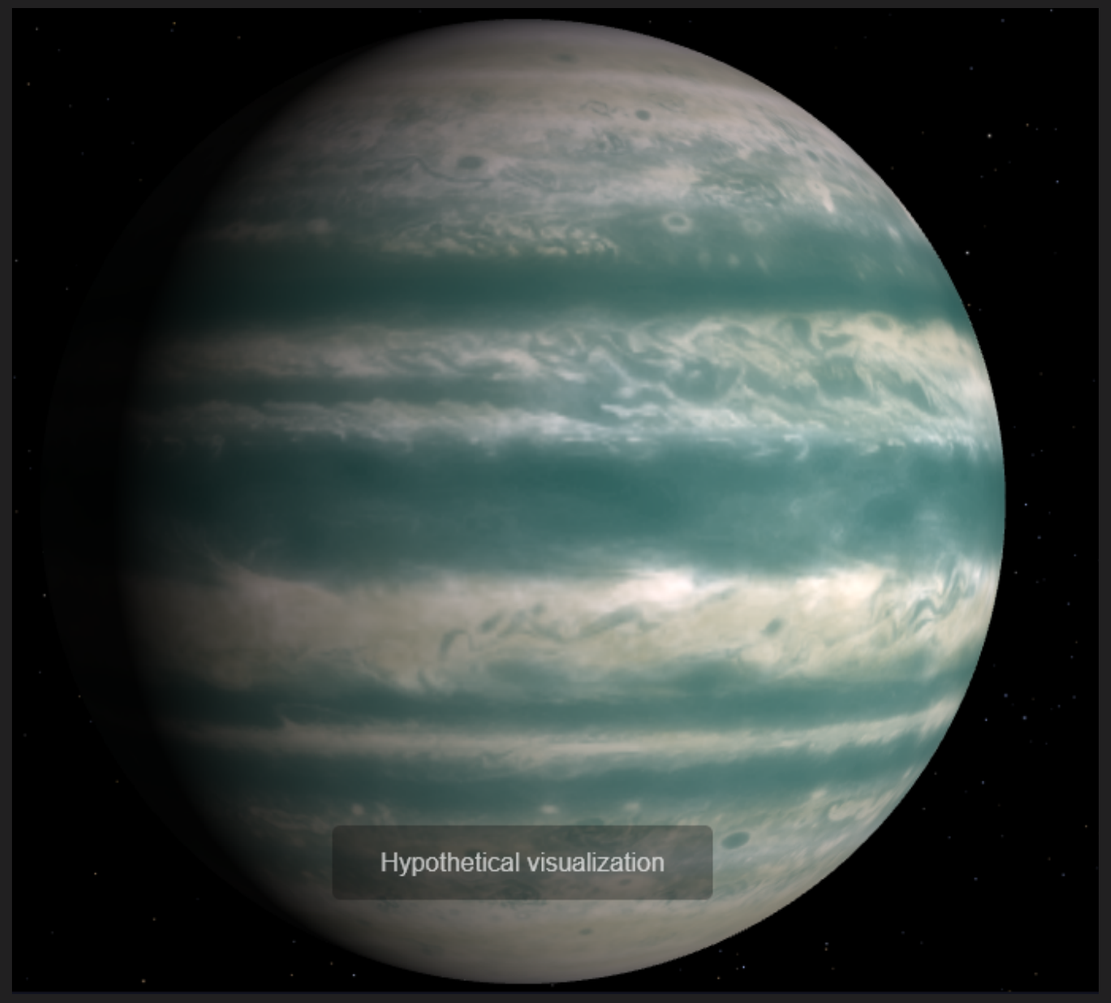
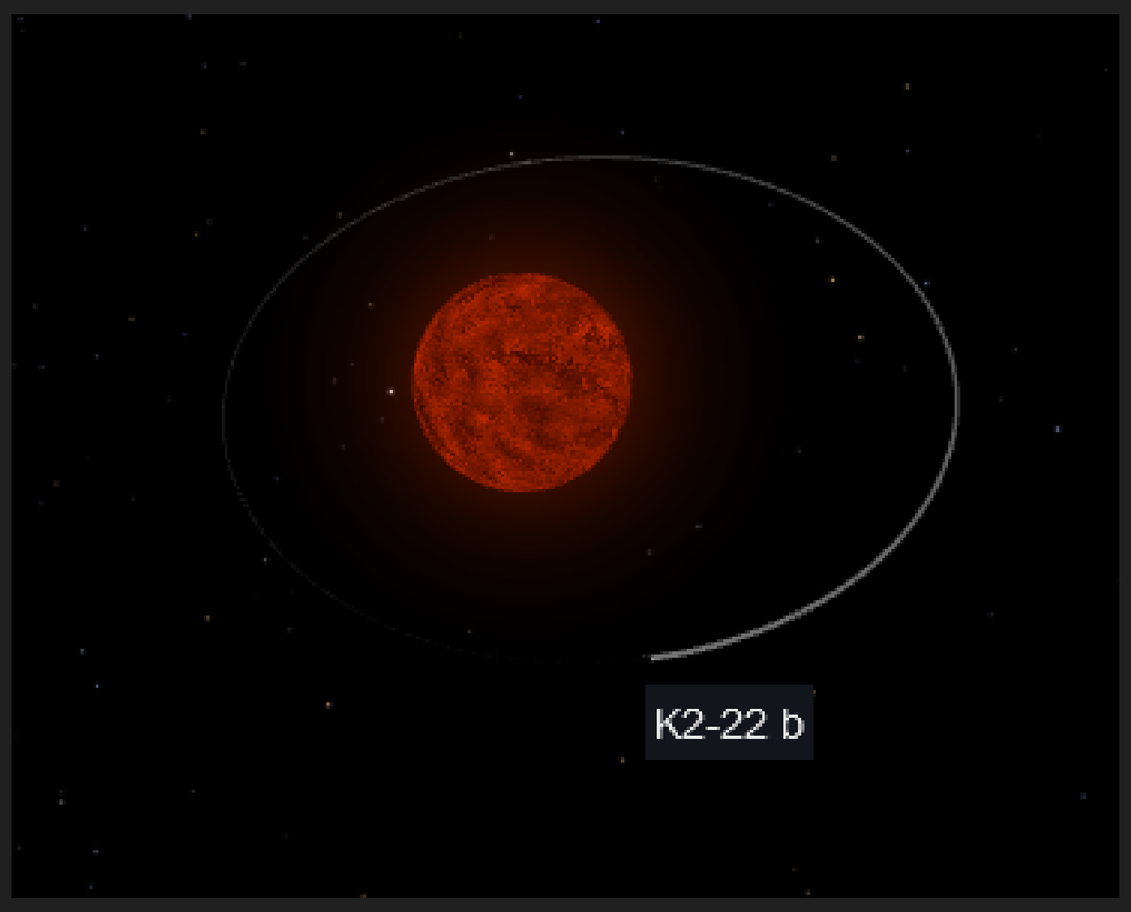
TRANSIT METHOD

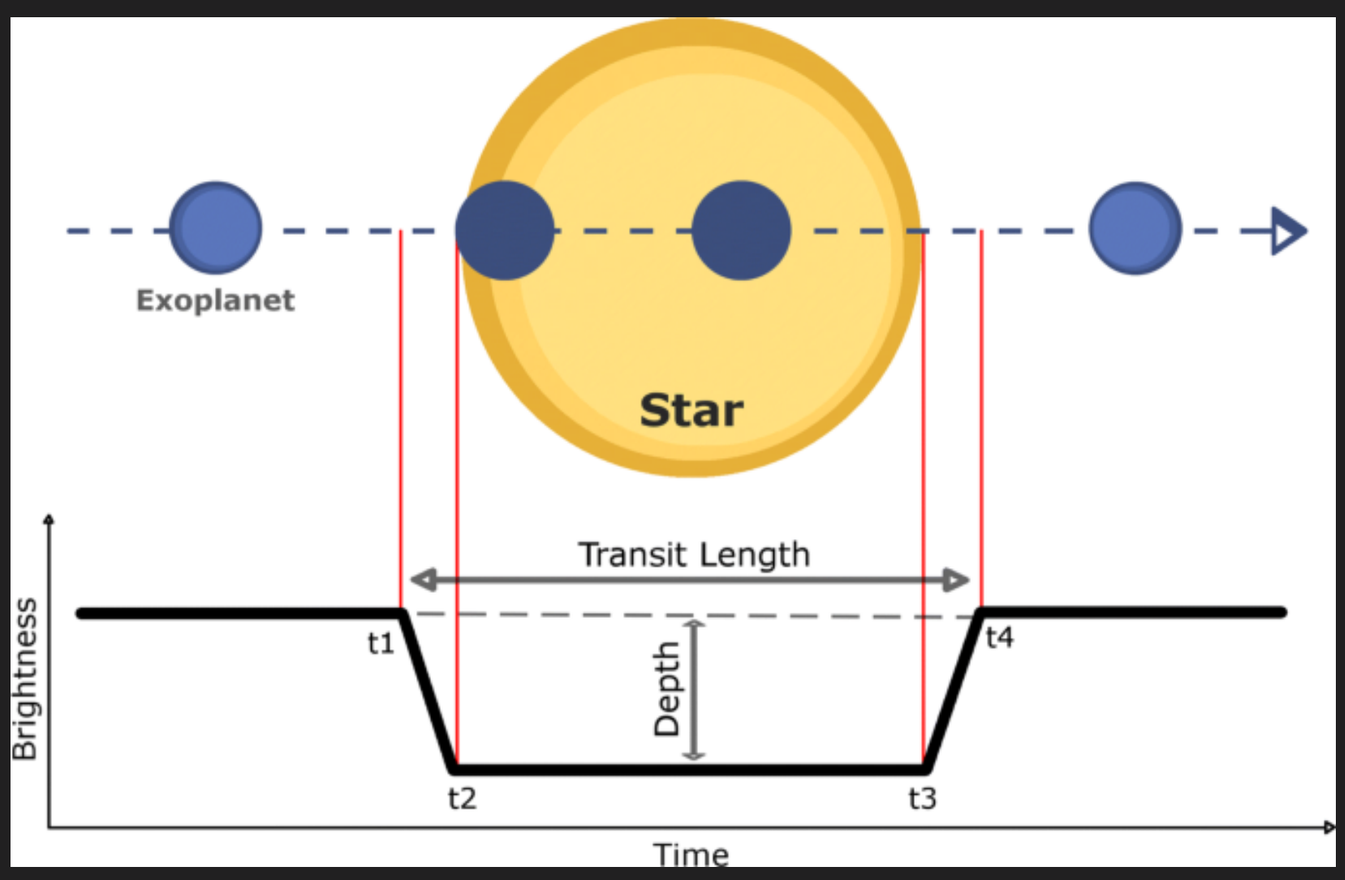
If a planet passes directly between a star and an observer's line of sight, it blocks out a tiny portion of the star's light, thus reducing its apparent brightness.

OUR SYSTEM : K2-22

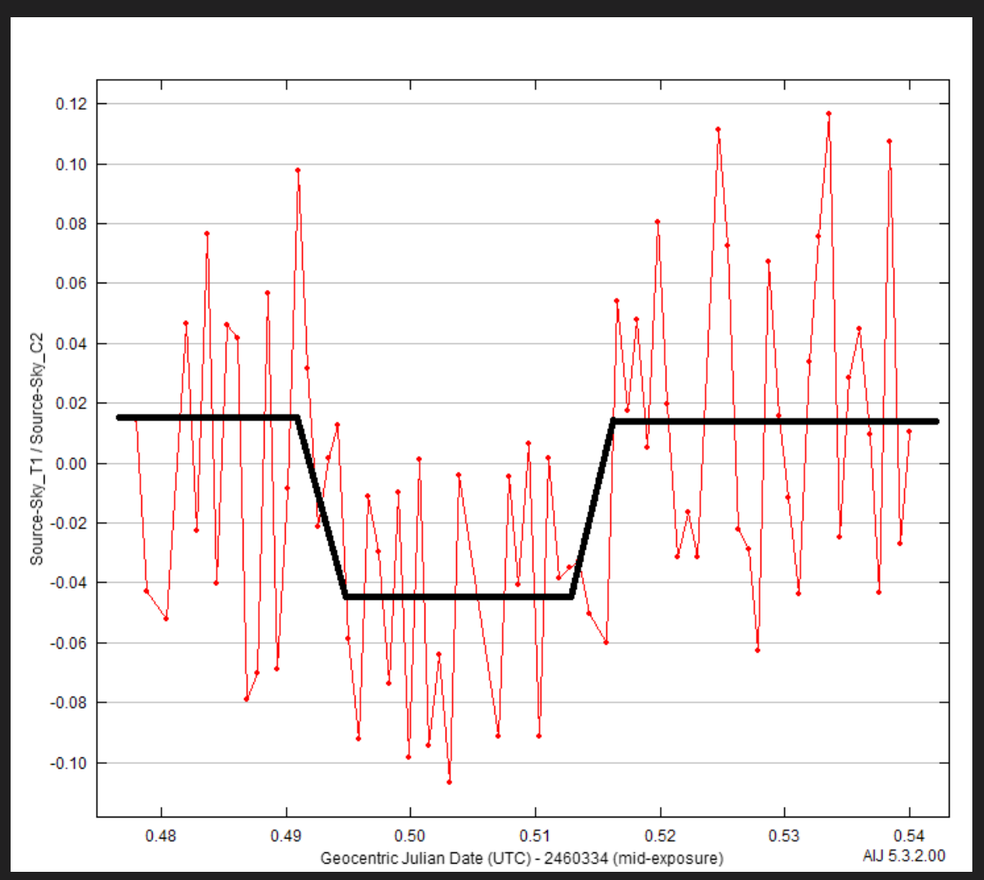




K2-22 b is a Neptune-like exoplanet that orbits an M-type star. Its mass is 1.4 Jupiters, it takes 0.4 days to complete one orbit of its star, and is 0.009 AU from its star. Its discovery was announced in 2015 and it is located 796 light years from us.



THEORY



OBSERVATION

We wait for the planet to transit in front of the star, capturing a series of images with an exposure time of 1 minute each over the course of 1 hour. Subsequently, we extract the light spectra from the star, corresponding to each red dot observed. The light diminishes when the planet transits, marking the duration of the transit to be approximately 35-40 minutes. Utilizing this characteristic curve, we can deduce the radius of the planet, a crucial factor in the overall characterization of the celestial body.