

Abstract Submitted
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A Ring Imaging Cherenkov Detector for CLAS12 at Jefferson Lab¹ CONNOR PECAR, FATIHA BENMOKHTAR, Duquesne University, MARCO MIRAZITA, INFN Laboratori Nazionali di Frascati, CLAS12 RICH COLLABORATION — A hybrid proximity Ring Imaging Cherenkov (RICH) detector has been built and is functional in the CLAS12 spectrometer in Jefferson Lab's Hall B. The RICH was constructed for separation of kaons from pions and protons in the 3-8 GeV/c momentum range. The RICH contains a wall of aerogel tiles (refractive index $n = 1.05$) which cause the production of Cherenkov radiation as particles under investigation enter the detector. Depending on the incident angle of the particle, the radiation ring will either travel directly to the readout photosensors or be redirected via a system of spherical and planar mirrors towards the readout electronics panel. The radiation is detected by a panel of 391 Multi-Anode Photomultiplier Tubes (MAPMTs) with pixel size of 6 mm and recorded by the readout electronics with accurate time resolution below 1 ns. In the last year, data has been taken using one RICH module and a second module is currently under construction. The performance of the RICH during the CLAS12 data-taking will be presented.

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