Contribution ID: **42**   Type: **not specified**

Characterization of FBK TI-LGAD and pixelated BNL AC-LGAD with laser TCT and beam tests

Wednesday, 21 February 2024 11:35 (20 minutes)

We present results obtained on the characterization of AC-LGAD sensors developed by Brookhaven National Laboratory (BNL), and TI-LGAD developed at FBK. These two technologies are promising candidates to achieve 4D charged particle tracking. In addition to tests with laser TCT, these devices have been investigated during a test beam campaign organized in the framework of the AIDAInnova WP6 project.

Space and timing resolutions were extracted for both technologies, together with the particle hit efficiency. In the case of the TI-LGAD, also the inter-pixel distance has been evaluated with test-beam data, and compared with previous laboratory measurements.

Co-authors: AIDAINNOVA WP6 TEST-BEAM GROUP; TRICOLI, Alessandro (Brookhaven National Laboratory); KILMINSTER, Ben (Universität Zürich); GIACOMINI, Gabriele (Brookhaven National Laboratory); BARONE, Gaetano (Brookhaven National Laboratory); BORGHI, Giacomo (Istituto Nazionale di Fisica Nucleare); PATER-NOSTER, Giovanni (Fondazione Bruno Kessler); SENGER, Matias; BOSCARDIN, Maurizio (Istituto Nazionale di Fisica Nucleare)

Presenters: MACCHIOLO, Anna (Max-Planck-Institut fuer Physik); MACCHIOLO, Anna (University of Zurich)

Session Classification: LGAD 2