

# Type Ia Supernovae and Symbiotic Stars

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## Abstract

Type Ia supernovae (SNe Ia) are thought to be the result of the explosion of a carbon-oxygen white dwarf that has reached the Chandrasekhar limit. This could be due to a merger or collision of the white dwarf with another white dwarf, or due to mass transfer from a non-degenerate companion (a main sequence or larger star). The power law dependence of the delay time between the birth of the progenitor system and the explosion as a SN Ia (the delay time distribution) and the unsuccessful search for evidence of the companions to normal SNe Ia would seem to favor the double-degenerate model. However, a rare subclass of SNe Ia, the so-called "SNe Ia-CSM", shows evidence of strong interaction with a hydrogen-rich circumstellar medium. In this talk, I review the observational properties of the SNe Ia-CSM, and discuss the evidence that the progenitors of these events are symbiotic recurrent nova systems.