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**Development of a new WIMP detector concept based on High Pressure Xenon Gas** ZACHARY MARQUEZ, CHARLIE CAMP, ANDREW RODIONOV, TYANA STIEGLER, JAMES WHITE, Texas A&M University Physics — Although a number of proven approaches exist, there is a continuing effort to develop WIMP detectors with improved sensitivity and more economical operation. One approach that shows great promise is based on the ratio of Scintillation to Ionization in pressurized, room temperature Gaseous Nobles (SIGN). Recent research and development results to determine basic properties of pressurized xenon for particle detection as well as background discrimination for WIMP detection will be presented.

Zachary Marquez  
Texas A&M University Physics

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