

# Science News & Journal Club Public Talk



时 间： 2018年11月16日 12:15 - 1:45pm

地 点： 紫台仙林园区3号楼302室

## Science News:

报 告 人： 胡晓军

## Journal Club Public Talk:

报 告 人： 田 君

报告题目： **Footprints of the YORP effect in asteroid families**

报告摘要：

The YORP effect affects not only the rotation rate, but also the spin orientation of asteroids. For this reason, due to Yarkovsky effect, it influences also the evolution of the semimajor axis with time. In asteroid dynamical families, the combined outcome can be a depletion of objects in the central part of the family, shown by the absolute magnitude vs. semimajor axis so-called V-plot. Only some of the related V-plots, used to estimate the age of several families, exhibit the depletion predicted above. In this paper we discuss the problem, introducing the concept of the YORP-eye and a general method of analysis. We show that the effect may sometimes be located in the low H tail, and thus difficult to detect. With a new method of analysis, we identify the footprints of the effect for most of the analysed families, obtaining also an independent estimate of the age of the family. In spite of the uncertainties, we obtain a very good agreement between these ages and those estimated on the basis of the slope of the V-plot: a result which supports both methods and the underlying physics.

参考文献：

Paolo Paolicchi, Zoran Knežević, Icarus, 2016, 274,,314:326

欢迎大家  
积极参与!

