



Shielded RF Lattice Update



Chris Rogers,
ASTeC,
Rutherford Appleton Laboratory



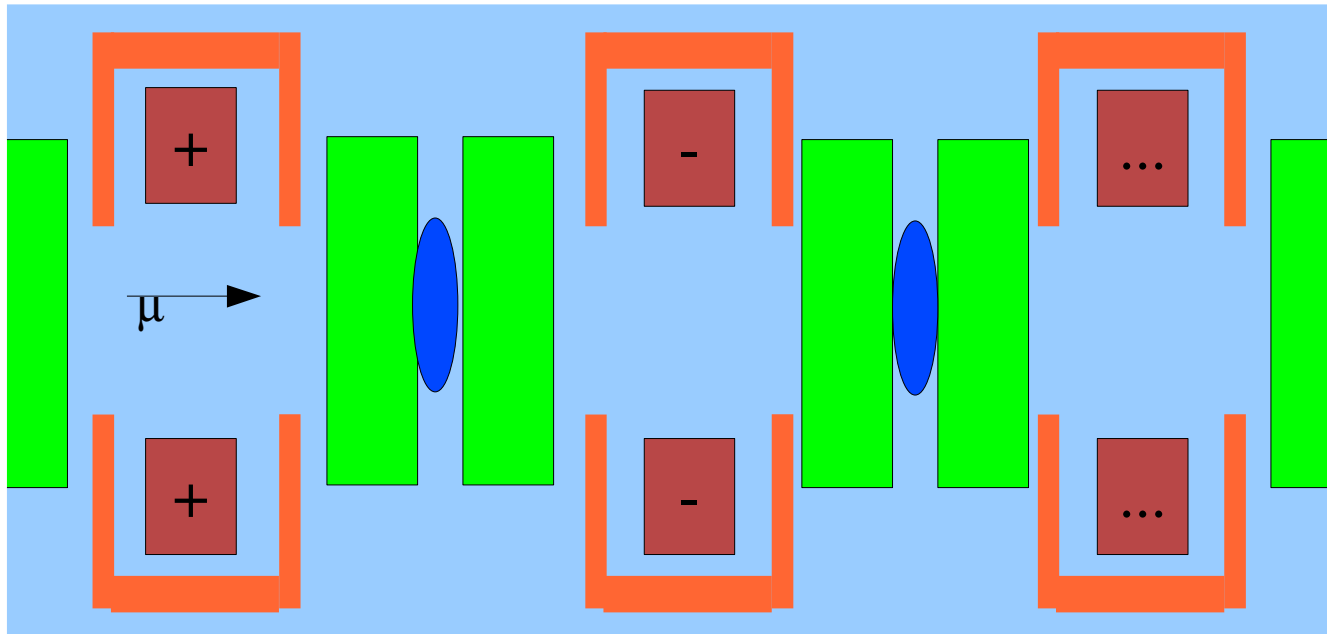


Update



- Comparison ICOOL vs G4MICE
 - Simulate my lattice through ICOOL and G4MICE
 - Compare output
- Calculation using Ecalc9f Clone
 - Updated muon rates
- “Accelerating” Lattices
 - First results for various lattices
- I will be quick - hopefully a bit more detail next time

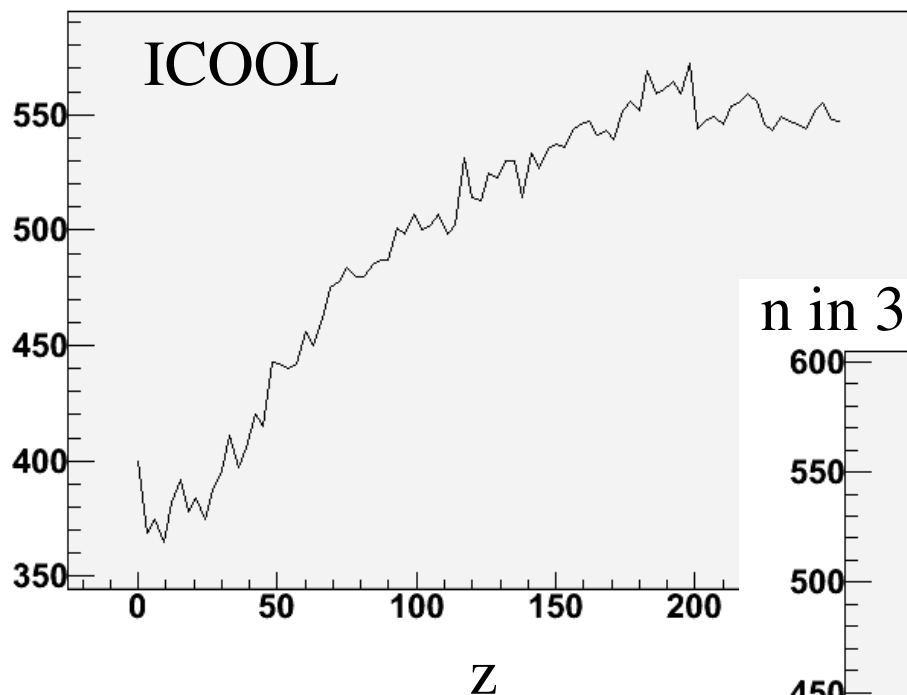
Shielded RF Lattice



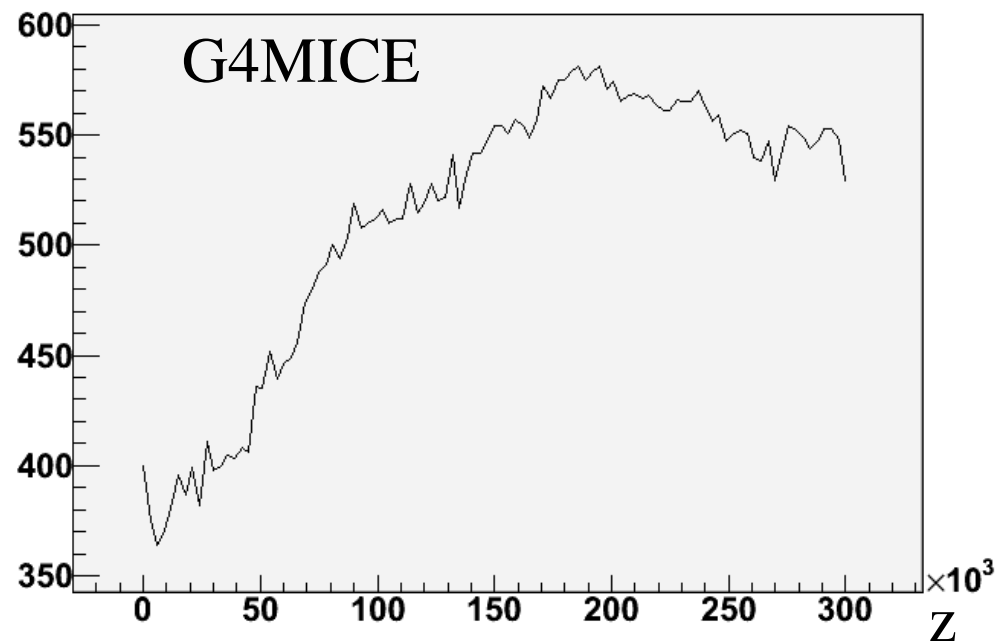
G4MICE vs ICOOL



n in 30 mm



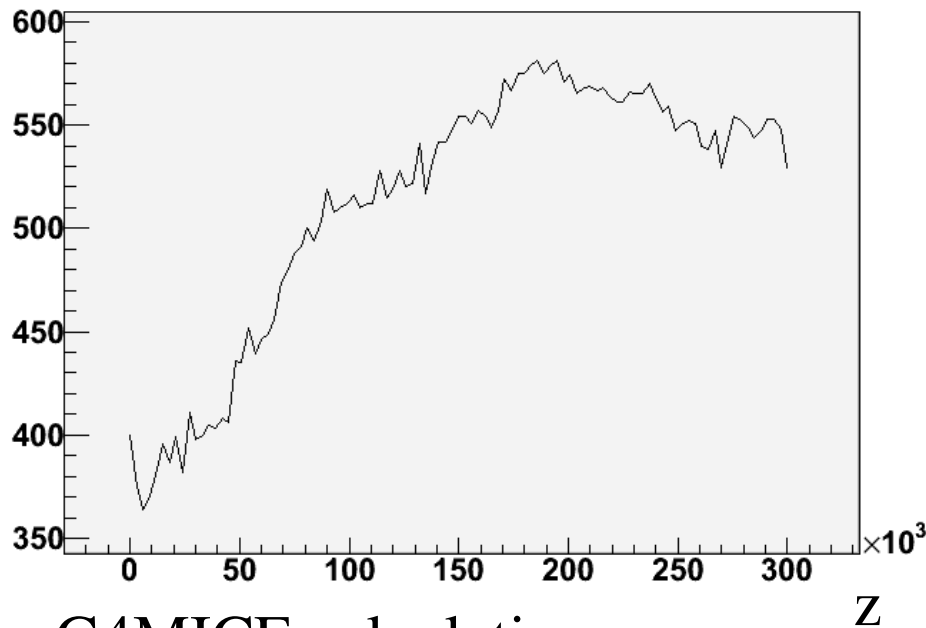
n in 30 mm



G4MICE vs ECALC9



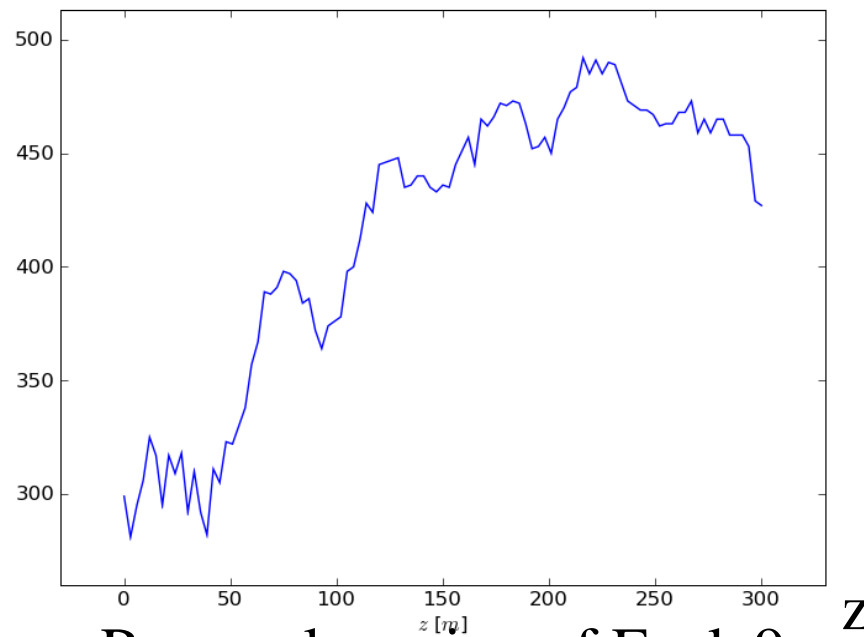
n in 30 mm



G4MICE calculation

- I just take a momentum bite
- increase of $\sim 45\%$
- slightly lower than previous after “optimisation” of routines
 - changed tracking step size etc

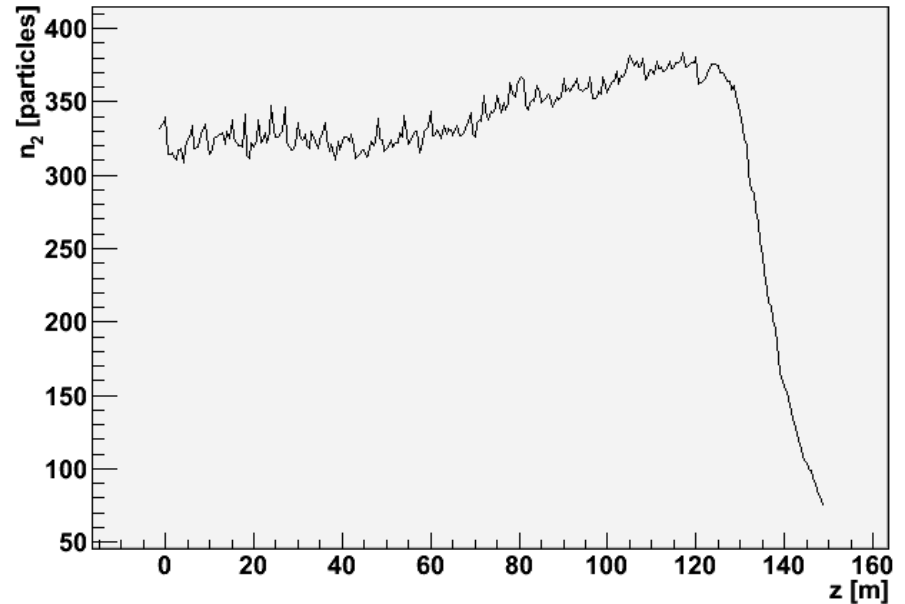
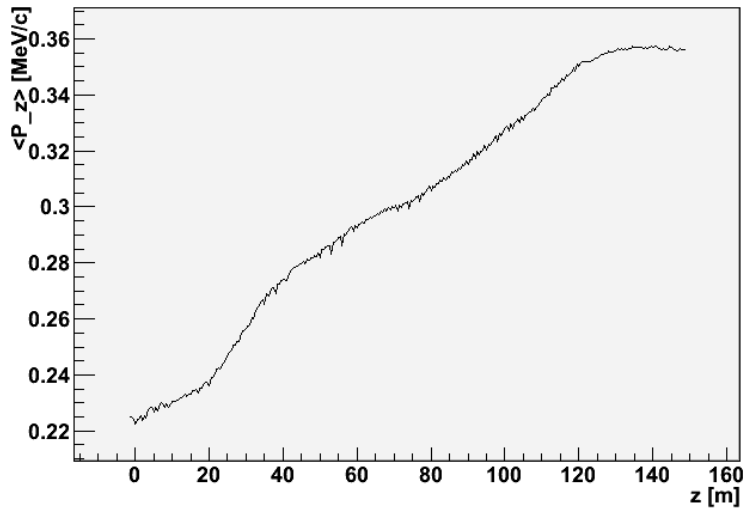
n in 30 mm



Personal version of Ecalc9

- does longitudinal amplitude cut properly
- nb this is an increase of $\sim 60-65\%$ in rate (still no windows)

Accelerating lattice



Try accelerating particles

- performance not so great...
- this is a lattice like accelerate, cool, accelerate, cool...