Abstract Submitted
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Revisiting the Orbital Parameters for the XO-3 System[1] KEDUSE WORKU, SONGHU WANG, Yale University, JENNIFER BURT, Massachusetts Institute of Technology, MALENA RICE, Yale University, XIAN-YU WANG, YONG-HAO WANG, Chinese Academy of Sciences, STEVEN S. VOGT, University of California at Santa Cruz, R. PAUL BUTLER, Carnegie Institute of Washington, BRETT ADDISON, University of Southern Queensland, BRAD HOLDEN, University of California at Santa Cruz, XI-YAN PENG, ZHEN-YU WU, XU ZHOU, Chinese Academy of Sciences, HUI-GEN LIU, HUI ZHANG, JI-LIN ZHOU, School of Astronomy and Space Science, GREG LAUGHLIN, Yale University — We present 12 new transit light curves, and 16 new out-of-transit radial velocity measurements for the XO-3 system. By modelling our newly collected measurements, together with archived photometric and Doppler velocimetric data, we confirmed the unusual configuration of the XO-3 system, containing a rather massive planet in a relatively eccentric and shortperiod orbit around a massive star Furthermore, we find no strong evidence for a temporal change of either Vsini (and by extension, the stellar spin vector of XO-3), or the transit profile (and thus orbital angular momentum vector of XO-3b). We conclude that the discrepancy in previous Rossiter-McLaughlin measurements may have stemmed from observational noise.

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