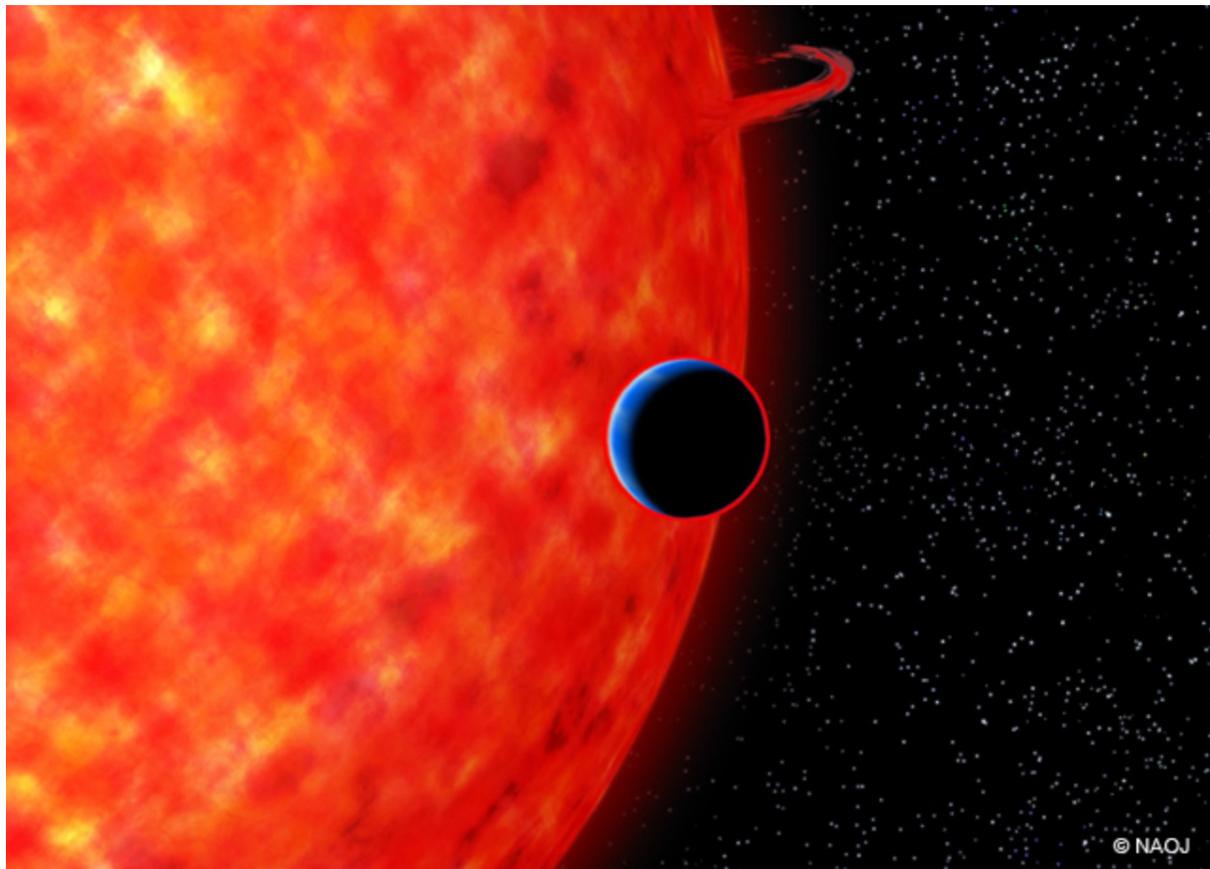




Cloudless Nights on a Super-Earth

June 12, 2013



When you have had something good your entire life, it's easy to take it for granted...especially if that thing is invisible. But today, we should take some time to realise how very fortunate we are that our planet has an atmosphere!

Earth's atmosphere is made of gas that wraps around the planet like a blanket, held in place by Earth's gravity. It keeps the temperature on the ground nice and cosy; keeping out the freezing cold of space at night and the furious heat of the sun during the day. Plus, the atmosphere acts as a protective barrier, absorbing harmful rays from the Sun and other cosmic bodies before they reach us at the surface! So, it's all thanks to our atmosphere that we can live on Earth.

It turns out that some planets outside our Solar System also have atmospheres! Astronomers in Japan have just identified the atmosphere of a planet orbiting a distant star. The planet is about 4 times bigger than the Earth. We call planets like this one 'Super-Earths'. The observations showed that while the planet probably has a truly *enormous* atmosphere, that is a whopping 200,000 times denser than Earth's, it isn't very cloudy there. I bet a lot of you are very jealous about that!



COOL FACT

There's no real boundary between our atmosphere and space, because the atmosphere grows thinner and thinner as it stretches up. But we have decided on an imaginary line at 100 km high, which we class as the beginning of space. We call this the Kármán line. As humans, however, we can only breathe up to about 8 km.

This Space Scoop is based on a Press Release from [NAOJ](#).
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