



Contribution ID: 723

Type: Poster

## The Aerogel RICH detector of the Belle II experiment

*Monday, 15 July 2019 19:40 (20 minutes)*

In the forward end-cap of the Belle II spectrometer, an innovative proximity focusing Ring Imaging Cherenkov counter with a multilayer focusing aerogel radiator has been installed. The detector is designed to be operated in a B field of 1.5 T, and consists of a double layer aerogel radiator, an expansion volume and a photon detector. In total 420 Hamamatsu hybrid avalanche photo sensors with 144 channels each are used to read out single Cherenkov photons with high efficiency. The device will allow a better than  $4\sigma$  separation of pions from kaons in the experiment kinematic region from 0.5 GeV/c to 4 GeV/c.

The detector components have been successfully produced and installed in the spectrometer. After a commissioning phase in 2018 (so called Phase 2), the detector is now included in the Belle II data taking, and is expected to contribute substantially to the performance of the spectrometer in looking for rare decays of B and D mesons, and of tau leptons. In the proposed contribution we will review some interesting design and construction points, discuss the commissioning experience, and report on the results of data taking in the 2019 campaign.

**Primary author:** KORPAR, Samo (University of Maribor and JSI)

**Presenter:** SANTELJ, Luka (Jozef Stefan Institute)

**Session Classification:** Wine & Cheese Poster Session

**Track Classification:** Detector R&D and Data Handling