

Seven terrestrial planets around the nearby ultra-cool dwarf star TRAPPIST-1

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Almost a year ago Michaël Gillon and collaborators (Nature 542,456–460; 2017) announced the discovery of a system of seven terrestrial planets around the ultra-cool dwarf star TRAPPIST-1. For many reasons this is an extremely interesting system. All the planets are tightly packed together and in orbital resonance. They have radii, masses, and densities close to those of the Earth, which means, they are so called terrestrial-type planets. Furthermore, their orbits inclination with respect to the observer allows to study their atmospheres and, eventually, to decide if they can be habitable. The TRAPPIST-1 system provides a planetary-scale laboratory, ideal for testing theories and models concerning planetary formation and evolution, atmospheres, interplanetary interaction and potential for habitability.

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