

Science News & Journal Club Public Talk



时 间: 2017年12月1日 12:15 – 1:45pm

地 点: 紫台仙林园区3号楼402室

Science News:

报 告 人: 杨 旻

Journal Club Public Talk:

报 告 人: 潘梦睿

报告题目: **The Scattering Outcomes of Kepler Circumbinary Planets under the Influence of Planet Mass Ratio**

报告摘要: Since the Kepler scope telescope launched, far over 3400 planets have been discovered. And One of the most exciting findings of Kepler is the discovery of several circumbinary planets around main-sequence stars. Recent studies reveal that the free eccentricities of some circumbinary planetary systems are larger than their forced eccentricities, especially Kepler-34b and Kepler-413b, implying that scattering events may take place in their formation. In this work, we extensively investigate the scattering outcomes of circumbinary planets focusing on the effects of planet mass ratio. We find that the planetary mass ratio and the the initial relative locations of planets act as two important parameters that affect the eccentricity distribution of the surviving planets. As an application of our model, we discuss the observed orbital configurations of Kepler-34b and Kepler-413b. Our work further suggests that some of the currently discovered circumbinary single-planet systems may be survivors of original multiple- planet systems.

主要参考文献:

Yan-xiang Gong, Jianghui Ji, 2017, AJ, 154, 179
Pierens, A., & Nelson, R. P. 2007, A&A, 472, 993
Bromley, B. C., & Kenyon, S. J. 2015, ApJ, 806, 98
Kley, W., & Haghighipour, N. 2015, A&A, 581, A20

欢迎大家
积极参与!

