Planning for a test production

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Outline

- Timeline for test production
- Open Issues for iLCSoft v01-19-05
- Test production samples

Timeline for a test production

- plan to soon create one more test-release of iLCSoft: **v01-19-05**
  - with all known issues fixed
  - ideally by the end of this week
- re-create test samples
  - single particles
  - uds
  - selected physics channels
- have one final round of testing/validation
- create final *production* release (at least for simulation)

last chance to find issues before production is started !

- see discussion at the end

Open Issues for iLCSoft v01-19-05

- BeamCalReco currently turned off
  - need simulation of pair-bg with frozen detector models
  - then need re-tuning of parameters
  - will do test production w/o BeamCalReco
- minor points in geometry of ILD_l/s5 models:
  - position of HCalRing (aligned w/ EcalEndcap front face)
  - correct position of LHCal (closer to LumiCal ?)
  - will not fix for this test productions - need experts to check
- need to finalize the calibration for the ILD_ls5 models
- switched back to SiTracking with slightly worse efficiency at low pt (20-deg issue)
  - will keep this for now and continue to investigate/improve

Background overlay for Test-production

- plan to overlay two types of background:
- pair background
  - e^+e^- pairs that actually are reconstructable in VXD and FTD
  - created tool to produce corresponding files with SGV
- aa_lowpt ($\gamma\gamma \rightarrow$ hadrons)
  - recently fixed generator: Γ_ρ, ...
  - prepared generator files with bb, bw, wb, ww samples (beam/virtual γ)
- bg-overlay is implemented in MC-production system
  - need to test the mechanism
- need to generate one bunch train of pair-bg tracks

will produce some test samples with background overlay

Samples for Test Production

- uds-events, E=30-500 GeV, (10k)
- $\gamma, K_L^0, \pi^0, K_S^0$, p=1-100 GeV, (20k)
- $\mu^{+-}, \pi^{+-}, e^{+-}, K^{+-}, p^{+-}$, p=0.2-150 GeV (100k)
- μ^{+-} at fixed p and θ values
- γ, 10 GeV, $\theta = 5^\circ - 14^\circ$
- aa_lowpt and pair-bg, 500GeV
- 100k events of bb, cc, qq at 91 GeV
- 100 k events of 6b, 6c, 6s, 6d, 6u at 500 GeV
- 6f_ttbar semi-leptonic and hadronic, 500 GeV
- $H \rightarrow$ invisible and $H\mu^+\mu-$, 250 GeV
- 2f_z_l, 500 GeV (for tau study)
- $H\mu^+\mu-$, 500 GeV

- more detailed plan circulated by A.Miyamoto to ILD mailing list
  - for physics samples see next slide

Discussion

- have received little feed back on physics samples from last test production this summer
- **Proposal**
- find people that have active anlyses and can commit to check their physics signal on a small test production
  - this would be a more *real world* test, including flavor tag, PID, etc ...
- your input is welcome: **volunteers** ?

Important

- need **thorough validation** of *all* samples
  - we need **strong contributions** form physics gropups here !
- aiming for start of the optimization production: **this year (!?)**