EVIDENCE FOR A BI-MODAL DISTRIBUTION OF POST MASS TRANSFER SYSTEMS?

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Binary systems consisting of a white dwarf and a main-sequence companion with orbital periods up to ≈ 100 d are often though to be formed through common envelope evolution which is still poorly understood. To provide new observational constraints on the physical processes involved in the formation of these objects, we are conducting a large-scale survey of close binaries consisting of a white dwarf and an A to K-type companion. Here we present three systems with eccentric orbits and orbital periods between $\approx 10 - 42$ d discovered by our survey. Based on *HST* spectroscopy and high angular resolution images obtained with SPHERE-IRDIS, we find that two of these systems are most likely triple systems while the remaining one could be either a binary or a hierarchical triple but none of them is a post common envelope binary (PCEB). The discovery of these systems shows that our survey is capable to detect systems with orbital periods of the order of weeks, but all six PCEBs we have previously discovered have periods below 2.5 d. We suggest that the fact that all of the systems we identify with periods of the order of weeks are not PCEBs indicates a transition between two different mechanisms responsible for the formation of very close (≤ 10 d) and somewhat wider WD+AFGK binaries: common envelope evolution and non-conservative stable mass transfer.