

Using Period-Luminosity to Calculate Distance for the RR Lyrae Star EZ Lyr

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RR Lyrae stars are periodic variable stars often used as standard candles to measure intergalactic distances. Our group calculated the period-luminosity and distance-luminosity relationships for RR Lyrae star EZ Lyr for comparison with previously established results from the GAIA satellite. In collaboration with the Our Solar Siblings program, we requested images of EZ Lyr from the Las Cumbres Observatory's (LCO) 0.4 meter SBIG telescopes on a set cadence until adequate data was acquired. EZ Lyr's luminosity was determined by analyzing subsequent light curves from the LCO images. Using this observed luminosity in the relationship described in Caceres & Catelan 2008, distance was calculated. For the star EZ Lyr, the PL distance was consistent with GAIA observations.