Front end energy deposition (comparison)

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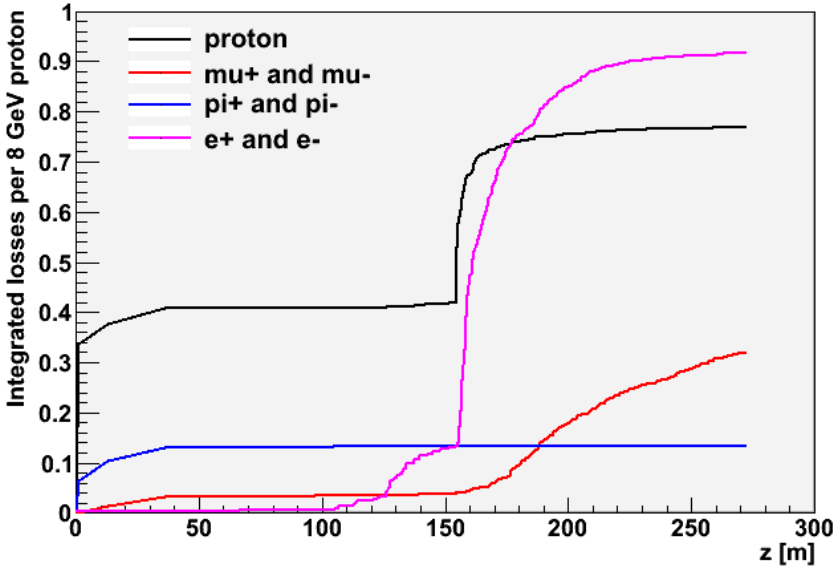
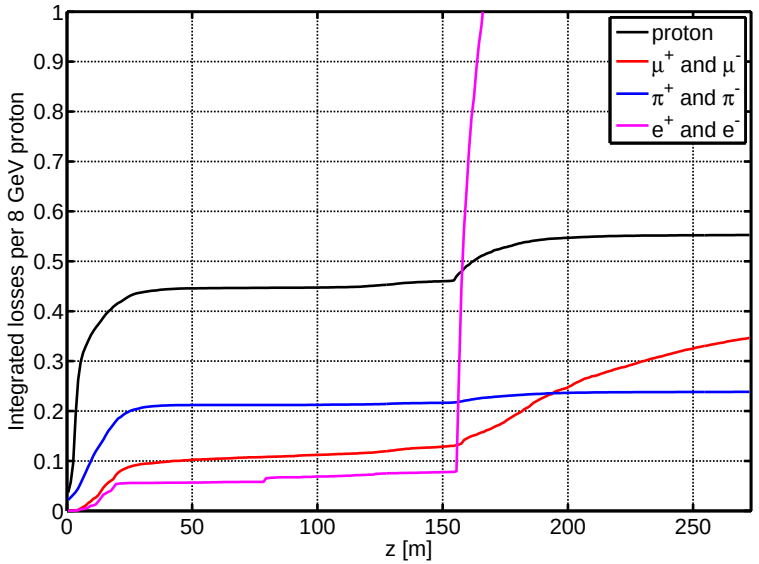
Last time (different initial beams, different approaches):



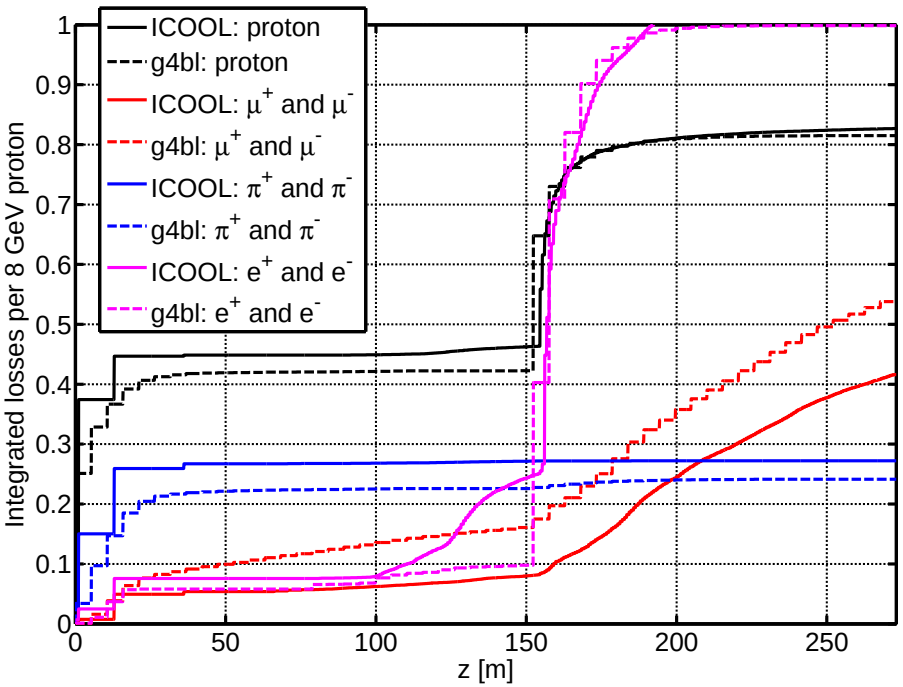
ICOOL (by Chris)



G4beamline

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

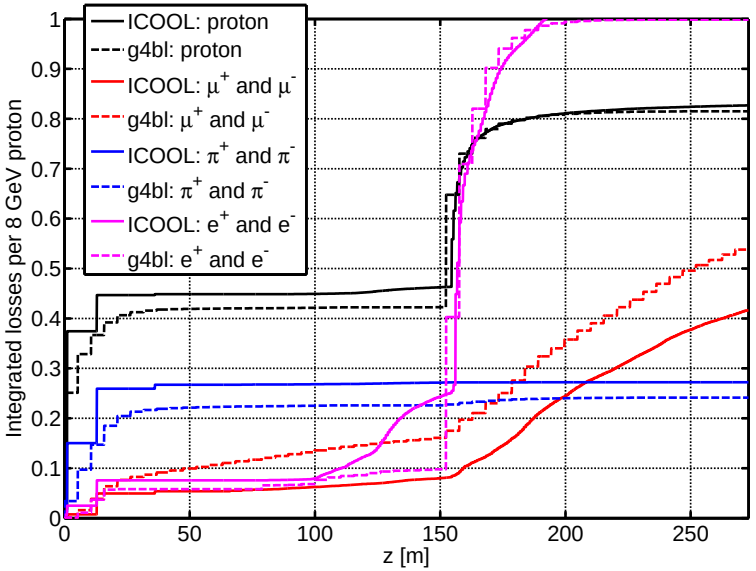
Now (apples to apples):



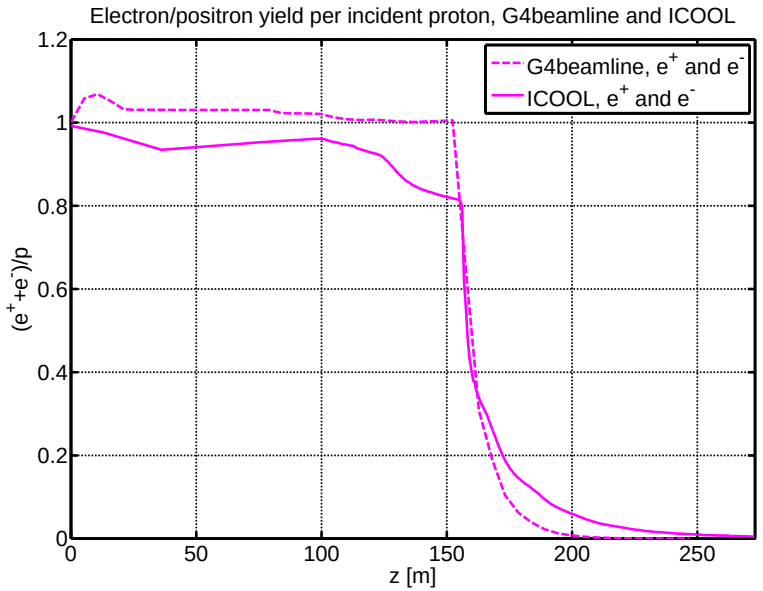
ICOOL vs g4beamline (new)

- 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



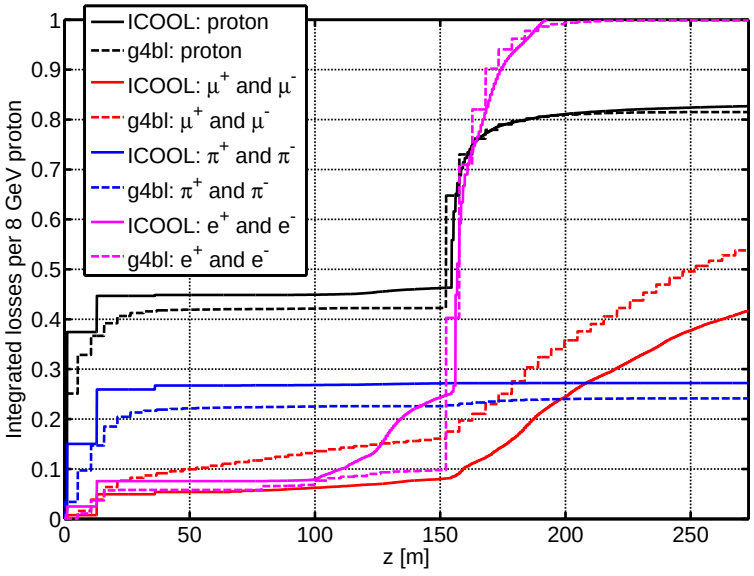
Particle loss



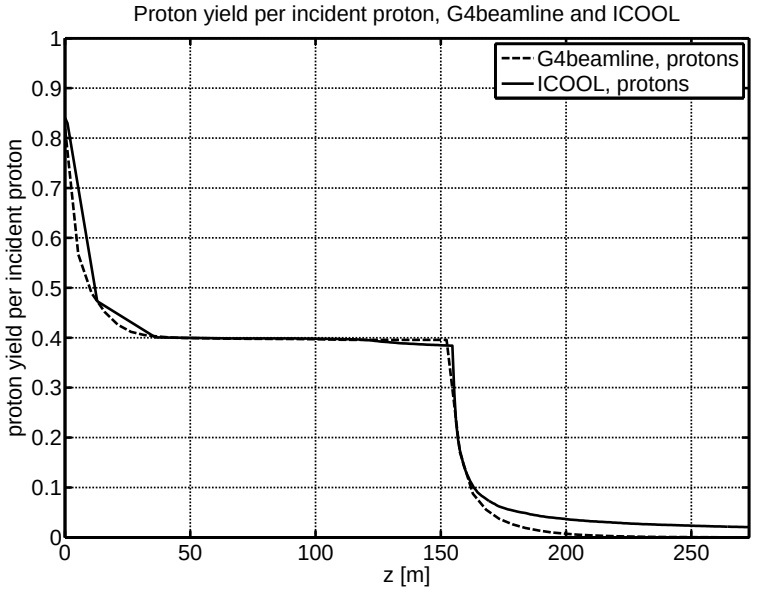
Particle yield

- Consistent

Observations II – protons



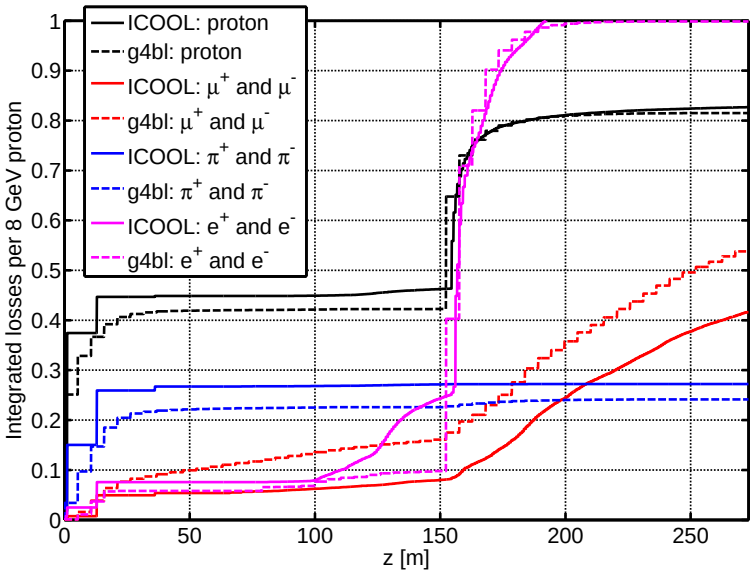
Particle loss



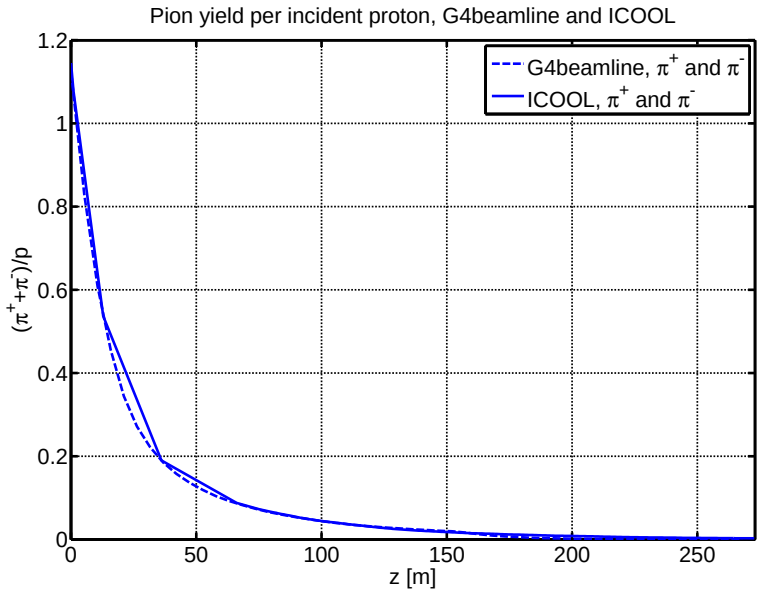
Particle yield

- Some inconsistency

Observations III – pions



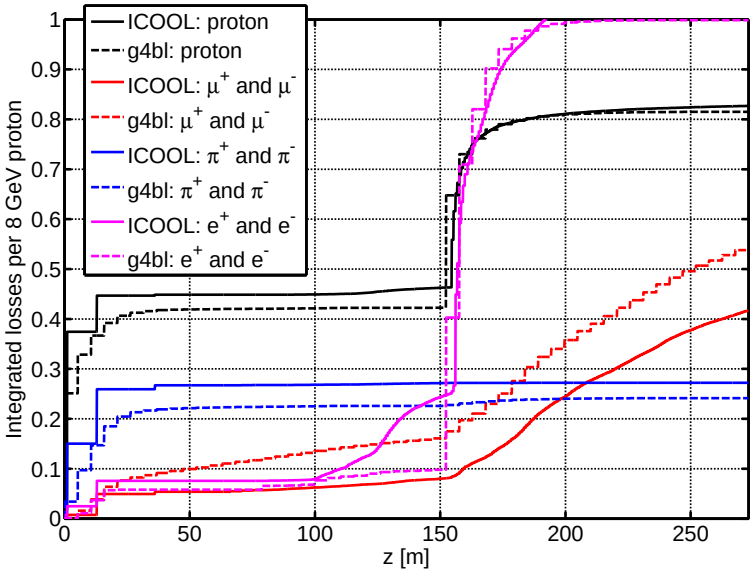
Particle loss



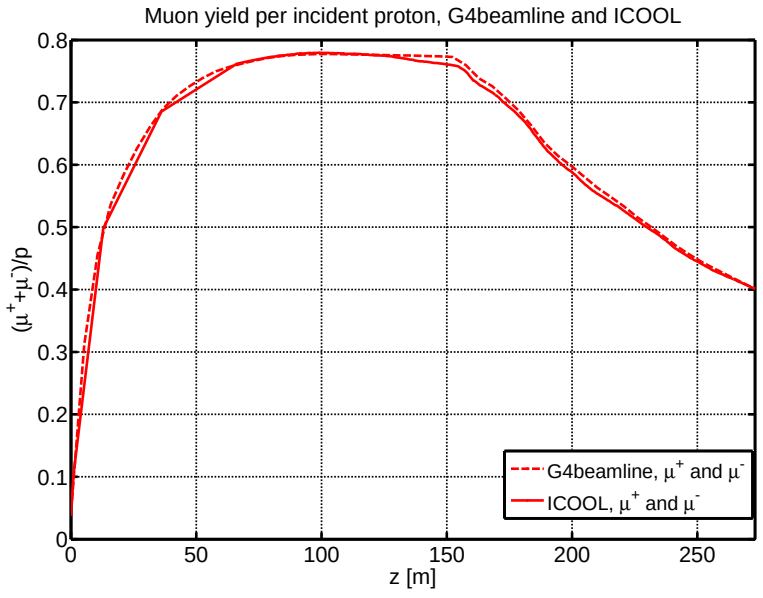
Particle yield

- Some inconsistency in the initial loss.

Observations IV – muons



Particle loss



Particle yield

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