Title: A TESS–SOPHIE Survey of Warm Jupiters: Orbital Architectures and Eccentricities

Most known transiting exoplanets orbit very close to their host stars, where intense irradiation and tidal forces can significantly alter their physical properties. In contrast, warm Jupiters (10 d < P < 200 d), which reside on wider orbits, are less affected by these processes and therefore potentially provide a clearer view of giant planet formation and migration. Despite the large number of confirmed exoplanets, transiting warm Jupiters remains relatively rare. In this talk, I will present an overview of our TESS–SOPHIE follow-up survey of long-period transiting planet candidates, including both confirmed planets and systems initially identified as giant planets but later revealed to be low-mass stellar companions. I will then focus on 11 newly detected warm Jupiters identified with SOPHIE and TESS. These planets have orbital periods ranging from 16 to 94 days, masses between 0.05 and 2.9 M_Jup, and radii spanning 0.3 to 1.5 R_Jup.

I will highlight several interesting properties of these systems, particularly their dynamical architectures and orbital eccentricities. Notably, TOI-7025b, TOI-6883b, and TOI-5110b exhibit remarkably high eccentricities, between 0.6 and 0.8—among the most eccentric planets to date. In addition, TOI-6883b, TOI-6457b, TOI-2537b, TOI-2295b, TOI-5893b, TOI-7176b, and TOI-7025b, with equilibrium temperatures between 307 and 800 K, provide valuable low-irradiation benchmarks for testing models of hot-Jupiter inflation. Finally, I will present dynamical analyses of the multi-planet systems TOI-6041 b & c and TOI-2537 b & c, based on transit timing variations (TTVs).