

# Minutes of the 11th SiD optimization meeting

*22-October-2014*

## **Present:**

Marty Breidenbach (MB)  
Marcel Demarteau (MD)  
Norman Graf (NG)  
Joel Goldstein (JG)  
Masakazu Kurata (MK)  
Bruce Schumm (BS)  
Jan Strube (JS)  
Andy White (AW)

## **Agenda and Points of discussion:**

1. Action Items from last time
  - a. JS and NG contacted Felix Sefkow. The improvement and validation is in progress. Felix pointed us to some recent CALICE documents that we can use for validation.
  - b. MD contacted Jose Repond. The RPC simulation will not be improved by the Argonne group.
2. Advanced Reconstruction in ILD
  - a. Use of Particle ID with TPC and calorimeters to improve jet energy resolution by applying the correct mass hypothesis to Tracks. Use of Particle ID in the flavor tagging. The use case is currently the Higgs self-coupling analysis. It's not used in detector optimization.
3. FCAL Status
  - a. Overview of the current status of the reconstruction. Studies have been carried out with SiD02, and now with sidloi3.
  - b. Group is up and running and may be expanding. With decreasing activity in Europe, SCIPP is gearing up to becoming the dominant player in FCAL reconstruction.
  - c. Currently learning about the differences in performance between sid02 and sidloi3. Brief discussion of the safety factors on the background in the TDR. They may be overly conservative for a given luminosity.
  - d. Next plan is to evaluate the performance of different algorithms and to try to combine the best pieces.

## **Action Items:**

During the DBD, several items were discovered and left untackled. If you remember some open work items, or discover new ones, please write them down and let me know about them.

**Tentative Agenda next week:**

Marcel Vos, Jet Reconstruction for lepton colliders