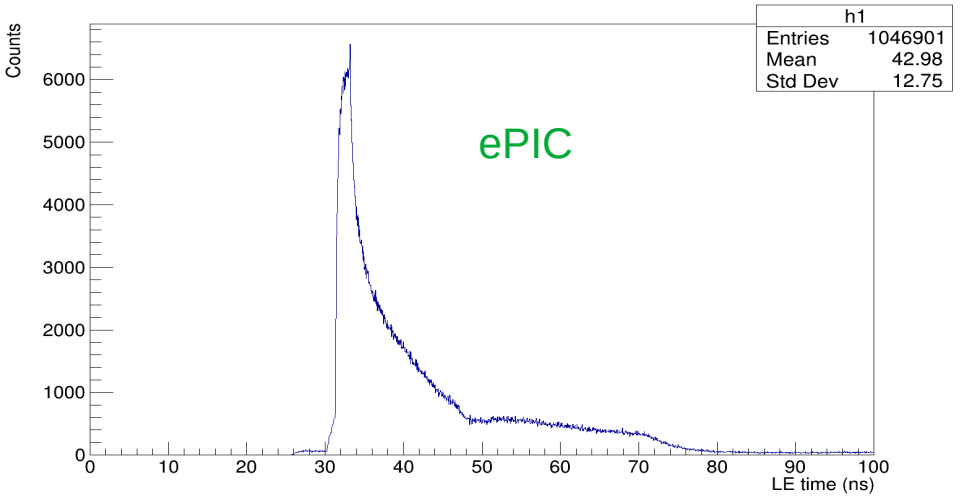
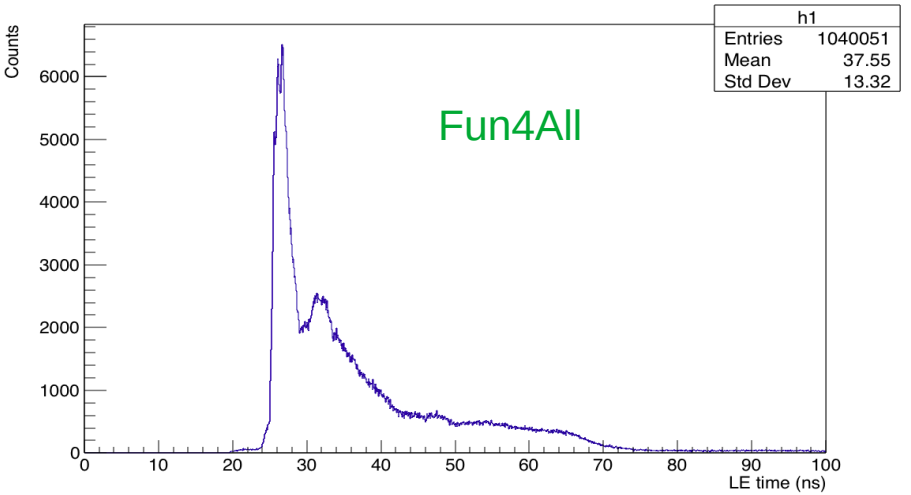
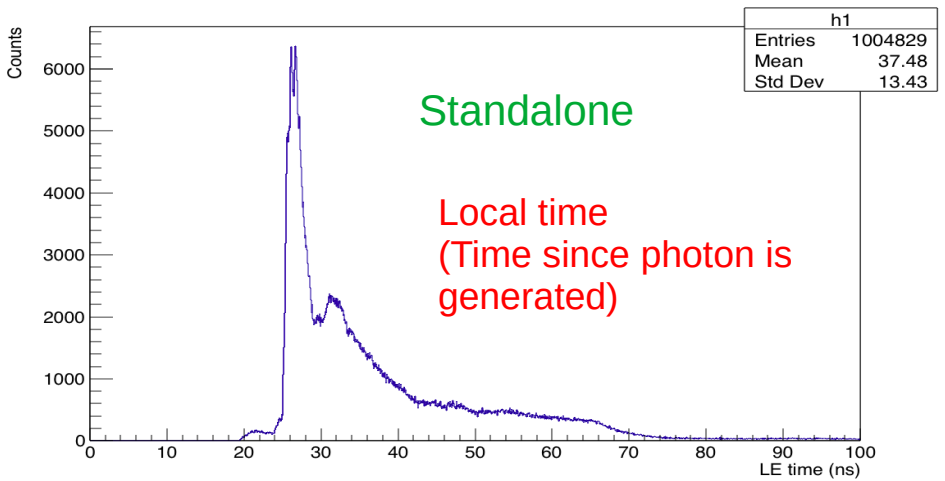
Simulation settings used

- 1000 pi+ events
- 6 GeV/c momentum
- Theta = 30 deg
- Phi = 0
- Magnetic field off
- No track smearing
- Same geometry for hpDIRC
    - Only 1 MCP and 1 pixel for Standalone and Fun4All
- No QE for sensors
- No photon transport efficiency

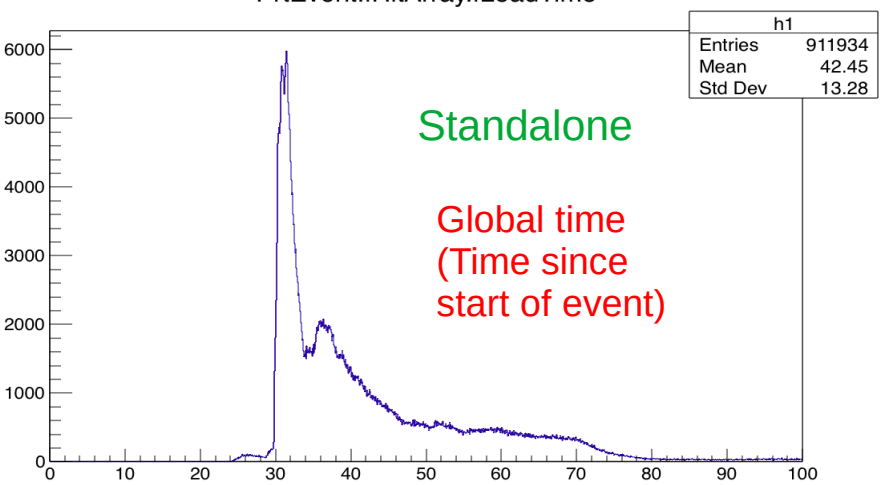
Discrepancy in photon arrival time

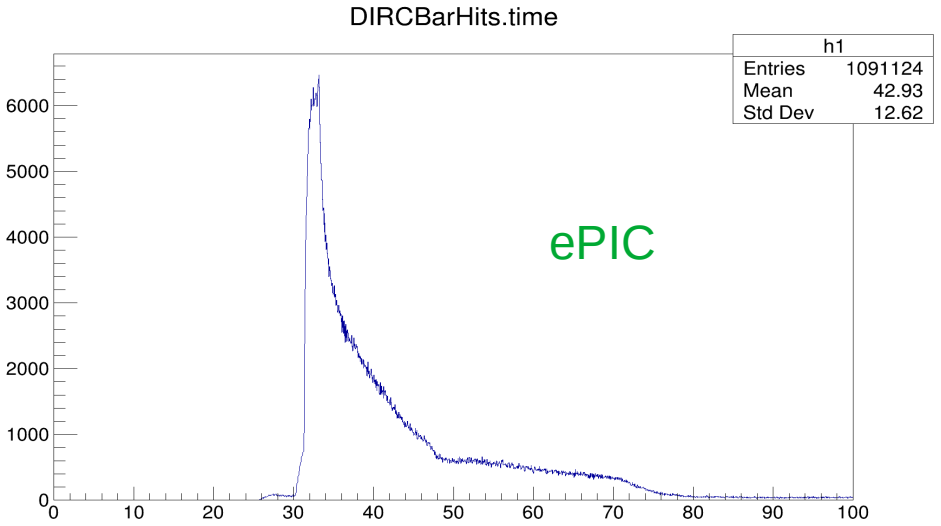


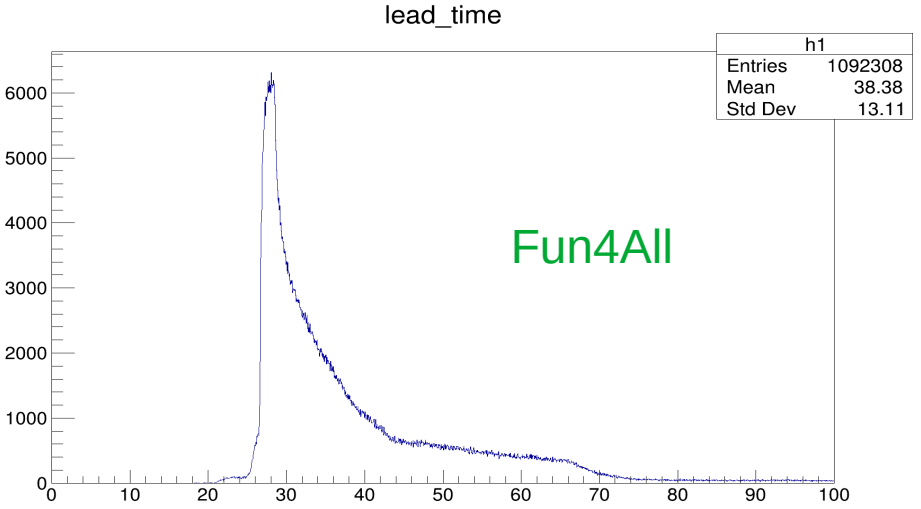


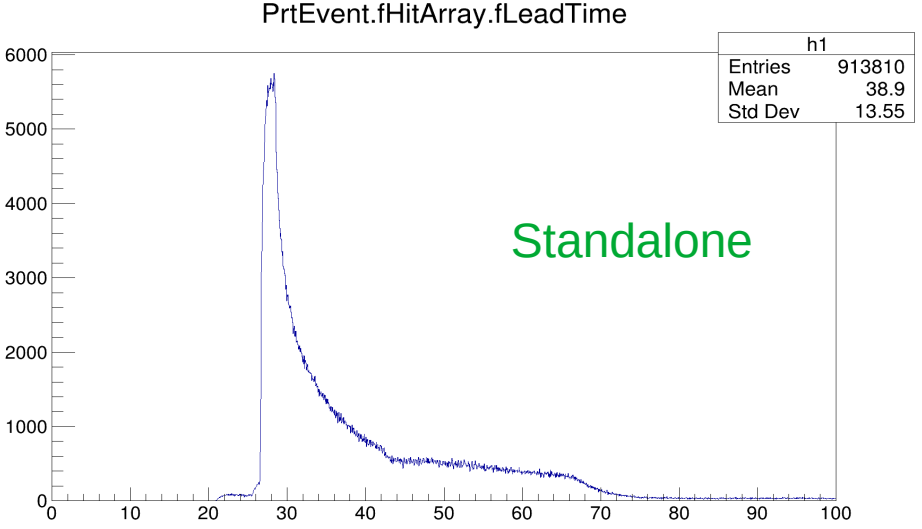


PrtEvent.fHitArray.fLeadTime



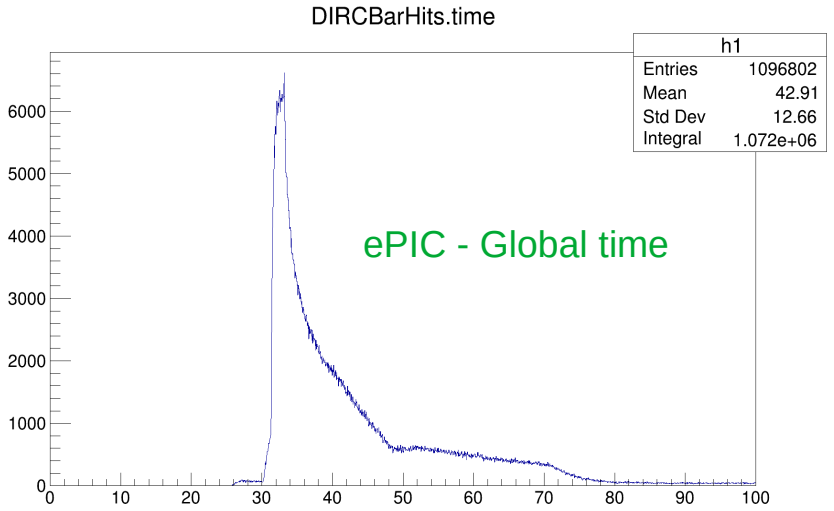


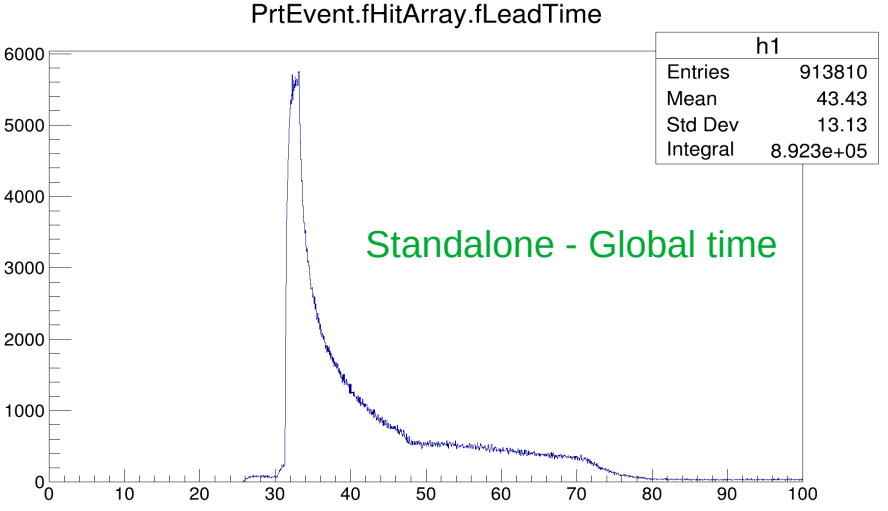


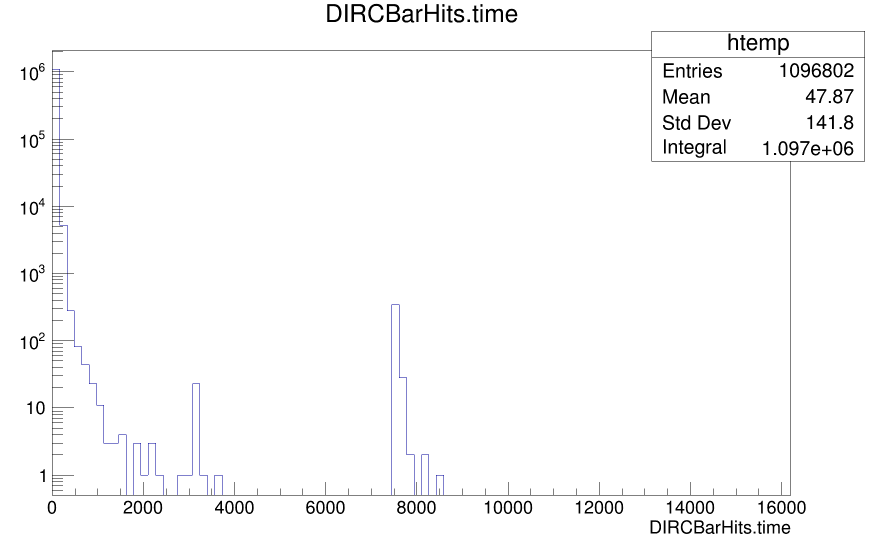


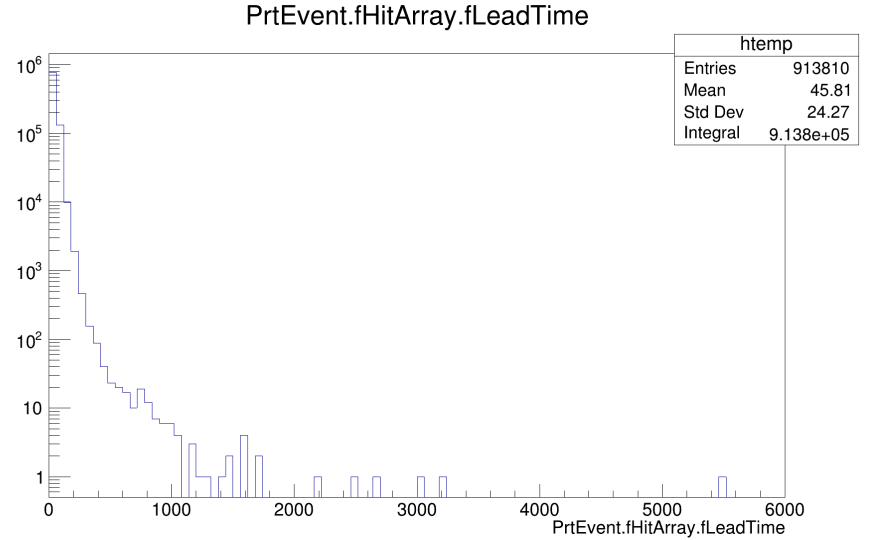
- Found a geometry overlap in versions of Standalone / Fun4All simulations for 1 MCP, 1 pixel configuration
- After fixing, the shapes of timing distributions agree better!

ePIC / Standalone comparison – photon time

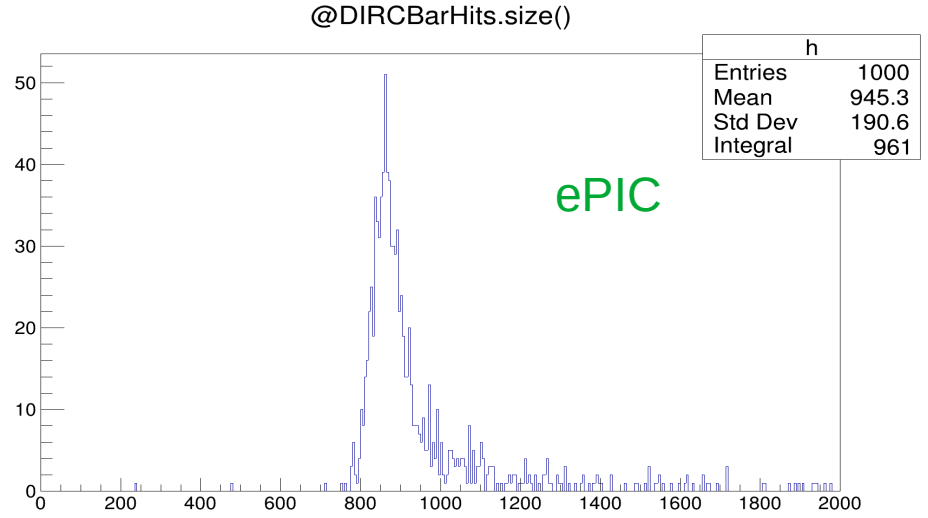


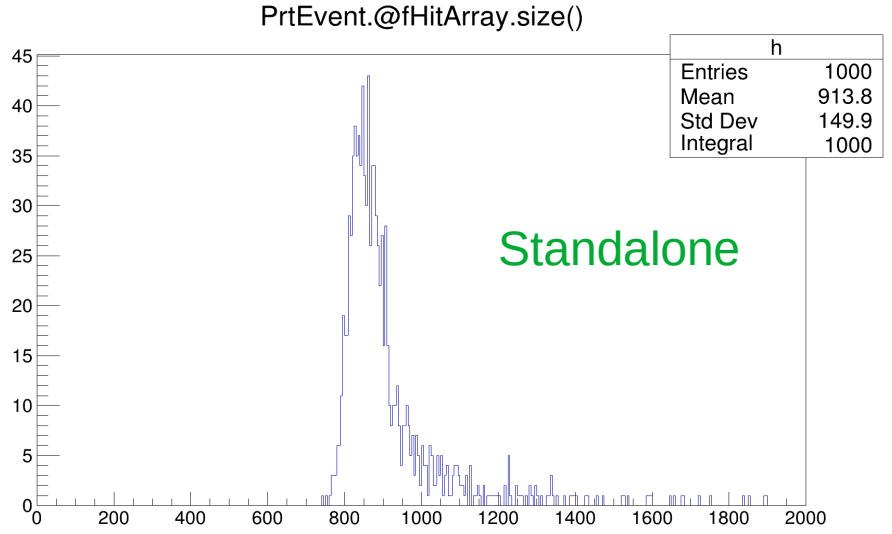


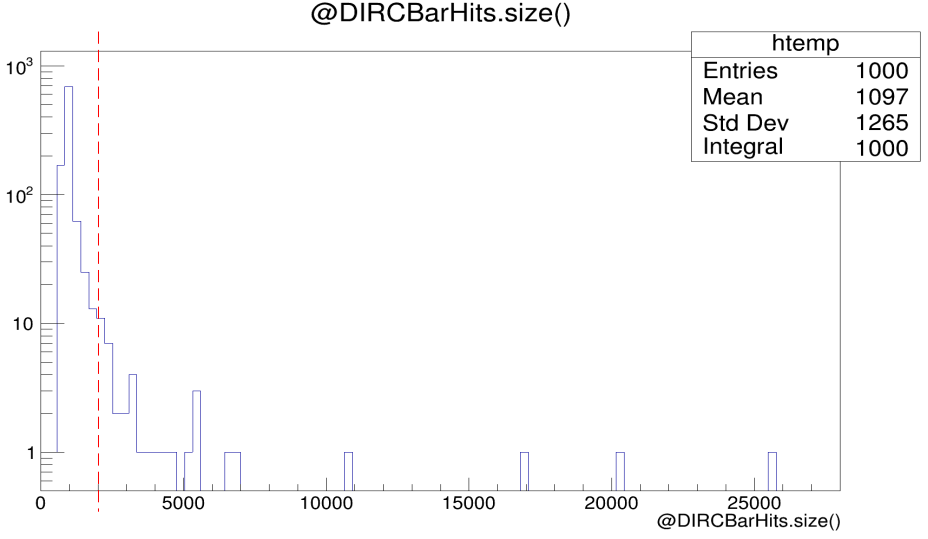


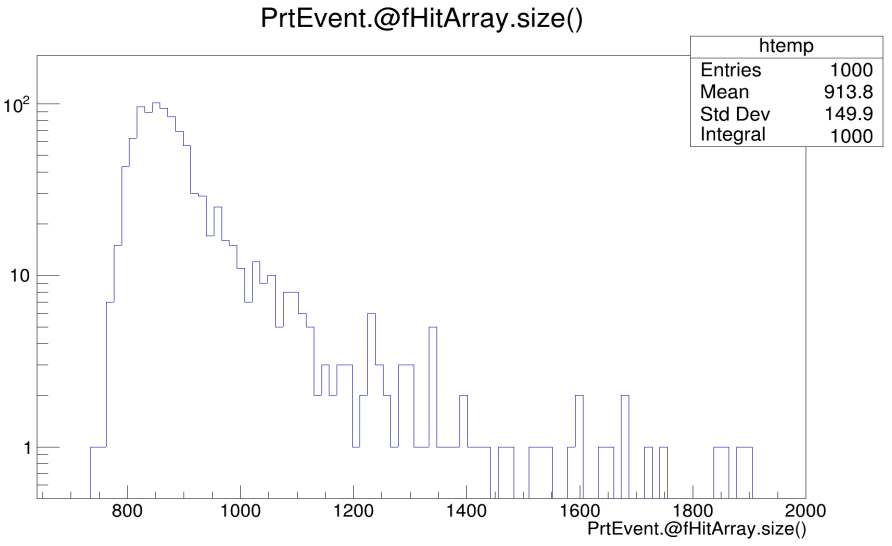


Number of hits / event









Next steps

- Find the source(s) for events producing > 2000 hits in ePIC simulation
  - Check physics list
  - Reproduce in standalone simulation