

FCAL Clustering WG.  
Meeting Minutes.  
December 15, 2014.

Itamar and Sasha reported on the progress of beam test data analysis:

- Reconstruction in telescope using TAF and Aarhus alignment and track finding software shows reasonable performance;
- Different shapes of the distributions for x and y coordinates residuals in telescope planes were observed. It might be explained by imperfection of alignment and beam parameters.
- It was demonstrated that the synchronization between telescope and LumiCal based on mimosa hardware frame number works well. Though the algorithm to match events is quite complicated and has to take into account specific features of readout hardware and DAQ.

During the discussion

- it was emphasized that it is important to understand better the difference in x, y residual distributions.
- Itamar provided additional details of LumiCal signal parameters and its processing during the reconstruction. Titi suggested to check the possibility of finding more than one event in 32 samples ( $\Delta t=50$  ns) LumiCal signal.

Strahinja gave a talk: High-energy particles in the FCAL detectors

- Evaluation of the accuracy of luminosity measurements in FCAL was presented. The simulation used a realistic luminosity spectrum from Guinea-Pig and new the version 2.2 of WIZARD event generator;
- Two cases were considered: ILC 500 GeV and CLIC 1.4 TeV;
- Uncertainty related to Four-fermion background was updated.

During the discussion Strahinja gave some details of using generated luminosity spectra as input for WIZARD generator. Some additional selections criteria can be studied to improve Bhabha events selection and luminosity measurements.

In general discussion

- Lucia informed about the progress in background estimation in BeamCal for new L\*.
- Bruce's group works on simulation software for SiD to address new L\* issues.
- TAU group had missing beam test data for telescope runs 131-179 and it luckily appeared that Veta had the data files.

Next meeting was preliminary scheduled to take place on January 5.