

Analyzing Color Relations for RR Lyrae in KELT

In this poster, we will use the color, period, and amplitude of stars in the Kilodegree Extremely Little Telescope (KELT) survey to identify RR Lyrae (RRL) stars. RRL stars are important because they can be used as tracers of galactic structure. The KELT survey is a single filter survey with between 4,000 and 9,000 epochs. Although this large number of epochs is useful for defining the light curve shape, it is difficult to separate some types of RRL stars from eclipsing binary stars by shape alone. To supplement these light curves, we will use catalog magnitudes to find color relations that can separate the RRL from the eclipsing binaries. We will then use the combination of these relations with light curve shape in order to pick out RRL stars.