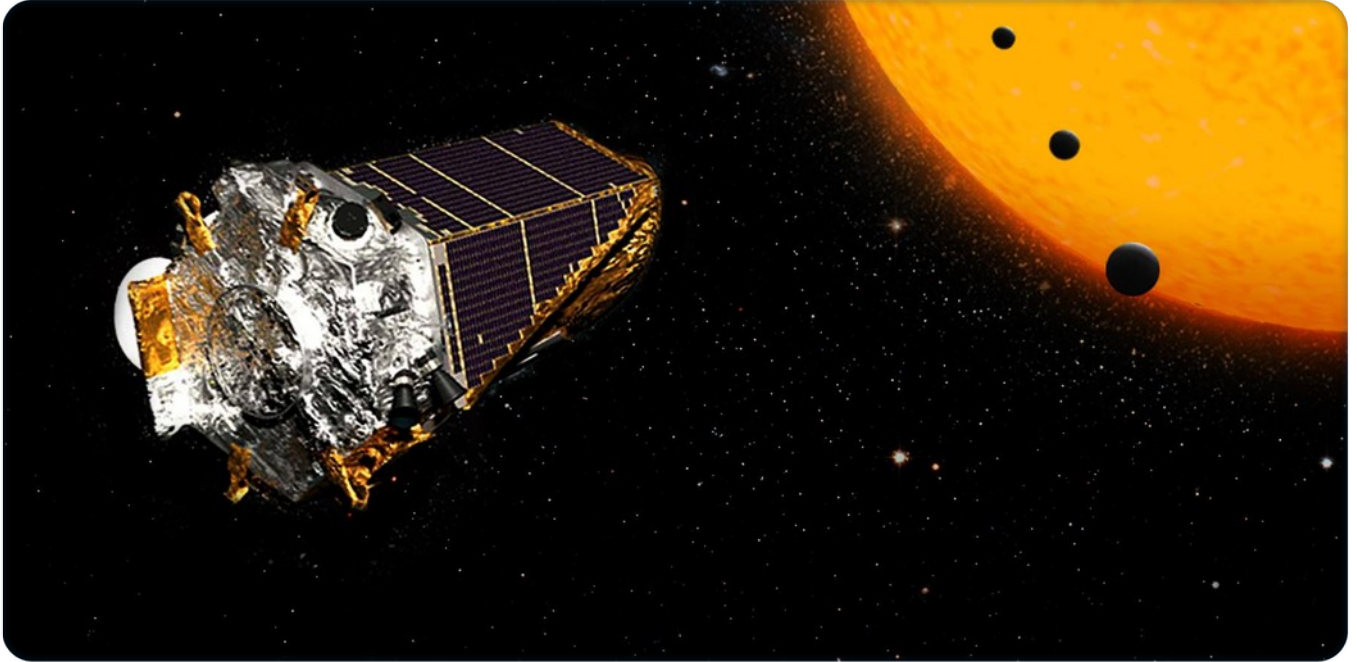




E is for Exoplanets Everywhere!



This Universe is vast and unending, filled with billions of stars like our Sun. Many of these distant stars have planets orbiting them, which we call 'exoplanets'.

So far, well over 3,000 exoplanets have been discovered. These days they're bursting onto the scene faster than ever; more than 100 new exoplanets have been discovered in the last three months alone!

One of the main reasons for our planet-hunting success is the Kepler Space Telescope. Kepler launched into space in 2009 and set about searching for exoplanets using a technique called the 'transit method'.

If a planet crosses (or 'transits') in front of its parent star, it blocks some of the star's light. This causes the star to look slightly dimmer. By searching for stars that regularly become dimmer for a short time, the Kepler space telescope has been able to detect more than 2000 exoplanets.

However, the dimming of a star can be caused by other things than planets, so follow-up studies are needed to confirm that they really are exoplanets.

When the Kepler space telescope ran into trouble in 2013, a new mission called K2 took over. Astronomers around the world are competing to confirm exoplanets suggested by K2, and they have been hugely successful!

To help confirm exoplanets, scientists have been using data from a satellite called Gaia (pronounced "guy-ah"). Gaia is a space telescope that is creating a 3D map of billion stars.

By blending the data from K2 with data from Gaia, scientists were able to weed out the fakers and confirm over 100 exoplanets!

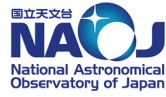
Not only were scientists able to confirm the existence of 104 new planets, they also learned quite a bit about them. They've found big planets, small planets, rocky planets, gas giants, even systems containing several planets.

But, the most exciting discoveries were planets found orbiting dangerously close to their stars, because no-one knows quite how these strange systems form.

Thankfully, there's still plenty of K2 data to sift through. The discovery of more peculiar exoplanets will help shed light on how they form and evolve.

COOL FACT

The Kepler Space Telescope was so powerful that, from its view up in space, it could detect one person in a small town turning off a porch light at night.



More information about EU-UNAWE
Space Scoop: www.unawe.org/kids/