

SiPM application for KL/muon detector at Belle-II

Content

We report on a new KL and muon detector based on scintillators to be used for the endcap and inner barrel regions in the Belle II experiment. The increased luminosity of the e^+e^- SuperKEKB collider entails challenging detector requirements. We demonstrate that relatively inexpensive polystyrene scintillator strips with wavelength shifting fibers ensure a sufficient light yield at the Silicon PhotoMultiplier (SiPM) photodetector, are robust and provide improved physics performance for the Belle II experiment. We also describe the simple technological methods used in the mass production for KL and muon detector modules, that allowed to increase significantly the light collection efficiency at SiPM, and the first experience of multichannel SiPM adjustment.

Author's Institution

MIPT, ITEP

Co-author's Institution

Primary author(s) : Dr. UGLOV, TImofey (ITEP)

Presenter(s) : Dr. UGLOV, TImofey (ITEP)

Session Classification : Poster Session