



Contribution ID: 233

Type: Oral

Upgrade of Belle II Vertex Detector with CMOS Pixel Technology

Monday, 26 June 2023 12:10 (20 minutes)

The Belle II experiment at KEK in Japan is upgrading its vertex detector system to address the challenges posed by high background levels caused by the increased luminosity of the SuperKEKB collider. A proposed vertex detector upgrade aims to install an all-layer monolithic pixel vertex detector based on fully depleted CMOS sensors in 2027. The new system will use the OBELIX MAPS chips to reduce the material budget and improve spatial resolution, and will consist of five layers using a single sensor type. This talk will focus on the design status of the OBELIX sensor and detection module developments based on the TJ-Monopix2, presenting laboratory and test beam results on pixel response, efficiency, and spatial resolution.

Primary author: Ms SCHWICKARDI, Marike (Uni Göttingen)

Presenter: Ms SCHWICKARDI, Marike (Uni Göttingen)

Session Classification: Detector Systems

Track Classification: Detector systems