Simulation Breakout Sessions

COMMITTIUM (Ready Talk Access Code = 9262422#)

Coordinator: Anthony Villano

Thu 3:30 - 5:00 pm _Specialized Detector Physics Simulation

How can specialized models be incorporated into simulation packages systematically, how can different detector packages be cross-compared systematically and continuously for new versions to be sure models behave correctly and new data is incorporated properly.

- specialized detector physics
- specific benchmarking with specialized geometry (e.g. Geant4/FLUKA comparison)
- microscopic data for vetting specialized detector physics

Thu 5:00 - 6:00 pm in Curia II_ Collaboration with Benchmarking Breakout

Identify the data which exists and where they can constrain the understanding of backgrounds. Specifically focus on exactly how some data sets can be used to constrain cosmogenic simulations.

- useful experimental datasets
 - Gran Sasso (LVD, Borexino)
 - Soudan (LBCF, MINOS, Soudan 2)
 - CERN (HE muon spallation)
 - simulation physics constraint schemes
 - Beam measurements directly measure cross spallation cross sections
 - Cavern measurements (delayed n's w/o energy)
 - Cavern measurements (prompt n's w/o energy)
 - Cavern measurements (prompt n's w/ energy)

Fri 4:00 - 5:00 pm Simulation Codes

Review of the existing packages for simulation and what processes exist and what the models are to add processes.

- simulation packages for low background physics (Geant4, FLUKA, MCNP)
- processes in each simulation package
 - 1. model for adding to each package
 - 2. relevant processes which exist in each package
 - 3. specific models used by all these processes and for different versions of the packages

Fri 5:00 - 6:00 pm in One East Collaboration with Radiogenics Breakout

- cross sections data for microscopic (e.g. (alpha,n)) events
- specific small scale cross section data (e.g. (alpha,n))