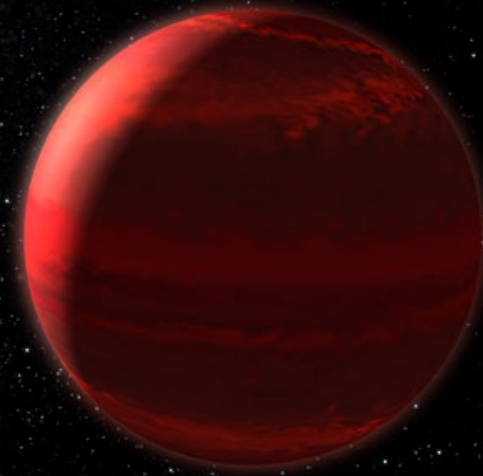


Brown Dwarfs

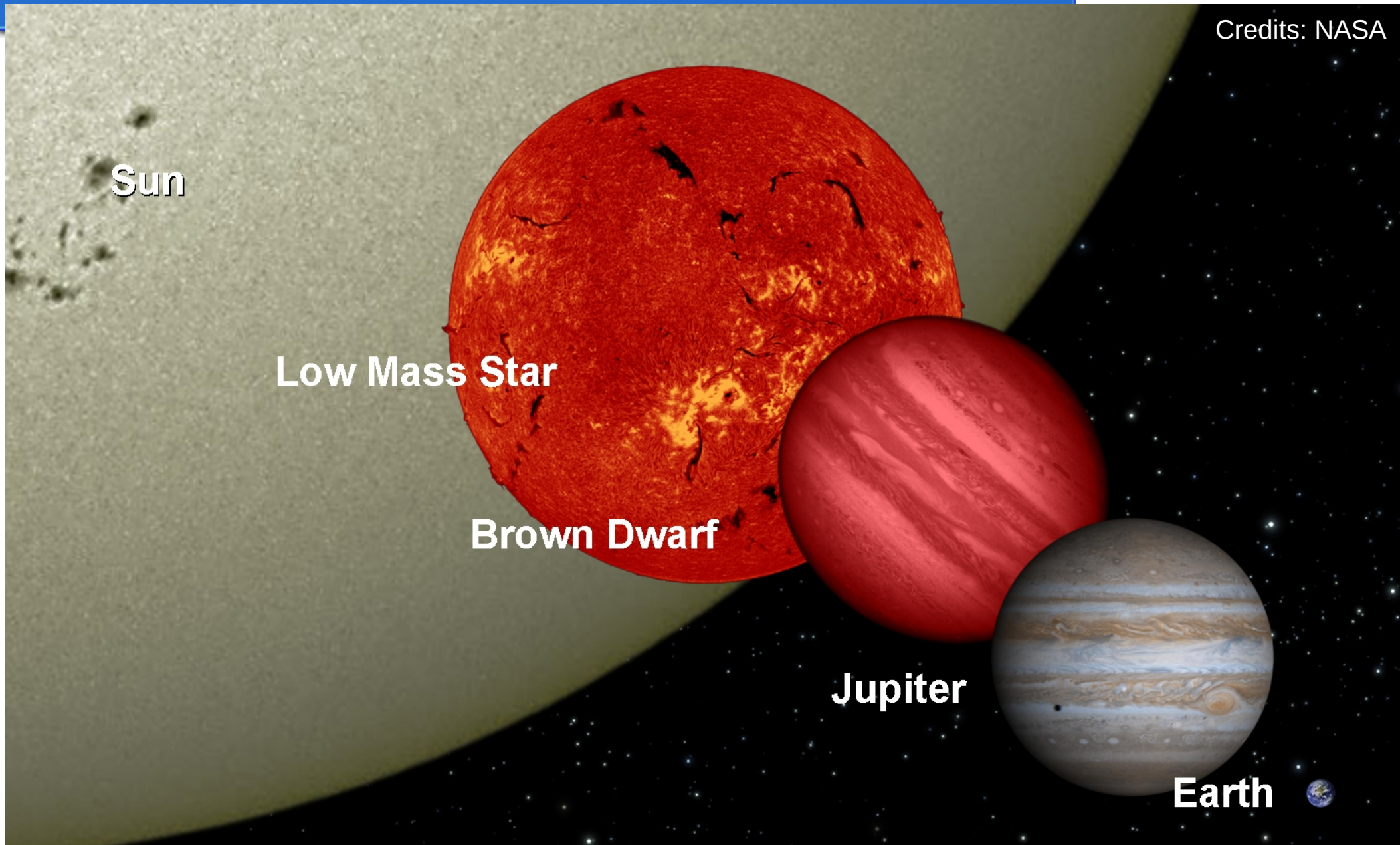
The Missing Link

Federico Marocco



What is a Brown Dwarf?

Credits: NASA

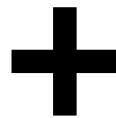


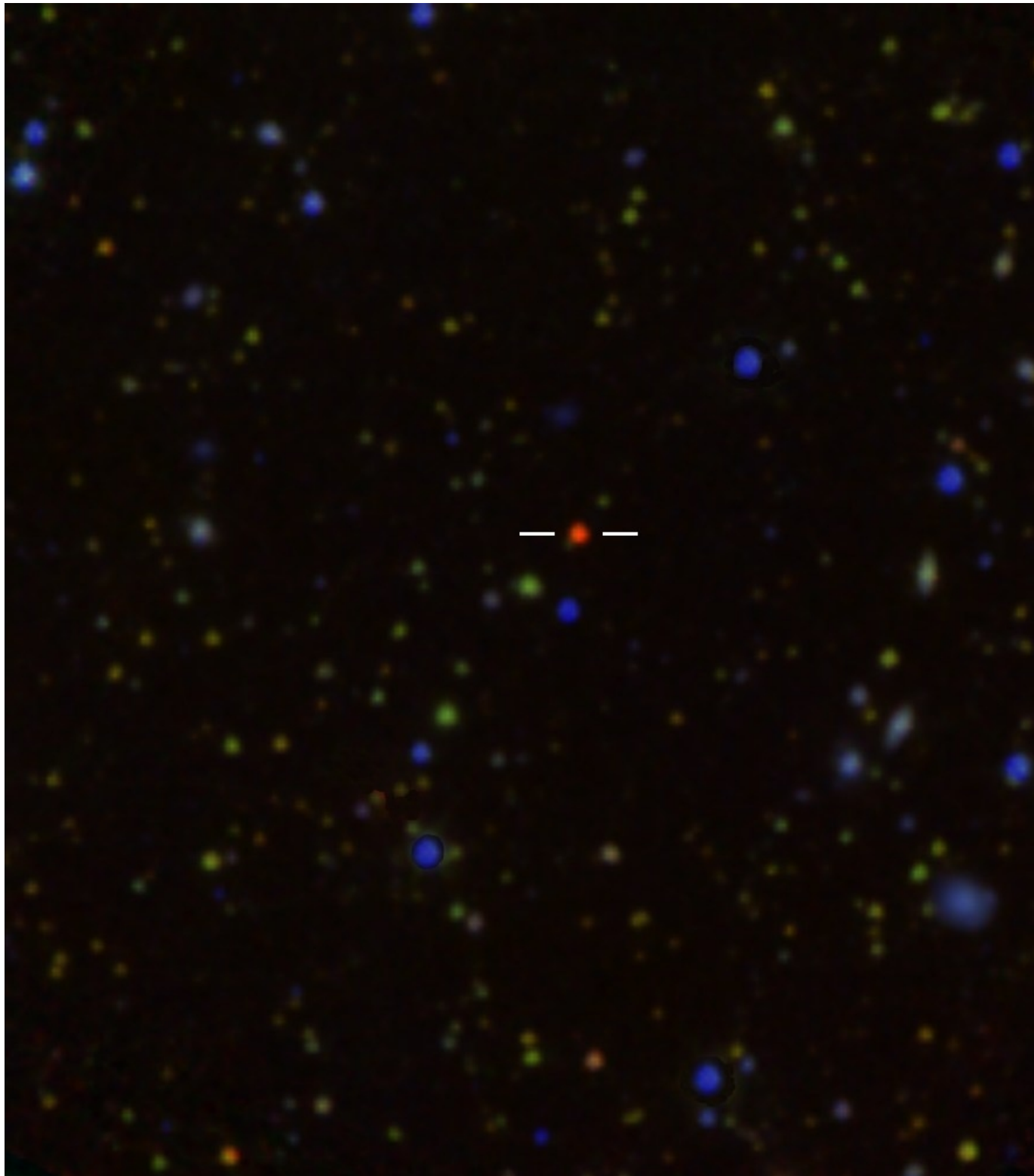
How do we study them?

Brown Dwarfs are VERY small and VERY faint, so we need big telescope.



They are also VERY cold, so they emit most of their light in the infrared.





ULAS J003402.77-005206.7

Distance ~ 42 light years

Surface temperature ~ 250° C

Luminosity ~ 0.000001 L_{Sun}

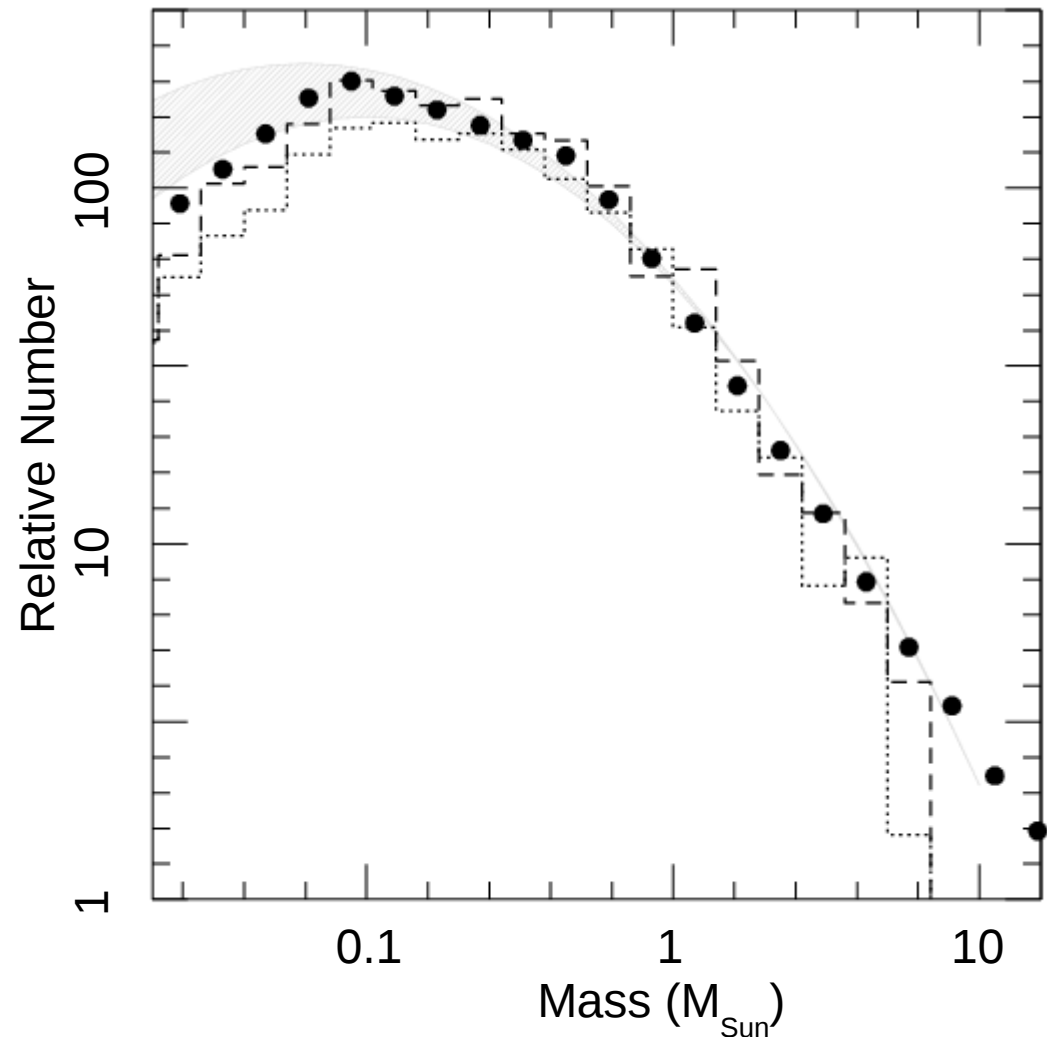
Mass ~ 20 M_{Jup} = 1/50 M_{Sun} =
6400 M_{Earth}

Why do we study them?

Brown Dwarfs are similar to exoplanets, but easier to observe.

Studying them we can refine our techniques to find exoplanets, and understand how they form and evolve. What we learn applies to our Solar System too!

They are also very numerous, so they might have an influence on the evolution of the Galaxy, and they can constitute part of the dark matter!



Thank you!