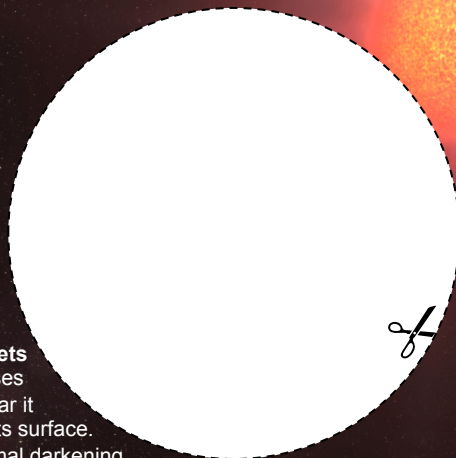


Discover and explore exoplanets with the transit method. Here's how it works.

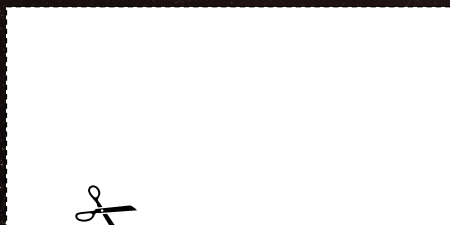


A star and its planets

When a planet passes in front of its host star it covers a tiny bit of its surface. This causes a minimal darkening.

Change of the light curve

This eclipse dims the brightness of the star slightly. This difference can be measured.



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(picture credit: ESO)

With another method – called radial velocity or Doppler method – the mass of the planet can be determined. Both methods can be used together on selected exoplanets to determine its density and other properties – such as whether the planet is made of stone, ice or gas.

If the brightness of an observed star dims periodically it can be a sign of the presence of a planet. In addition the diameter of the planet can be determined.

When an exoplanet passes in front of its host star it covers a small fraction of the star during the transit. This causes a little eclipse. The brightness of the star dims very little, but still measurable. For comparison: If you hold a pinhead in front of a burning light bulb, it covers a portion of the light – and the bulb gets a bit darker.

Researchers agree that there are billions of planets in the universe. To date scientists have discovered about 2,000 planets outside our solar system – called exoplanets. Some of them have been discovered with the transit method.

Transit method

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