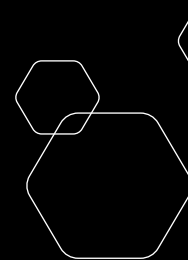
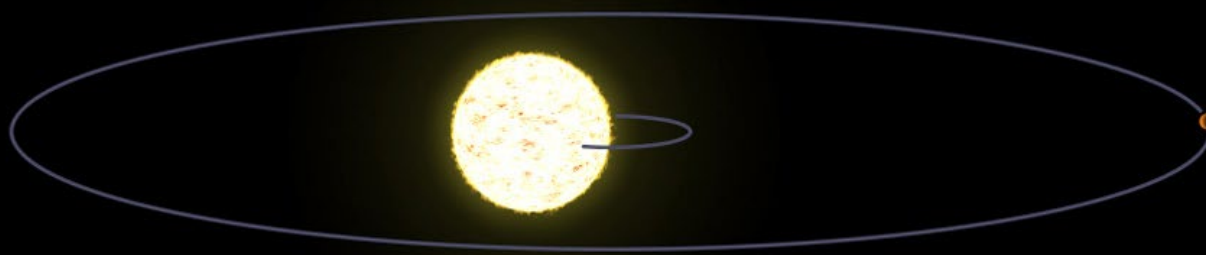


Discovering Exoplanets with the Wobble Method



Scientists look for wobbling stars to infer the presence of unseen planets.



An orbiting planet tugs on its host star and causes the star to wobble slightly. Astronomers look for this wobble to infer the presence of planets too small and dim to observe directly.

One way of finding planets orbiting other stars is to study if and how stars wobble.

Planets are much less massive than stars, but they still exert gravity. When planets tug on stars gravitationally, they cause the stars to move slightly, because of their shared center of mass—also called their *barycenter*. Sensitive instruments on Earth can measure this movement precisely, and astronomers can infer that planets must be orbiting the wobbling stars. Discovering these new worlds is exciting because some of them could host life—we just haven't found it yet!

This plot shows a star's wobble velocity as a function of time. In this case, the star is moving about 50 meters per second toward and then away from Earth.

