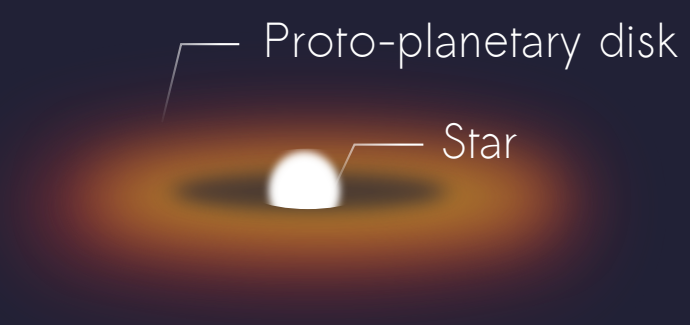
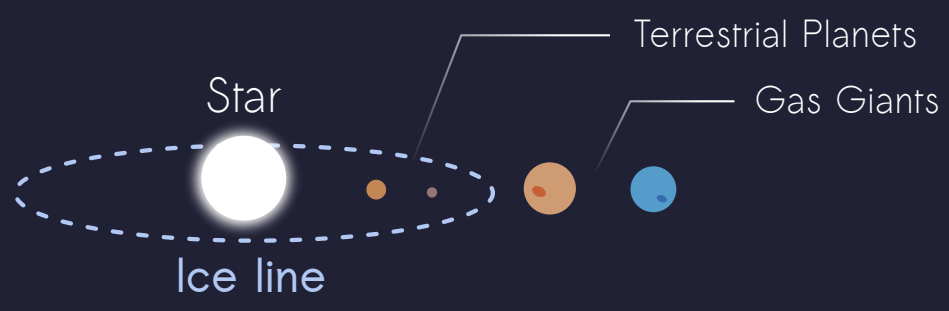
WHAT'S A... PLOONET

A PLOONET is a planet that used to be a moon!

PLANET FORMATION



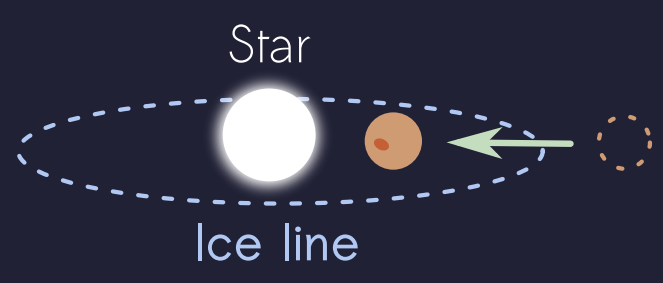


When stars are born, left over dust and gas form a disk around the star where planets can form.

Planets born close to the star are Terrestrial (rocky like Earth), planets born far away are Gas Giants (like Jupiter). The "Ice line" is the boundary between "close" and "far".

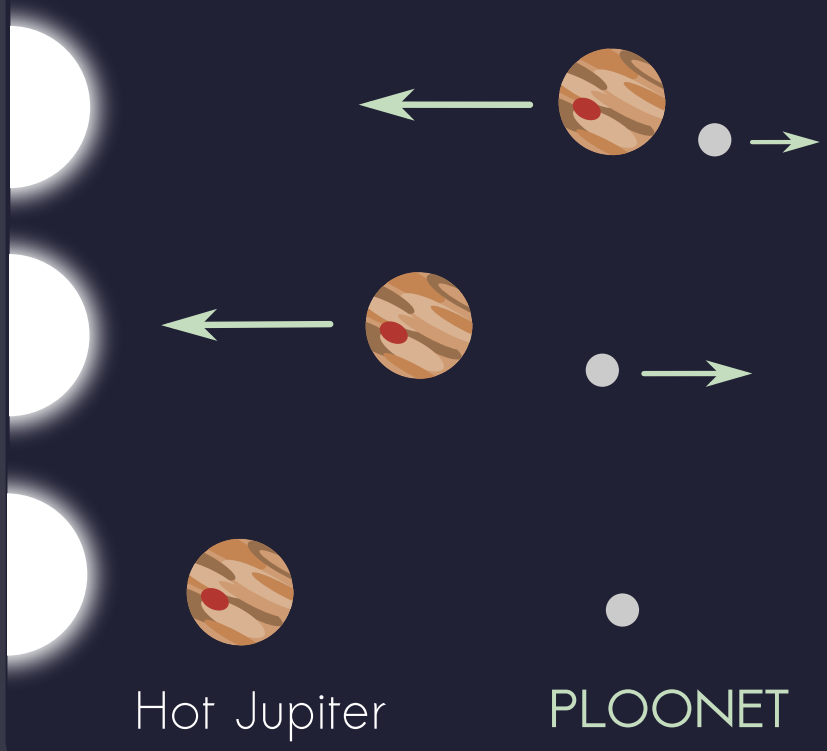
HOT JUPITERS

Astronomers have found many Gas Giants too close to their stars! That means they must have formed further out, and then migrated inwards. We call these "Hot Jupiters".



PLOONET FORMATION

When planets form around stars, moons can also form around planets.



When Gas Giants migrate towards the star, gravitational interactions with the planet and with the star pull the moon further and further away.

Sometimes this effect is strong enough to yeet the moon out of the orbit of its parent planet.

It then becomes a PLOONET.

UNSTABLE PHASE

This is a very unstable phase, however, and within 1 million years (very short for astronomers!) 75% of ploonets crash into their parent planet or the central star.