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Title: Mass and density of Kepler-78b  
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Abstract: Kepler-78 (former KIC 8435766) was identified by Sanchis-Ojeda et al. (2013) to harbor a transiting planet of approximately Earth size. One of its prominent characteristics is its ultra-short orbital period of only 8.5 hours. While the exquisite Kepler photometry was able to constrain its radius and period with high precision, the mass of the planet, and thus its mean density, remained fully unconstrained in the absence of precise radial-velocity measurements. In this talk we present an accurate mass measurement of Kepler-78 b using the HARPS-N spectrograph recently installed at the Telescopio Nazionale Galileo on La Palma, Spain. These new data allow us to provide significant constraints on the bulk density and thus the nature of this ultra-hot Earth.