



Contribution ID: 20

Type: Poster (short oral)

## [F08] Development of AC-LGAD detector with finer pitch electrodes for high energy physics experiment

Thursday, 27 October 2022 11:50 (15 minutes)

Low-Gain Avalanche Diode (LGAD) sensor is one of candidate sensors for tracker at future hadron collider. To use this sensor as tracking detector, AC-LGAD sensor was developed which has both timing and spatial resolution. In high luminosity environment, a 30ps of timing resolution and  $O(10\mu\text{m})$  spatial resolution helps to reduce pileup effect and reconstruct tracks precisely. By optimization fabrication parameters, 80 $\mu\text{m}$  pitch strip and 100 $\mu\text{m}$  pitch pixel sensors are successfully produced. In this talk, I will present the performance of fine electrode pitch sensors such as pulse height, crosstalk size, timing resolution, inter electrode capacitance and radiation hardness evaluated using a beta-ray source and in 800MeV electron testbeam.

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**Session Classification:** Timing Detector