

Ruby rain in the atmospheres of super-hot Jupiters!

What is the science question?

What kind of clouds can form in the atmospheres of super-hot Jupiter exoplanets?

What are the findings?

- Al-bearing species such as corundum (Al_2O_3), which forms the basis for materials found on Earth such as rubies and sapphires, is the highest temperature cloud that can form in a planetary atmosphere.
- Increasing the metallicity of the planet increases the mass available for the clouds, and pushes them to deeper layers of the atmosphere.

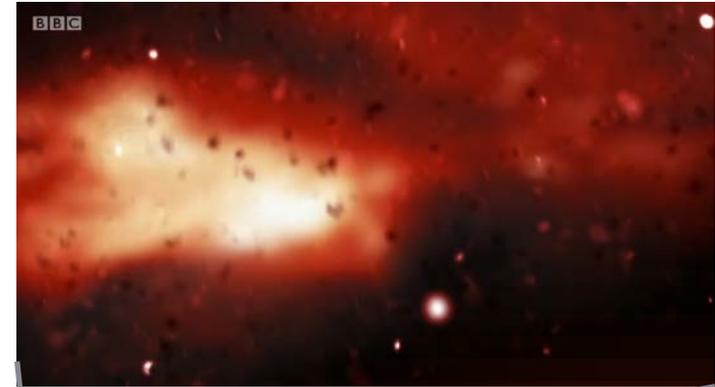
What is the impact?

We suggest that planets around metal-rich stars are more likely to have thick clouds in their atmosphere made out of Al-bearing species like corundum.

Why does it matter to non-scientists?

Some exoplanets have clouds made of rubies and sapphires!

Hannah Wakeford (693), Avi Mandell (693), *et al.* 2016, Monthly Notices of the Royal Astronomical Society (MNRAS)



Super-hot Jupiter:
WASP-12b