



# The Beginnings and Ends of Double White Dwarfs

Contribution ID: 30

Type: **Talk**

## New observational constraints on the merger rate of double white dwarfs in triple systems

*Wednesday, 3 July 2019 11:55 (20 minutes)*

Despite the importance today of Type Ia supernova explosions (SNe Ia) for a number of branches of astrophysics and cosmology, their progenitors and exact explosion mechanism remain unclear. The two standard scenarios for SNe Ia explosions, single-degenerate accretion and double-degenerate mergers, both have a number of theoretical and observational challenges, and there is still no consensus on the relative importance of each channel. I will present ongoing observational work on the statistics and properties of hierarchical triple systems that is aimed at constraining the relative importance of these objects as a potential third candidate for SNe Ia progenitors. Our preliminary results are already suggesting that such triples may indeed be an important contributor to the observed SNe Ia rate, and would also provide a clean explanation for the existence of a sizeable fraction of merged white dwarfs as recently suggested by Gaia.

**Primary author:** CHANAMÉ, Julio (Pontificia Universidad Católica de Chile)

**Presenter:** CHANAMÉ, Julio (Pontificia Universidad Católica de Chile)

**Session Classification:** Observed WD Populations 2