Status Report

LCD LAPP Physics meeting

Summary of the strategy

- Final aim : good idea of CLIC discovery capability of a Z' resonnance in the channel e^+e^- -> ttbarZ' (Framework of the RHNM model)

- Need realistic top tagging performance
- Full simulation :
  - ISR, BS, gg->hadr.
  - PandoraPFA with marlin framework
  - Involvement in the ttbar study group towards the CLIC CDR

- Realistic smearing of the Z' generator level data

What is done

- Unsmeared e^+e^- -> ttbarZ' ok
- Top tagging software ready (constant improvement)
- Background channels identified (ww, zz, wwz) and simulated
- Full simulation of ttbar (and bg):
  - ISR, BS OK
  - gg->hadr. May need some debug (CERN)
  - Marlin Reco OK but B-tagging should be soon included

What remains to do

- Fully complete the steps just mentioned…
- Extract smearing information for the e^+e^- -> ttbarZ' channel study

- Write down every thing

- Have a look at 500GeV toptagging (promise to ttbar study group) (2 weeks from now to have the 500GeV detecor model)

Time scale

- Today: ~mid february.
- 3 TeV study completed by the end of the month
- Start writing by the beginning of march
- In parallel
  - apply smearing to Z' data
  - Run Top tagging @ 500 GeV
- Thesis 1st ~full draft available during april
  - > start defense organisation process.