

# SEMINARIO DEL DEPARTAMENTO DE FÍSICA TEÓRICA

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## Mass-Loss, Stellar Evolution, and Planets

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**Abstract:** It is still difficult to both compute theoretically and observe with accuracy the high mass-loss rates that take place at the end of the evolution of the most common stars in the Universe; those with masses between 1 and 8 times the mass of the Sun. Besides determining the evolutionary end of the star, these mass loss-rates have important consequences for galactic chemical evolution because they regulate the mass limit between those stars that will end up as white dwarfs and those that will explode as Supernova Type II. In this talk it will be shown how models of the mass-loss evolution and observations of Planetary Nebulae central stars in the Magellanic Clouds have allowed us to: 1) constrain the duration of the mass-loss rate episodes, 2) make predictions about how and where the ejected envelopes can be observed, 3) obtain evidence of the mass-loss rate dependency with metallicity. Finally, we will discuss the impact that the most critical phases of the late stellar evolution has on the survival of planets.