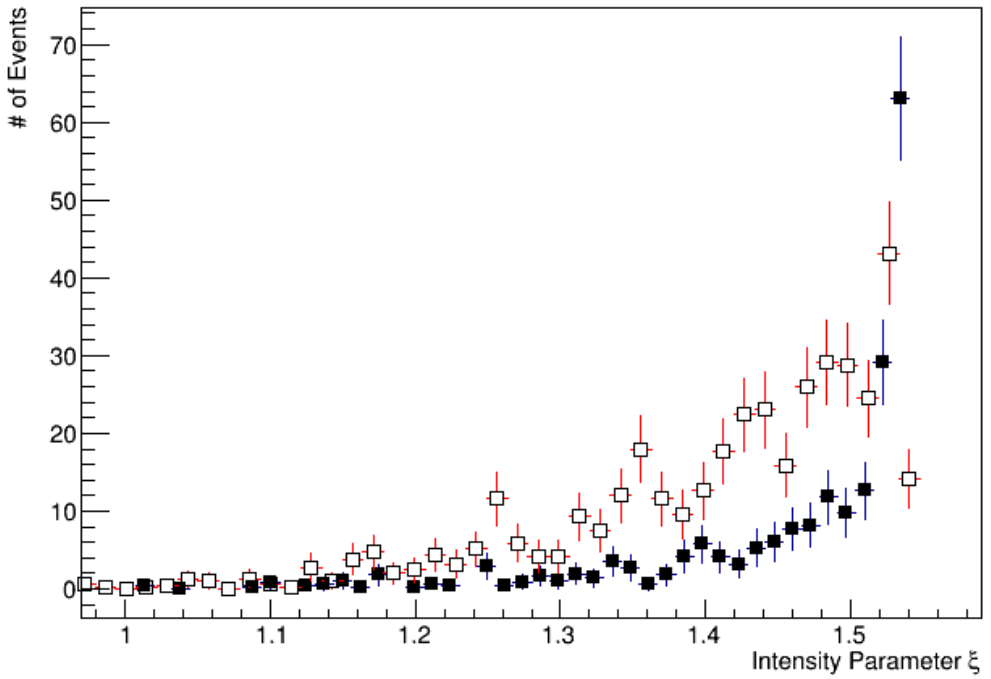




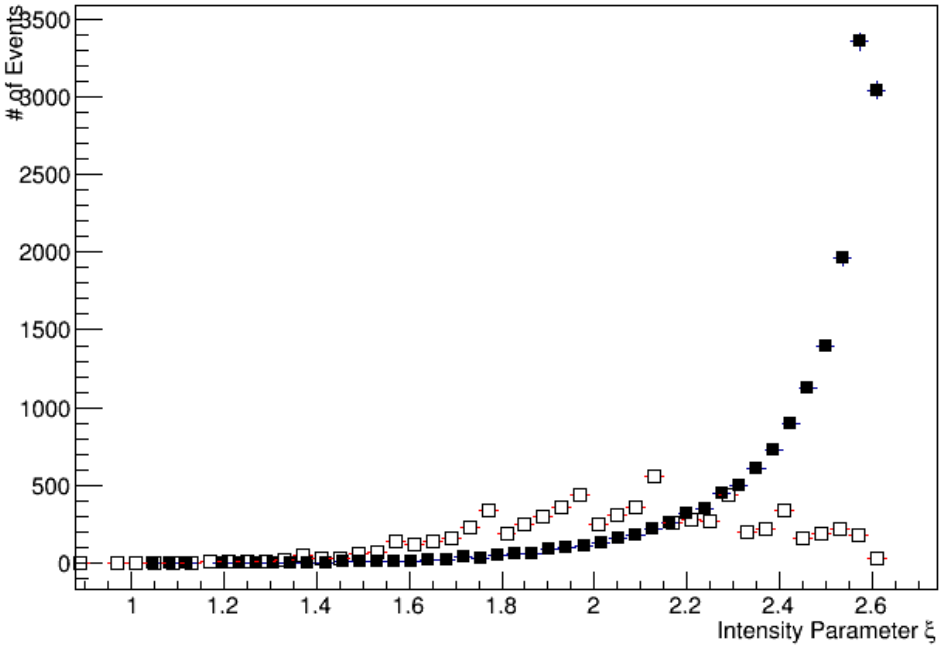
For given time, only a single laser intensity is given now

Xi at interaction

0.35J



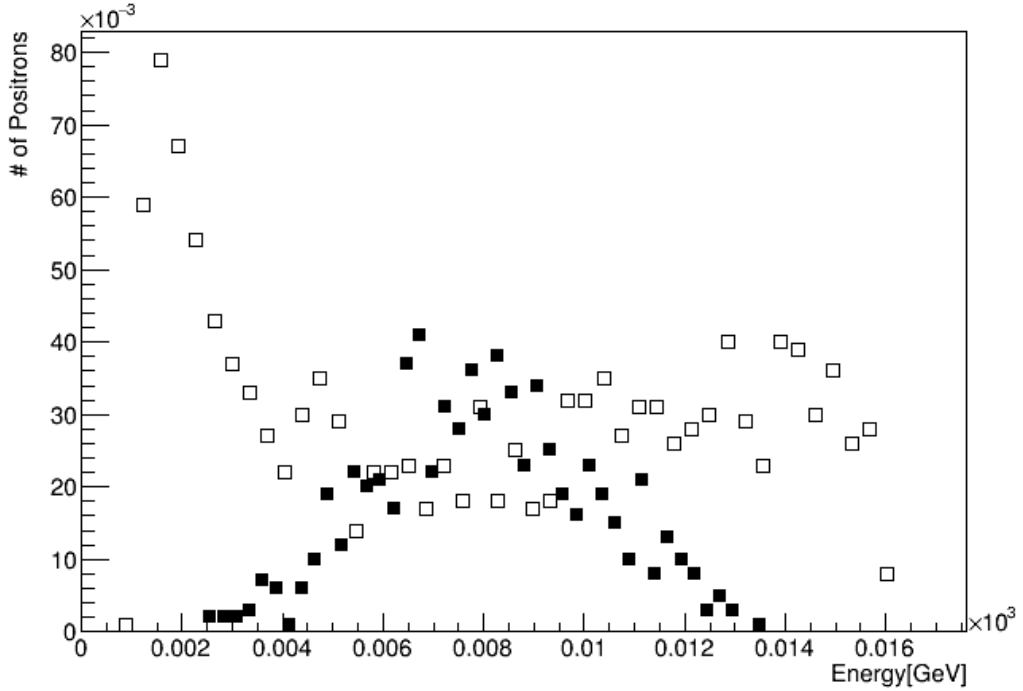
1.0J



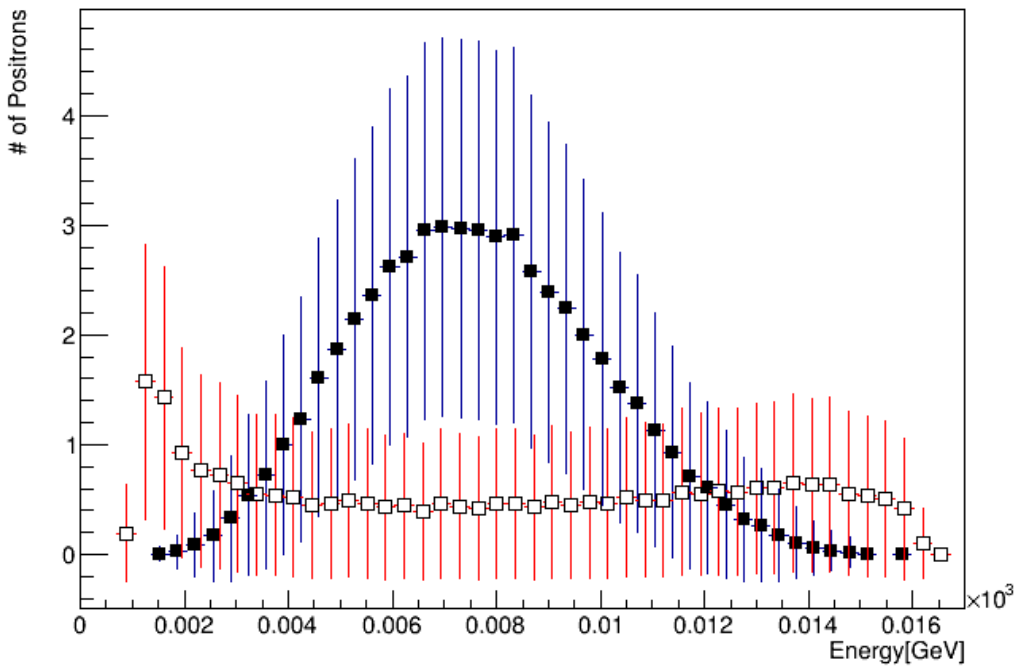
Intensity now peaking at highest Intensity

Positron Energy

0.35J

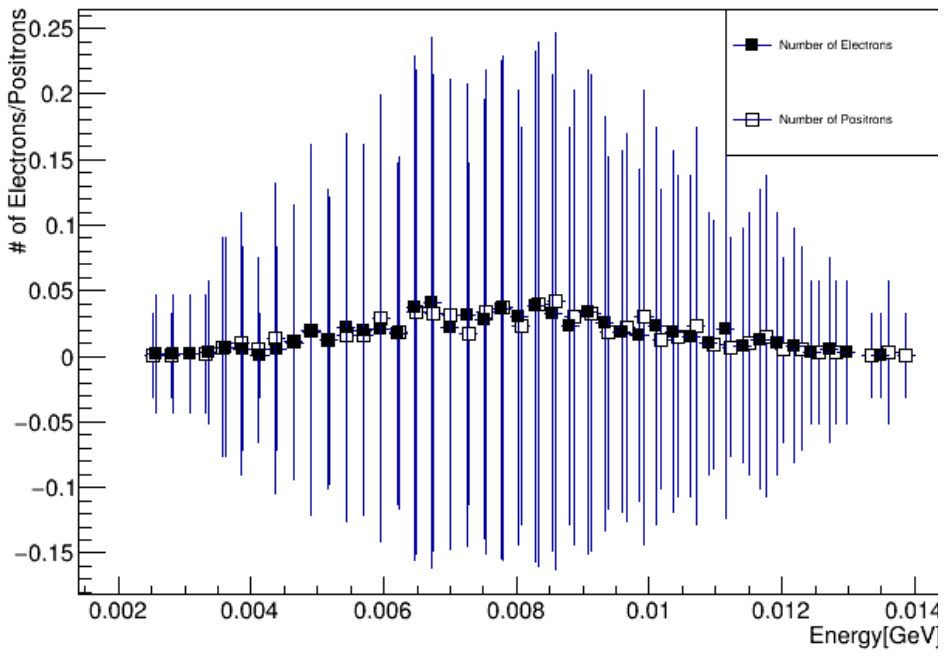


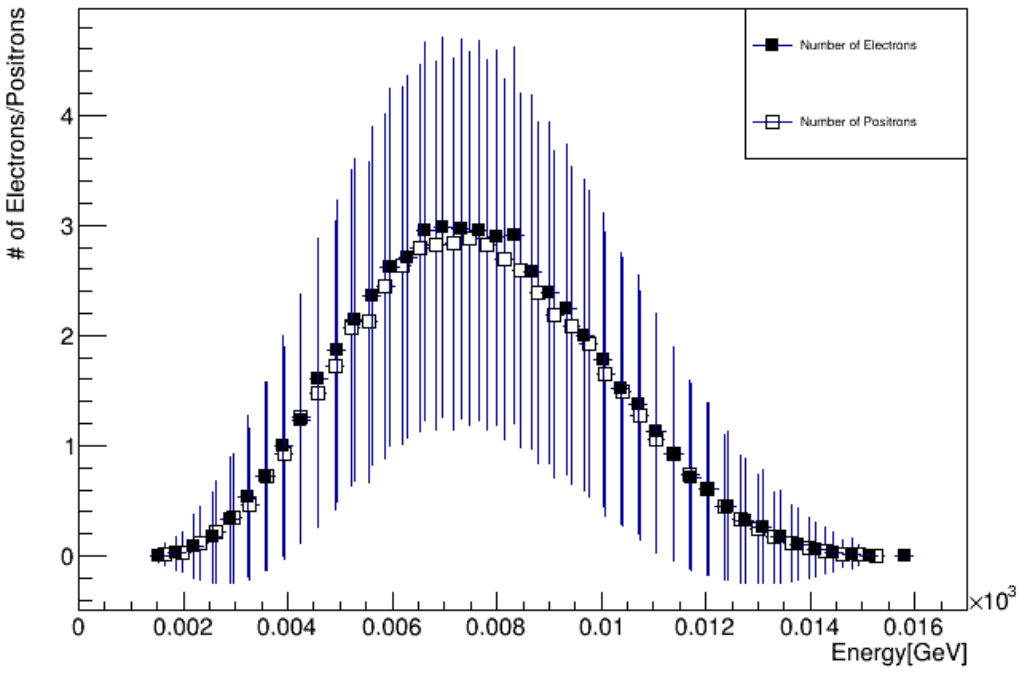
1.0J



Complete change of the shape with new MC, now peaking at ~7 GeV

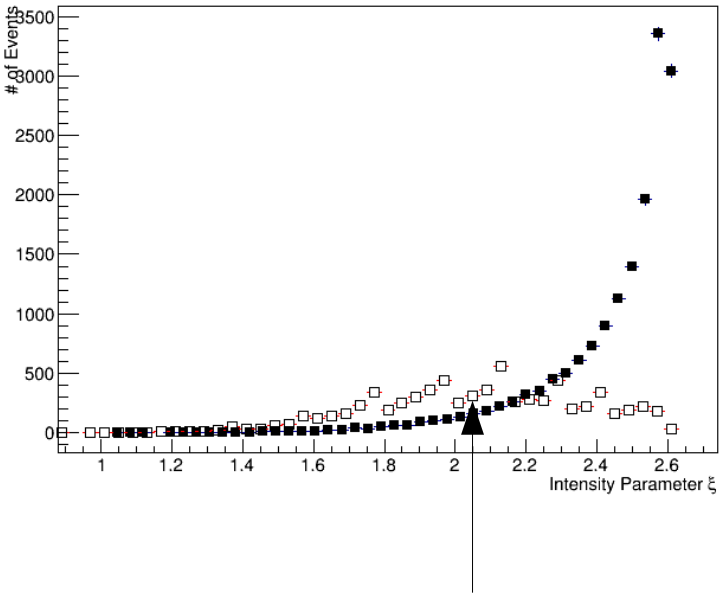
Electron and Positron spectrum



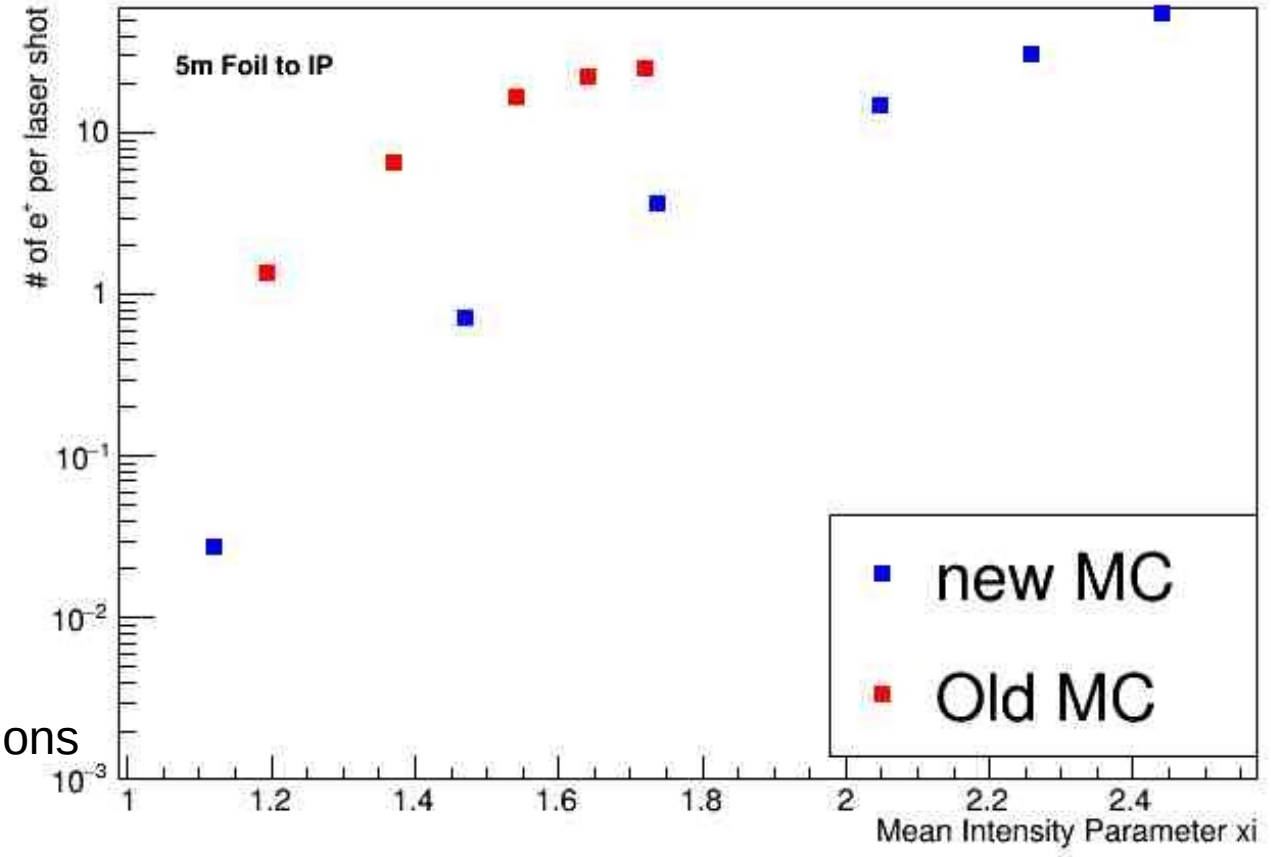


Same shape for electrons and positrons

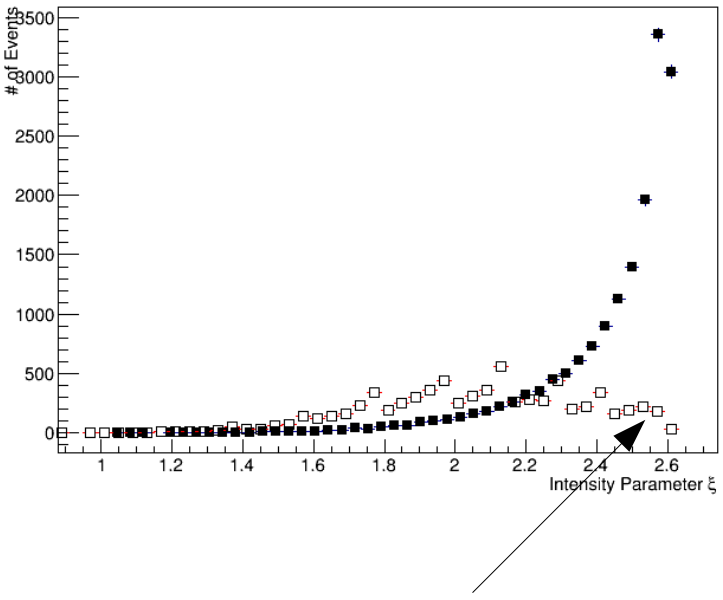
Mean Xi



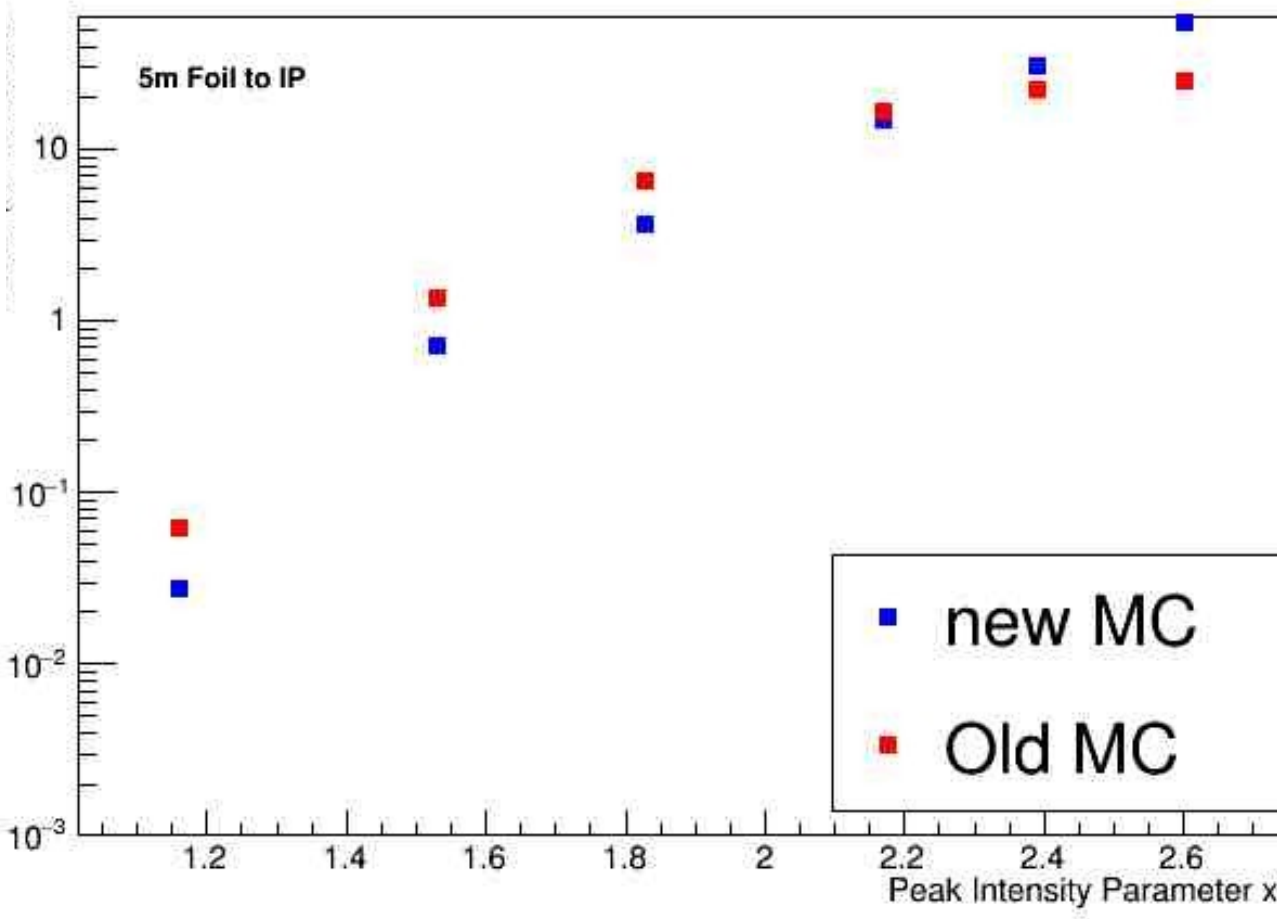
Mean xi = average xi at interactions



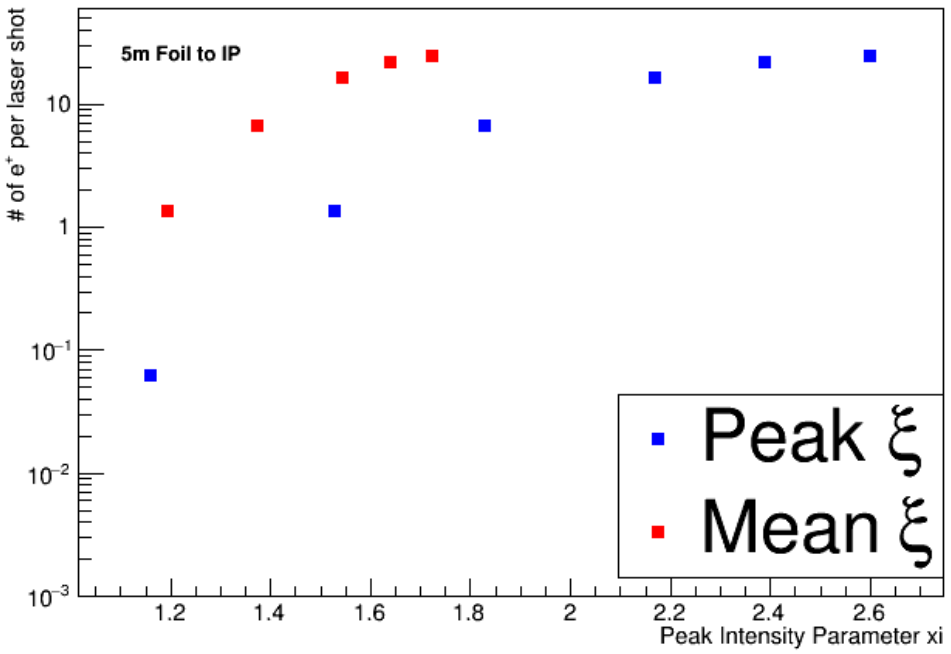
nominal Xi

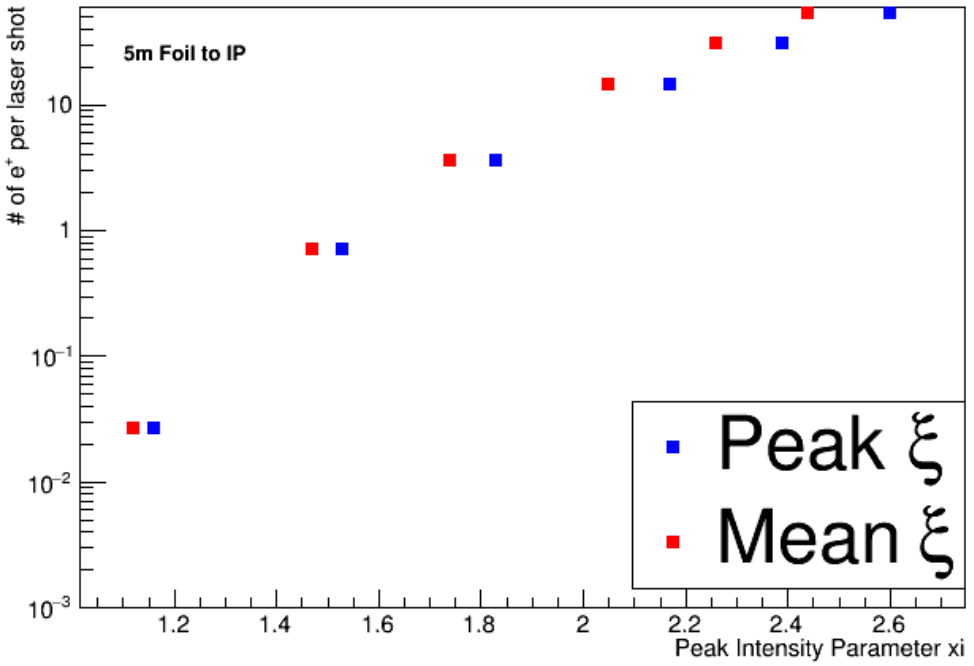


nominal xi = xi given by the laser,
maximum xi for the laser



nominal vs mean xi

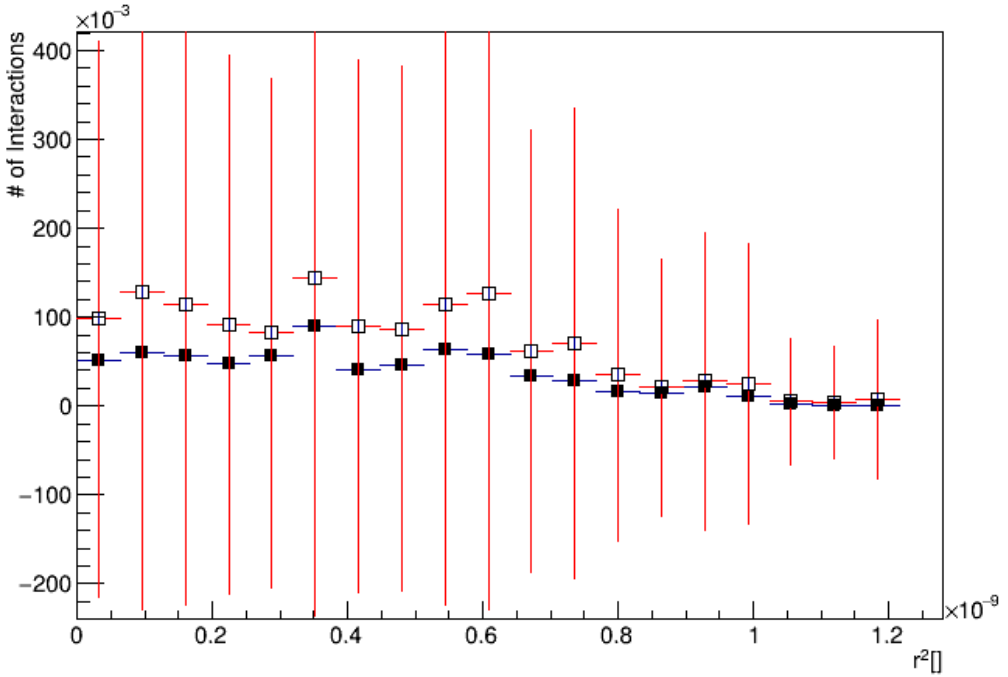




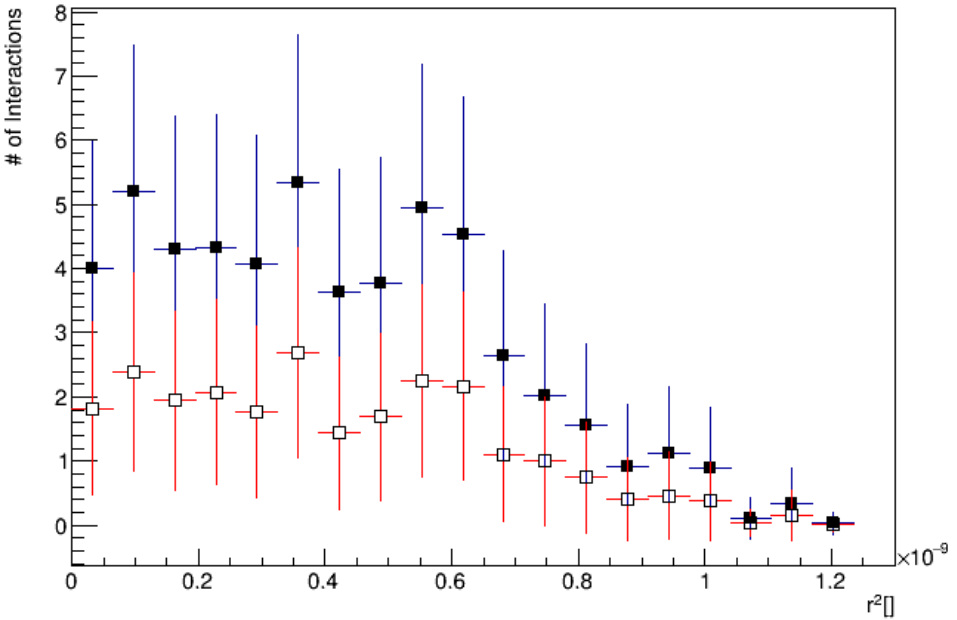
Mean and nominal xi now fit well better with respecto each other

Radial shape of the Interaction region

0.35J



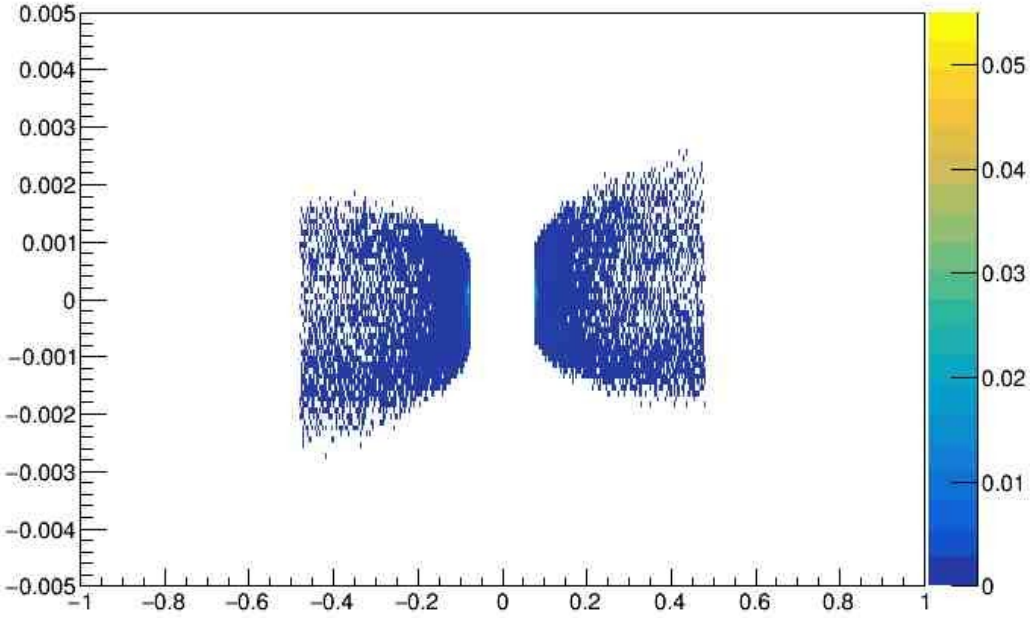
1.0J



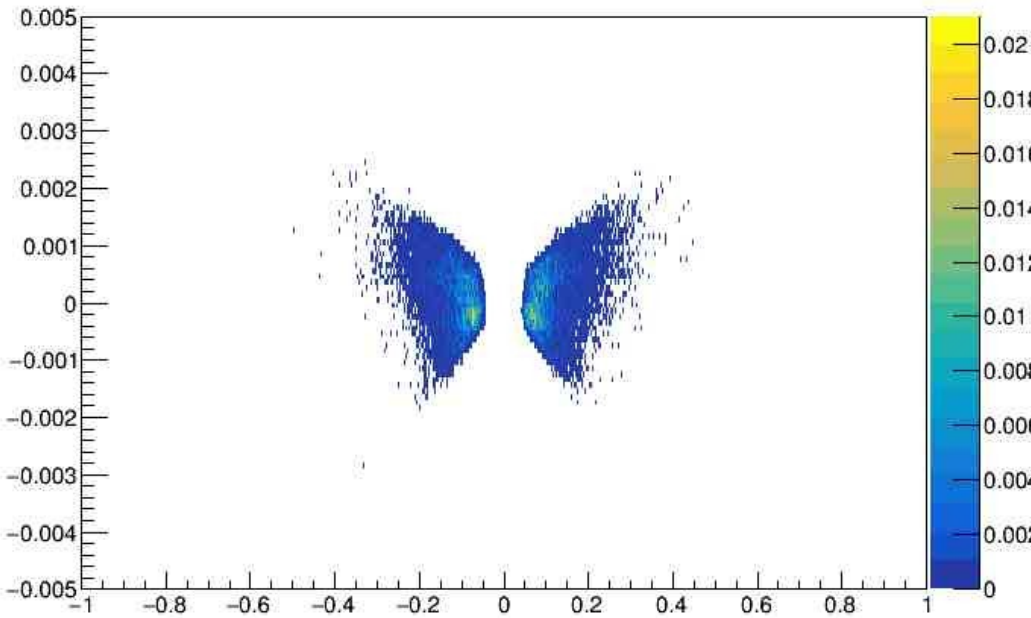
Similar distribution, no changes in transversal shape

Particle Distribution in Detector 1.0J

Old MC



New MC



No more asymmetry,
particles in even smaller area of the detector