

EVOLUTION OF ACCRETING WHITE DWARFS FROM HST AND GAIA

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Accreting white dwarfs are ideal laboratories in which to test our understanding of the evolution of all types of compact binaries, as they are numerous, nearby and relatively bright. In this talk, I will discuss how the synergy between the Hubble Space Telescope and the ESA Gaia space mission allowed us to derive masses, temperatures and accretion rates for a large sample of accreting white dwarfs. Thanks to these results, we have revealed the presence of an anti-correlation between the average accretion rates and the white dwarf masses, which suggests the presence of an additional mechanism of angular momentum loss not accounted for by most evolutionary models. These results provide new stringent constraints on the models describing the evolution of these binaries and I will present them in comparison with the currently available theoretical framework.