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## The aerogel RICH for the Belle II spectrometer

*Friday 15 February 2013 11:20 (20 minutes)*

For the Belle II spectrometer we are developing the proximity focusing RICH with aerogel as an radiator. It will be positioned in the small space between the drift chamber and the electromagnetic calorimeter inside a strong magnetic field of 1.5 T in the forward direction of the spectrometer and will enable the efficient separation of kaons from pions in the wide range of particle momenta from 0.5 up to 4 GeV/c. The chosen photo sensor - Hybrid Avalanche Photo Diode should be able to detect single photons with high efficiency and in addition it has to be resistant to high radiation doses of  $10^{12}$  neutrons/cm<sup>2</sup> and 100 Gy of gammas in 10 years of operation. In the contribution the design of the detector will be presented. We will show the beam test results of the detector prototype, the results of the tests in the magnetic field and the results of the irradiation tests of photo sensor samples.

### **quote your primary experiment**

Belle II

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