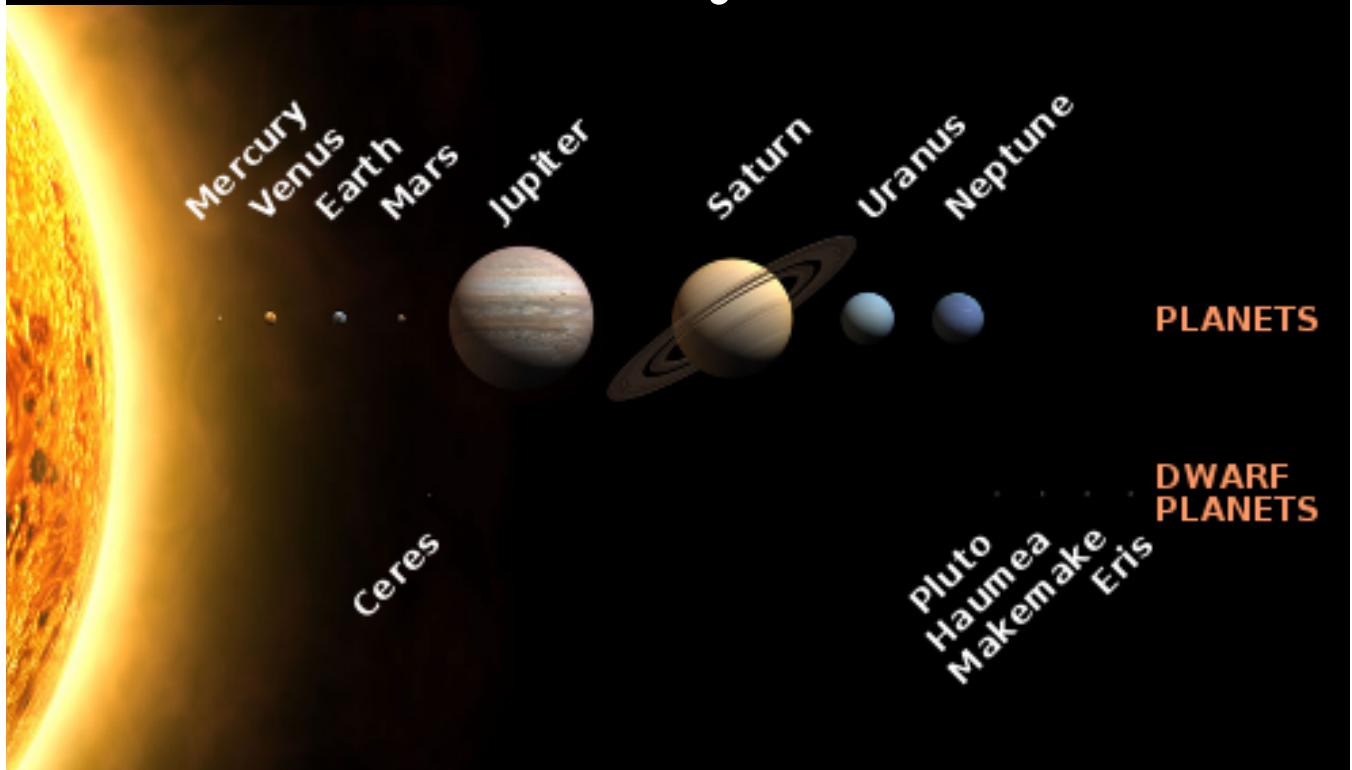


Lesson 1 Slide Presentation:

A Tour of the Solar System

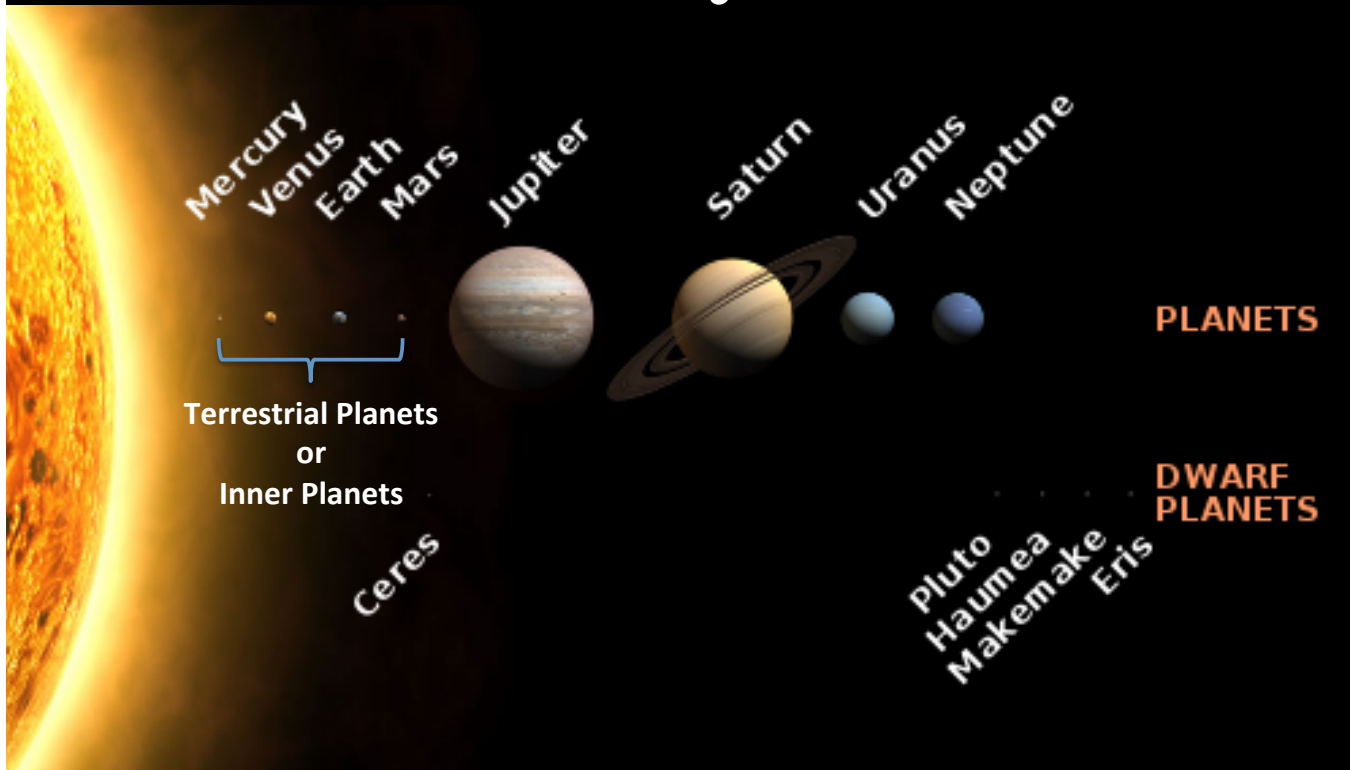


A Tour of the Solar System



SLIDE 1

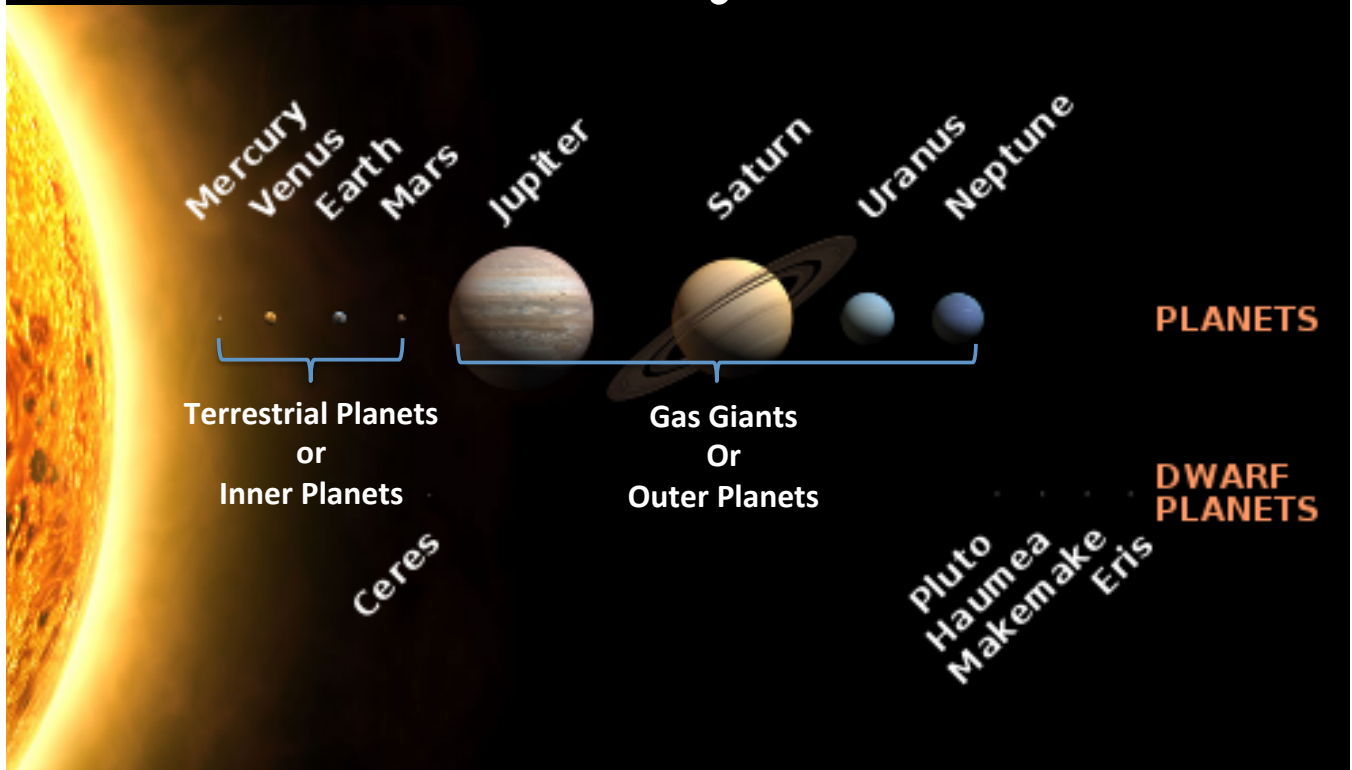
A Tour of the Solar System



SLIDE 2

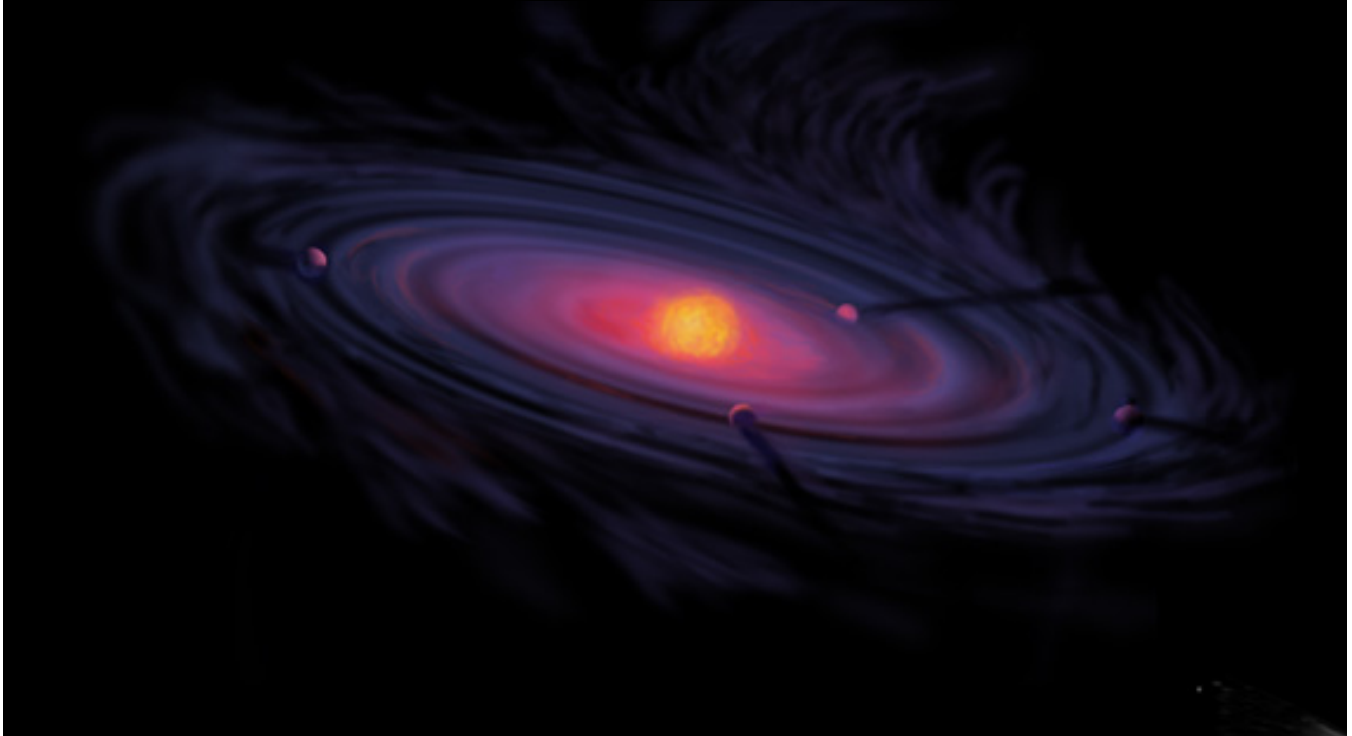


A Tour of the Solar System

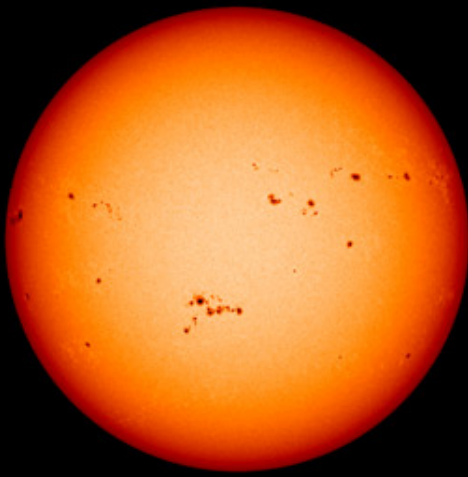


SLIDE 3

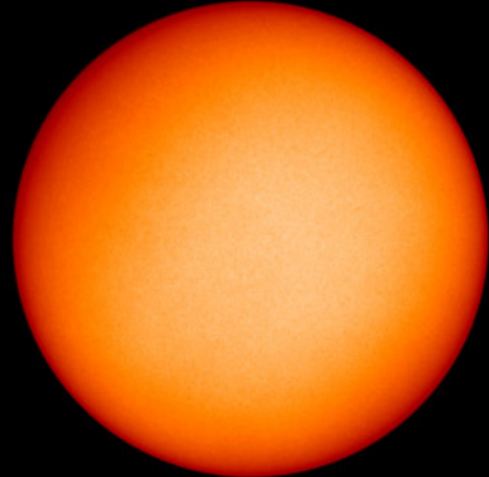
An artist's impression of the early Solar System's planetary disk with the early accretion bodies (proto-planets)



SLIDE 4



July 19, 2000



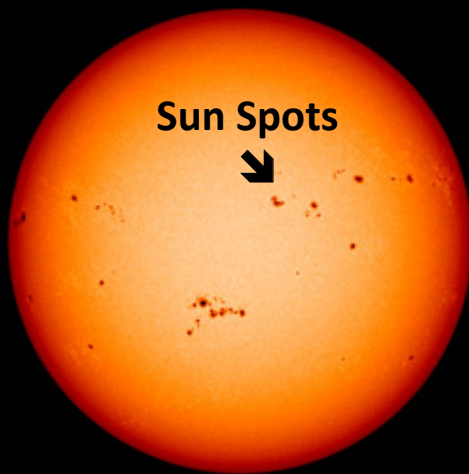
March 18, 2009

Starting With our Favorite Star!

Our Sun!

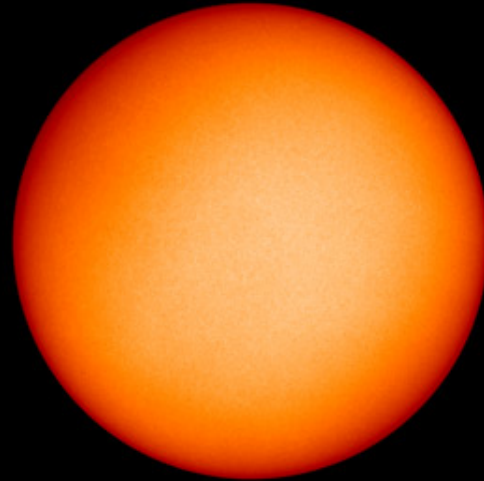
SLIDE 5

A Recent Solar Maximum



July 19, 2000

A Recent Solar Minimum

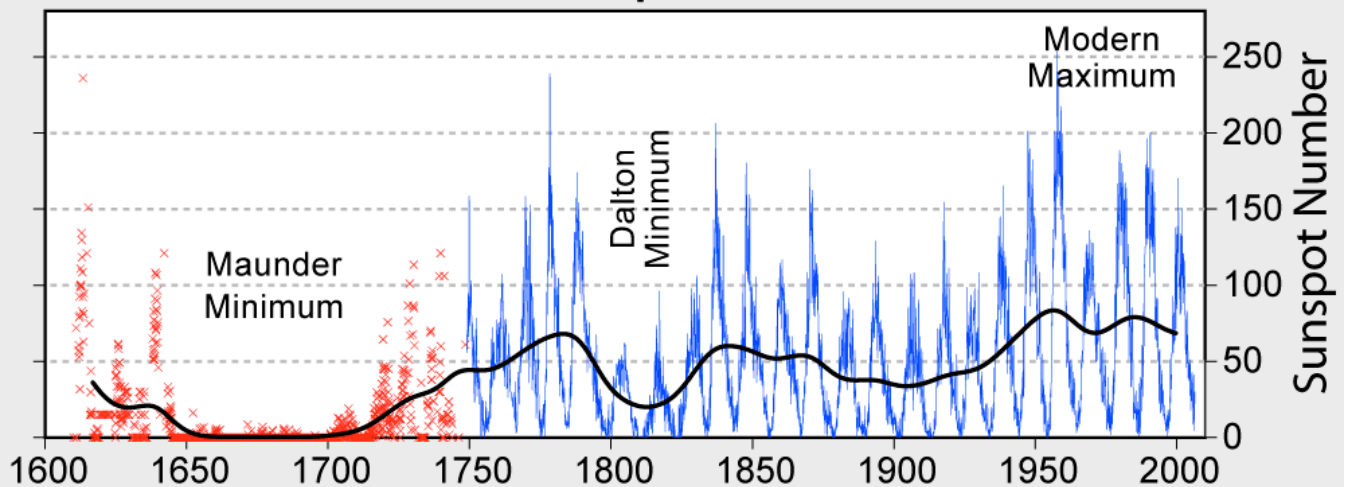


March 18, 2009

The Sun goes through a Solar Cycle every 11 years, from a period of maximum number of Sun Spots to a minimum number of Sun Spots

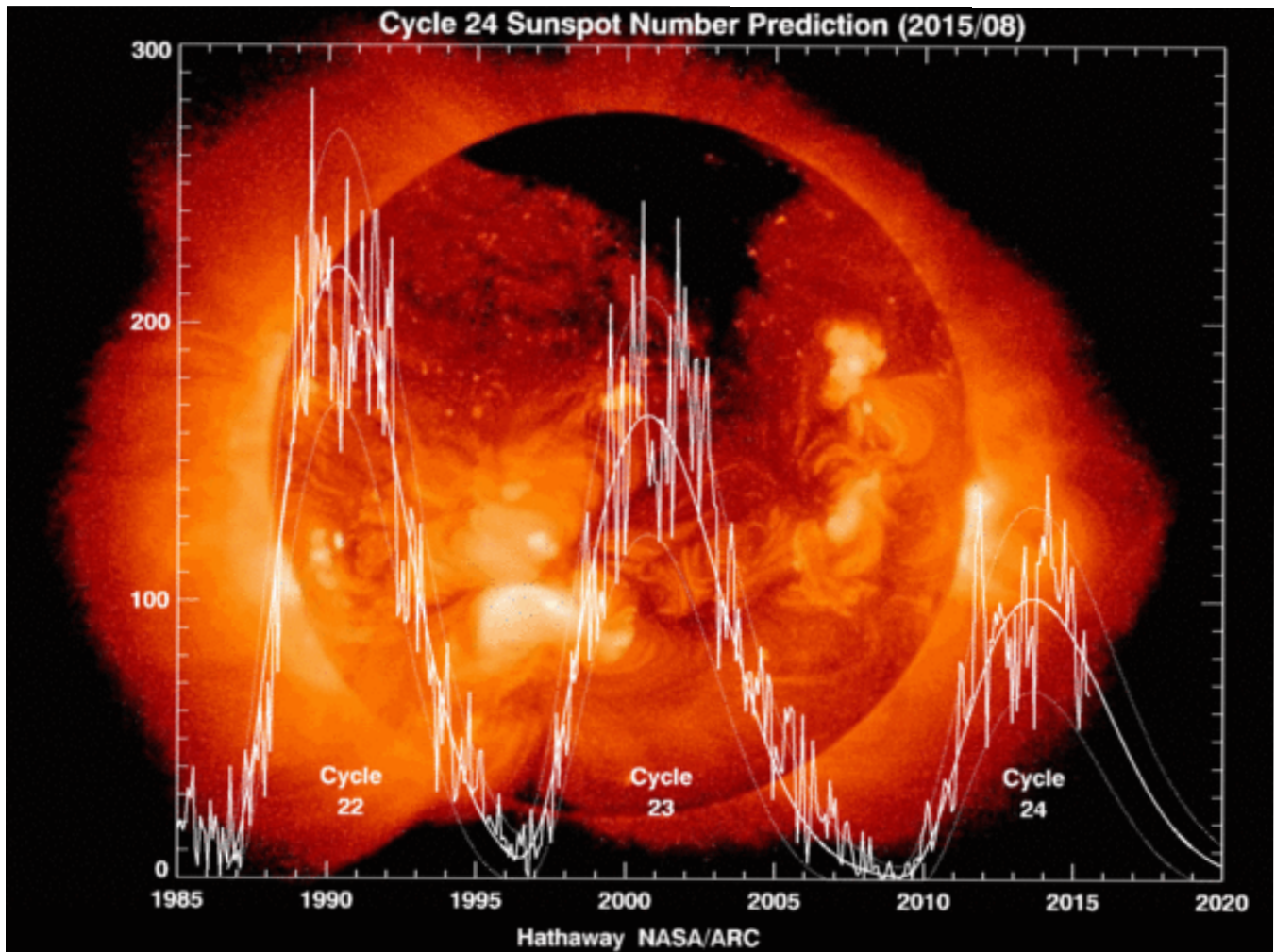
SLIDE 6

400 Years of Sunspot Observations

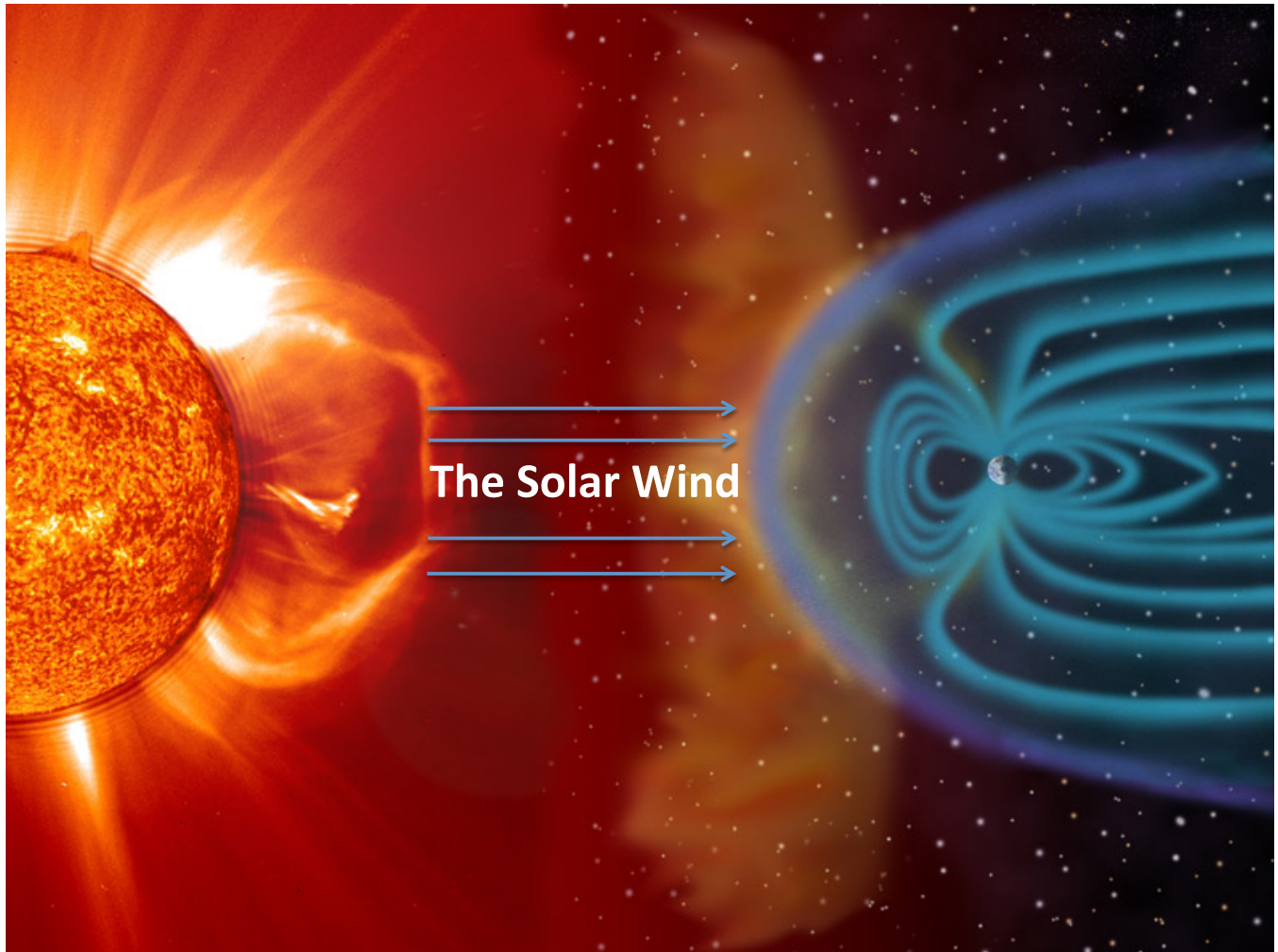


A Long-Term Record of Sunspot Activity Between 1609 and 2007, Showing the 11-Year Solar Cycle from Solar Maximum to the next Solar Maximum. The Current Solar Minimum (2008-2009) was Especially Long in Duration. The 2014 Solar Maximum (cycle 24) was much lower than the previous one (cycle 23).

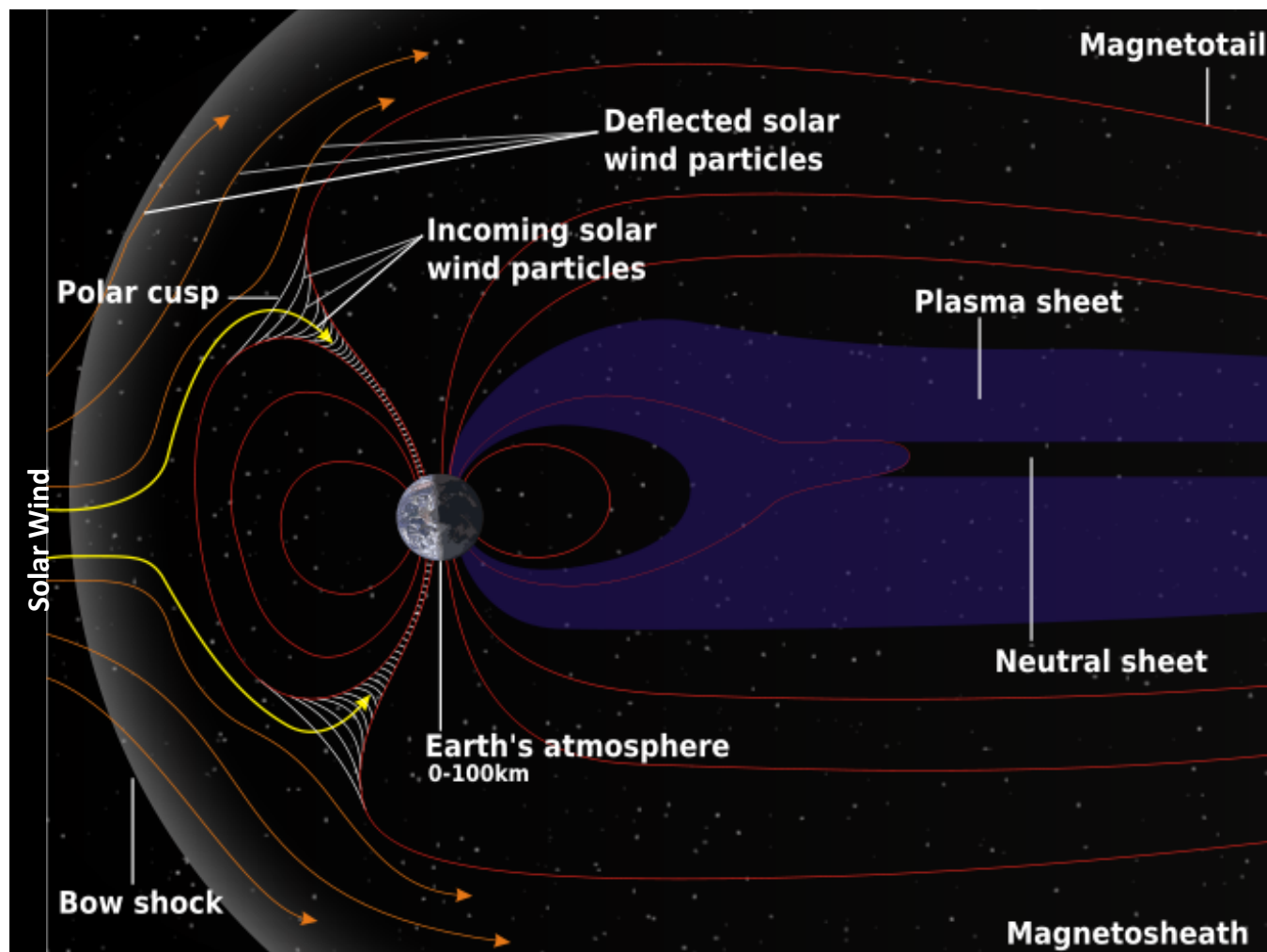
SLIDE 7



SLIDE 8

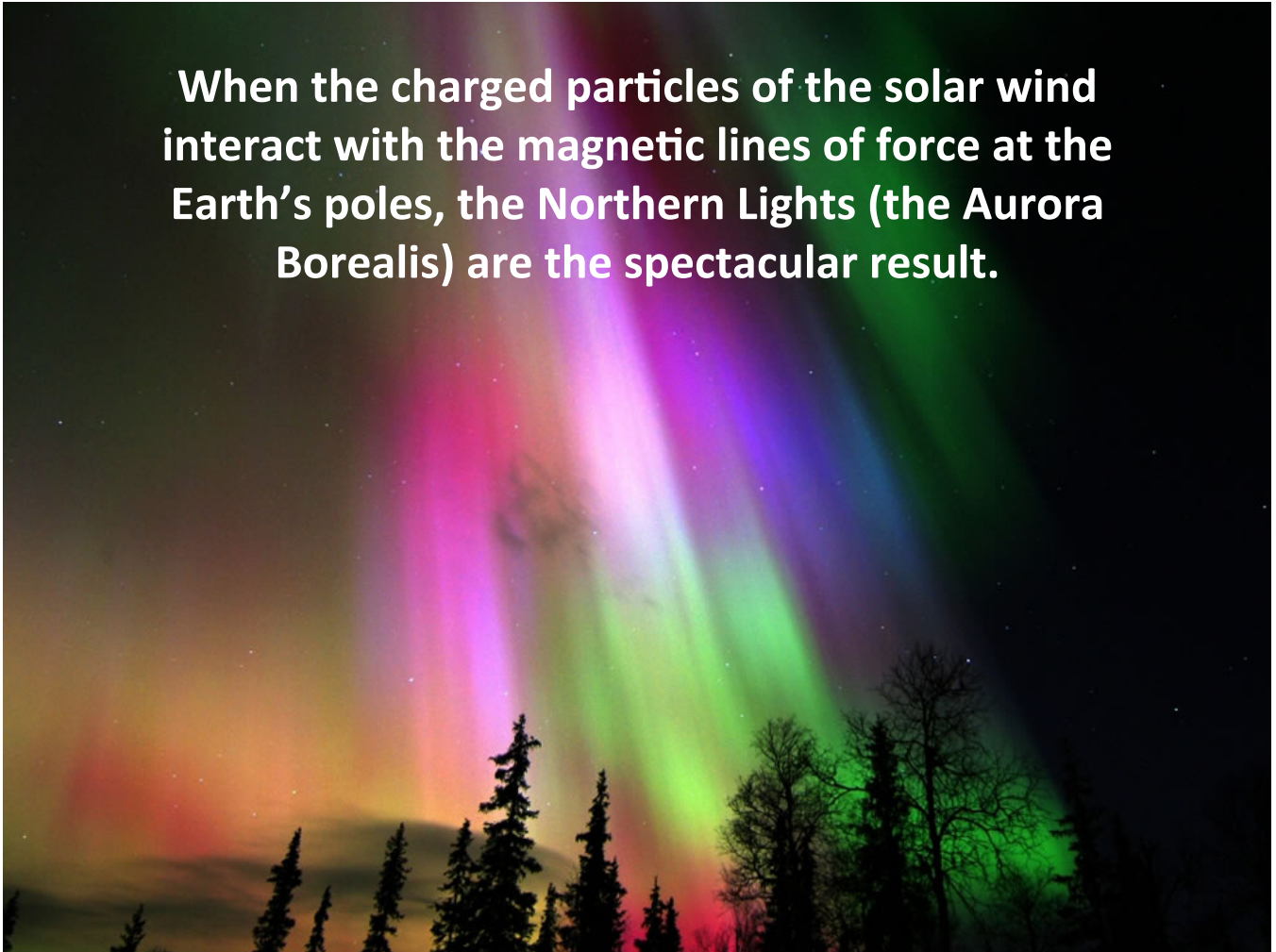


SLIDE 9



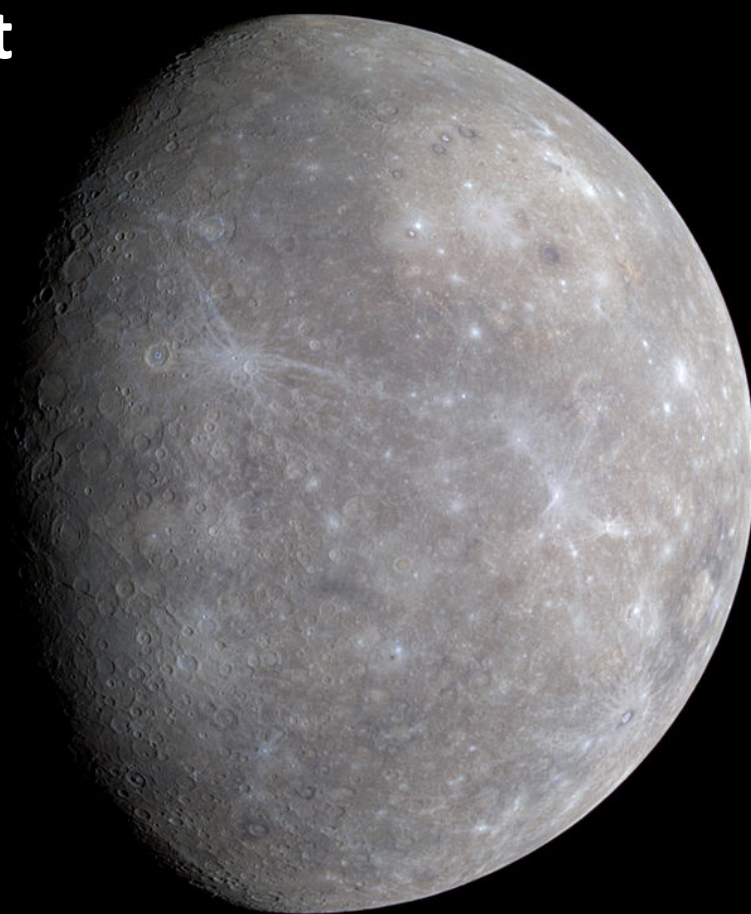
SLIDE 10

When the charged particles of the solar wind interact with the magnetic lines of force at the Earth's poles, the Northern Lights (the Aurora Borealis) are the spectacular result.



SLIDE 11

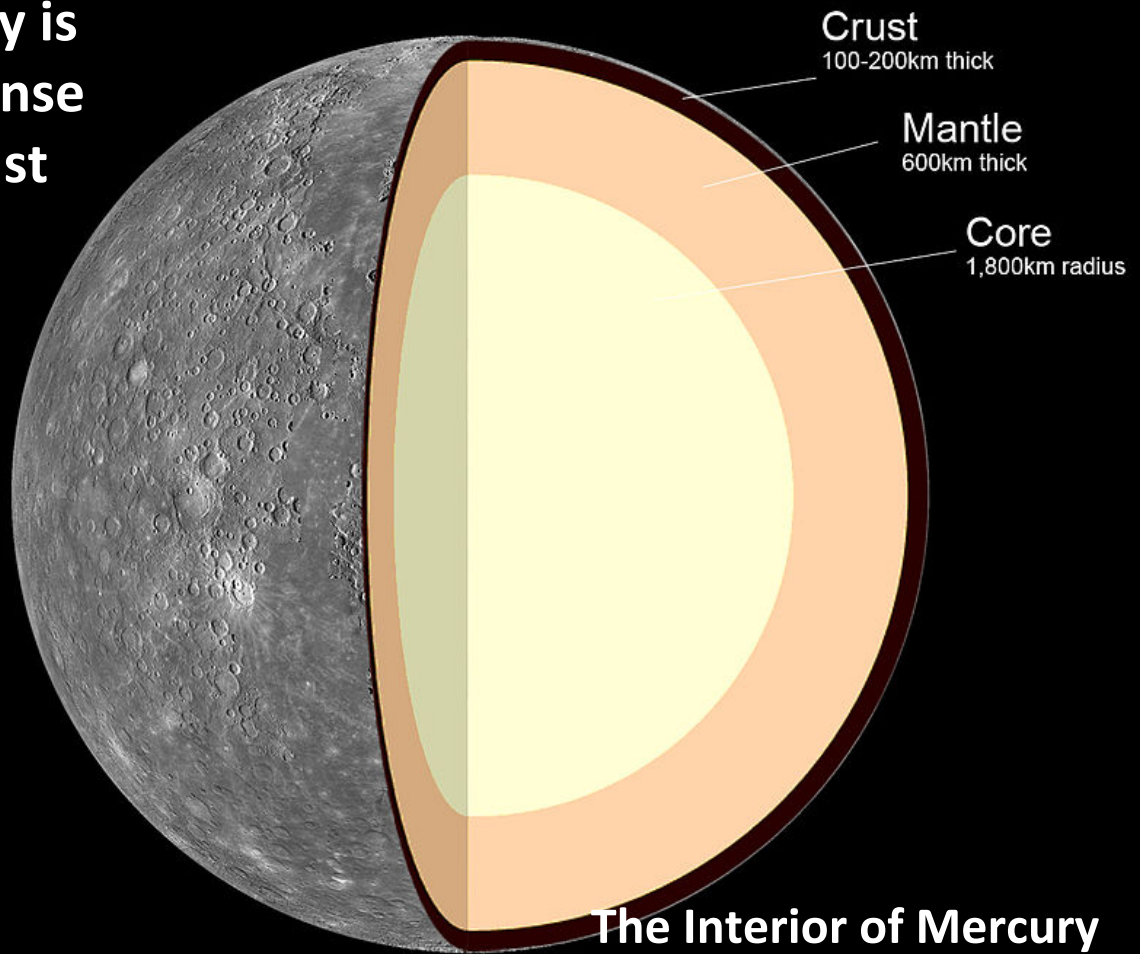
The Planet Mercury



SLIDE 12



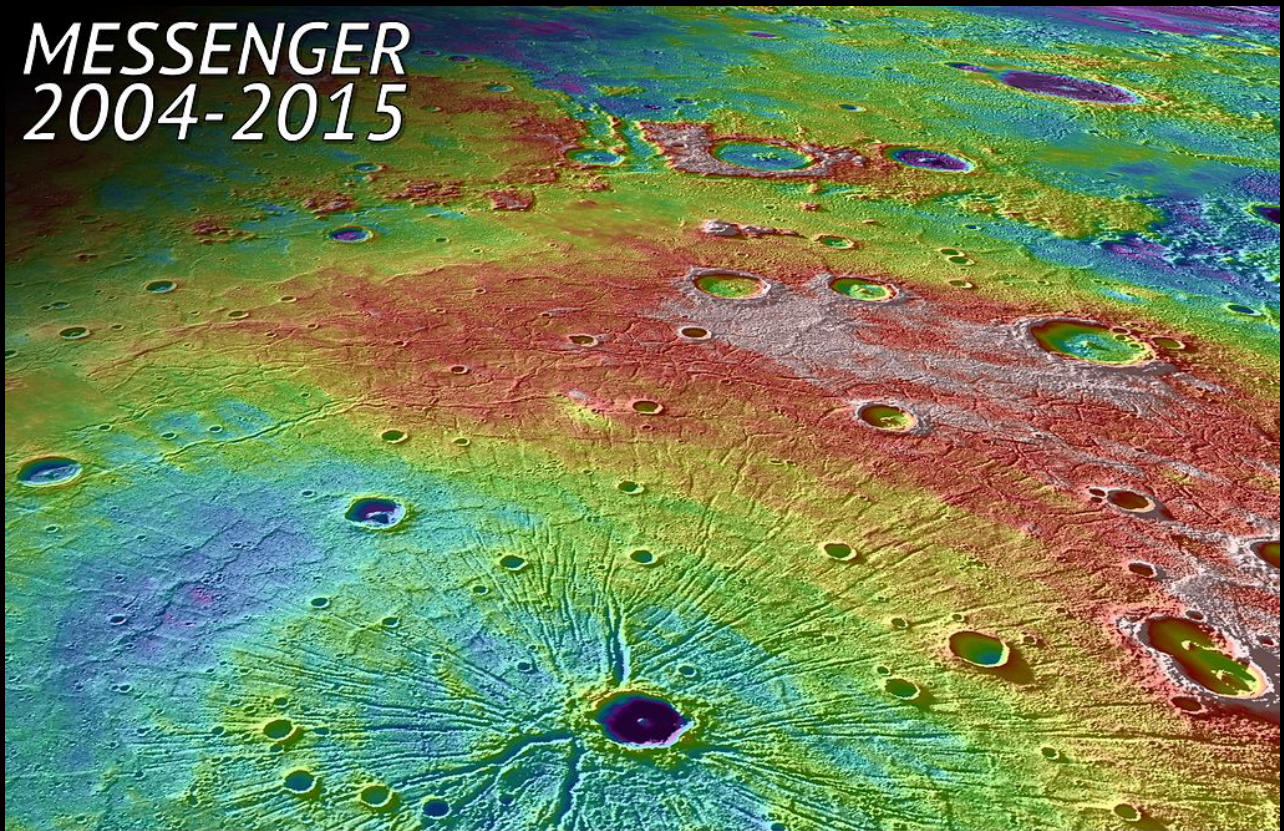
**Mercury is
very dense
and must
have a
large
core**



The Interior of Mercury

SLIDE 13

MESSENGER 2004-2015



The NASA MESSENGER Spacecraft orbited Mercury for 4 years (2011-2015), mapping surface topography (High=Red, Low=Blue)

SLIDE 14



**The Planet Venus
has a very
dense
cloud
cover**

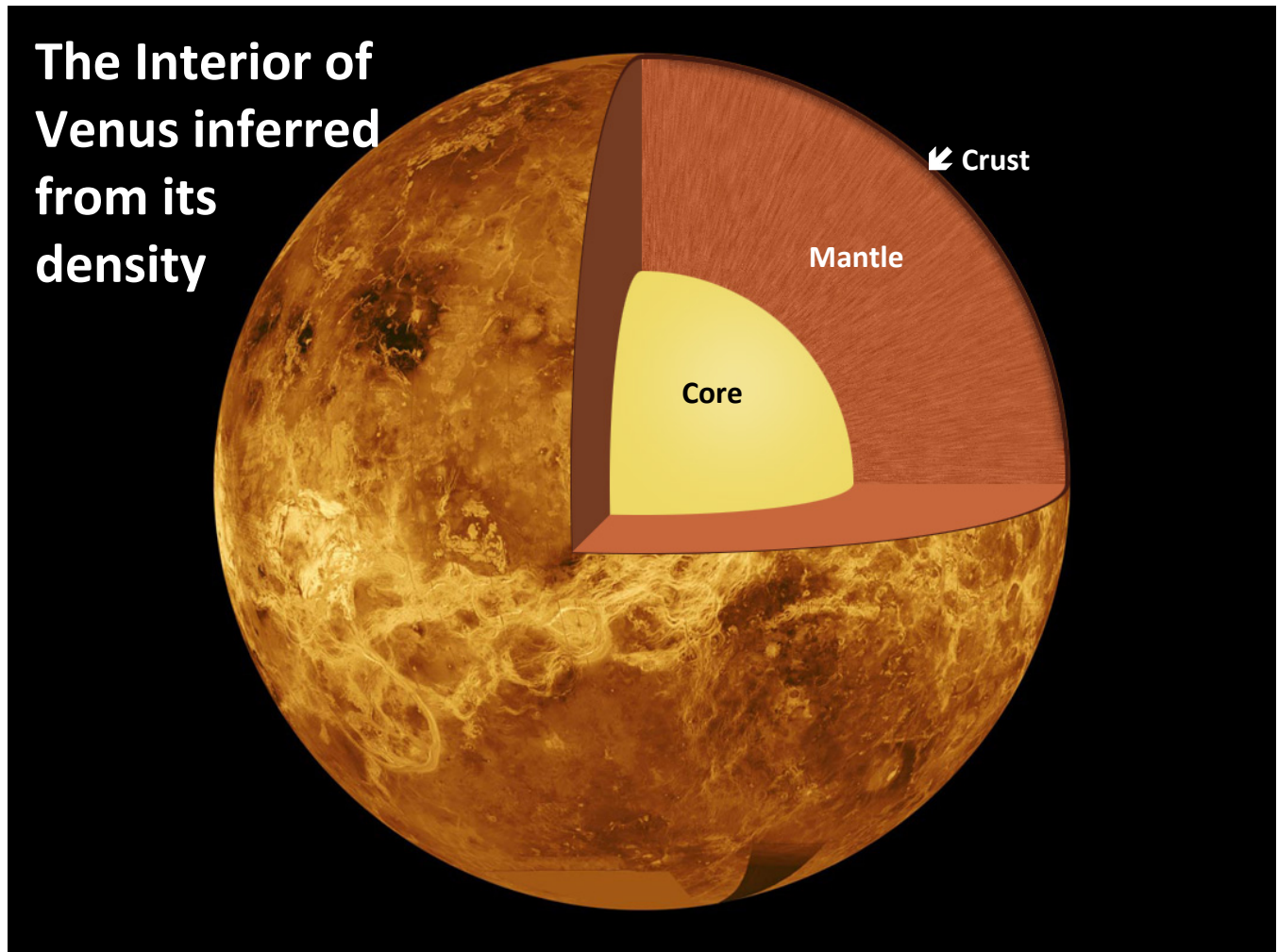


SLIDE 15

**The surface of
Venus seen
without its
dense clouds,
using radar.**

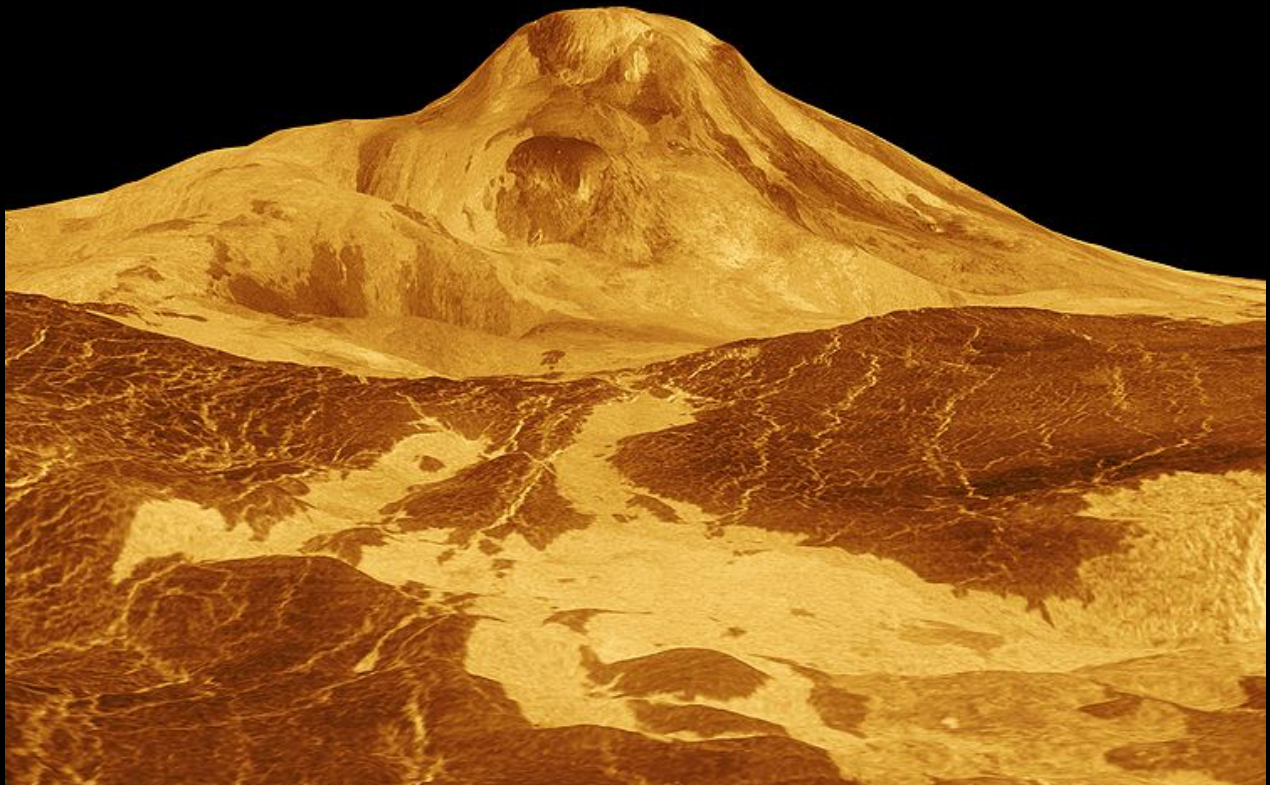


SLIDE 16



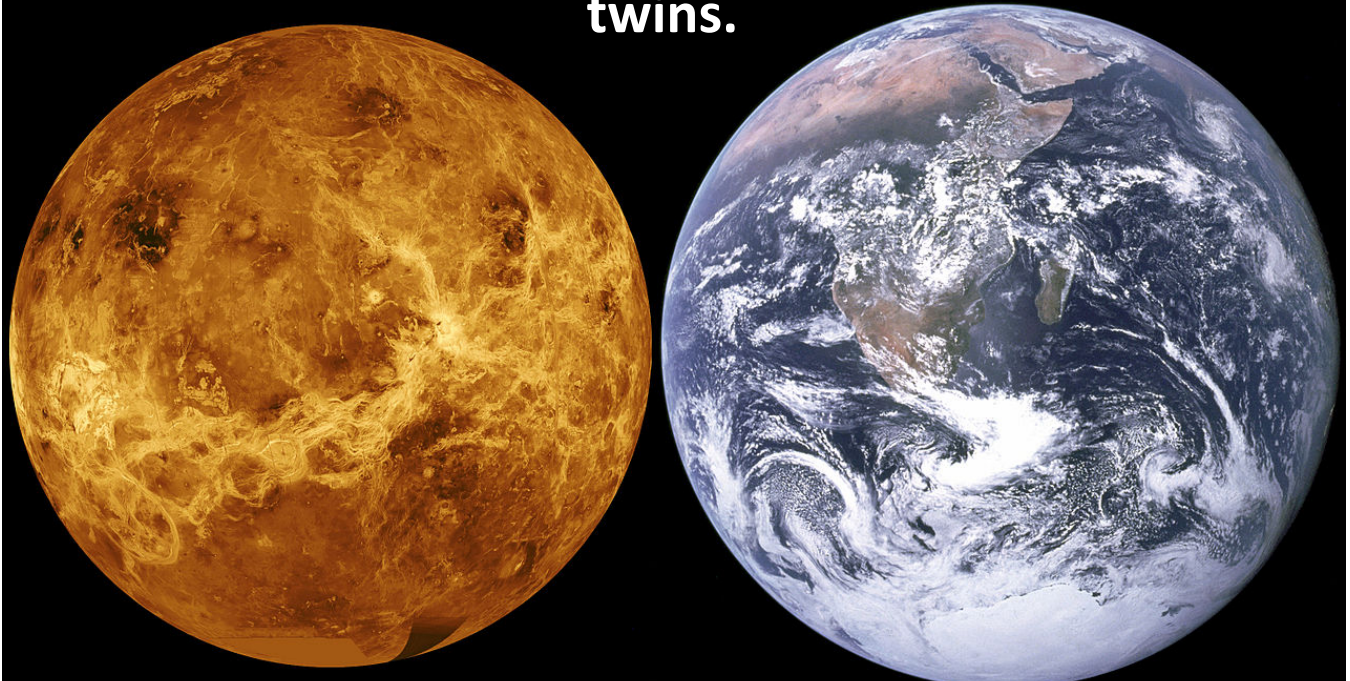
SLIDE 17

Maat Mons, a Mile-high Volcano on Venus. In this False-color image, a yellow Lava Flow is seen in the Foreground. Image is from NASA's Magellan Mission.



SLIDE 18

A size comparison of Venus and Earth. Venus seen by radar looking through its dense sulfuric acid clouds. Venus is hot (800°F) and rains acid rain! Before spacecraft data, Venus and Earth were thought to be twins.



SLIDE 19



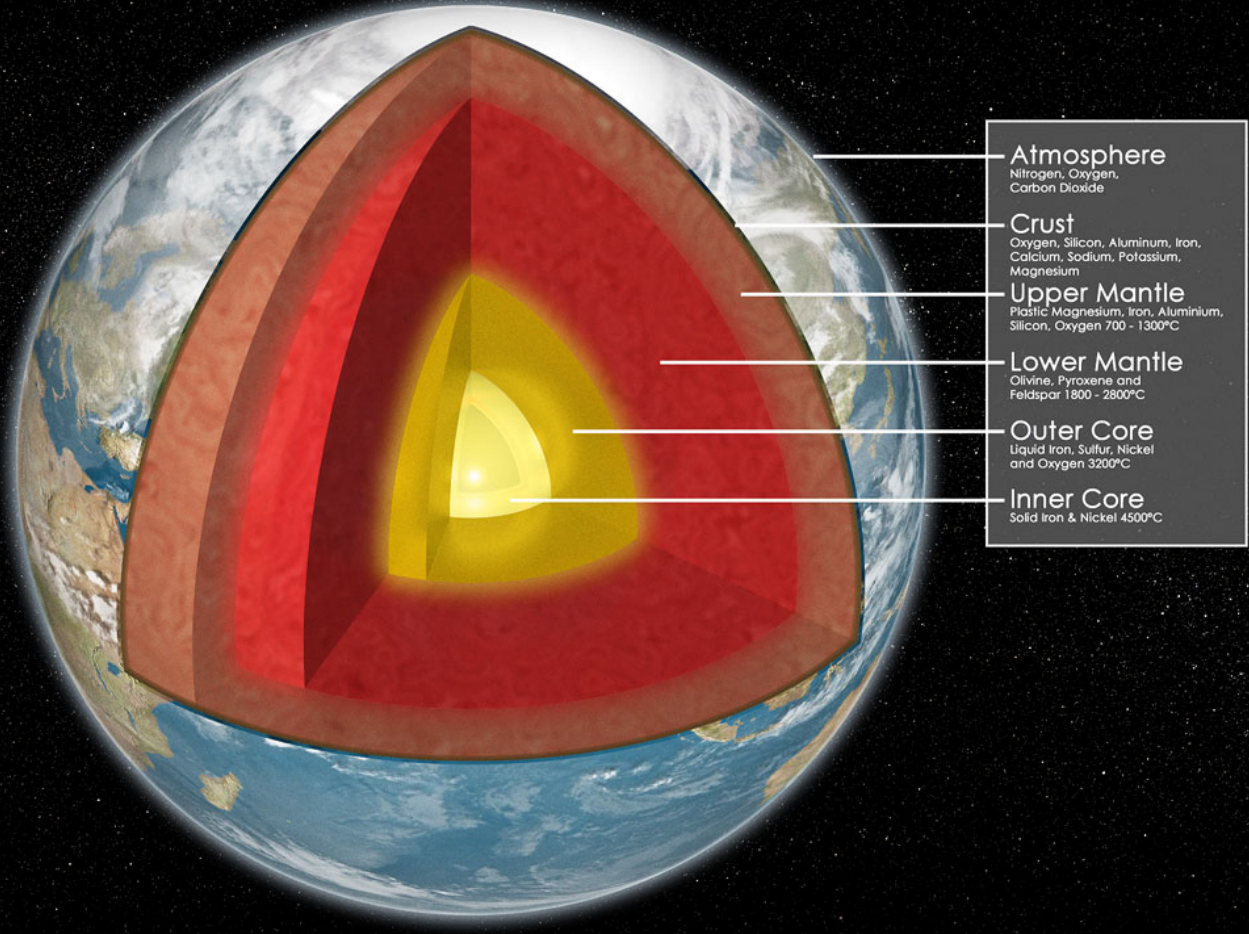
The famous “Blue Marble” image of the Earth as seen from Apollo 17 on December 7, 1972. Look how different Earth is from Venus.



SLIDE 20



Earth: Cross Section



SLIDE 21

A volcanic eruption in the Aleutian Islands of Alaska



SLIDE 22



Mars



SLIDE 23



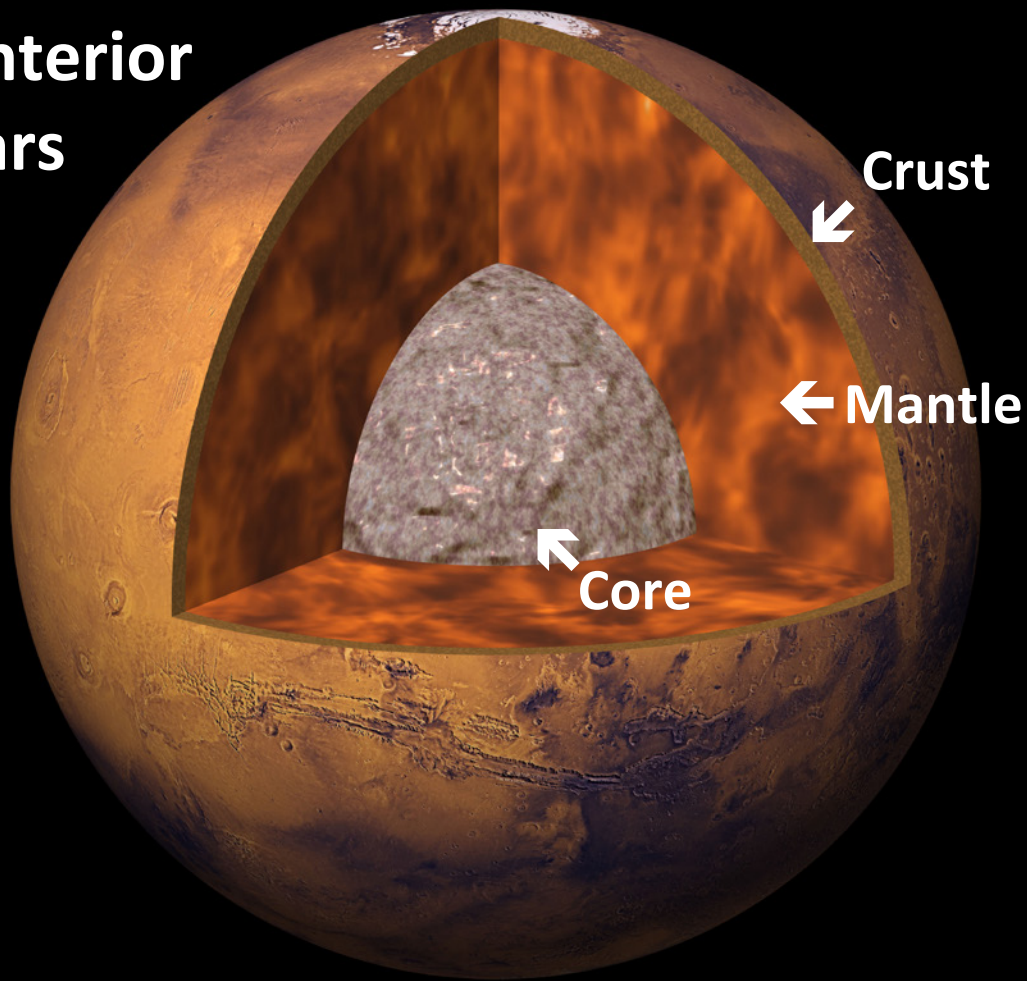
Mars has a thin Atmosphere



SLIDE 24

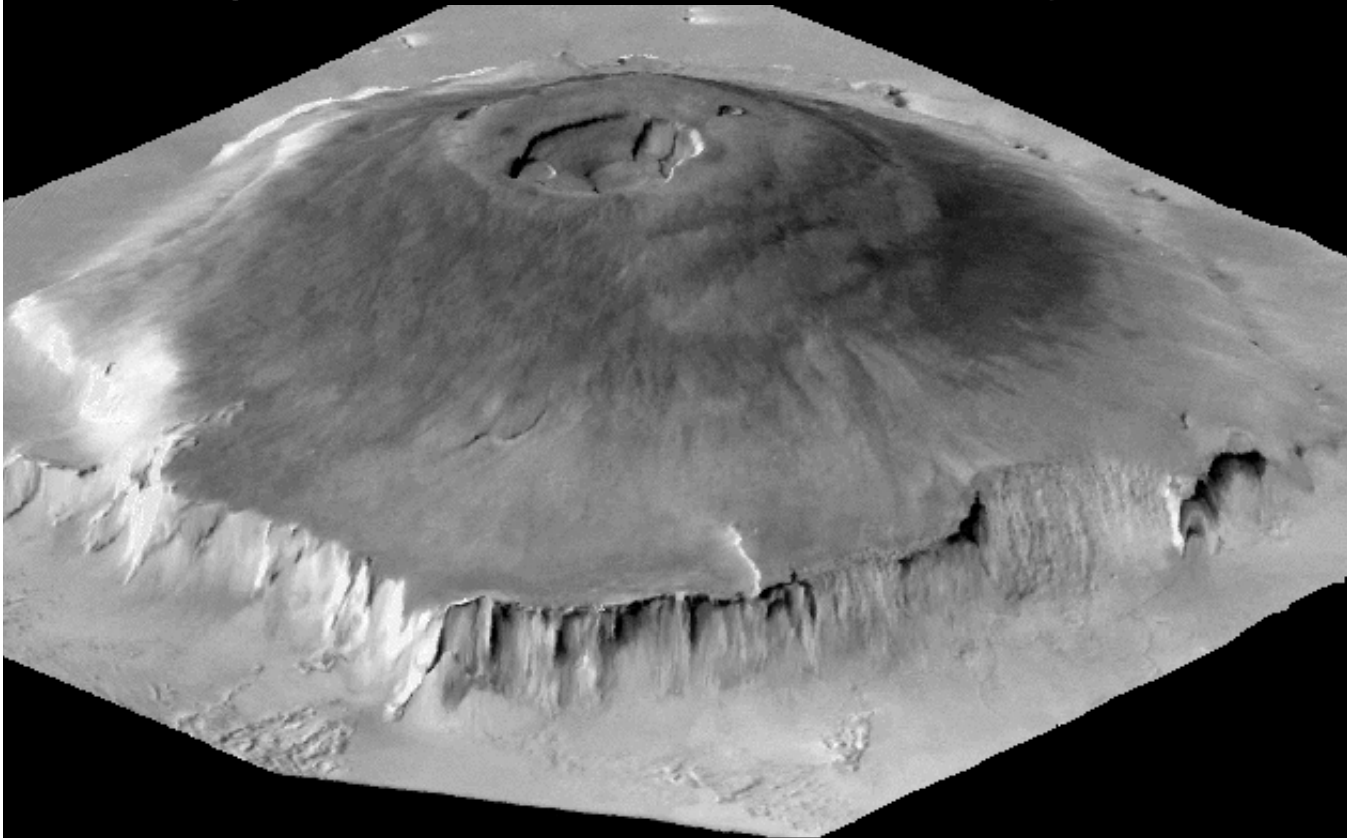


The Interior of Mars

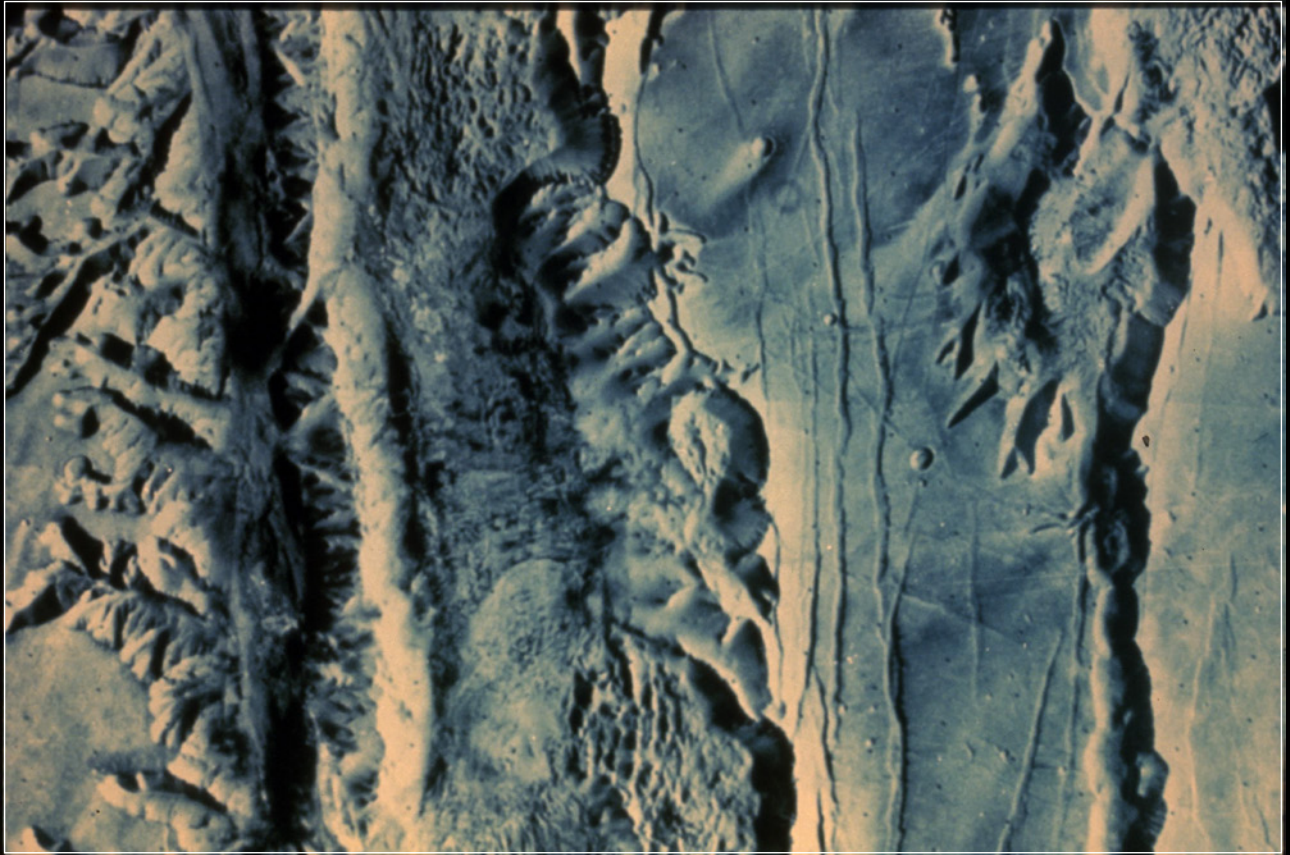


SLIDE 25

Olympus Mons, on Mars – The Largest Volcano in the Solar System



SLIDE 26



SLIDE 27

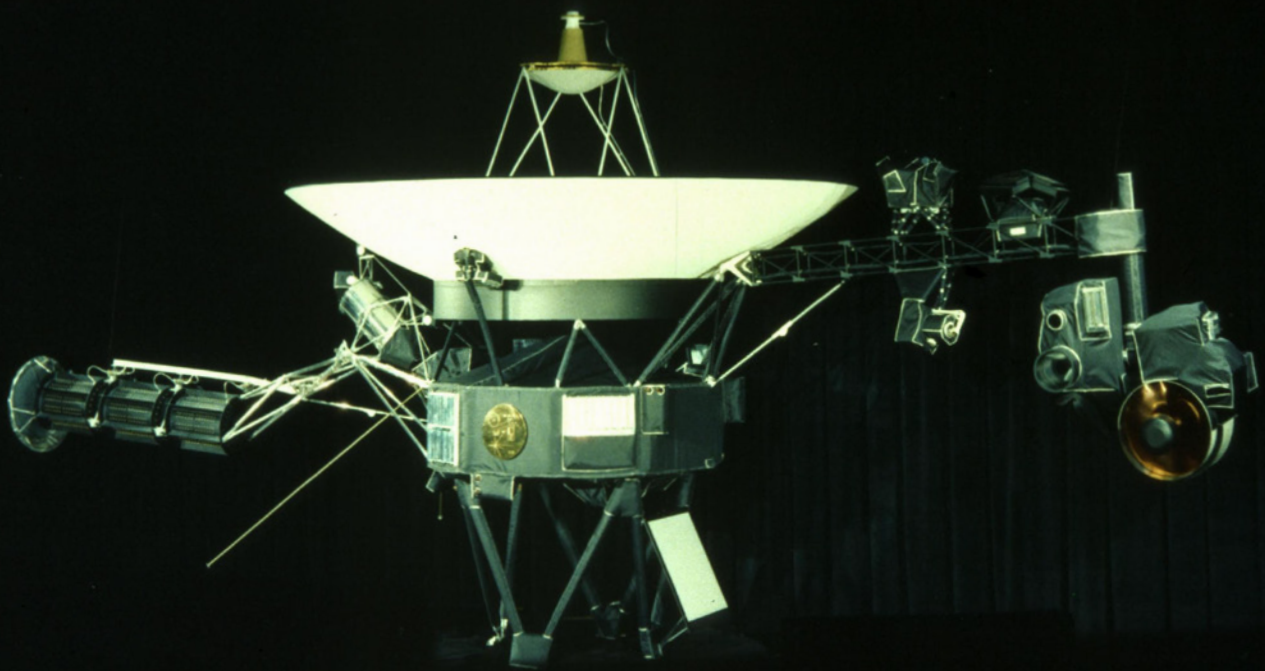
NASA's Mars Rover "Curiosity" launched on Nov. 26, 2011, and landed on Aug. 6, 2012. It carries a complete science lab that has analyzed many samples of the Martian "soil" and sub-surface



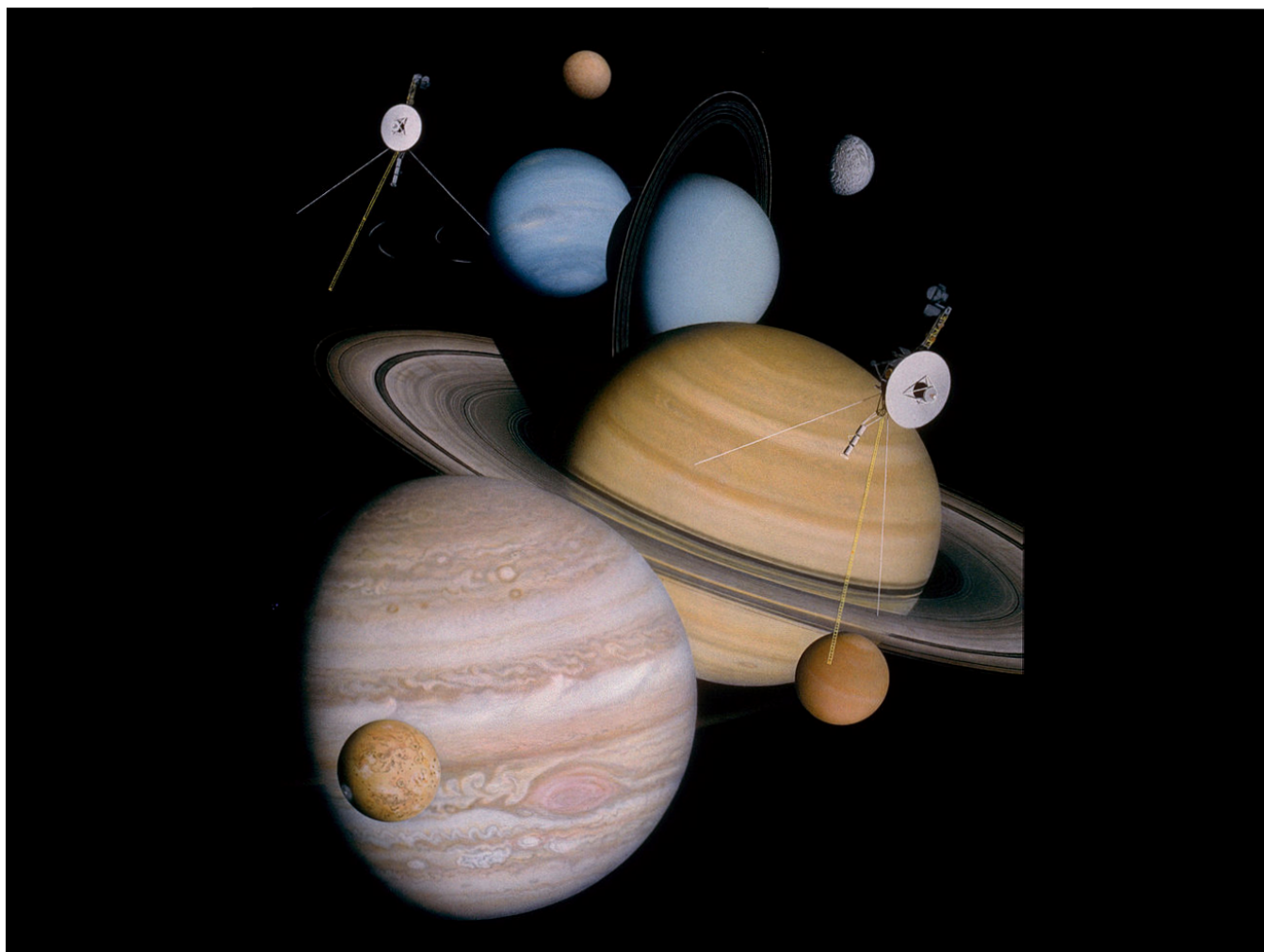
SLIDE 28



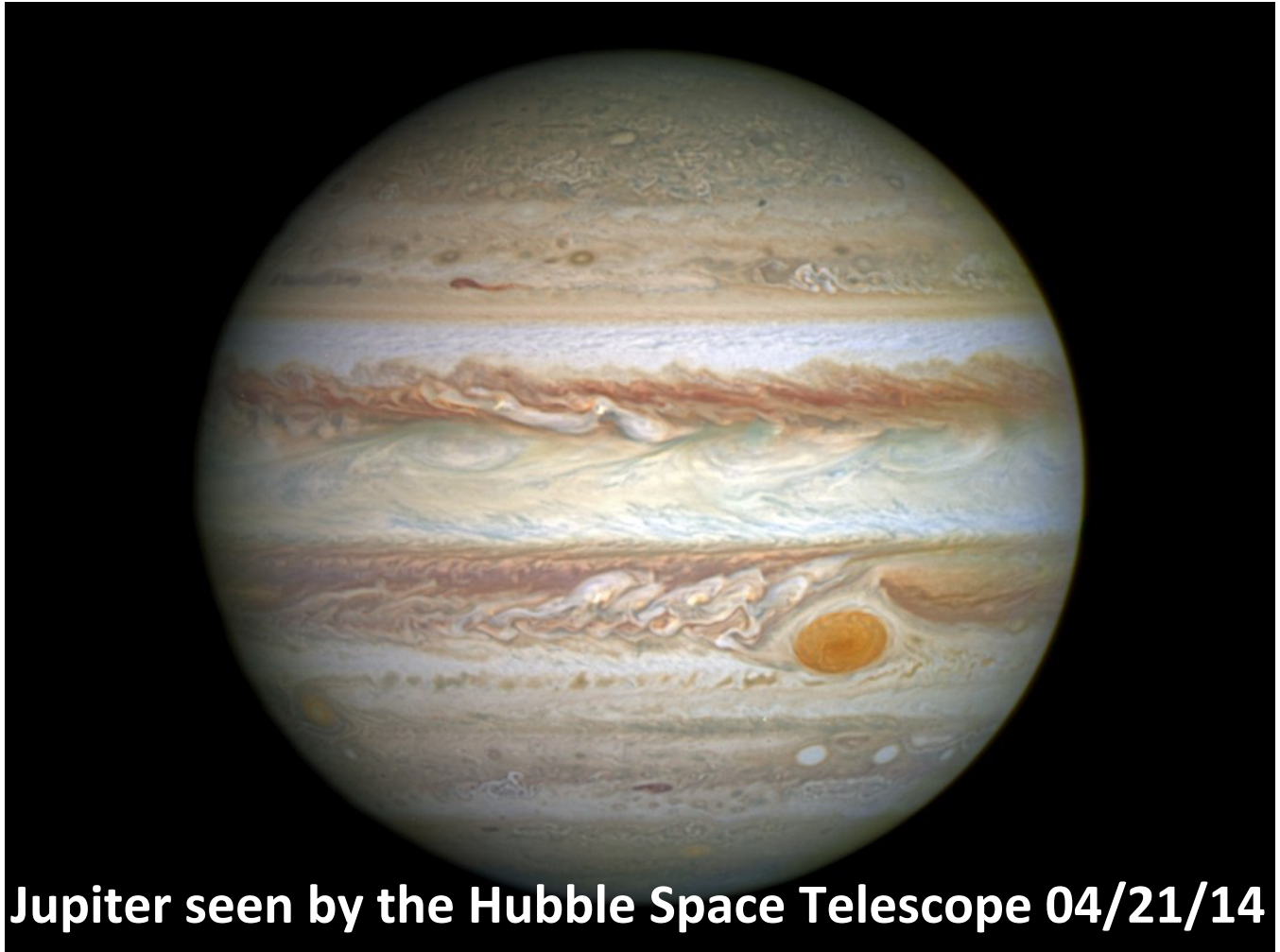
The Voyager Spacecraft (1977)



SLIDE 29



SLIDE 30



Jupiter seen by the Hubble Space Telescope 04/21/14

SLIDE 31



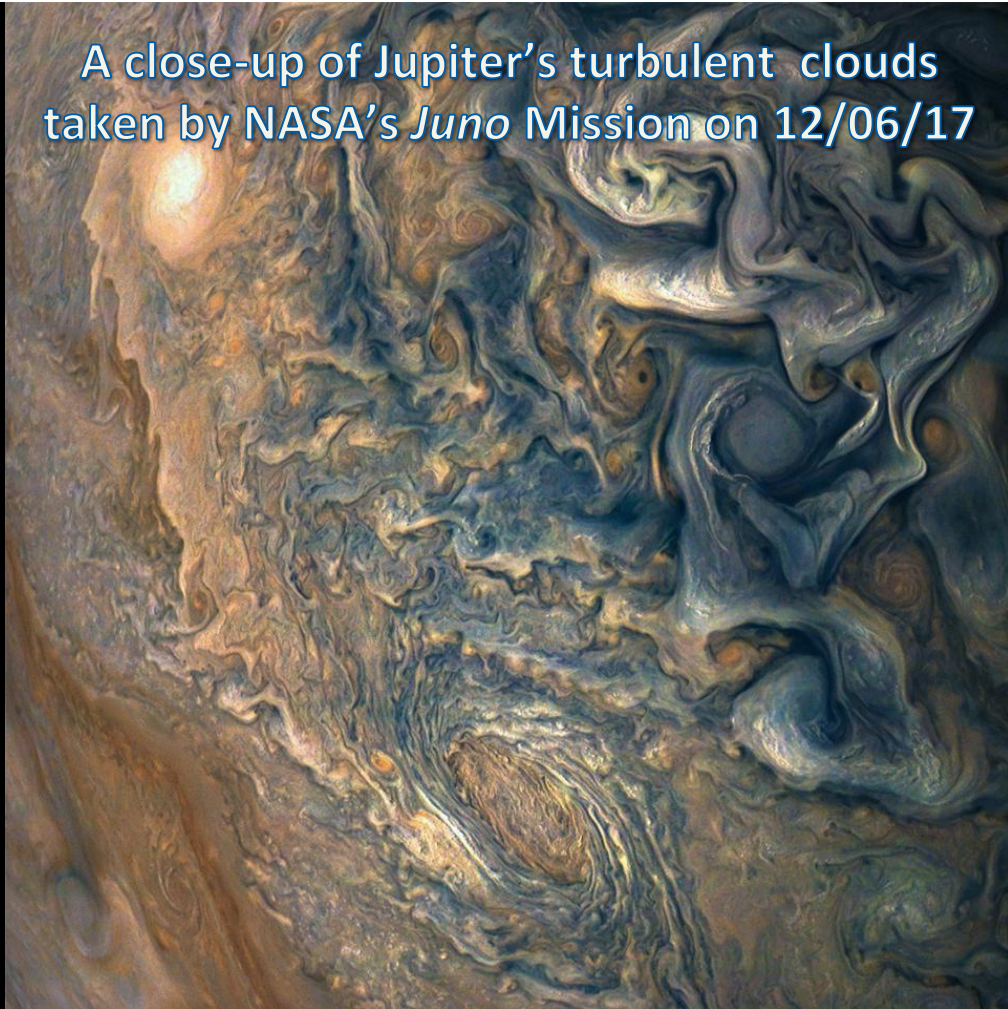
Jupiter's Great Red Spot



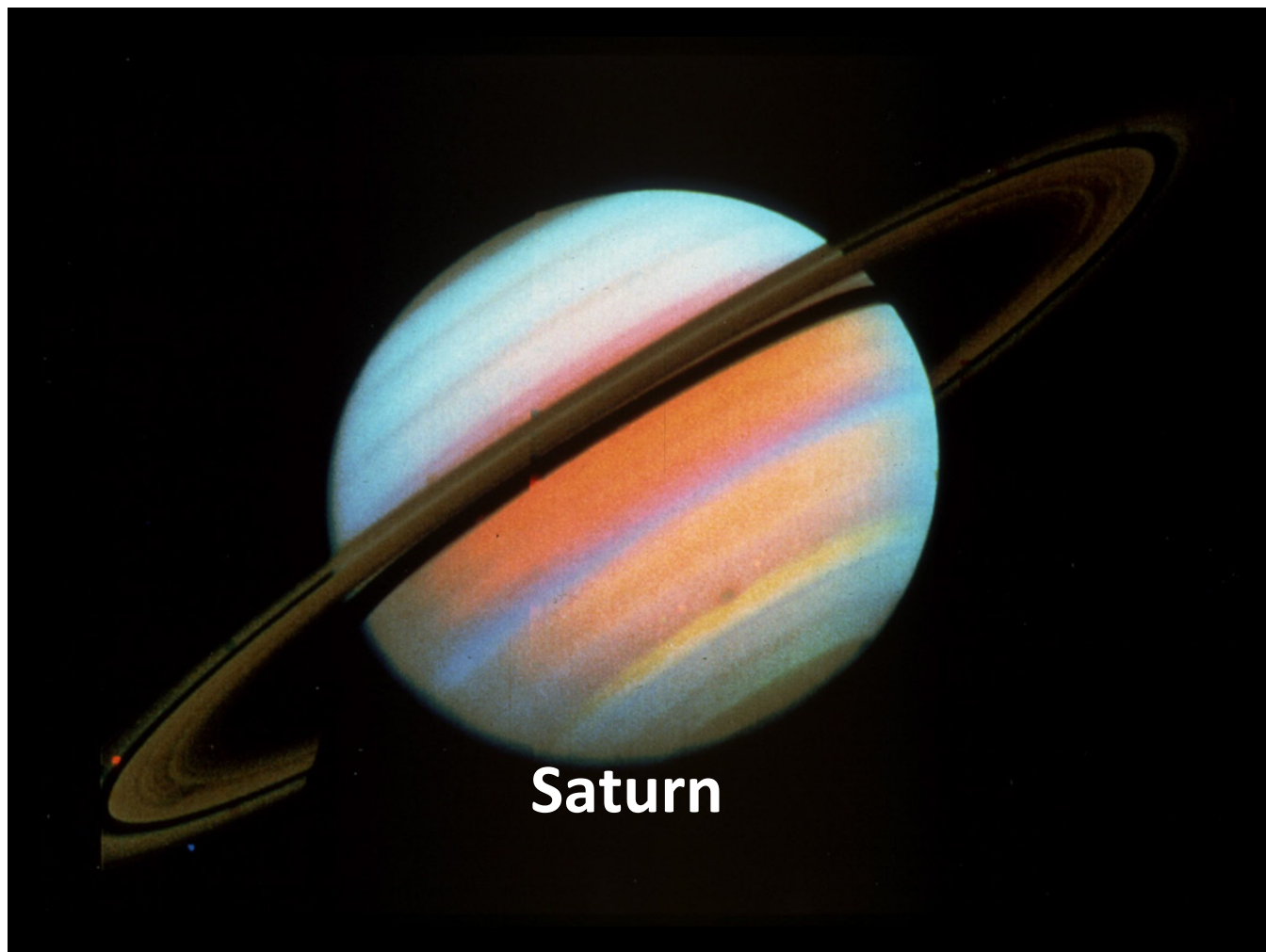
SLIDE 32



A close-up of Jupiter's turbulent clouds
taken by NASA's *Juno* Mission on 12/06/17



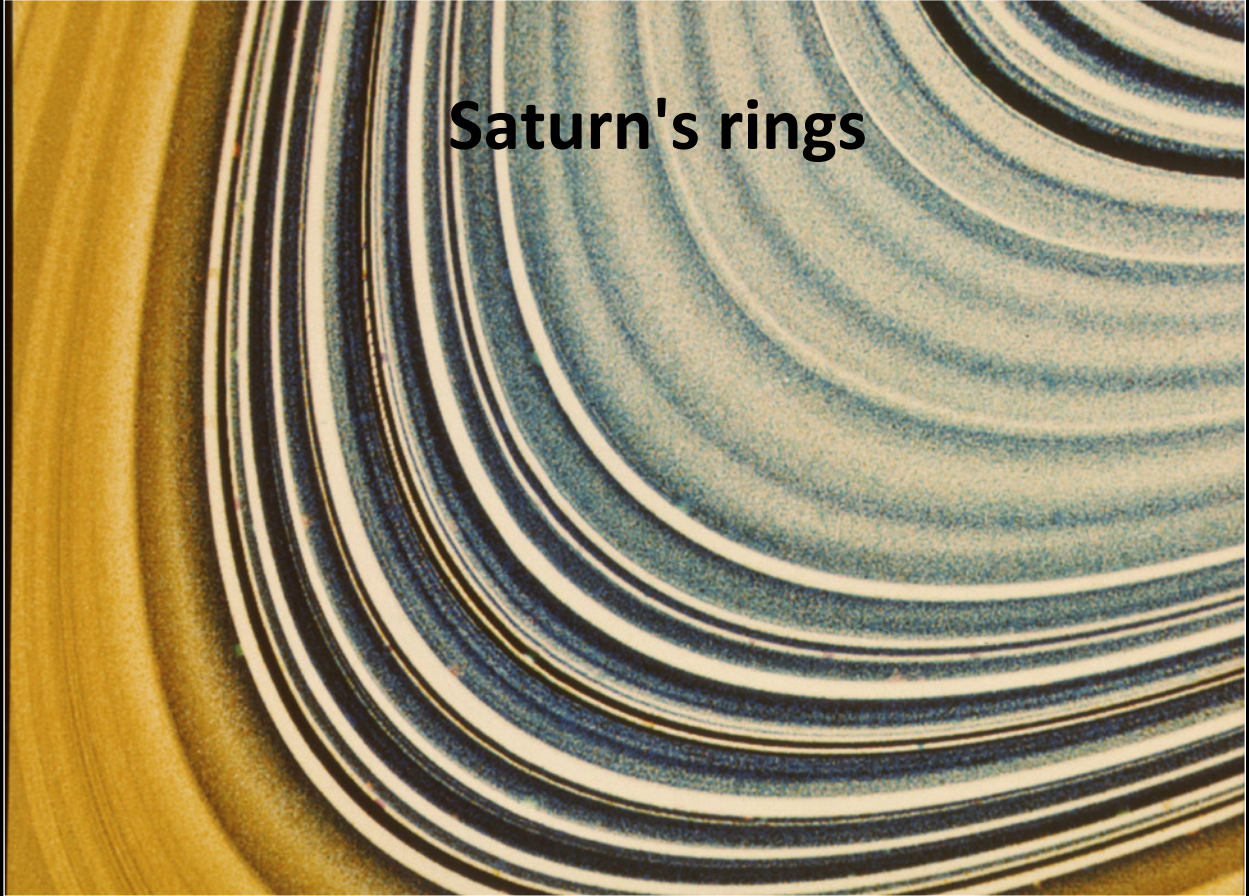
SLIDE 33




SLIDE 34



Saturn's rings



SLIDE 35



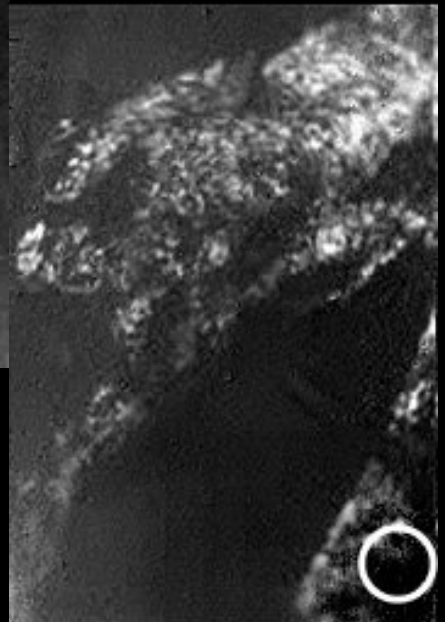
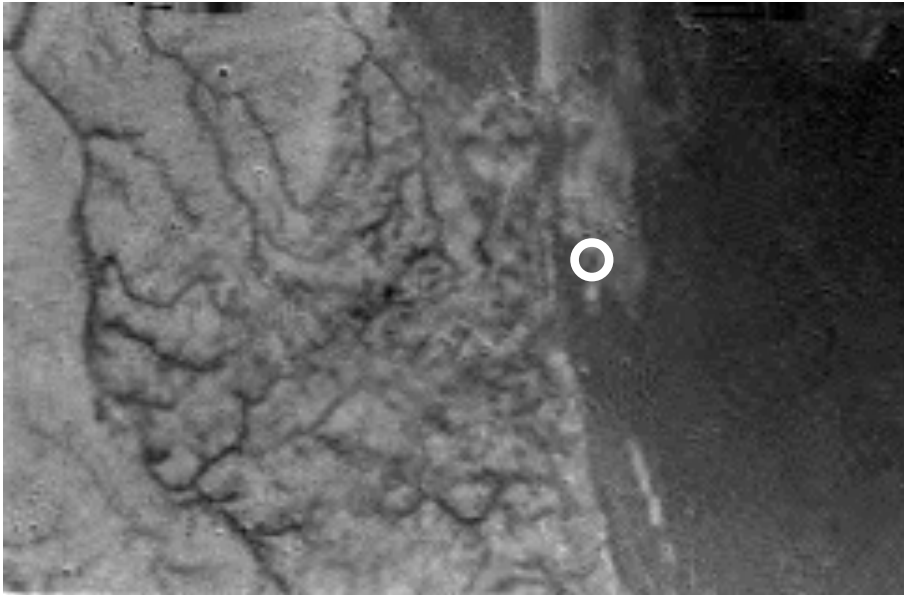
**Titan, Saturn' s
largest moon**

SLIDE 36



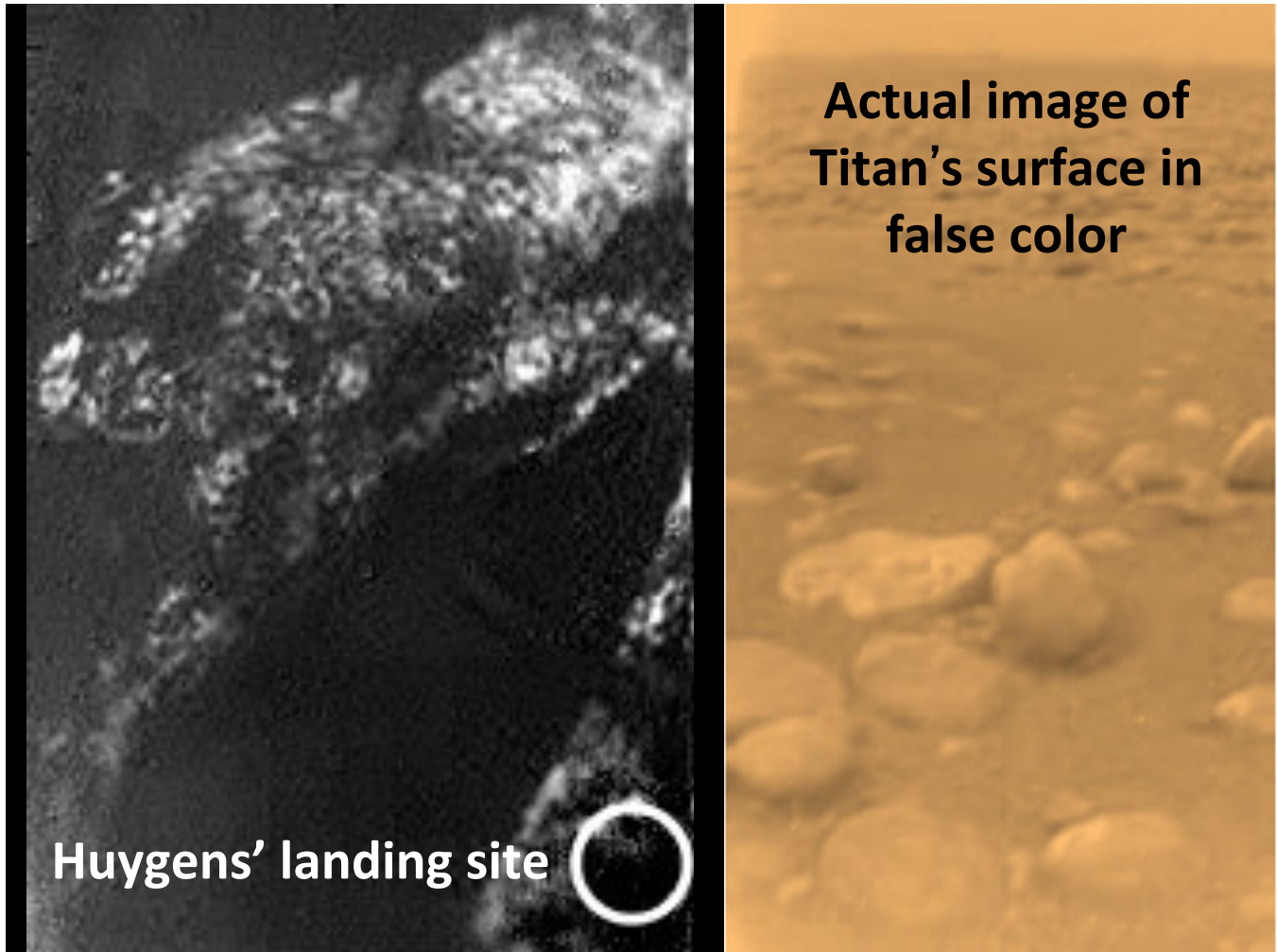
A Cassini Image of Titan's Atmosphere

SLIDE 37



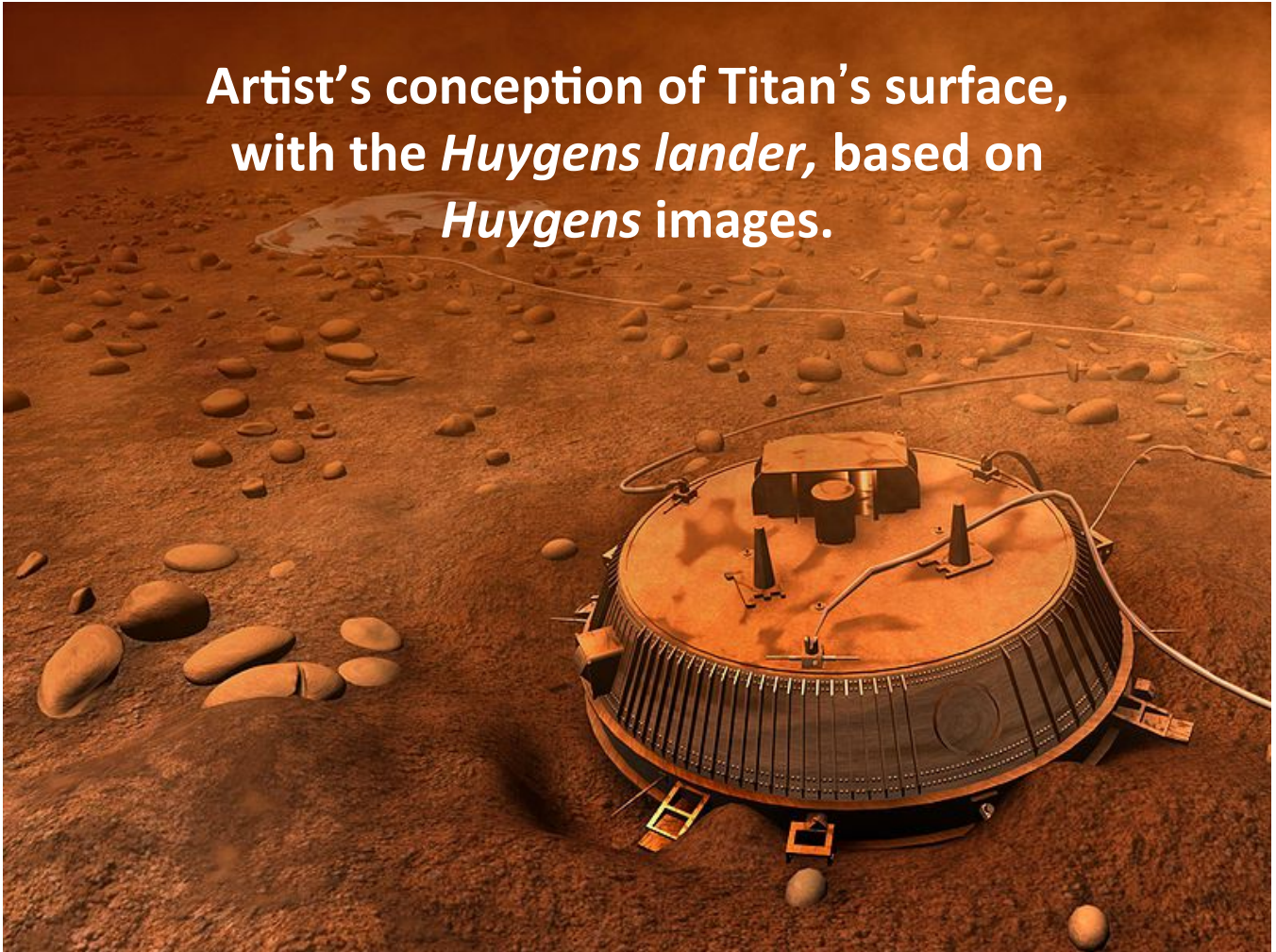
**The apparent landing site
of the *Huygens* probe on
the surface of Titan**

SLIDE 38

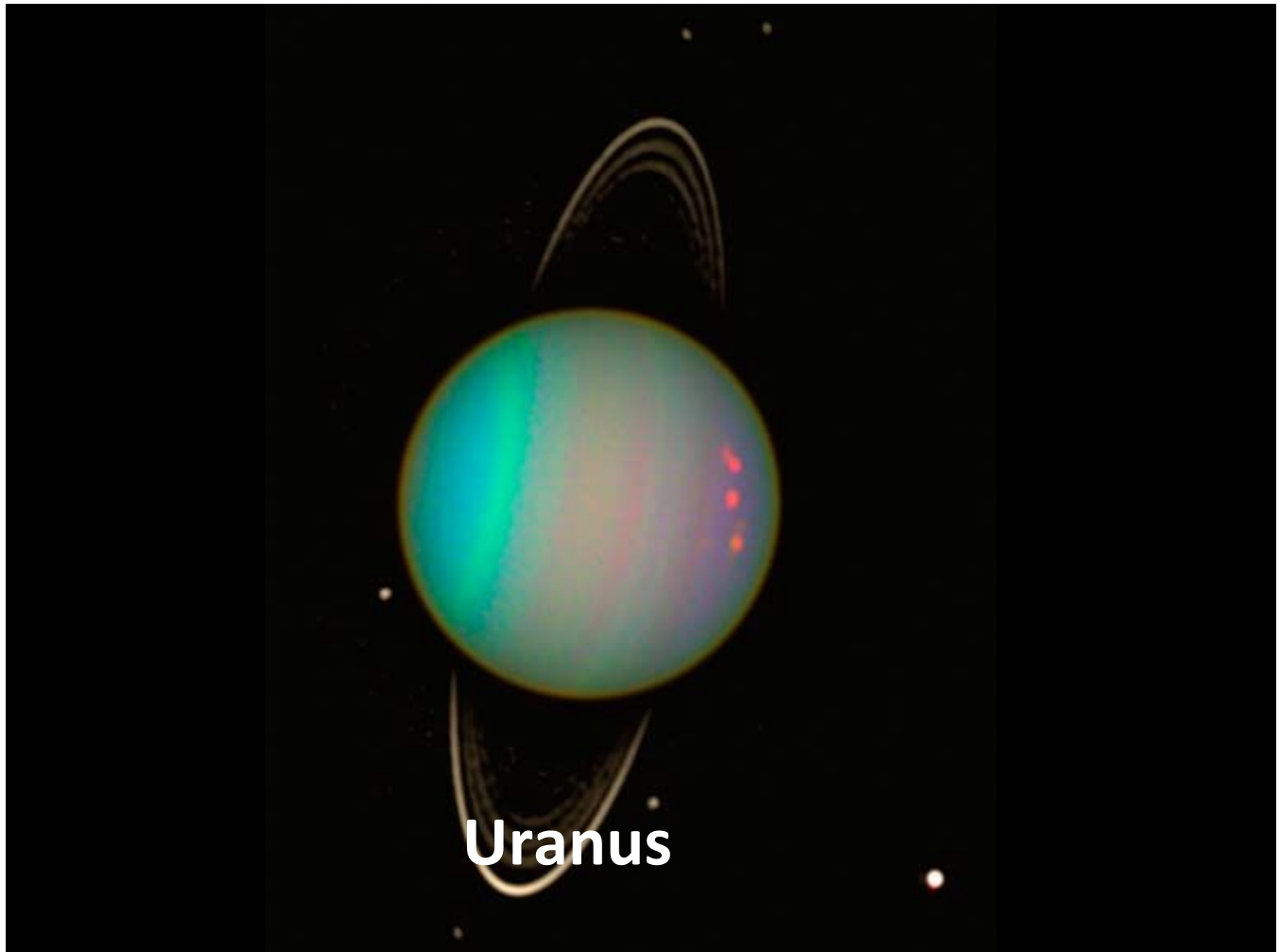


SLIDE 39

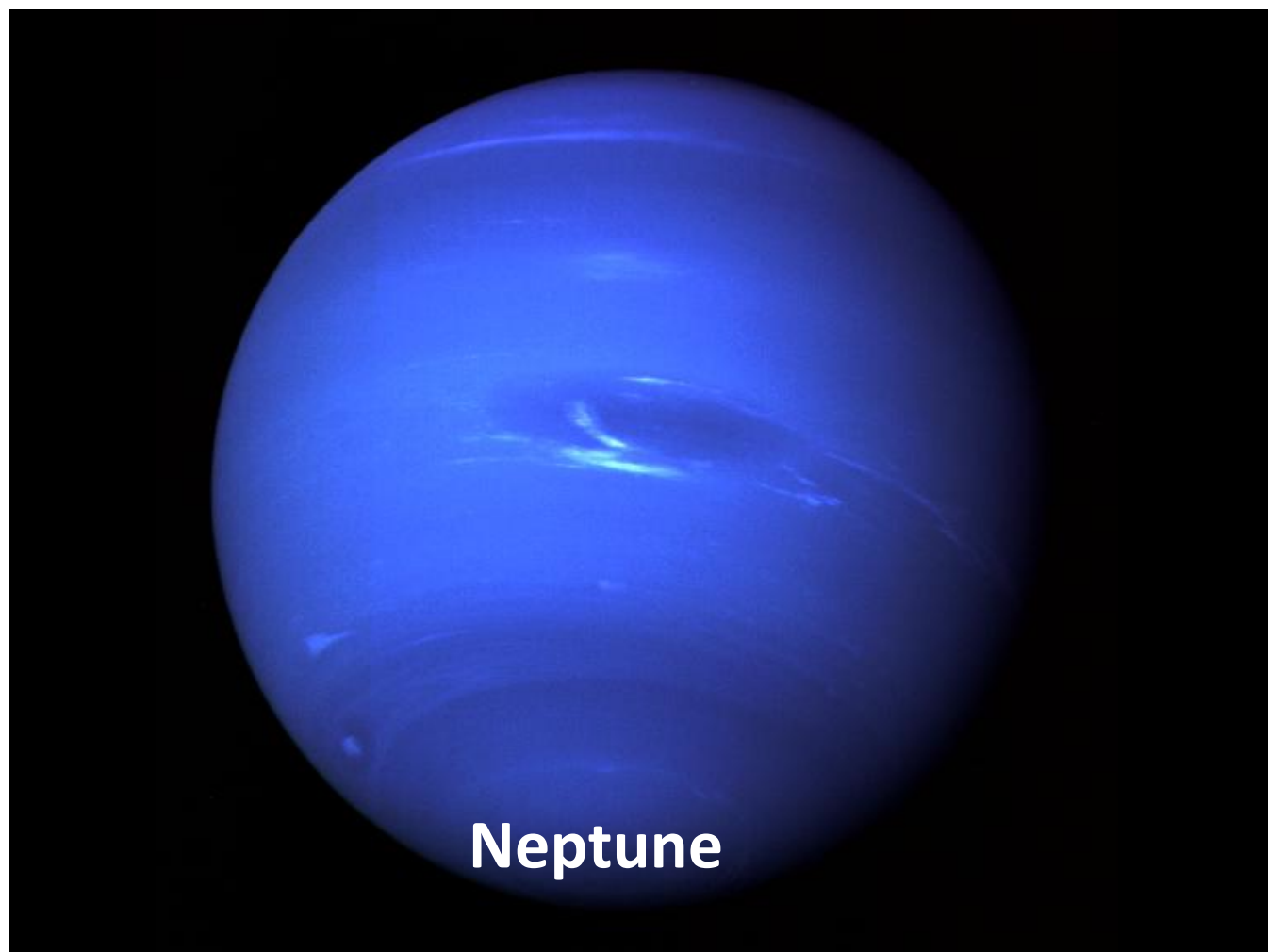
**Artist's conception of Titan's surface,
with the *Huygens* lander, based on
Huygens images.**



SLIDE 40



SLIDE 41



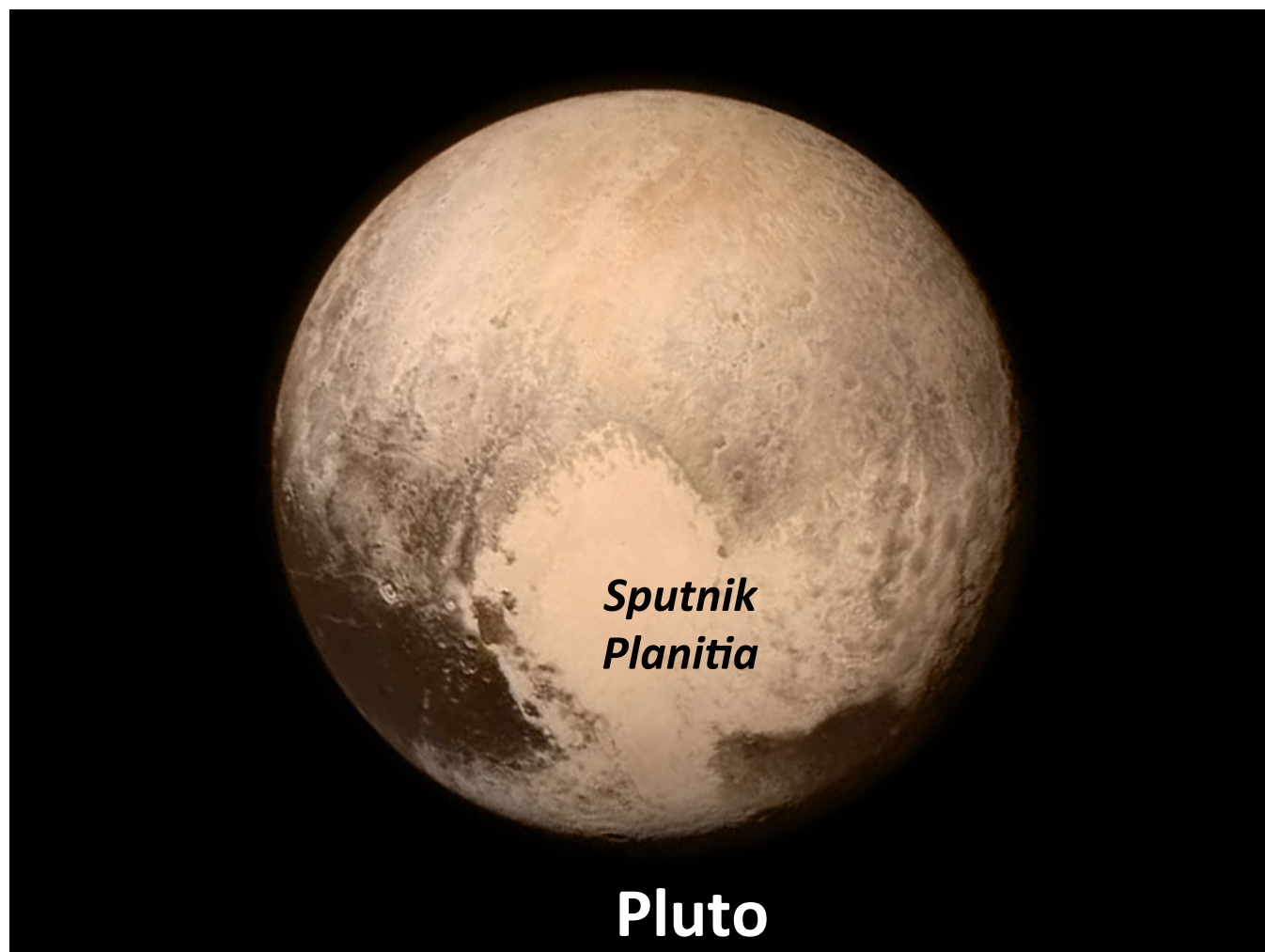
SLIDE 42



The New Horizons Spacecraft did a fly-by of Pluto in July of 2015



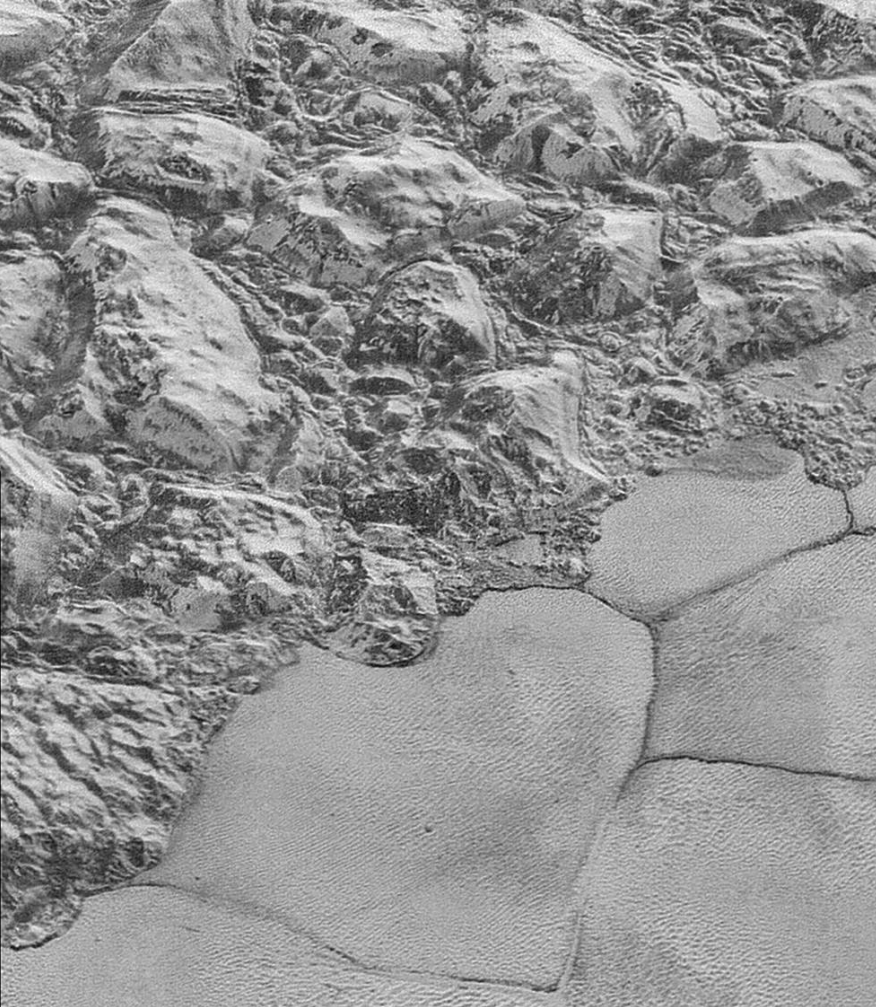
SLIDE 43



SLIDE 44



The heart-shaped nitrogen ice feature named *Sputnik Planitia* is surrounded by mountains made of water ice.



SLIDE 45