

Forward Spectrometer Update

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Profiler

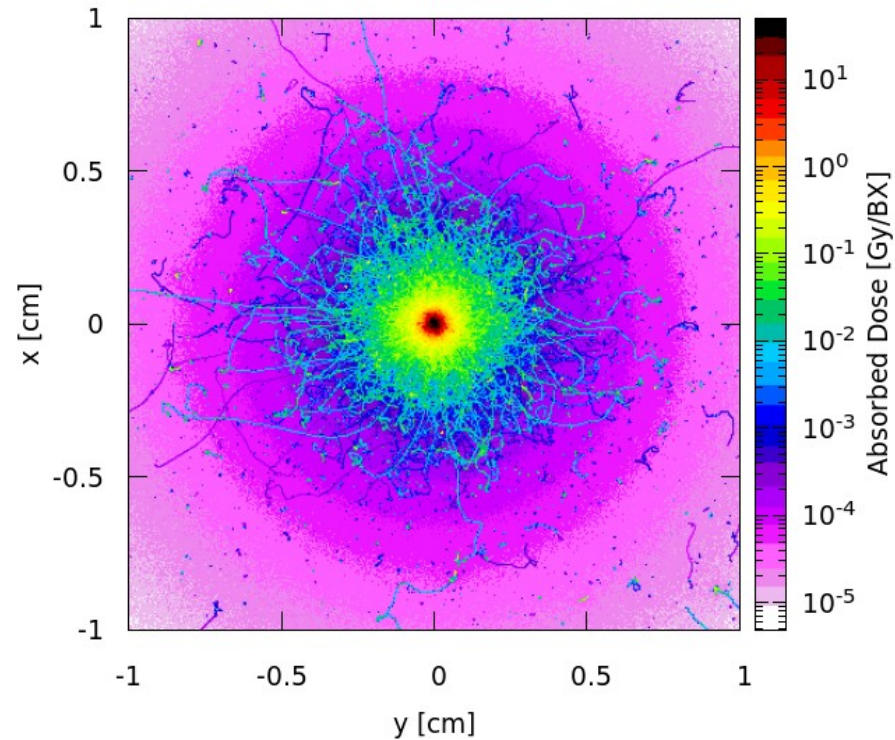
- Some physical properties of GadOx:
- Radiation length: 1.14 cm
- Specific heat capacity (@ 300K): 0.318 J/g/K
- Melting point: 2343 K

Profiler

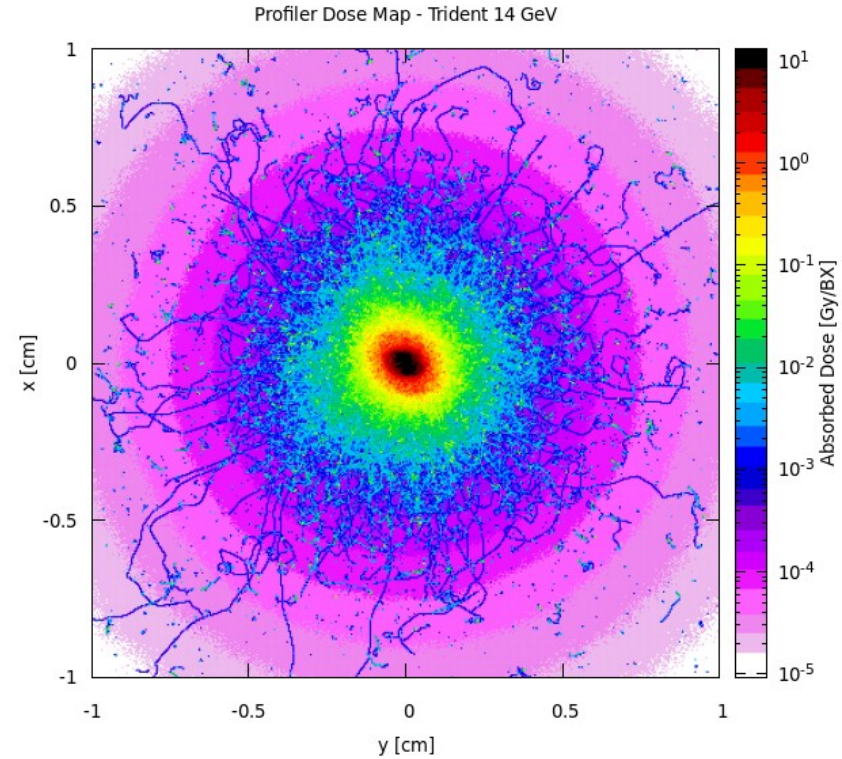
- New proposed dimensions
- 2 x 2 x 0.5 cm, centred on beam axis
- Thickness < radiation length => less energy absorbed and less distortion of photon beam
- For a maximum dose in centre of 100 Gy/BX, the temperature change is ~ 0.3 K/BX => ~ 7500 BX before melting
- @ 1Hz, ~ 2 hrs operation - @ 10 Hz, ~ 13 min operation

Dose Map - BPPP

Profiler Dose Map - BPPP 17.5 GeV

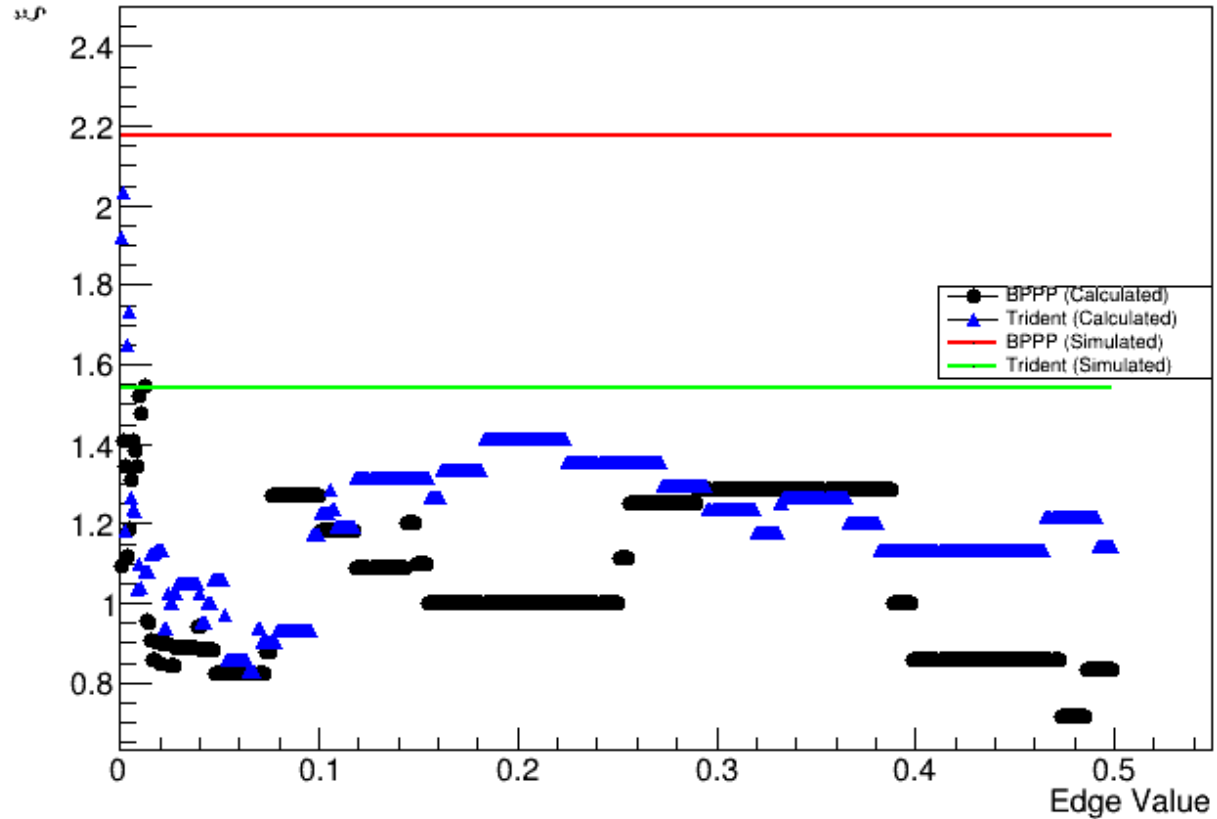


Dose Map - Trident

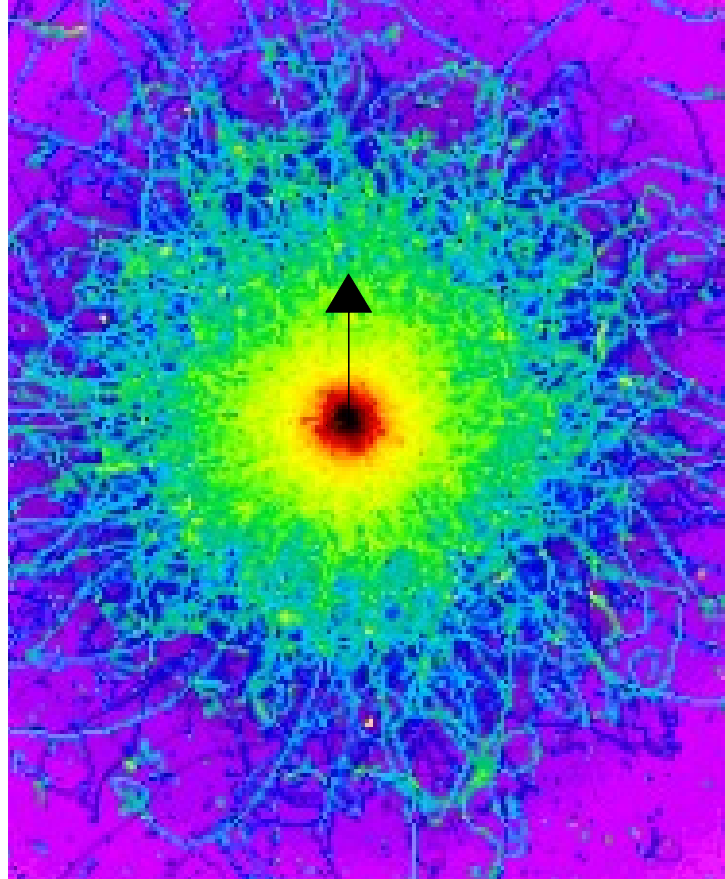


Calculation of ξ

Value of ξ vs edge value



Dose Edges



Dose Edges 3D

Three dimensional plot of absorbed dose on profiler

