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# KIC 2569073, A New Cepheid in the Kepler FOV?

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## Abstract

The Kepler space telescope has proven to be a gold mine for the study of variable stars. Unfortunately, Kepler only returns a handful of pixels surrounding each star on the target list, omitting a large number of stars in the Kepler field. Superstamps of the centers of the open clusters NGC 6791 and NGC 6819 have allowed for the identification and study of many variables that were not included in the Kepler target list. One particularly interesting new variable discovered via these superstamps is KIC 2569073, nicknamed Fluffy. With a period of 14.66 days and a sinusoidal light curve, Fluffy is either a Cepheid (which would make it only the second one in the Kepler field) or a rotationally modulated variable. We present our photometry for this star and discuss its classification. We also present the results of our investigation into potential cycle-to-cycle variations in the period and lightcurve shape of Fluffy.

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