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Dissection of post-AGB binaries

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Binaries among post asymptotic giant branch stars (post-AGB) were historically serendipitously detected, but these turned out to have a common property: they all display a clear near-infrared excess, indicating that circumstellar dust must be close to the central star. It is now well established that this indicates the presence of a stable compact circumbinary disc. The luminous evolved post-AGB primary has likely an unevolved stellar companion with a minor contribution to the energy budget. In the Galaxy a sample of about 85 of these disc objects have been identified which turned out to be indeed binaries. In the Large
and Small Magellanic Clouds, disc sources represent about half of the population of optically bright post-AGB stars. In this presentation I will review the recent results on our attempts to dissect these systems. I will give an overview on the properties of all interacting components: the post-AGB primary, the main sequence component, the circumbinary dusty disc and the circum-companion accretion disc which launches a high-velocity jet. The interaction processes between these components govern the evolution of these systems and i will give an update on our sample studies. Our ultimate aim is to progress in our understanding of the late phases of binary evolution.

Session

Stellar evolution

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