THE SOLAR SYSTEM

SENT INTO SPACE CLASSTRONAUTS PROGRAMME

LAUNCH YOUR SCHOOL INTO SPACE

THE SOLAR SYSTEM

Today we will be learning...

about the different planets in our solar system

By the end of the lesson you should be able to...

- Name the planets in the solar system
- Describe the features of some of the planets in the solar system
- Explain why it would be difficult to live on the other planets

THE SOLAR SYSTEM

Imagine you are on a space ship going on a long journey away from Earth through space.
What might you see on your journey?

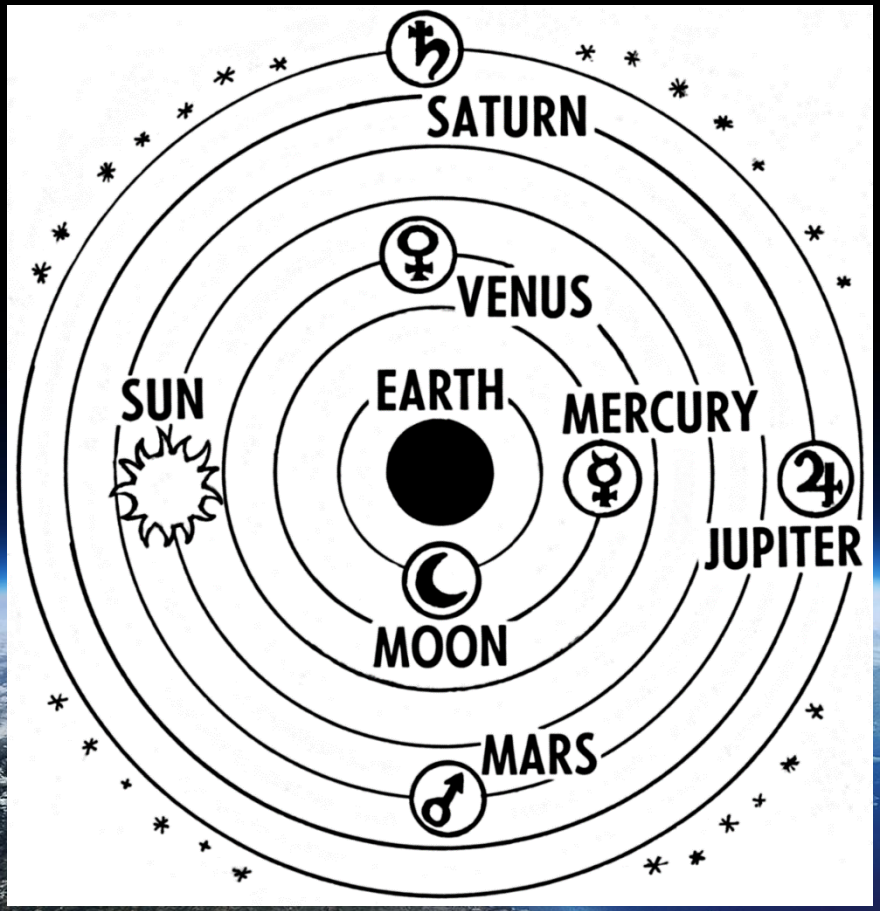
THE SOLAR SYSTEM

You are Roman astronomer **Claudius Ptolemy**, trying to come up with a model to explain the universe. When you look up into the sky you see the Sun, Moon, planets and stars moving across the sky in regular cycles.

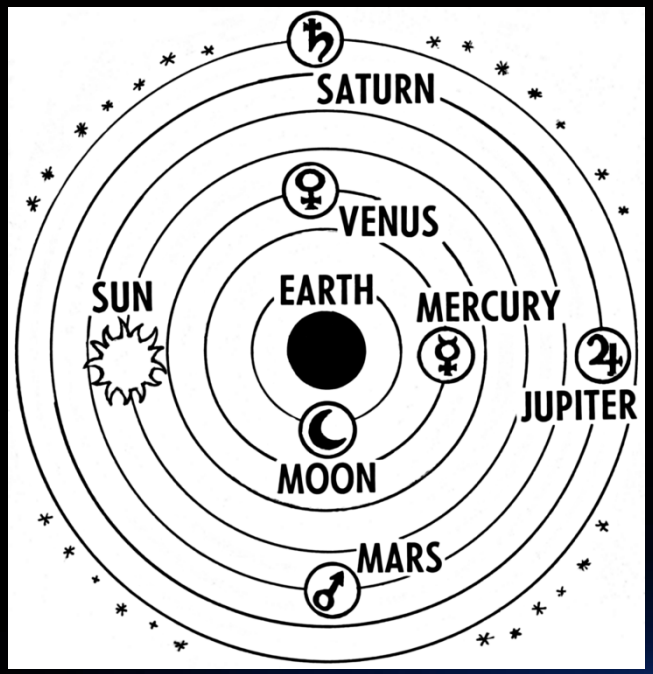
What model of the Universe would you come up with to explain this?

THE SOLAR SYSTEM

The Ptolemaic System - 150 AD



THE SOLAR SYSTEM



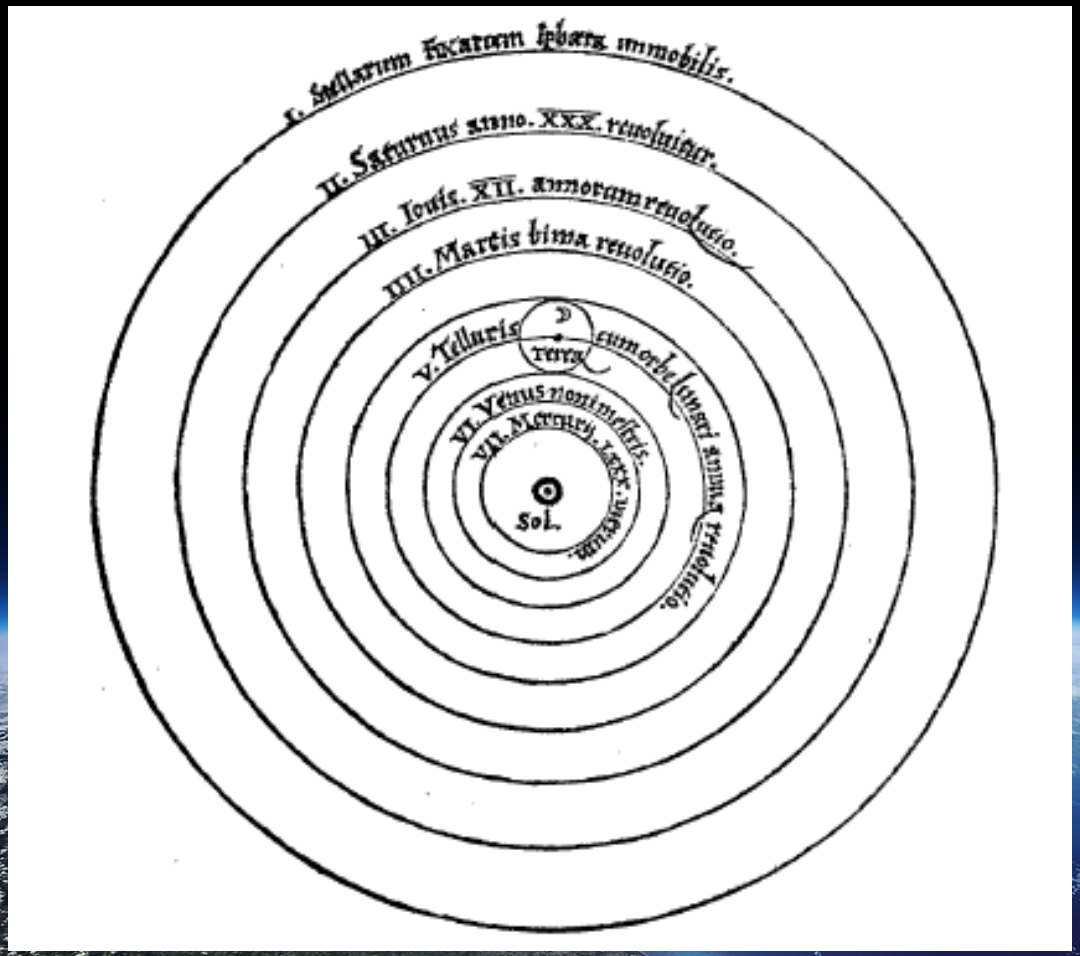
Geocentric (Earth-centred) model of the universe:

- Earth doesn't rotate
- Moon, planets, sun and stars orbit around Earth in spheres of increasing size
- Accepted for next 1,400 years until 16th century

Created by Roman **Claudius Ptolemy**

THE SOLAR SYSTEM

Copernican Model - 1534 AD



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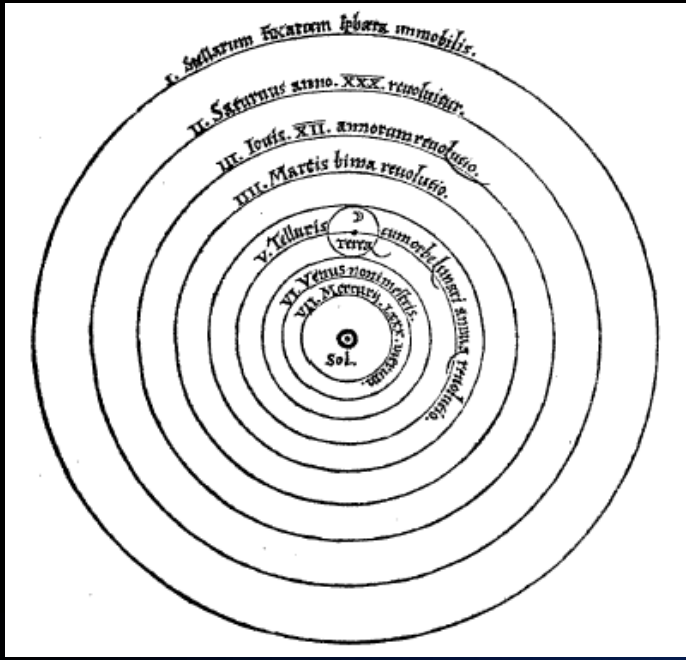
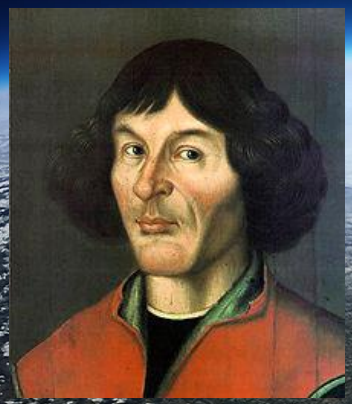
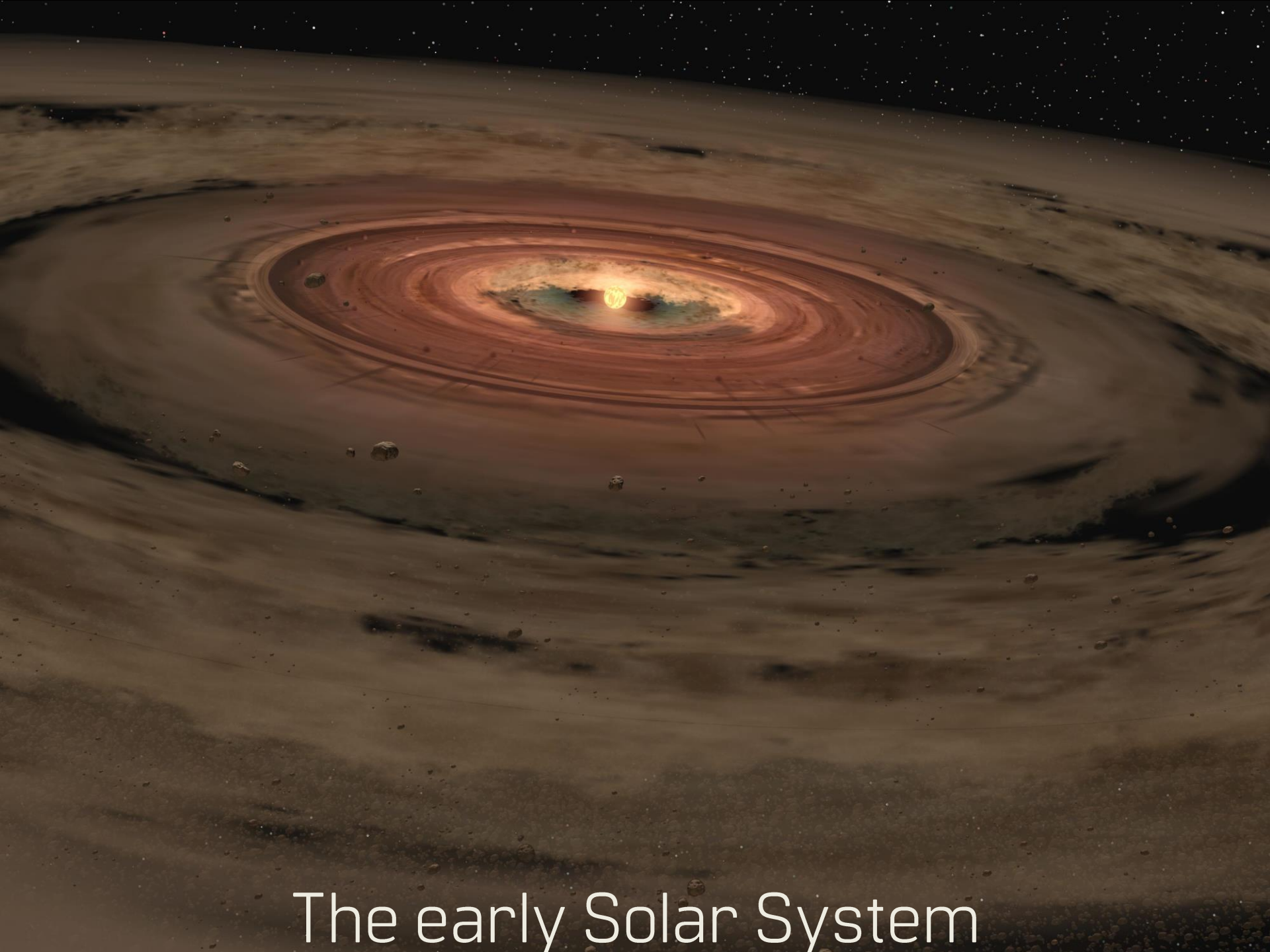


Heliocentric (Sun-centred) model of the universe:

- Around the Sun, in order, are Mercury, Venus, Earth and Moon, Mars, Jupiter, Saturn, and the fixed stars
- The distance from the Earth to the Sun is small compared to the distance to the stars
- Not widely accepted until late 17th/early 18th century

Nicolaus Copernicus
Poland
1473-1543



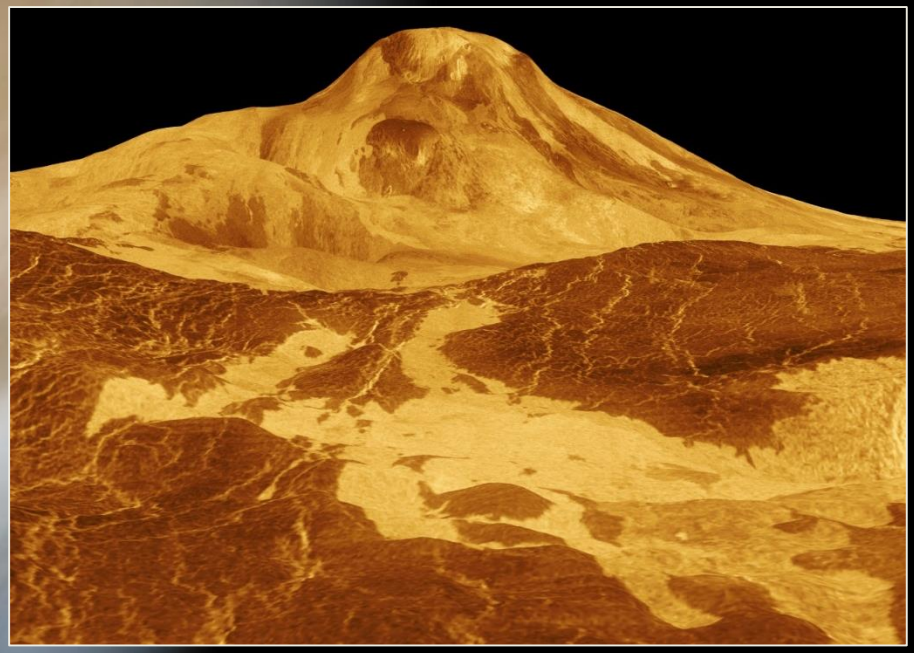


The early Solar System


Sun

Mercury

Venus



Earth

Earth

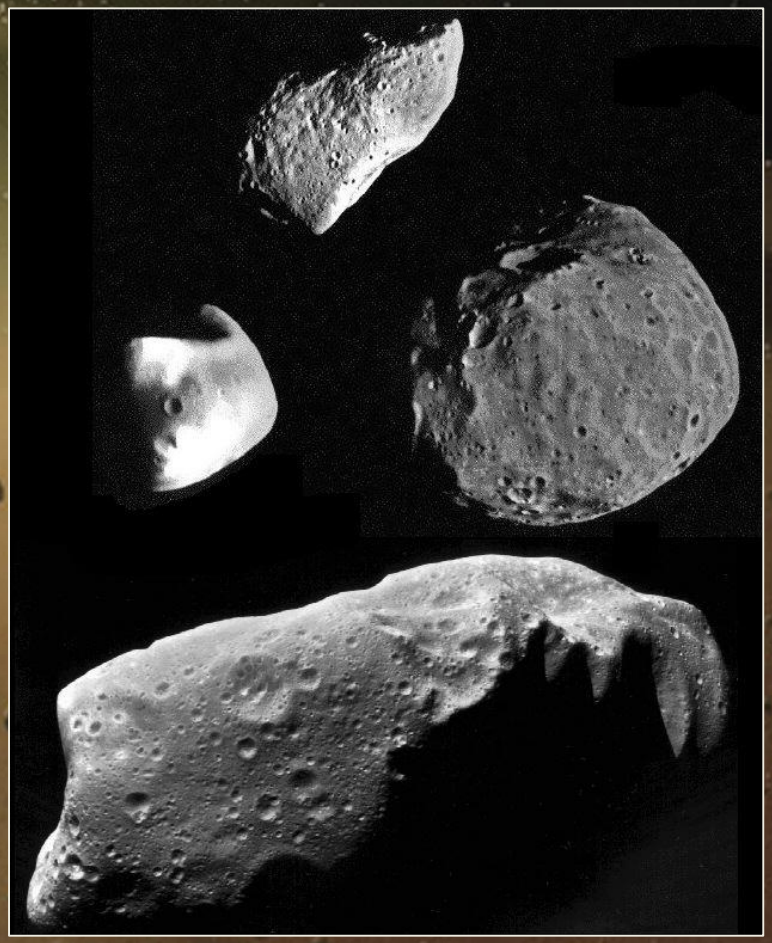
This video by the [Sent Into Space] team launches you from the ground up to 40km above the surface, passing through a solar eclipse

Mars

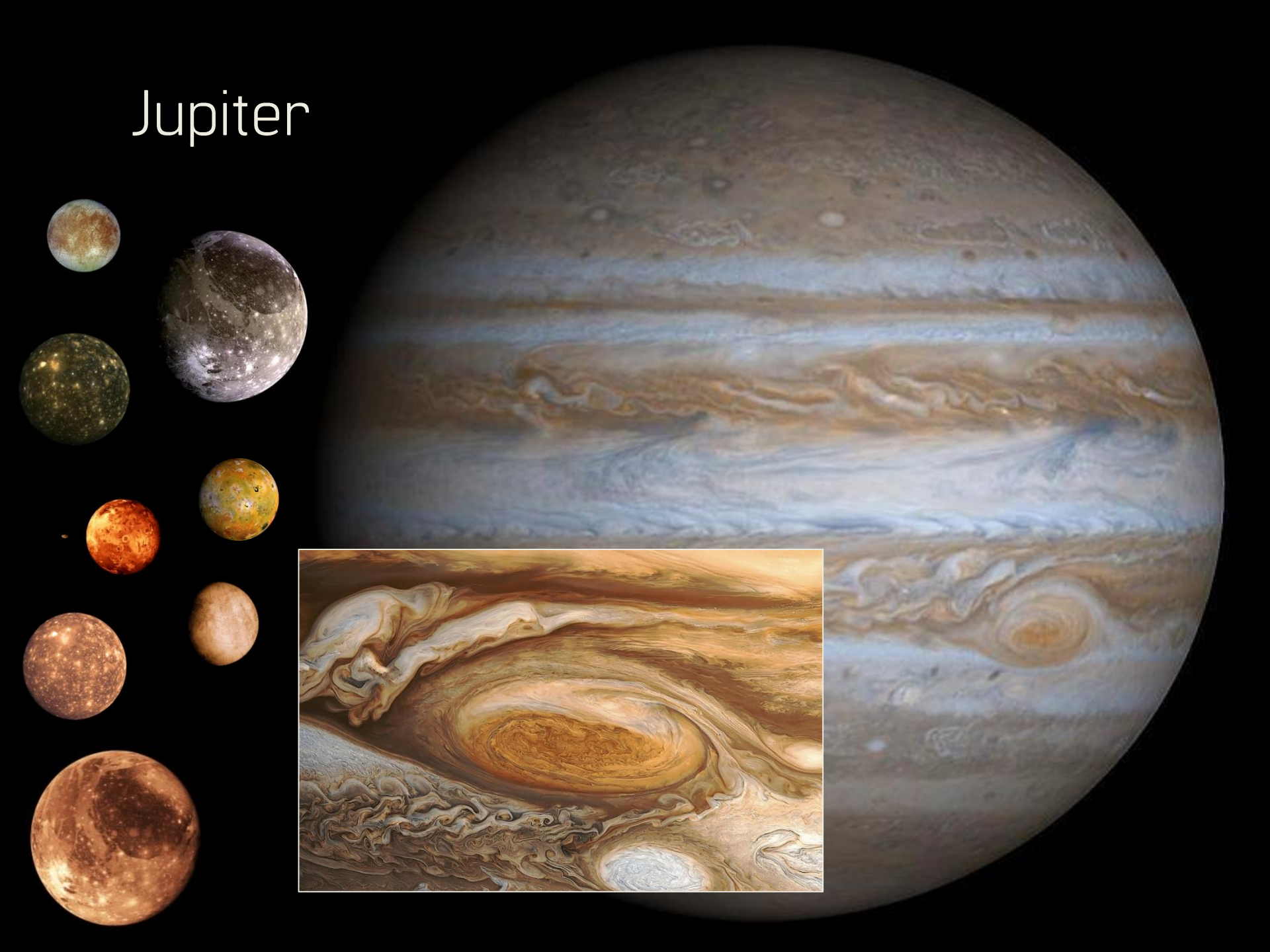
Mars

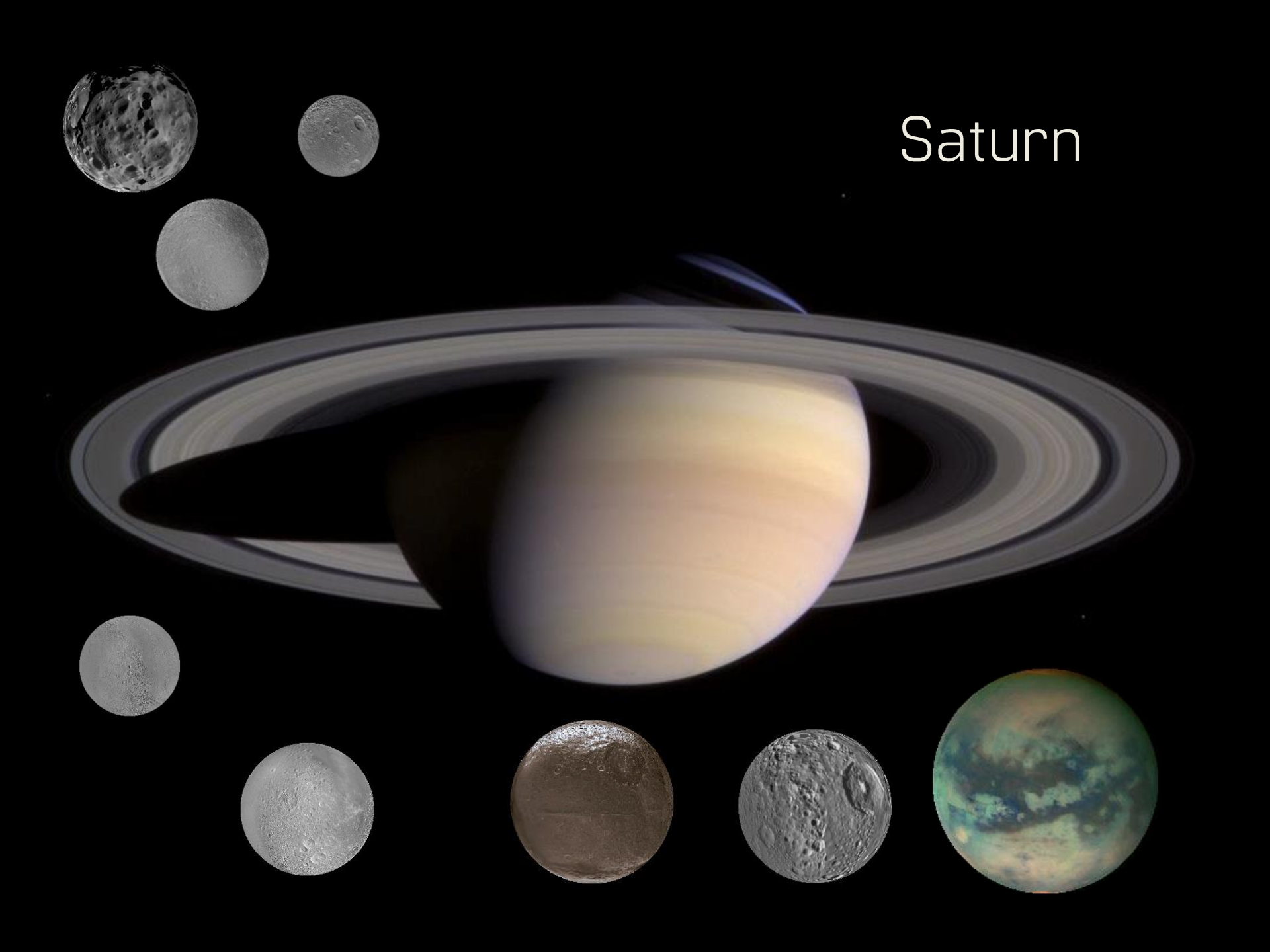
Say hello to the Curiosity rover on the surface of Mars!

The Asteroid Belt



Jupiter

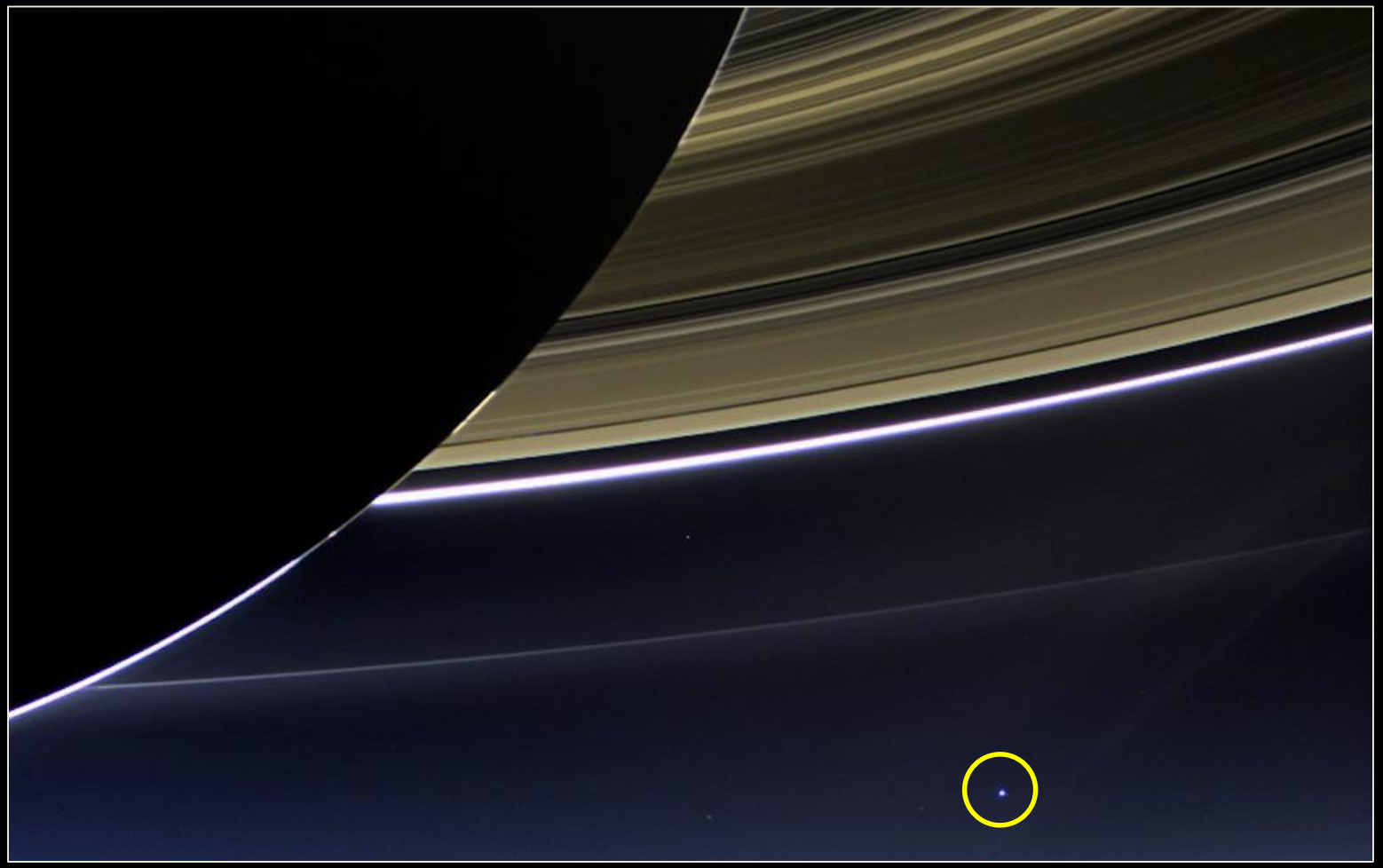



Saturn

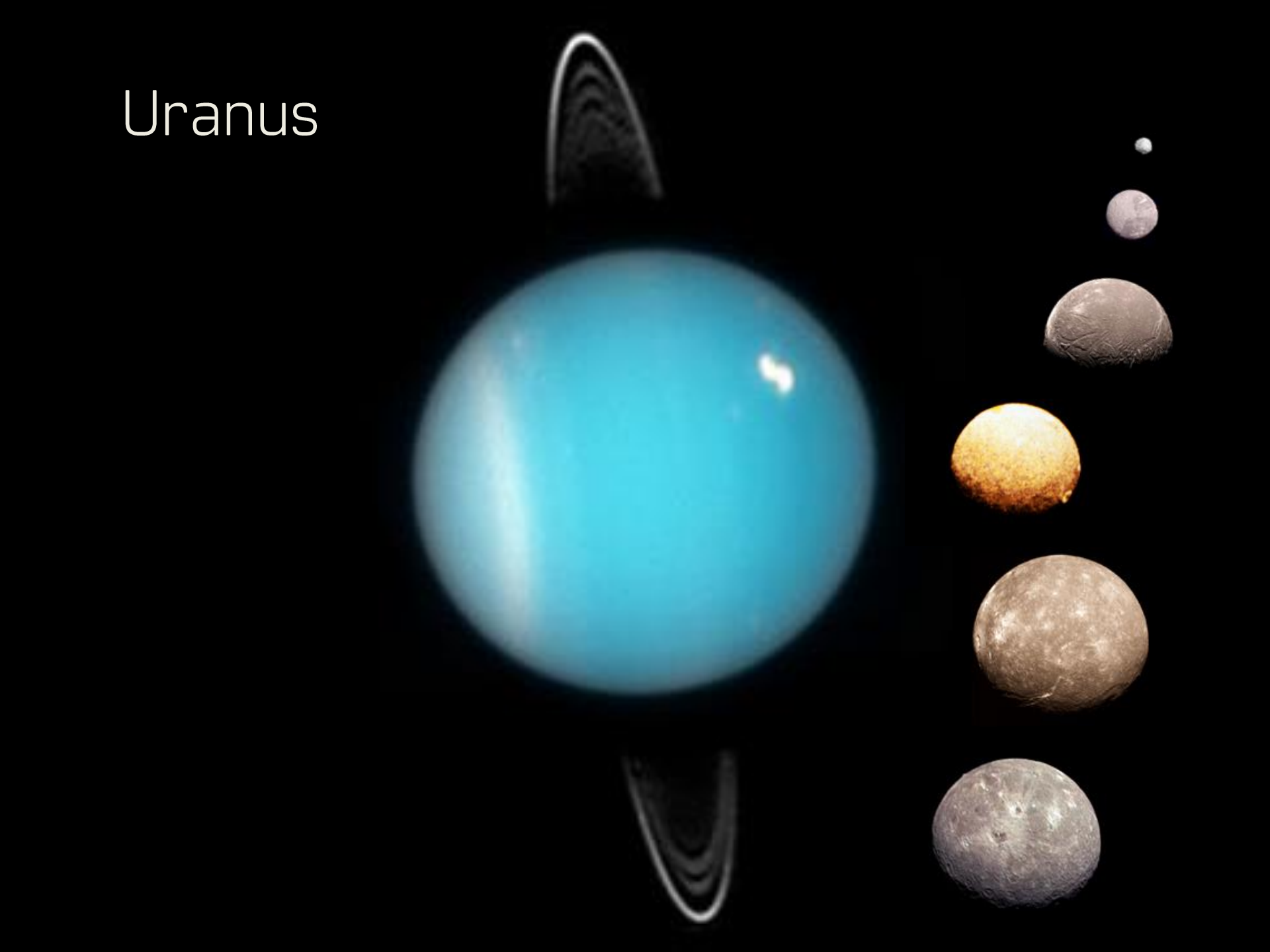
This picture was taken by the Cassini probe, orbiting around Saturn.

Can you spot Earth?

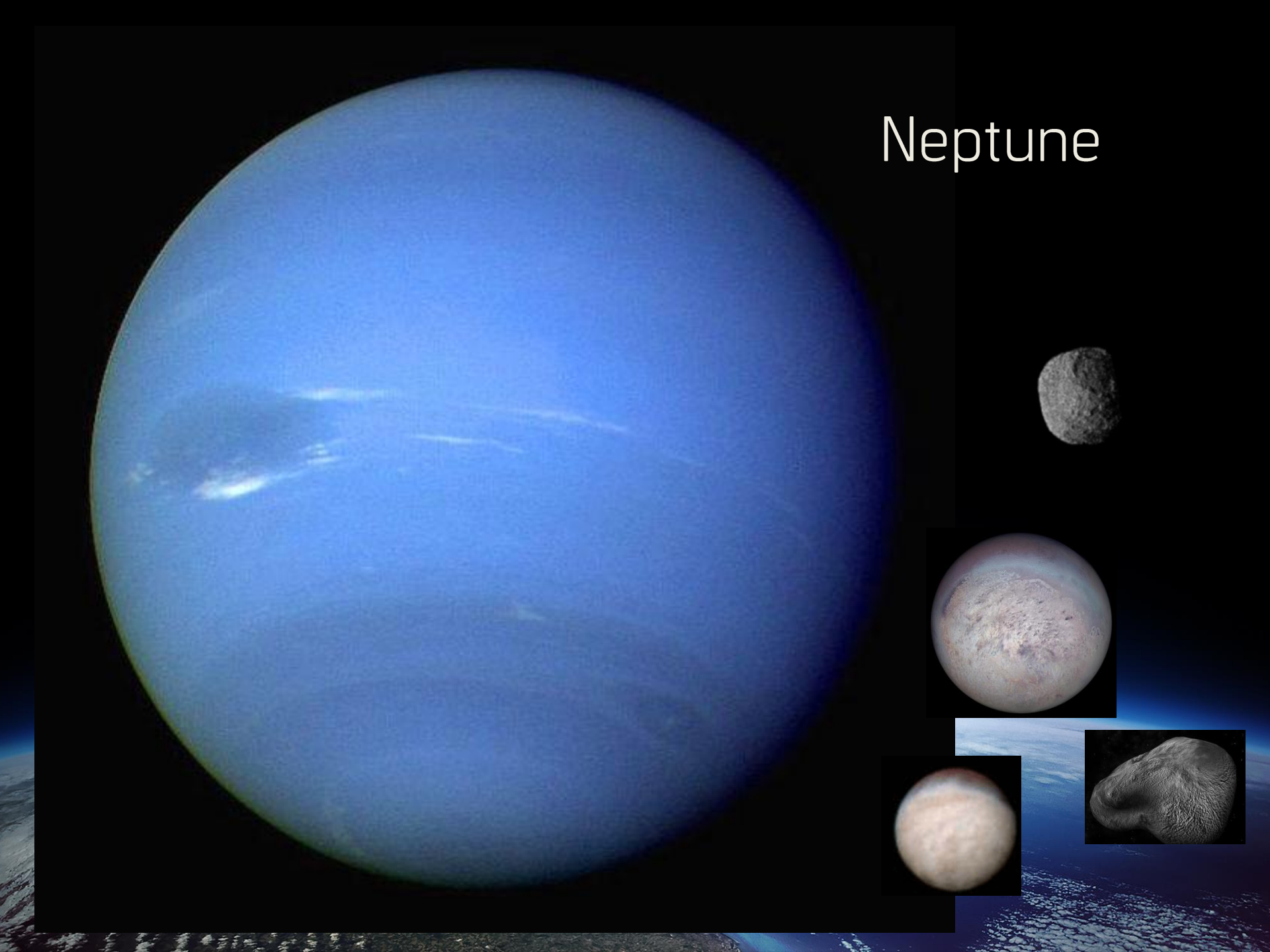
Saturn



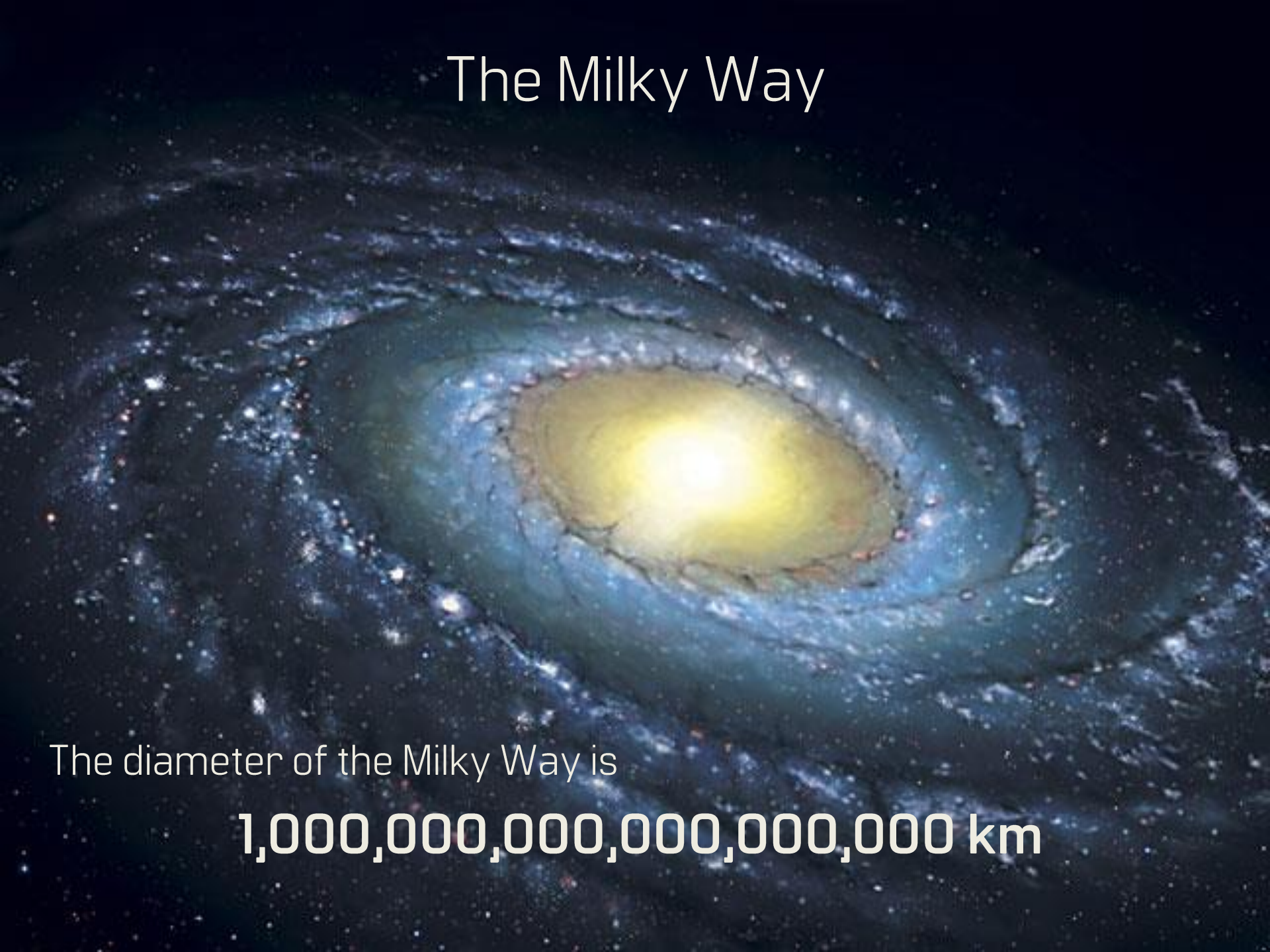
Uranus



Neptune



The Milky Way



The diameter of the Milky Way is

1,000,000,000,000,000,000 km

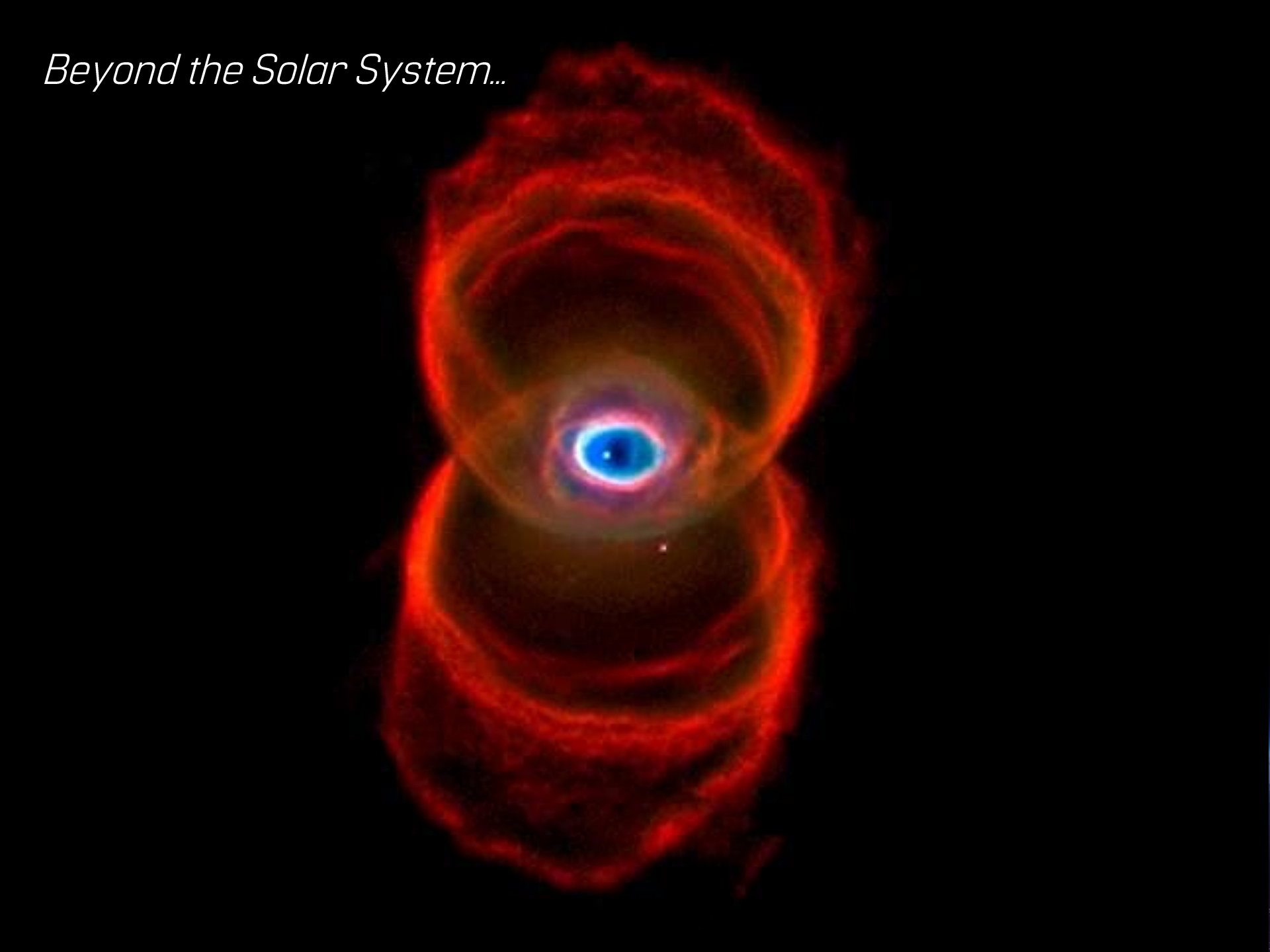
The Universe

The diameter of the observable universe is

930,000,000,000,000,000,000,000,000 km

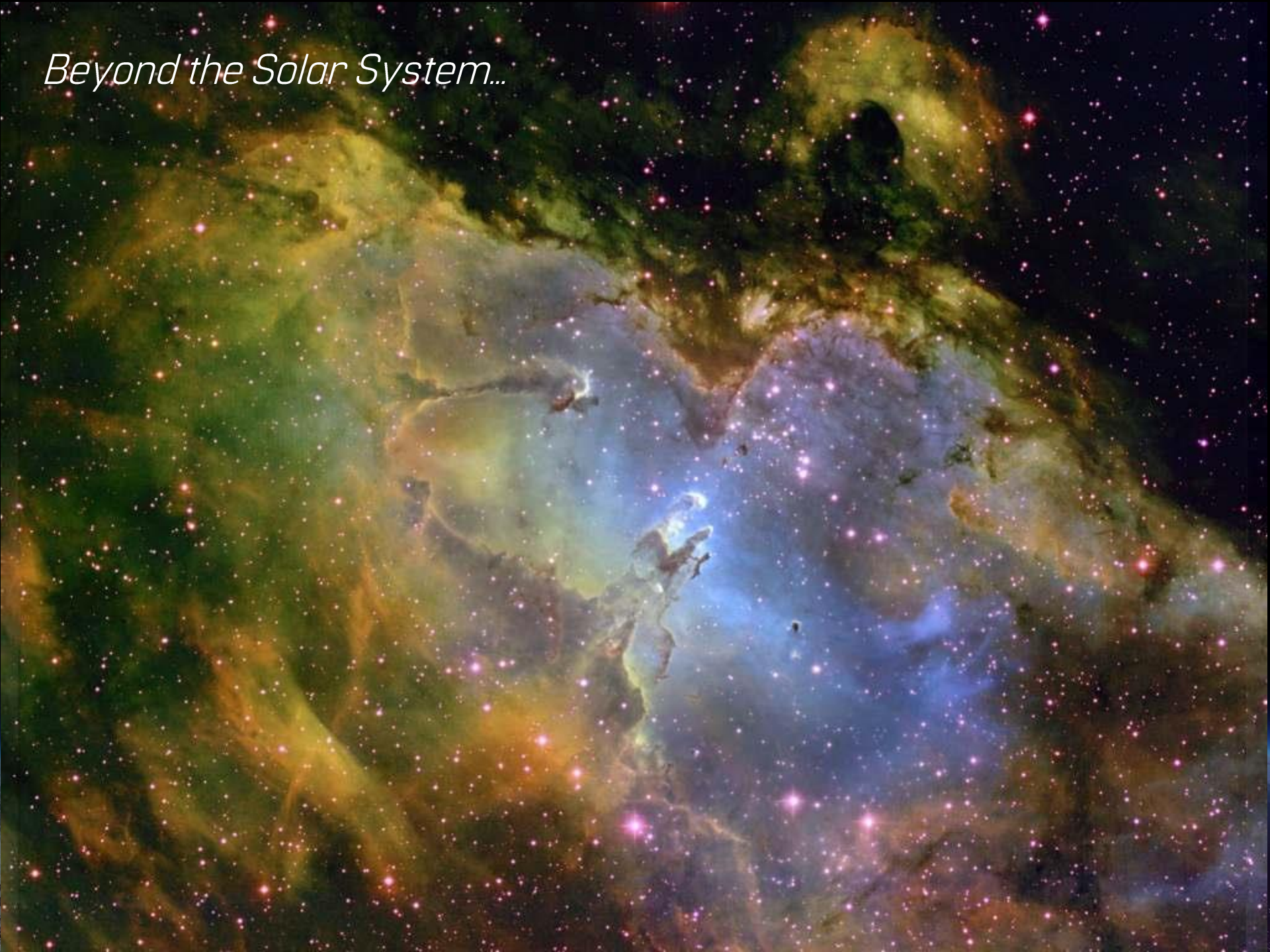

The Universe
There are...
9,000,000,000,000,000,000,000
stars in the universe

Beyond the Solar System...



Beyond the Solar System...


Beyond the Solar System...


Beyond the Solar System...


Beyond the Solar System...


Beyond the Solar System...

Beyond the Solar System...

Black holes:

- Dead stars
- Large mass
- Very strong gravity
- Not even light can escape

OUR CLASSTRONAUTS PROGRAMME

This presentation is produced by Sent Into Space and supports the Classtronauts school space launch programme. The ultimate STEM project, launching a balloon into space is a great idea if you're wondering how to engage your pupils with the science curriculum. We'll visit your school and fly a craft into space right from your playground. Our presenter gives a mission briefing explaining the science behind high altitude flight, answering questions from the pupils before launching an item of your choosing into space. It's the perfect activity for Space Week.

INSPIRE A GENERATION OF ASTRONAUTS

We deliver a complete end-to-end service; from project management, launch day and post-launch support.

FULL SET OF LESSONS AND PLANS TO SUPPORT A SPACE THEMED LEARNING

Our website includes a full set of lesson plans, worksheets and presentations for topics across the science and maths curriculum. These free science resources for KS2, KS3 and KS4 are available for download as PDFs, powerpoint presentations and word documents for easy printing.

GET IN TOUCH

To find out more about our Classtronauts program, visit Sentintospace.com/classtronauts or download our Classtronauts brochure here.

Get in touch to discuss your Classtronauts project further:

A: Unit 3a, Parkway Rise, Sheffield, S9 4WQ, UK

E: hello@sentintospace.com

T: +44 (0) 114 213 1050
M: +44 (0) 7579 041 334