

FCAL S&A WG
Meeting Minutes.
January 31, 2018.

Evgeniy presented Alternative digital filter for LumiCal TB 2016 data processing.

- The study was made using TB2016 data collected with APV25 front-end chip with and without charge divider;
- The alternative digital filter evaluates the signal based on the sum of the samples of the signal after CR-RC shaper;
- A parameterization was developed to map the sum to the fitted value of the signal;
- The developed approach is about 15 times faster than fitting;
- An undershoot in the end of CR-RC shaper response was observed in some channels for some events.

During the discussion it was pointed out:

- The LumiCal front-end electronics designed with smaller sampling compared to APV25 and deconvolution digital filter might be better approach to test;
- The non linear dependence between sum (integral) and amplitude extracted from the fitting is not well understood.

In general discussion Wolfgang mentioned that FCAL still needs to find a person who will work on the validation of the forward detectors performance in ILD and that Andrey Sapronov from JINR is a good candidate taking into account his experience with BeamCal.