Review of Open Problem Reports

Geometry WG

Parallel geometries & Navigation

- ## [#1449](#1449)

  - *Particle not scored when step length proposed by StepLimiter lands exactly on a geometry boundary*

  - The problem seems related to the interpretation of the flag 'fGeometryLimitedStep' in G4Transportation::PostStepDoIt(), and what is actually done by G4SteppingManager. A dirty workaround is proposed. To verify if fixes introduced from 9.6.p03 up to 10.3 help!

- ## [#1885](#1885)

  - *G4PhantomParametrisation::GetReplicaNo and G4PSEnergyDeposit3D::GetIndex use different ordering*

  - User proposes solution by modifying implementation of `G4PSEnergyDeposit3D::GetIndex()`

Magnetic field

- #1940
  – *Electric Field units mismatch*
  – User reporting wrong drift of particles, according to the units used to set up the electric field. A test case is provided; nevertheless additional information is asked to the user (?)

- #1969
  – *Particle polarization lost in G4PropagatorInField*
  – Observed a problem when propagating muons in magnetic fields; the muon polarization gets reset to zero. User has provided a patch which is however not valid as it would break those cases which do use the propagation of the polarisation in the magnetic field; i.e. want to have the polarisation propagated, but not integrated. New use case which was not considered