Abstract Submitted
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Variable Star Search Using ROTSE3 Data FARLEY FERRANTE, ROBERT KEHOE, Southern Methodist University — I present results of a variable star search using data from the Robotic Optical Transient Search Experiment 3 (ROTSE3) telescopes. Variable stars fluctuate in magnitude as seen from Earth due either to changes in the star's luminosity or to changes in the amount of the star's light that reaches Earth. My research is focused on analysis of the time variation of optical light output as recorded in ROTSE 3 images. Specifically, I am attempting to identify short-period variable candidates such as delta Scuti stars, eclipsing binary stars, and contact binary stars. Amplitude variations for these classes of variables are on the order of one magnitude with periods on the order of two to five hours. The ROTSE3 telescope sensitivity holds the promise of significantly extending our reach to dimmer objects than previous searches and I will report on the confirmed discovery of a previously unidentified contact binary star in the constellation Sagittarius. This contact binary is now listed in the International Variable Star Index (VSX) maintained by the American Association of Variable Star Observers (AAVSO).

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