**Date: Wed, 11 Dec 2019 18:17:26 +0100**

**From: Marek Idzik <idzik@ftj.agh.edu.pl>**

**To: fcal-members (FCAL Members mailing list)" <fcal-members@cern.ch>,**

**Subject: Re: 43th FCAL Hardware WG Meeting - Summary**

Today we had few contributions to the FCAL HWG meeting:

**1**. Sasha gave "Update on ALPIDE telescope data analysis" regarding the last test-beam at DESY

 - he managed to convert the raw format telescope data to LCIO

 - hit reconstruction works, reasonable noise behavior is seen, position of the beam after magnet agrees with simulation

 - a lot to be done, next step is to make alignment

**2**. Ruth Magdalena proposed to use "Cerenkov Prototype for LUXE in March TB" for photon monitoring

 - Cerenkov prototype was developed for ILC polarimetry

 - EUDAQ TLU would be needed for synchronization with telescope

 - setup was proposed in which LumiCal is used for photons and three telescope planes plus Cerenkov for electrons bent by magnetic field

 - in principle FCAL is open for this proposal but details needs to be checked/discussed. For example the telescope will be available only

for one week (Yan should check it) and so a detailed schedule planning is needed in advance.

 **3.** Andrei showed proposal for contacts/pads in GaAs sensors. Bottom contact with nickel and gold - fine. Top pads with vanadium and Aluminium plus SiO2 passivation - possible problems may appear: surface radiation damages due to SiO2 passivation, quality of contact during bonding to Al pads. SiO2 passivation may be removed in later stage of production process. Quality of Al pads would need to beexperimentally verified. Andrei is going to produce few (3-4) prototypes of GaAs sensors.

**4.** Sergei presented "GaAs-2019 plans", the status for existing and planned GaAs sensors

 - new sensors should be done with proportional segmentation

 - since only 3 inch wafers can be done, a prototype of the inner (central) part of the sensor should be fabricated first

 - in the prototype different options (regarding guard ring and gaps) should be tried

 - a proposal for pad metalization with gold was shown - to be discussed with Andrei...

**5.** I showed the "Status of FLAME-based setup for beam-test"

 - FLAME ASICs and the board hosting 8 FLAMEs - ready

 - FPGA board reading single sensor plane - schematic ready, layout to be done

 - Backplane board hosting 4-8 FPGA boards - to be done

 - plan is to have 5-10 readout planes ready for the March test-beam

Best Regards,

  marek