

PID with the Belle II Aerogel RICH



Rok Pestotnik, on behalf of the Belle II ARICH group

- Ring Imaging Cherenkov Detector with an aerogel radiator (ARICH) in the forward endcap of Belle II (1.5 T magnetic field)
- Cherenkov photons irradiated in two 2cm thick layers of silica aerogel (2x124 tiles) are propagated to the photon detector (420 HAPDs)
- very reliable operation since 2018
 - 94% of channels are fully operational;
 - No significant degradation
 - The ARICH runs almost without any human intervention.

Particle Identification Performance

The kaon identification efficiency is above 96% in the wide momentum range from 0.5 to 4 GeV/c at a relatively low pion mis-ID probability of 10%.















