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A Wavelength Shifting Readout method for Large Gaseous Particle Detectors. ANDREW RODIONOV, CHARLIE CAMP, ZACH MARQUEZ, TY STIEGLER, JAMES WHITE, Texas A&M University Physics — A new method to readout the ionization of a gaseous-based particle detector is being investigated as part of the research and development effort to develop very large detectors for future WIMP search experiments. In this approach, a grooved plastic scintillator cylinder is used to wavelength-shift the vacuum ultraviolet light produced from proportional scintillation in gaseous xenon. The design and construction of the test chamber is discussed along with preliminary findings.

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