Contribution ID: **5** Type: **not specified**

Preparations for LGAD characterization with 30 MeV protons

Wednesday 21 June 2023 11:40 (20 minutes)

Development of a new generation of 4D, low-material-budget detectors based on LGADs allows for combining high temporal and spatial resolution in one technology. Thin LGAD sensors feature a strong dependence of a deposited energy on the incident angle. Therefore, it is important to study how the incident angle of ionizing particles influences the time resolution.

The talk will report on preparation of a test beam where we intend to use 30 MeV protons for characterization of LGADs sensors having 1.3 x 1.3 mm2 pad size and a thickness of 200 μm, with a 50 μm thick active layer. The talk will describe the U-120M cyclotron facility at the Nuclear Physics Institute of the Czech Academy of Sciences and the setup for the irradiation. In addition, we will also present results from lab tests where the LGADs were tested with 90Sr beta source in the auto-triggering and coincidence modes.

Author: KRIZEK, Filip (Czech Academy of Sciences (CZ))

Co-authors: LASTOVICKA MEDIN, Gordana (University of Montenegro (ME)); KRAMBERGER, Gregor (Jozef Stefan Institute (SI)); Dr KUSHPIL, Vasily (Nuclear Physics Institute of CAS)

Presenter: KRIZEK, Filip (Czech Academy of Sciences (CZ))

Session Classification: LGAD