

Abstract Submitted
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High rate bench test of MaPMT and frontend electronics for SoLID Cherenkov detectors BISHNU KARKI, Duke University, SOLID COLLABORATION — The proposed Solenoidal Large Intensity Device (SoLID), a large acceptance spectrometer at Jefferson Lab, can handle high luminosities (10^{37} - 10^{39} $\text{cm}^{-2}\text{s}^{-1}$) and cover the full 2π azimuthal angular range. The raw detector rate in Cherenkov detectors, used for particle identification in SoLID, is estimated to be as high as 4 MHz/PMT. The readout system for the Cherenkov detectors should be compatible with the high rate expected in the SoLID. To check and confirm the expected performance, we have tested Multi-anode PMT (MaPMT) and frontend electronics using lasers and LEDs to such a high rate to mimic the SoLID running conditions. In this talk, I will present our test results and discuss its performance.

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