

Simulation production

Sho Uemura

Moving to JLab

- Nice staging system (no NFS bottlenecks)
- No Internet on batch systems or build systems
 - ▶ ilcinstall very difficult to install
 - ▶ How will we get conditions?

Simulation infrastructure

- General-purpose software, compiled to run on batch:
/u/group/hps/hps_soft
 - ▶ SLIC (ilcinstall)
 - ▶ hps-java.jar
 - ▶ hps-detectors
 - ▶ C++ stdhep utilities
 - ▶ EGS5 distribution
- Anything specific to MC production: /u/group/hps/production/mc
 - ▶ Auger scripts
 - ▶ Auger logs
 - ▶ EGS5 scripts
 - ▶ Data quality summaries
 - ▶ MadGraph source trees

Data

- In terms of production stages:
 - ▶ EGS5 beam background (StdHep), MadGraph tridents (LHE): no beam spot, beam in +z direction
 - ★ /mss/hallb/hps/production/stdhep, /mss/hallb/hps/production/lhe
 - ▶ SLIC output (LCIO)
 - ★ /mss/hallb/hps/production/slic
 - ▶ Still need readout (LCIO) and recon (LCIO, ROOT), but those are easier
- In terms of MC samples:
 - ▶ Beam background with tridents
 - ▶ Prompt A' (with background)
 - ▶ Still need detached A', tridents
- Tool versions in filenames, run parameters in path:
slic/ap-beam-tri/1pt1/100apv2-egsv1-triv2_m1s0d4_48.slcio

Detector geometry/SLIC

- HPS-Proposal2014-v4 replaces tessellated ECal flange with G4 primitives; x10-20 speedup over v3
- Norman/Jeremy adding 3D fieldmap to SLIC, still testing
- v4 detector seems to eliminate an old SLIC crash (material in tracking volume but outside field) but adds a new one (something to do with geometry), will investigate
- Any more changes to dead material, detectors?
 - ▶ Muon?
 - ▶ Alignment-friendly SVT?