Front end energy deposition (comparison)

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Last time (different initial beams, different approaches):

ICOOL (by Chris)

- TODO: account for ALL losses, not only the particles hitting the aperture;
- TODO: re-run ICOOL simulation with new initial data (consistent with g4beamline).
Now (apples to apples):

- All lost particles are accounted for;
- New ICOOL results with 4e5 PoT (not the “newest” file yet though);
- New g4beamline results (all losses);
- Caveat: g4beamline graphs have a “Heaviside-ish” look, to re-run with more monitors.
Observations I – electrons

Particle loss

- Consistent
Observations II – protons

Particle loss

- Some inconsistency
Observations III – pions

- Integrated losses per 8 GeV proton
- Particle loss
- Some inconsistency in the initial loss.

- Pion yield per incident proton, G4beamline and ICOOL
- Particle yield
**Observations IV – muons**

- **Particle loss**
  - Significant inconsistency — different loss rates;
  - **TODO**: Find the source.