Relativity and Exoplanets: Gravitational Microlensing, Doppler Beaming, and More
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Perhaps surprisingly, the theories of both special and general relativity play important roles in several areas of exoplanet research. I will review the most important and intriguing of these applications. The most obvious case is gravitational microlensing, which has become a fairly routine method of finding planets, and is poised to become even more important in the next decade. I will also briefly survey the numerous other areas where relativity plays a role in exoplanet theory and observations, including photometric Doppler beaming, general relativistic precession, transits of compact objects, and even (potentially) gravitational wave experiments.