

ILD meeting

Whistler, November 4, 2015

Programm

Session 1:

08:30 Introduction

Presenter(s): Dr. Ties BEHNKE (*DESY*)
Location: The Fairmont Chateau Whistler

08:45 Site specific studies for ILD

Presenter(s): Dr. Karsten BUESSER (*DESY*)
Location: The Fairmont Chateau Whistler

09:15 Tracking news in ILD

Presenter(s): Paul COLAS (*CEA/IRFU, Centre d'etude de Saclay Gif-sur-Yvette (FR)*)
Location: The Fairmont Chateau Whistler

09:45 Status and news from the ECAL

Presenter(s): Dr. Taikan SUEHARA (*Kyushu University*)
Location: The Fairmont Chateau Whistler

Session 2:

10:45 Status and News from the HCAL

Presenter(s): Katja KRUEGER (*DESY*)
Room: Empress B
Location: The Fairmont Chateau Whistler

11:15 Pandora and its impact on the ILD optimization

Presenter(s): Lan TRAN HUONG (*DESY*)
Room: Empress B
Location: The Fairmont Chateau Whistler

11:40 Analyses in ILD: Status and Outlook

Presenter(s): Dr. Junping TIAN (*KEK*)
Room: Empress B
Location: The Fairmont Chateau Whistler

12:05 Software Status and Outlook

Room: Empress B
Location: The Fairmont Chateau Whistler

12:20 Discussion

Room: Empress B
Location: The Fairmont Chateau Whistler

Status of ILD

Spokesperson elected as of May 2015: thanks for the broad support.

Since then: Setting up the rest of the structure

Step 1: Four positions proposed by the spokesperson:

- Deputy Spokesperson
- Physics coordinator
- Software coordinator
- Technical coordinator

Due to problems with the position of the technical coordinator we decided to go ahead with just the three other positions. Once cleared, the position of the TC will be filled and elected as quickly as possible.

Step 2: Four positions elected by the Institute Assembly

ILD Optimization

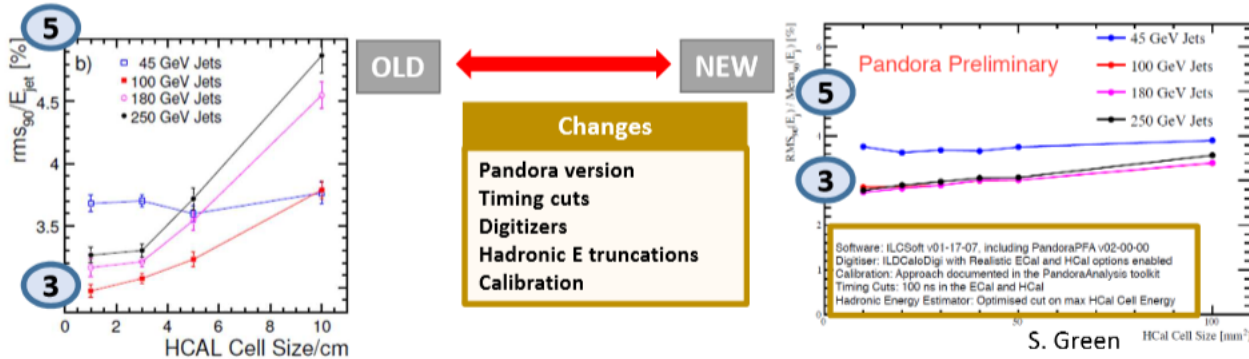
ILD optimization is a key goal for ILD

- Significant activities
 - Detector level: improve understanding and performance of subdetectors
 - Tools: Significant progress in tools (See e.g. yesterdays software session)\
 - Physics driven: start to assemble a suite of reactions tested for different detector options.

See summary talk by Mary-Cruz
See contributions in this session

Tools are Important

Strong dependence on our reconstruction tools:



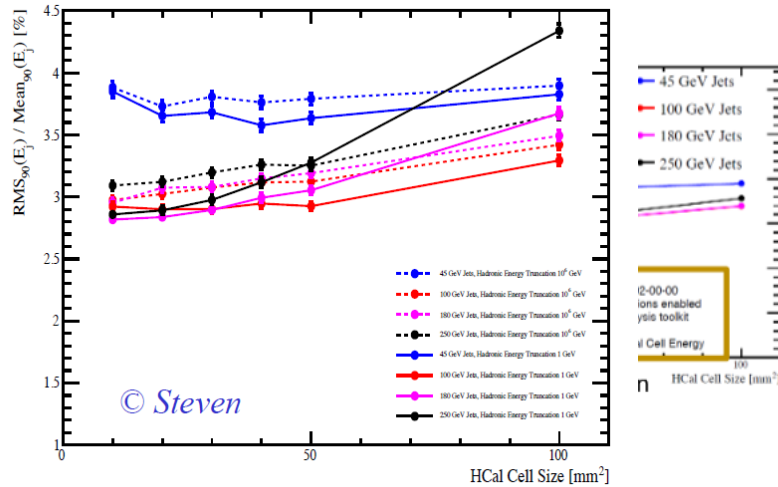
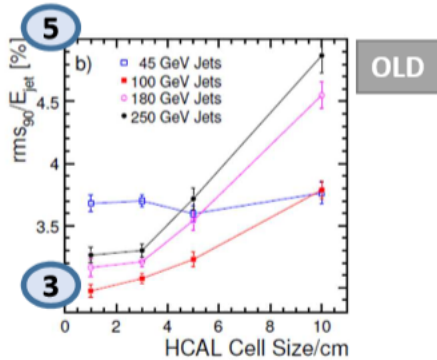
Dependence of Jet Energy Resolution on AHCAL cell size.

Implementation of proper software compensation might change the picture yet again.

Excellent understanding of our tools is essential for a sensible optimization job.

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Excellent understanding of our tools is essential for a sensible optimization job.

How do we proceed: Proposal

Define 3 ILD detector models

- DBD as a comparison detector (R=180cm)
- Intermediate scale (R=160 cm)
- Extreme case (R=140cm)



Other parameters (length, etc) need a detailed review to make sure we have not missed any major point.

Implement these detectors in DD4HEP and Ddsim
Validate

Produce sufficient events to study the benchmark reactions

Need to be clever, since we might not need to produce all backgrounds for all models, needs study

Time Scale

Now: from now until summer define the other parameters of the 2 new models

by studying things like tau, photon reconstruction, tracking, PFLOW, etc.

Edges? Endcap? etc etc.: many detailed studies needed

Summer: finalise the definition of the models, finalise the models, start validation

Fall: validation finished

Until end of the year: finish production of relevant data files

Clearly we are delayed compared to the plans in spring.
But we have much better confidence now in our tools.

Discuss update to the schedule today.