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MOLLER/PREX Detector Development DUSTIN MCNULTY, Idaho State University, MOLLER COLLABORATION, PREX/CREX COLLABORATION — The high luminosity requirements of parity violating asymmetry measurements, such as those proposed by the Jefferson lab experiments MOLLER and PREX, create several challenges for detector design. Our current design focus is on thin quartz Cherenkov detectors with and without air light guides. These designs are radiation hard and give a consistent/robust response for each electron independent of energy. The quartz thickness, its distance from the pmt, the orientation between quartz and beam, and light guide geometry are some of the key design considerations. Several new thin quartz integrating detector prototypes have been constructed and recently tested at MAMI with the help of the P2 collaboration. These prototypes consisted of Møller and super-elastic rings for the MOLLER experiment, the new PREX II detector, and re-designed Jefferson Lab Hall A Luminosity monitor. This talk will introduce the new designs, give results from the recent beam studies, and give plans for future work.

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