

Abstract Submitted  
for the CUWIP21 Meeting of  
The American Physical Society

**White Dwarf Stars Observed with NASA's Kepler K2 Space Telescope** KENDALL SHEPHERD, WESTON HALL, Baylor University, BARBARA CASTANHEIRA ENDL. PHD, Baylor University, UT Austin — Ninety-five percent of all single stars will evolve into white dwarf stars. On a white dwarfs cooling sequence of the HR diagram, they pass through three distinct instability strips. At these temperatures, white dwarfs are observed to pulsate due to hydrogen recombination. Variable stars allow researchers to study stellar interiors. Variable and non-variable white dwarf stars were searched for in short cadence observations and by cross-matching data with Gaia and SDSS. Using data from campaigns 0 - 19 of NASA's Kepler/K2 space telescope, hundreds of white dwarf stars were identified. A color magnitude diagram was created of the white dwarf cooling sequence from the stars with a color index less than 0.7. These stars were analyzed for variability, and stricter bounds were implemented on the instability strips of the cooling sequence. This work will enable better models of the variability of these stars, and help to determine driving factors of stellar pulsation.

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Date submitted: 04 Jan 2021

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