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Studying the Post-AGB stars in Magellanic Clouds as a probe for dust production and mass-loss mechanisms

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The asymptotic giant branch (AGB) phase modelling is made uncertain by the poor knowledge of some physical mechanisms that play a crucial role on the internal structure and the late evolution of low- and intermediate-mass stars. On the contrary, the post-AGB phase is only marginally affected by the uncertainties mentioned and spectra can be more easily analyzed to derive the chemical composition and to characterize the dust in their surroundings. By exploiting these characteristics of the post-AGB stars, it is also possible to retrieve crucial information regarding the mass-loss process experienced by stars during the transition from the AGB to the post-AGB phase. To this purpose, we interpreted the spectral energy distribution of 14 post-AGB stars in the Magellanic Clouds to derive information about the luminosity, the dust content, and the surface chemical composition of the individual sources. In this talk I will present the results of this analysis from which we are able to infer information regarding the optical depth and the mass loss rate necessary to link the post-AGB phase to the previous one.

Session

Stellar evolution

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