



Contribution ID: 91

Type: Poster

Measurements of 511 keV annihilation photons with ultimate timing resolution

Monday, 5 September 2016 15:15 (15 minutes)

We report on measurements of 511 keV annihilation photons with ultimate timing resolution via detection of Cherenkov radiation in PbF₂ crystals attached to an ultra-fast single-channel Micro-Channel PhotoMultiplier Tube (MCP-PMT). We have measured back-to-back timing resolution using a pair of such detectors, and compare the results with a Monte Carlo simulation. The study would provide useful benchmark in development of TOF-PET with Cherenkov light using an array of multi-anode MCP-PMT or solid-state photodetectors, such as MPPC or SiPM.

Registered

Yes

Primary author: KOBAYASHI, Kazuho (Nagoya University)

Presenter: KOBAYASHI, Kazuho (Nagoya University)

Session Classification: Poster Session A

Track Classification: Technological aspects and applications of Cherenkov detectors