



Lack of Transit Timing Variations of OGLE-TR-111b

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We present six new transits of the exoplanet OGLE-TR-111b observed with the Magellan Telescopes in Chile between April 2008 and March 2009. We combine these new transits with five previously published transit epochs for this planet between 2005 and 2006 to extend the analysis of transit timing variations reported for this system. We derive a new planetary radius value of $1.018 \pm 0.025 R_J$, which is intermediate to the previously reported radii of $1.067 \pm 0.054 R_J$ (Winn et al. 2007) and $0.922 \pm 0.057 R_J$ (Diaz et al. 2008). We also examine the transit timing variation and duration change claims of Diaz et al. (2008). Our analysis of all eleven transit epochs does not reveal any points with deviations larger than 2σ . Although the transit duration nominally decreases over the four year span of the data, systematic errors in the photometry can account for this result. Therefore, there is no compelling evidence for either a timing or a duration variation in this system. Numerical integrations place an upper limit of about $1 M_{\oplus}$ on the mass of a potential second planet in a 2:1 mean-motion resonance with OGLE-TR-111b.