
The role of planets and brown dwarfs in terminating the RGB and the AGB evolution

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Abstract

The large fraction of white dwarfs that are polluted by small bodies of planetary systems, about 40 per cents, suggest that 30-50 per cents of all white dwarfs progenitors have interacted with a planetary systems during their RGB or AGB phases. I will review the status of the planet-giant interaction in light of our new suggestion that Isolated stars have lower than traditionally assumed mass loss rate on the RGB and AGB. (Isolated stars were define recently by my research group as stars that are not spun-up much, or not at all, during their post-main sequence evolution, beside possibly when they reach the very upper AGB.) Under our assumption then, Isolated stars achieve larger radii on the AGB than what is commonly accepted, and so have a higher chance to interact with planets. As well, due to their larger AGB radius they are more vulnerable to their interaction with planets.

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