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Optical Observation of Low Mass X-Ray Binary V1727 Cygni¹ ALEX PRICE², PAUL MASON³, University of Texas at El Paso, EDWARD L. ROBINSON⁴, University of Texas at Austin — This research is based upon optical observations of the neutron star V1727 Cygni (=4U 2129+47). A total of 19 nights of data were collected from September 2010 through August 2011 at the McDonald Observatory via the 82 inch (2.1 m) Otto Struve Telescope. The Interactive Reduction and Analysis Facility (IRAF) was used to reduce the data collected. We present the resulting light curves. We will describe our analytical methodology, which makes use of a phase dispersion minimization program in order to identify periodicity. Preliminary results seem to support previous research by Bothwell, Torres, Garcia, and Charles that V1727 Cygni is part of a three-body system. Preliminary results also suggest that this system exhibits ellipsoidal variations. This research is supported by a National Science Foundation Partnership in Astronomy and Astrophysics Research and Education (PAARE) grant to the University of Texas at El Paso.

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