

Seven worlds discovered in nearby star system

Astronomers have discovered seven Earth-sized planets orbiting a star just 40 light-years away. At least three of them could harbour oceans of water, increasing the possibility they could host life

Discovery made by NASA's **Spitzer Space Telescope** which produces heat-radiated images from celestial objects

Infrared radiation

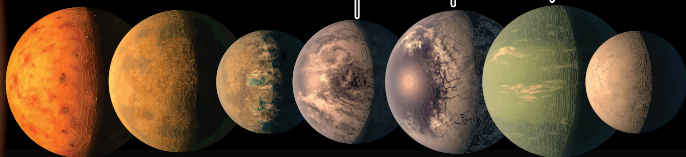
TRAPPIST-1 system

Located in Aquarius constellation

Central star
Ultracool dwarf star, roughly same size as Jupiter

Planets "e", "f" and "g" orbit in **Habitable Zone** – meaning oceans of water could exist on surface

Earth to scale



Orbital period:
Days

	b	c	d	e	f	g	h
Orbital period (Days)	1.51	2.42	4.05	6.10	9.21	12.35	~20

Distance to star: *Astronomical Units (AU)**

Distance to star (AU)*	0.011	0.015	0.021	0.028	0.037	0.045	~0.06
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Planet radius: *Relative to Earth*

Planet radius (Relative to Earth)	1.09	1.06	0.77	0.92	1.04	1.13	0.76
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Planet mass: *Relative to Earth*

Planet mass (Relative to Earth)	0.85	1.38	0.41	0.62	0.68	1.34	-
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Mass estimates for six inner planets suggest rocky composition like Earth, with surface temperatures between 0-100 degrees Celsius

*Equal to 150 million km – roughly distance from Earth to Sun