

ID SIMULATION STATUS

Fred Luehring

10/03/00

Talk Summary:

- 1. Subsystem Simulation Status**
- 2. Material / General Issues**

SUBSYSTEM STATUS

Pixels:

Sasha R. is trying to keep the GEANT3 geometry current with the constantly changing pixel geometry (both for the services and the actual detectors).

Markus Klute (with Dario) has been looking at dE/dx with in GEANT4 using a simulation of the pixel testbeam.

SCT:

Jo is serving as a caretaker of the SCT GEANT3 code. She may revise the SCT geometry once the pixel service routing is better defined.

Christopher Lester has been working on the XML code for the GEANT4 simulation (with input from Stan). Chris has also been working with David Calvet on defining the SCT hits and digitizations for use with GEANT4.

TRT:

I am revising the GEANT3 digitization with the latest testbeam results. The most recent (final?) TRT geometry is almost ready for release. I am still working on revising the amount of the TRT service material.

Andrei and Yuri Zalite are putting the TRT end-cap geometry into the XML for use with GEANT4.

Dario's work on the GEANT4 PAI and TRT digitization has been picked up by Ketevi Assamagan and he has begun work on the TRT straw response. Vaso Mitsou is studying the GEANT4 transition radiation (TR) model.

MATERIAL AND OTHER COMMON ISSUES

- In August, Steinar held a meeting about using EDMS to track the ID material systematically. This would hopefully allow the systematic transfer of engineering information to the simulation.
- We need to come to a decision on releasing the final(???) GEANT3 geometry.
- To build the GEANT4 ID geometry, we need envelope volumes for the subsystems and the services (especially where parts of one system pass through another system). Stan has been thinking about this.
- I believe it is imperative that consistent “look and feel” be maintained throughout the XML code describing the entire ID geometry.
- Also the way the XML is turned into a CPU efficient GEANT4 model of the ID geometry needs to be done as consistently across the ID as is feasible.
- Dario (with input from Stan and myself) has created a set of hit and digitization definitions for the ID.
- Simply put we need to carefully coordinate future ID simulation development across all subsystems.