

Abstract Submitted
for the OSF07 Meeting of
The American Physical Society

Imaging Starspots on II Pegasi via Light-curve Inversion¹ NALIN VUTISALCHAVAKUL, Ohio Wesleyan University, RYAN DESKINS, East Tennessee State University, ROBERT HARMON, Ohio Wesleyan University — Starspots on the star II Pegasi were mapped via the method of Light-curve Inversion, which infers the appearance of the dark spots based on the brightness variations they produce as the star rotates. Our data were obtained with the 0.4-meter Vanderbilt/Tennessee State University Automated Photometric Telescope from September 1995 to January 1996 and from November 1988 to September 1992 (Henry, et al. 1995, ApJSS, 97, 513). For the first data set our results suggest that II Peg has opposite differential rotation to that of the Sun, with higher latitude spots having shorter rotation periods. We analyzed the second data set in an attempt to confirm this, but found that no definite conclusion could be drawn, though differential rotation is clearly present. The difficulty arises in part because the data were obtained through only two photometric filters (B and V), which limits the resolution in latitude. Future observations of the star through a larger set of filters might resolve this ambiguity.

¹This research was supported by funds from the OWU Summer Science Research Program and the NSF REU Program.

Robert Harmon
Ohio Wesleyan University

Date submitted: 01 Oct 2007

Electronic form version 1.4