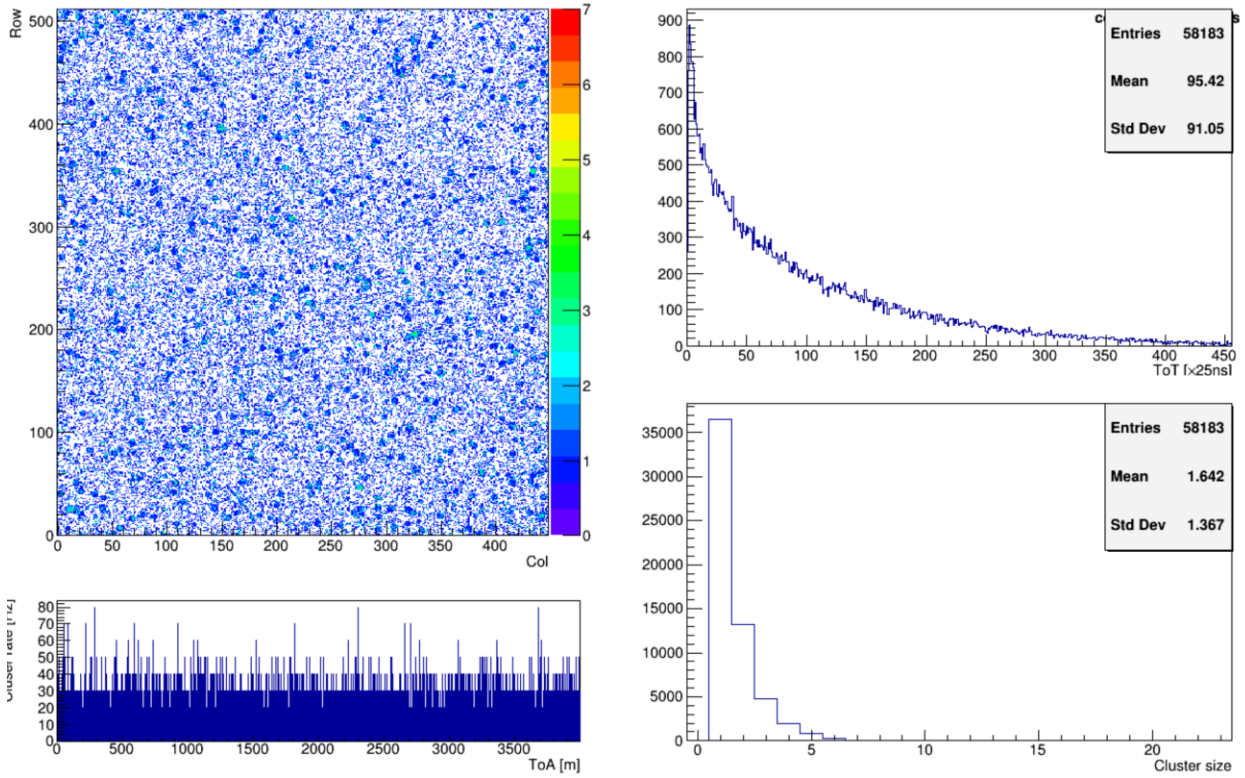
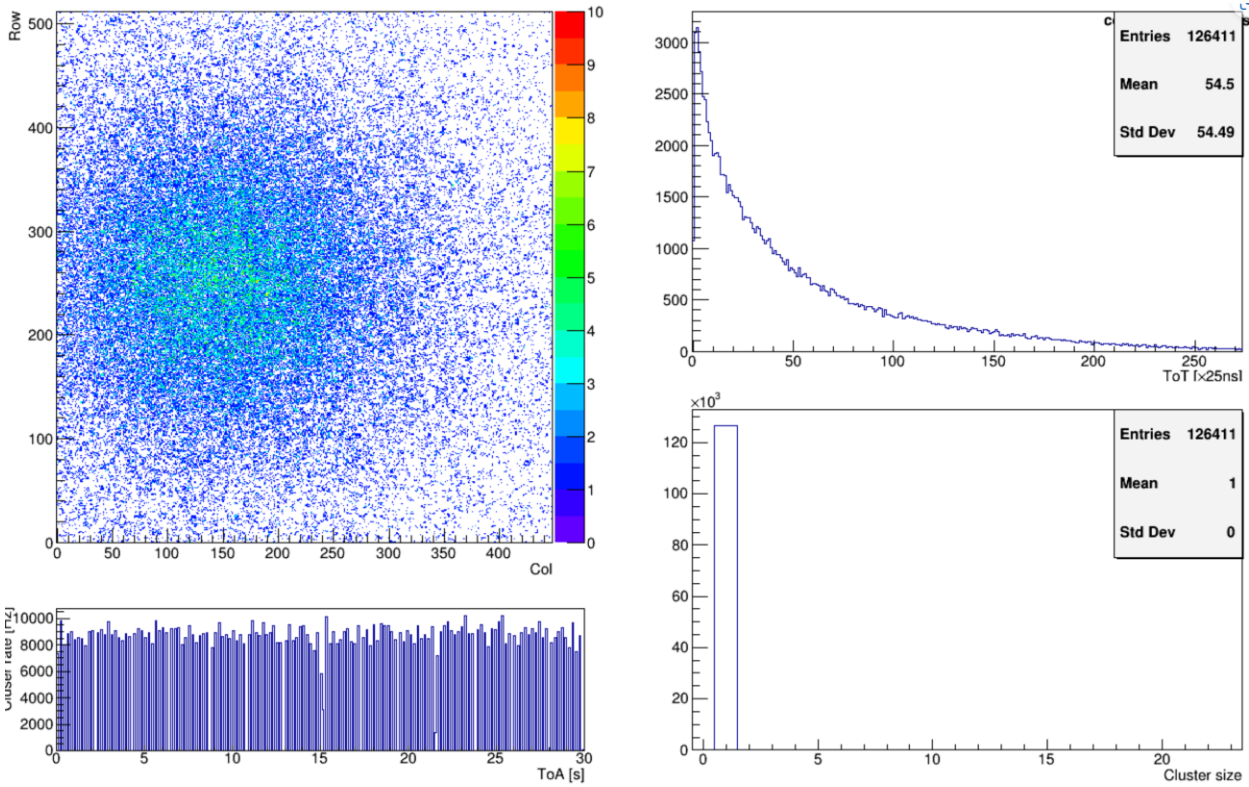
Low-Q2 meeting
06/08/2024

Timepix4+SPIDR4 signals

Cosmics over Weekend



Sr90 Source



ToA structure since fixed
Reading out over slow controls line
– Need to move to 10Gb line
(No clustering carried out here)

Beamline communication comments

thanks for sending the lattice. I've looked at beam at Q3ER after passing the magnets from IP and I'm missing the horizontal position by almost 10 mm. Slides with more details are attached.

Yes, I think using GeneralParticleSource is fine. But please check the energy of the beam you set. The total energy should be 34924.26476*0.51099895069=17846.263 MeV. The command you use "/gps/energy 18 GeV" sets the kinetic energy, if I remember correctly this command. But maybe it has a small impact.

thanks a lot for checking, after setting energy to 17846.263 MeV and B2eR orientation to its bending angle I also get an exact match with the lattice, both in position and divergence, vertical and horizontal. The main effect was from the energy.

Comments

- This <1% beam energy/1cm will have a reasonably significant effect on our detector positions, acceptance and rates.
- When the lattice is updated in the simulation will we need all MC samples to be recalculated?
- Presumably, there is a similar discrepancy in the far forward