The Beginnings and Ends of Double White Dwarfs

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Finding compact binaries with KPED

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The Kitt Peak Electron Multiplying CCD (EMCCD) demonstrator is a new instrument that has been developed for use at the Kitt Peak National Observatory's 84-inch telescope. With frame rates greater than 1 Hz possible and a field-of-view of 4.4′ × 4.4,′ this camera, coupled with a fully roboticized telescope, it is ideal for follow-up of short period, white dwarf binary candidates, as well as short duration transient and periodic sources identified by large field-of-view all-sky surveys such as the Zwicky Transient Facility. We will discuss this system and its synergy with ZTF, including its high-cadence observation of select Galactic fields and moderate cadence observations of a 3000 square degree field at higher declination. We will describe how we are systematically following up and confirming periodic sources identified in ZTF data, and will highlight some of the binaries that have been found.

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