



V četrtek, **19. decembra**, bo imel **Teo Močnik** iz University of California in Riverside (ZDA) astrodebato z naslovom *Weighing TESS Planets with Keck*. Predavanje bo na Fakulteti za matematiko in fiziko v predavalnici F5 **ob 11. uri**. Vljudno vabljeni!

Astrodebate organizira [Astronomska skupina na Fakulteti za matematiko in fiziko](#) Univerze v Ljubljani.

*Slika: Ilustracija satelita TESS (avtorstvo: NASA's Goddard Space Flight Center)*

## Weighing TESS Planets with Keck

The Transiting Exoplanet Survey Satellite (TESS) is a space-based telescope, which is designed to detect transiting planets around bright, nearby stars. TESS is expected to find around 250 planets smaller than 2 Earth radii among a total of 1250 planets of any size from the nominal 2-year mission 2018 – 2020. Most of these planets will orbit stars that are bright enough to measure their masses with ground-based telescopes via the Doppler spectroscopy radial velocity method. The TESS-Keck Survey (TKS) is the largest collaborative effort in the northern hemisphere to measure precise masses and orbits of over 100 TESS-discovered planets, nearly doubling the existing population of planets smaller than 5 Earth radii with measured masses. This will unlock several important investigations, grouped into three main science themes: planet bulk compositions, orbital architectures, and planetary atmospheres. To achieve these goals, TKS was allocated a total of 168 observing nights between 2019 and 2021 to use the HIRES spectrograph at the 10 m Keck telescope. In this talk, I will present an overview and the current status of the TESS mission and the TKS survey.