

ABSTRACT ONLY

WHAT WE HAVE LEARNED ABOUT DOUBLE PERIODIC VARIABLES IN THE LAST 13 YEARS

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The interacting binaries Double Periodic Variables (DPVs) show two photometric cycles, one is the orbital and the other is about 33 times longer. The cause of this long cycle is still an enigma. More than 150 DPVs have been found in the Galaxy and the Magellanic Clouds. We review the current knowledge of these variables, comparing them with the strongly interacting binaries W Serpentids and the less active Algols. We summarize the last 13 years of research on these systems, including the analysis of optical/infrared high-resolution spectroscopy and models of light curves. Some properties of the DPV long-cycle are highlighted and the properties of their circumstellar discs are studied using, for instance, Doppler tomography. The role played by the secondary star and the possible rapid rotation of the primary are discussed. We conclude that DPVs represent an important phase of the evolution of intermediate mass close binaries that should be taken into account when dealing with binary star evolutionary models and population synthesis studies.

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