

A Study of the Orbital Period of WASP-43b

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WASP-43b is a hot Jupiter exoplanet with an ultrashort orbital period, 0.81347 days. From previous studies, there is a possibility that the orbital period of WASP-43b is decreasing. However, from the recent studies, the results show that there is no change in the orbital period of the system. Therefore, in this work, the orbital period change of WASP-43b is investigated. Nine transit light curves obtained from three telescopes, 0.7m ROP-NM at Regional Observatory for the public Nakhon Ratchasima, 0.5m TRT-TNO at Thai National Observatory and, 0.7m TRT-GAO at Gao Mei Gu Observatory in 2017-2018 are presented. We combine the mid transit time from our data with published mid transit time of WASP-43b. The result shows that WASP-43b has an orbital period change with the rate $dP/dt=+8.576$ milliseconds per years. Therefore, there is no evidence from tidal effect in the system.

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