Contribution ID: **25** Type: **not specified**

Impact ionisation models and LGAD sensors in the context of the High Granularity Timing Detector simulation in ATLAS

Thursday 23 May 2024 16:05 (25 minutes)

The High Granularity Timing Detector (HGTD), to be installed in ATLAS for the High Lumi phase in 2029, will use fast timing information to alleviate the effects of the high pile-up of Run4. Low Gain Avalanche Detectors (LGADs) will be used to achieve precision up to 30 ps and currently an intense campaign of R&D and testing is undergoing to establish their performance. Correctly describing the impact of avalanche processes in LGADs is a key point in the simulation of the sensors: I will discuss in this talk the current models included in Allpix, how they compare and how they describe the data that are being collected in the test beam campaigns at DESY and SPS.

Will the talk be given in person or remotely?

Presenter: VISIBILE, Andrea (Nikhef National institute for subatomic physics (NL))

Session Classification: Applications and studies