The Beginning and Ends of Double White Dwarfs



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The formation of close double white dwarfs

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Close double white dwarfs(CDWDs) are good tests for theories of binary evolution, potential progenitors of Type Ia supernovae, and important contributors of gravitational wave signal at low frequencies. We used a binary population synthesis code of a population of 1 million binaries to study the characteristics of CDWDs, the mass transfer stability criterion comes from adiabatic mass loss model of Ge et al.(2015). I found that the simulation results are in good agreement with the observed characteristics of 107 known double white dwarf binaries, especially the 19 double white dwarf binaries with known masses of both components.

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