

SAIP 2011



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Eclipsing Contact Binary Stars – Period Analysis using SuperWASP data

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Content :

Some eclipsing contact binary stars of the W UMa-type are known to undergo changes in orbital period. These changes can be as a result of the light travel time effect if the contact binary is a member of a multiple stellar system or due to some intrinsic phenomena that are poorly understood at this stage. Analysing systems that appear to be undergoing changes in orbital period may shed some light on the important physical processes that occur in close binary systems. Pilecki et al. (2007) searched through the All Sky Automated Survey (ASAS) database for semi-detached and contact binary systems with high period change rates. They present 31 interacting binaries whose periods either increased (10) or decreased (21) in a five year interval of observations. Using data from the Wide Angle Search for Planets (SuperWASP) project, it has been possible to do period analyses using O – C diagrams which provide a more reliable measure of period change. The results of the analyses will be presented.

Level (Hons, MSc, PhD, other)? :

PhD

Consider for a student award (Yes / No)? :

Yes

Short Paper :

Yes

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