

ILD Physics Analysis strategy

SDHCAL meeting

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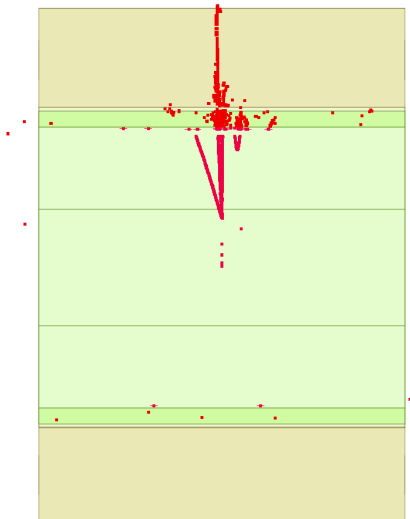
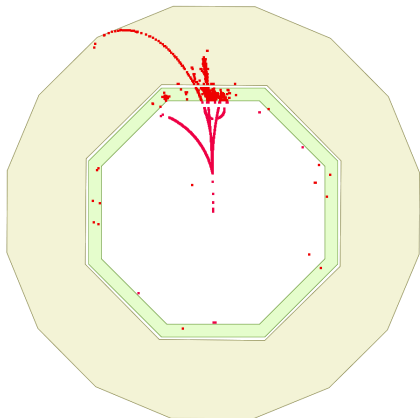
The tools we have learned.

In the framework of the SDHCAL test-beams data analysis we have learned:

- How to work in the ILCSoft analysis framework. (Installed in CIEMAT running in dedicated nodes)
- Run from scratch a simulation using the standard sequences in the framework and switching from one scenario to another (large \rightarrow small), (AHCAL \rightarrow SDHCAL), etc.
- Navigate and run over the centrally produced datasets (DIRAC)
- Produce ntuples out of the samples for detector/physics analysis. (AIDA,REC,SIM)
- Use reconstructed physics objects and produce event cut flows for analysis.
- Event display, etc.

The tools we have learned

Private CIEMAT-SDHCAL pion gun simulation for comparison with TB-2018.



Choosing a physics analysis

- Among the physics channels we have mentioned, we are open to both options: $H \rightarrow c\bar{c}$ or $H \rightarrow \tau\tau$.
- $H \rightarrow \tau\tau$ (Daniel Jeans). https://agenda.linearcollider.org/event/7371/contributions/37895/attachments/30993/46405/LCWS16_higgscp.pdf
- Recent publication (Jeans, Wilson) on CP of tau leptons pairs <https://arxiv.org/pdf/1804.01241.pdf>
- CMS: <http://cms-results.web.cern.ch/cms-results/public-results/publications/HIG-17-034/index.html>,
- ATLAS: <http://cms-results.web.cern.ch/cms-results/public-results/publications/HIG-17-034/index.html>

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