

The formation and long-term evolution of circumbinary planetary systems across the H-R diagram

Contribution ID: 25

Type: **not specified**

Observations of post-AGB discs

Thursday 16 January 2025 16:00 (35 minutes)

Both planets and discs are detected in binary systems beyond the main sequence. In particular, many post-asymptotic giant branch (post-AGB) binary systems are found to host circumbinary discs. These discs, created from the material of the evolved star during some yet poorly understood binary interaction phase, show many similarities with protoplanetary discs around pre-main sequence stars. These include dust mass, Keplerian rotation, infrared excesses, dust mineralogy, and the disc physics near the dust sublimation rim. These similarities raise the question whether a second episode of planet formation processes are taking place in these discs around post-AGB binaries. In this talk I will give an overview of the observational campaigns that have been ongoing over the last few years to uncover the structure and evolution of the circumstellar environment of the binary systems far beyond the main sequence. I will show observational results covering different wavelengths, from the optical to the submillimetre, and discuss how these multi-wavelength, and thus multi-scale, datasets can help our understanding of circumbinary planetary system formation and evolution.

Presenter: CORPORAAL, Akke

Session Classification: Post MS systems