

Results for pixel and strip USTC AC-LGAD sensors

Thursday, 30 October 2025 16:40 (20 minutes)

The development of next-generation particle detectors capable of precise 4D tracking is crucial for future high-energy physics experiments. AC-LGAD have emerged as a leading technology to achieve excellent spatial and temporal resolution simultaneously. This report details the successful development and characterization of a new batch of AC-LGAD detectors fabricated by the University of Science and Technology of China (USTC). We present a comprehensive performance evaluation of these devices, focusing on key metrics such as spatial resolution, time resolution, and signal uniformity. Furthermore, the report provides a critical analysis of how different fabrication parameters and design choices—including electrode layout, doping profiles—directly influence the detector's electrical and functional characteristics.

Primary author: 李, 寒 (中国科学技术大学)

Presenters: LIU, Yanwen (USTC); 李, 寒 (中国科学技术大学)

Session Classification: Parallel 1: Upgrade

Track Classification: Upgrade