On the shoulders of giants



Contribution ID: 21 Type: Oral contribution

Constraining the Migration Channels of Warm Jupiters Using Population-Level Eccentricities

Thursday 26 March 2026 09:25 (20 minutes)

Giant planets are expected to predominantly form beyond the water ice line and occasionally undergo inward migration. Unlike hot Jupiters, which can result from high-eccentricity tidal migration, longer-period giant planets are in many ways more challenging to explain because they reside outside the tidal influence of their host stars. Orbital eccentricities offer important clues about the formation and dynamical history of distant giants. Based on uniform Keplerian fits of 18,561 RVs targeting 200 warm Jupiters, we use hierarchical Bayesian modeling to evaluate the impact of planet multiplicity on the reconstructed population-level eccentricity distributions. I will present results from this program and unveil what eccentricities are beginning to tell us about how, when, and under what conditions longer-period giant planets undergo inward migration.

Presenter: Dr MORGAN, Marvin (UC Santa Barbara, USA)

Session Classification: Cold Jupiters OR inner low-mass planets: statistical properties