

FLUKA-G4 update

Simons team meeting

9 June 2026

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U. Tennessee, Knoxville



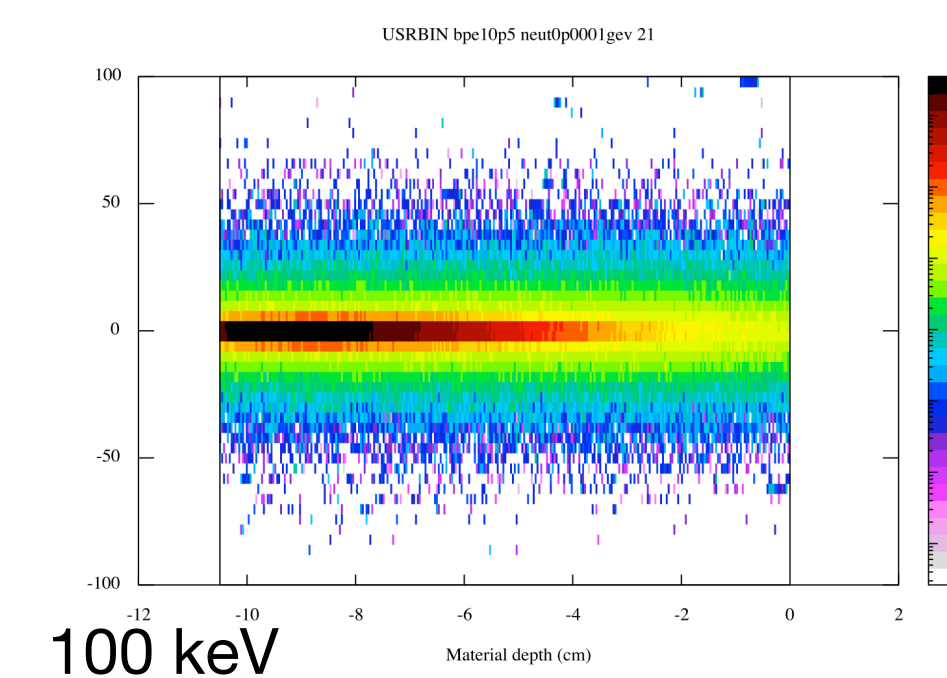
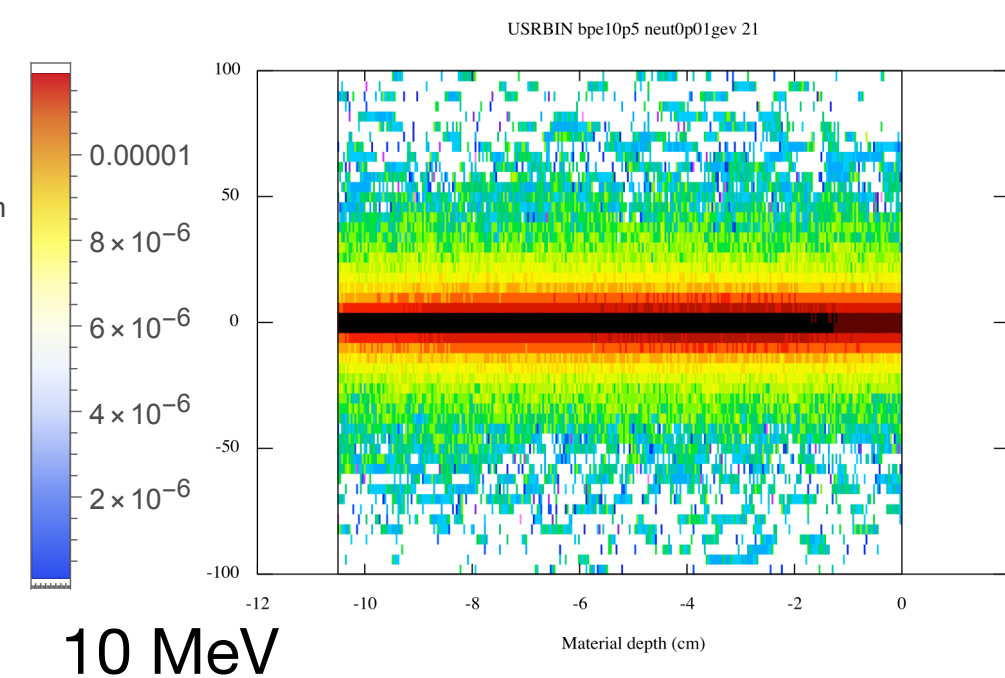
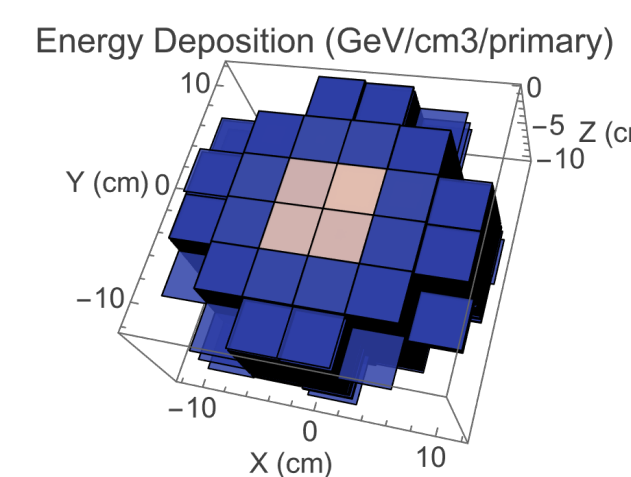
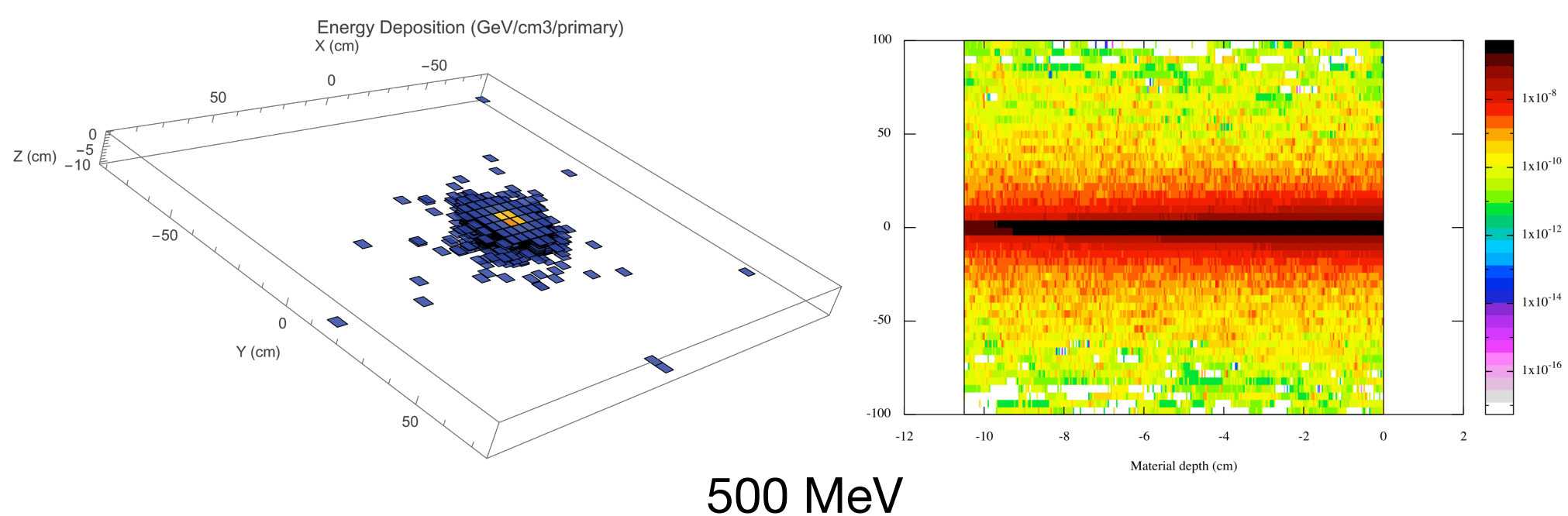
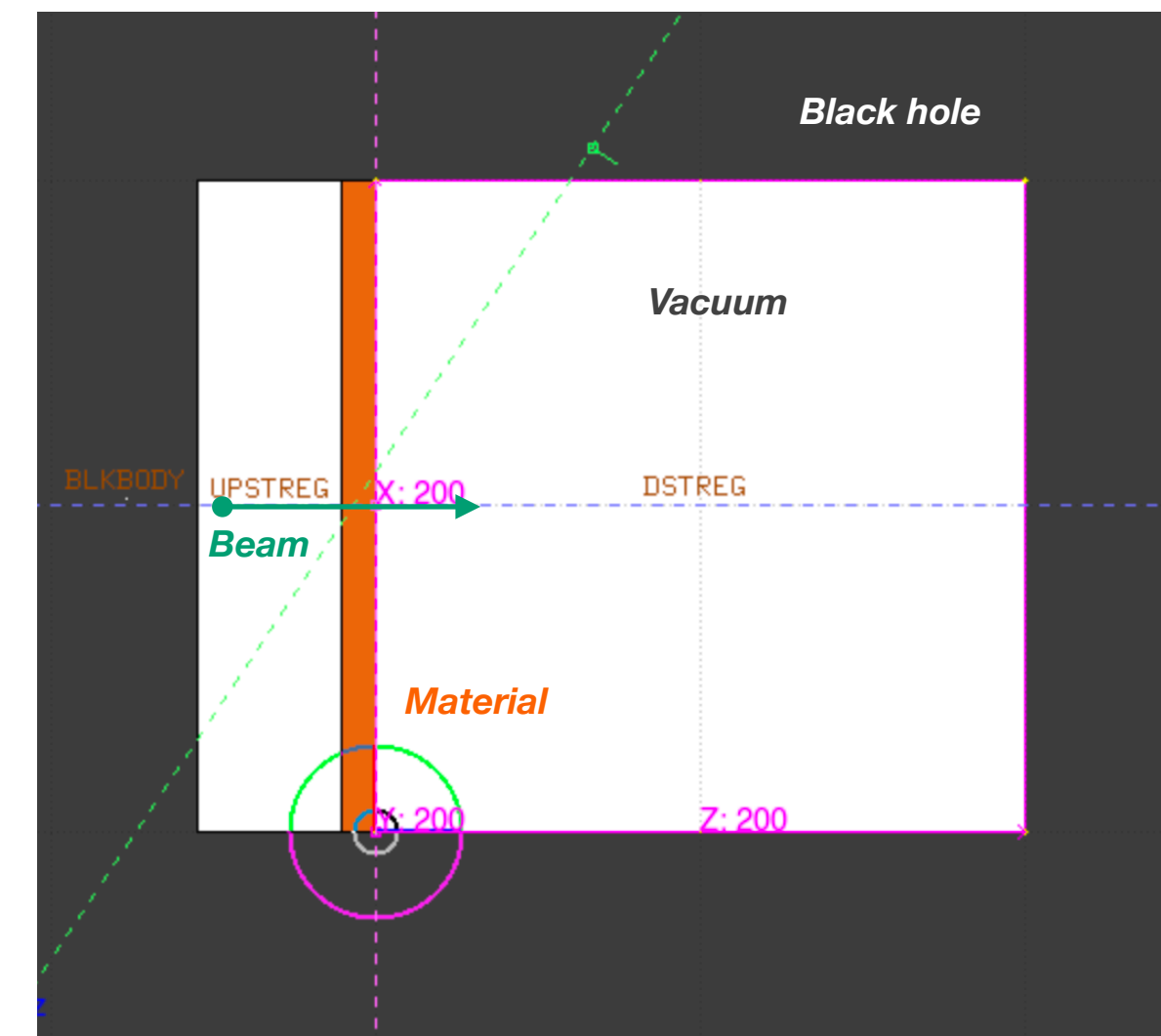
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Updates since last meeting



Looking at energy deposition

- Continued reforming updated FLUKA setup for BPE/W neutron deposition
- Starting with BPE...
 - ▶ Energy deposition in slab
 - ▶ BDX for neutrons, photons, electrons
- ~Expected behavior observed in energy scan for 10.5 cm BPE
 - ▶ Capture spikes observed in γ BDX spectrum
 - ▶ Greater deposition spread observed at higher energies



Next steps

- Repeat test with tungsten and ENDF
- Comparison to Geant4:
 - ▶ EM thresholds set explicitly in FLUKA → need to match (in) G4
 - ▶ Point-wise transport settings written explicitly in FLUKA—check for possible inconsistencies
- Meeting with Daniele in O(1 week) to discuss BIB sim setup

