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An Asteroseismic Age for a Solar Type Star in a Wide Binary with an M dwarf ERICA SAWCZYNEC, JENNIFER VAN SADERS, DANIEL HUBER, Institute for Astronomy University of Hawaii, JASON CURTIS, Department of Astronomy Columbia University; Department of Astrophysics American Museum of Natural History, NICHOLAS SAUNDERS, JOHN TONRY, Institute for Astronomy University of Hawaii — M dwarfs are popular targets for modern surveys as they are the most numerous and longest-lived stars in the universe. Their close habitable zones make them ideal candidates for finding exoplanets using typical planet-finding methods. Being able to estimate the ages of M dwarfs is crucial; young M dwarfs produce high energy flares which may affect the atmospheres of and the probability of finding bio-signatures on surrounding planets. However, estimating the ages of M dwarfs is challenging, and conventional techniques often fail. Some age-dating techniques, such as period-age relations, could be widely used, but require further calibration. The system HIP 43232, comprised of an M dwarf in a wide binary pair with a late F type star, can provide a benchmark for such calibration as ages of solar-like stars can be estimated using asteroseismology. Asteroseismology is the study of the oscillations in stars using the visible pulsations to determine stellar properties such as age, radius, and mass. Here we present the stellar parameters of the late F type star in HIP 43232 derived using asteroseismology utilizing data from the K2 survey. Additionally, we present the stellar parameters and rotation period of the M dwarf and their implications for testing M dwarf spin down.

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