

Study and analysis of the new eclipsing PCEB system: SDSS J074548.63+263123.4

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The common-envelope process is known as one of the complicated phases in binary evolution. A lot of efforts have been dedicated to study this common-envelope stage, but the many questions related to this process are yet to be answered. If one binary survives the common-envelope, the binary will emerge as a white dwarf accompanied by low-mass main sequence star in close orbit, or often referred as the post common-envelope binary (PCEB). SDSS J074548.63+263123.4 is one of the newly found PCEBs from the Sloan Digital Sky Survey (SDSS). In this work, we aim to confirm the eclipsing nature of J074548.63+263123.4 and to determine the stellar and orbital parameters. The primary eclipse in the light curve of SDSS J0745+2631 from our follow-up observation using the ULTRASPEC instrument from the Thai National Observatory. The data in g' filter showed an evidence of the primary eclipse. In the end of 2014, J074548.63+263123.4 was observed on several filters (r' , g' and $KG5'$ filters). Those observations shown primary eclipse and SDSS J0745+2631 is confirmed to be an eclipsing binaries system.

Summary

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