

---

# EAPS Planetary Lunch Colloquium Series (PICS)

---

**Dr. Margaret Pan**

Research Scientist

Massachusetts Institute of Technology

Tuesday, September 20<sup>th</sup>

12:30pm

54-517

---

## Recent Thoughts on the Mass and Origin of Chariklo's Rings

---

Occultation observations of the Centaur 10199 Chariklo in 2013 revealed two dense narrow rings, the first discovered around a minor planet. Even more surprising, those and later observations in 2014 consistently showed a significant difference between the widths of the inner ring measured during occultation ingress and egress. If these width variations are long-lived, they strongly suggest the ring has a finite overall eccentricity and eccentricity spread, which in turn may be used to estimate the ring mass. I will discuss that estimate and some of its implications for ring formation scenarios, including close encounters with Neptune and outgassing from Chariklo's surface.



---

For more information, contact John Biersteker ([jo22395@mit.edu](mailto:jo22395@mit.edu))