

Abstract Submitted
for the OSF16 Meeting of
The American Physical Society

Observation and Analysis of KIC 8462852: Occultation by Comets or Civilization?¹ ADAM LAHEY², Bowling Green State Univ — A particularly interesting star, KIC 8562852, recently became famous for its enigmatic dips in brightness. The interpretation broadcast by many popular media outlets was that the dips were caused by a megastructure built around the star by an intelligent civilization. The best scientific hypothesis relies on a natural phenomenon: the break-up of a comet orbiting the star. To further address this problem, we have measured the star for four months using BGSU's 0.5m telescope and digital CCD camera, and we present the star's brightness as a function of time. Using three very clear nights, we refined the brightness of four comparison stars which can be used by the local astronomical community to monitor the star's brightness. These newly refined magnitudes should reduce the uncertainties in our brightness measurements; this error analysis is essential in determining the significance of any brightness deviations. An observed dip in brightness would confirm the comet hypothesis by establishing a cyclical pattern, or may serve as a basis for new understanding of variable stars. An additional element to the project involves creating CCD calibration images and a well-documented procedure for future use.

¹CCD Imaging of KIC 8462852: Occultation by Comets or Civilization?

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Date submitted: 11 Sep 2016

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