

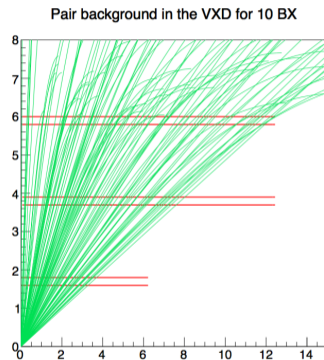
Software Coordinator's Report

F.Gaede, DESY

ILD Meeting, Feb 22, 2017

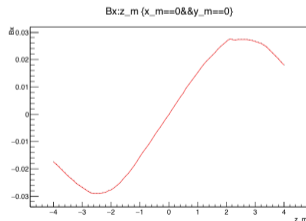
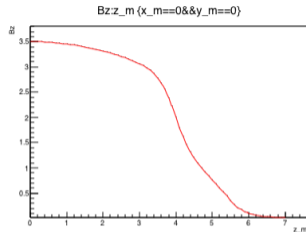
- Generator
- Simulation
- Reconstruction
- Monte Carlo Production
- Software Workshops

- testing new *alpha* version of WHIZARD
 - implemented new LCIO output format
 - generator status
 - event meta data
- implemented module in SGV to create pair-bg files for mass production
 - filter **reconstructable tracks**: $NDF > 0$, e.g. from three 2D hits
 - results in ~ 50 tracks per BX
- eventually need ~ 10 bunch trains (10k BXs) for MC production

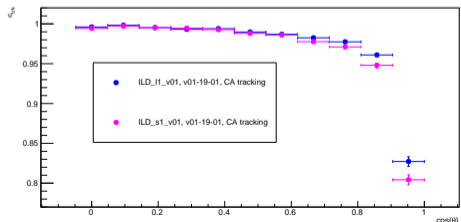
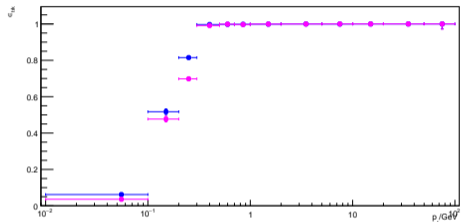


- FCal (B.Pawlik)
 - checked mainly LCal
 - compatible w/ (old) anti-DID field map
 - need to re-check w/ new anti-DID
- BCal needs to be moved closer to IP ($\sim 40\text{cm}$) \Rightarrow **to be done...**
- BP will compare models w/ CAD drawings, shown by A.Levy in Morioka
- TPC (D. Tsianou)
 - looking into digitization
 - will change parameterization of point resolution, due to newer gas mixture (T2K)
 - expect improved resolution wrt. TPC
- Calo (D.Jeans)
 - in contact w/ SDHcal group (Tibor)
 - about to provide improved SDHcal model for ILD_I/s2_v01

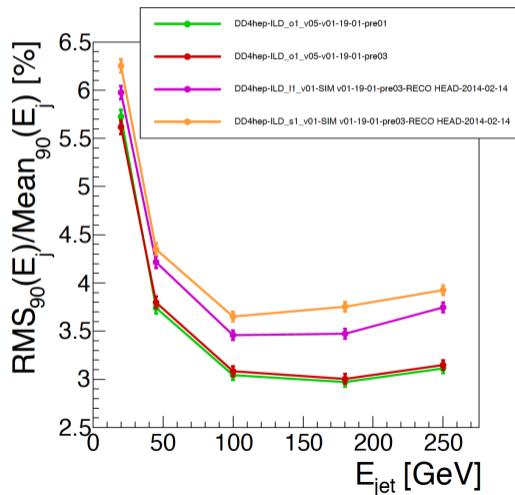
- need to simulate effect of pair-bg w/ and w/o anti-DID in ILD
 - beamCal
 - backscatter into inner tracker (VXD)
- created field maps from simulation (U.Schneekloth)
- implemented GuinePigReader in **DDSim**
- implmentation of B-field code ongoing
 - A.Perez Perez (IPHC)



- comparing tracking efficiencies for ILD_l/s1_v01
- observe degradation for smaller model (higher B-field)
 - at low p_T and in forward direction
 - numbers are **preliminary** !
- ongoing: study effect of background on tracking efficiency



- comparison of JER for ILD_I/s1_v01 to ILD_o1_v05
 - sth. wrong for newer models in PFA or calibration, ...
 - observed differences in em-calibration
 - => would need re-tuning of software compensation
- also still observe differences in JER between Mokka and DD4hep based sim/reco
- work in progress ...



- started to prepare extra production of
- $Z \rightarrow qq, M(qq) > 150\text{GeV}$ at 250 GeV
- for b-charge analysis, requested by LAL
- have created stdhep files
- estimated resource needs
- production should start soon

	Estimated size	Destination SE (Replication)	Comment (Disk or Tape)
GEN	0.25 TB	KEK-SRM	Akiya produced Move to TAPE soon
GEN-SPLIT	0.25 TB	PNNL-SRM IN2P3-SRM	DISK is suitable for small split file
SIM	6.0 TB	DESY-SRM KEK-SRM	Keep at DESY or KEK
REC, DST	11.6 TB	IN2P3	DISK site is suitable for small DST files
MergedDST	0.4 TB	KEK-SRM DESY-SRM IN2P3-SRM	Replicate all sites After merged, DST files will be removed

● LC Software expert Meeting

- March 20-24 at CERN
- <https://indico.cern.ch/event/606671/>
- 'hands-on' working meeting
- address open issues in iLCSoft and iLCDirac:
 - finalize the transition to Github
 - restructure some of the iLCSoft packages
 - work on iLCDirac
 - implement new features
 - ...

● ILD Software and Optimization/Technical Workshop

Monday	Tuesday	Wednesday	Thursday	Friday	
	- tracking - PFA	- MDI and subdetector status	- HLR tools and application	- anti-DID Task Force	closing plenary - discussion - decisions
L	U	N	C	H	
- core tools - generator - simulation and Grid tools	- status of sub-detector simulation models	- physics and optimization	- HCal geometry Task Force		

- April 24-28, in Lyon, France
- focus on software on Monday and Tuesday
 - will swap Tue and Wed afternoon...