Post-main sequence evolution of debris discs.

Amy Bonsor, Mark Wyatt

Institute of Astronomy, University of Cambridge.

Very little is known about planetary systems around white dwarfs. Hot dusty discs with radii less than 0.01AU have been observed around several systems and a link between these discs and planetary systems has been suggested.

The population of debris discs around main sequence A stars, on the other hand, is well constrained from observations and modeling. However the fate of these discs once the star evolves beyond the main sequence is not clear. In this talk I discuss the effects of stellar evolution on debris discs. Our models evolve the main sequence population of debris discs right the way through to the white dwarf phase, determining the population of discs around white dwarfs and hence the potential to observe such systems.

In an extension to this work, I will talk about the dynamical effects of mass loss on planetesimal belts. This is relevant to the structure of debris discs around white dwarfs and potentially the formation of the observed hot dusty discs.