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Surface Imaging of HIP 106231 via Light Curve Inversion

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— The star HIP 106231 (LO Pegasi) was observed with the intention of mapping its starspots. Starspots, similar to sunspots on the Sun, are dark areas on the surface of a star caused by intense magnetic fields. CCD images of HIP 106231 and the surrounding star field were obtained using an 8-inch Meade Schmidt-Cassegrain Telescope in conjunction with a Santa Barbara Instruments Group ST-8E CCD Camera and CFW8 filter wheel. Aperture photometry was used to create light curves (i.e. plots of brightness vs. time) for the B, V, R and I photometric filters. The light curves were analyzed via Light Curve Inversion, which is a technique that produces an image of the starspots based on the variations in the star's brightness they produce as they rotate into and out of view of Earth. We present a map which indicates the presence of a mid-latitude spot or projection from a polar spot.

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