

# CHARACTERIZING THE ORBITAL PERIODS OF TRANSITING PLANETARY DEBRIS AROUND WHITE DWARFS

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At least 30% of white dwarfs show metal-polluted spectra encoded with the bulk geochemical makeup of accreted extrasolar rocks. Exactly how this planetary debris is delivered to the star's surface remains weakly constrained by observations. We have recently discovered many new members of the new class of white dwarfs showing transits from edge-on planetary debris disks. These transits offer a real-time glimpse into the accretion of planetary debris onto white dwarfs, presenting a unique new laboratory for understanding the pollution of white dwarfs. To date, only four of the 11 known transiting debris systems have measured orbital periods. The light curves of these objects point towards a dichotomy: short- (< 25 hr) and long-period (> weeks) systems. It is therefore crucial to measure more orbital periods to characterize these systems as a class and begin to connect transits to the broader context of pollution. We discuss progress made on new techniques to measure the orbital periods of more transiting debris systems and the ongoing search for more such systems using all-sky time-domain surveys.