

Physics Coordination Report

K.Fujii & J. List, ILD Software & Analysis Meeting, Aug 8 2018

ILC in Japan



Friday Aug 10:

 the Science Council of Japan will have the first meeting to discuss the report of the MEXT advisory panel

Sunday Aug 5 / Tuesday Aug 7:

- Barry Barish and Sheldon Glashow gave a symposium in Tokyo and a press conference and expressed their support for the ILC
 - https://www.interactions.org/press-release/internationallinear-collider-project-hosts-press-conference
 - https://www3.nhk.or.jp/nhkworld/en/news/ 20180805_18/



.... back to ILD matters





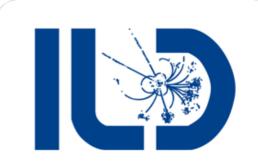
- all 12 analyses have started
- progress is slow since most analysers also have other tasks
- today updates from:
 - ee -> gamma Z
 - search for extra Higgs bosons

MC production



- several additional samples where recently processed:
 - mh > 125 GeV samples @ 250 GeV (DBD)
 - Iow delta-M Higgsino signal samples
- => expect updates soon!
- more to samples to come
 - extension of "Cambridge uds" samples for cc/bb
 - mh < 125 GeV and mh > 125 GeV samples @ 500 GeV (DD4HEP) (request today)
 - signal samples for anomalous QGCs: still need to sort out Whizard 2 technicalities





LCFIPlus:

- DBD performance can be obtained in some cases
- but suspicious dependency on the size of the training sample
- vertex position uncertainties not understood
- and degradation with beam background
- => this is critical for all benchmarks which need charm and bottom tagging!





- Isolated lepton (muon) finder:
 - can be used without yoke information => average efficiency a few percent lower than DBD at same purity
 - => can and should be used for benchmarking
 - but strong local inefficiencies for certain theta values
 - eg near costheta = 0.8:
 - => tracked to missing TPC hits due to a wrong simulation parameter
 - => fixed in central software, but of course this does not help our already simulated benchmark samples
- => will have to live with the fact that the benchmark samples will be for comparing large and small ILD (including the same bugs), but

not for best physics performance

Next meetings



Aug 22 (chaired by Frank)

Sep 5 (Frank)

Sep 19 (Keisuke)

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• and of course the benchmarking pre-meeting to the LCWS, October 19-21 (detailed agenda to come soon)