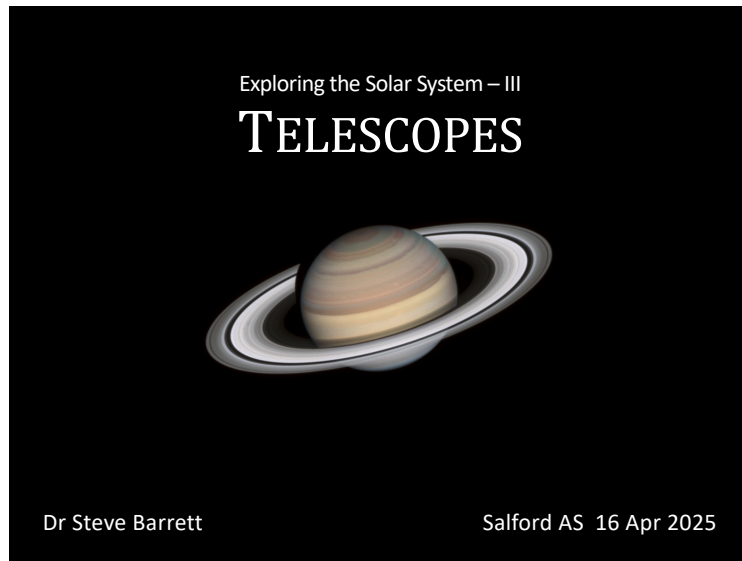


# Exploring the Solar System III – Telescopes



## Exploring the Solar System III

## Telescopes

### 400 Years of Telescopes

First Views

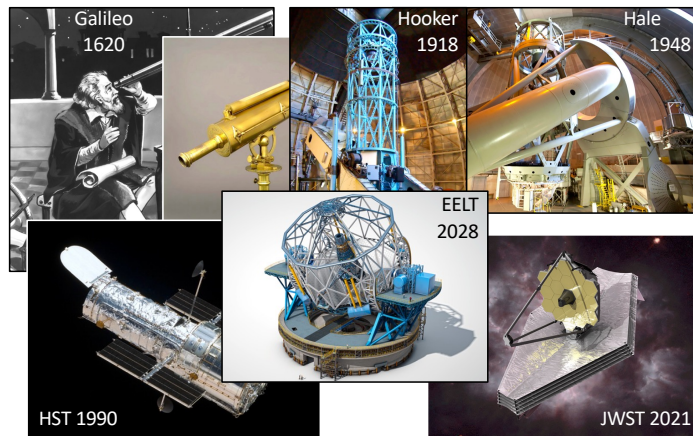
Latest Views

What Next?



2

## Keeping an Eye on the Universe



3

## Galileo and Jupiter's Moons



" ... our own eyes show us four stars which wander around Jupiter as does the Moon around the Earth "



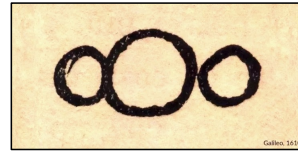
4

# Exploring the Solar System III – Telescopes

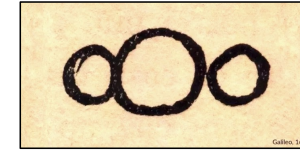
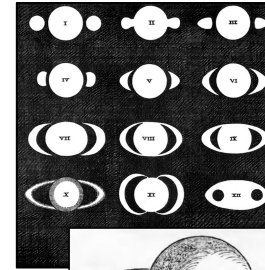
## Galileo and Saturn



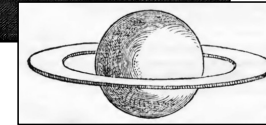
" The first sight that I had of Saturn was of three round stars ... that in the middle considerably larger than the two lateral ones "



## The Shape of Saturn



Galileo 1610



Huygens 1659

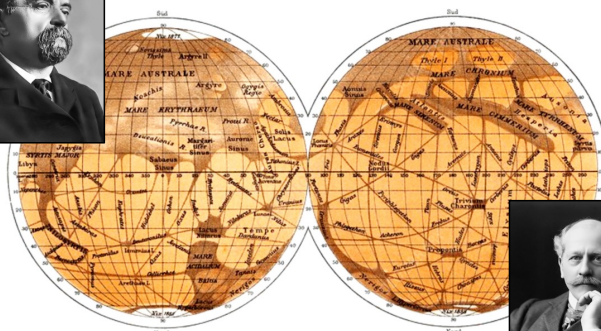


Hubble 2003

## Canals on Mars



Schiaparelli 1880s



Lowell 1890s



## Canals on Mars

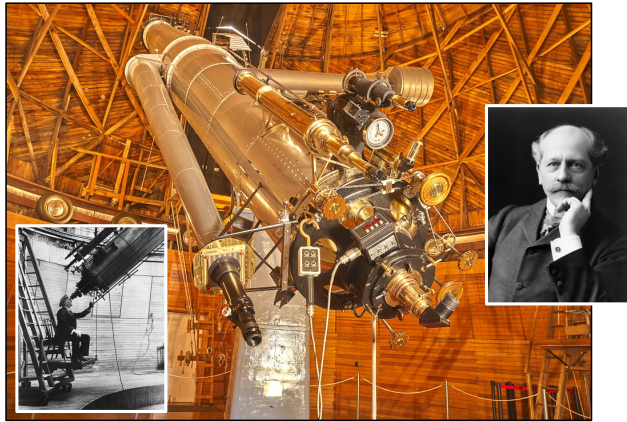


" ... there can be no doubt that living beings inhabit our neighbor world "

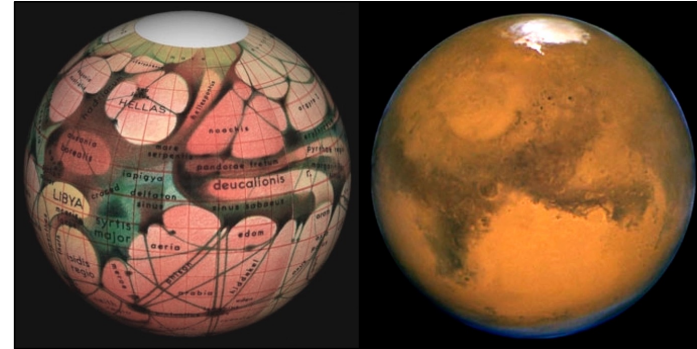
Lowell 1906

# Exploring the Solar System III – Telescopes

## Lowell Observatory



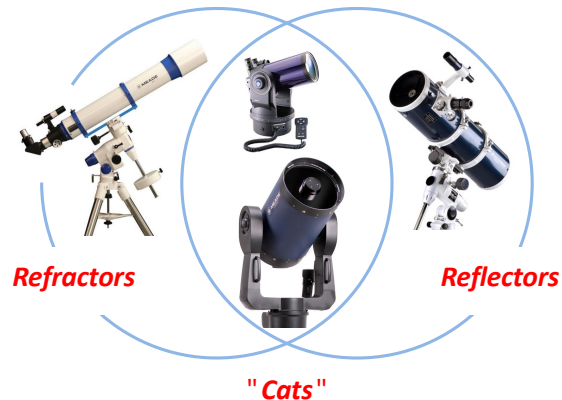
## Canals on Mars



Antoniadi 1894

Hubble 2003

## Amateur Telescopes



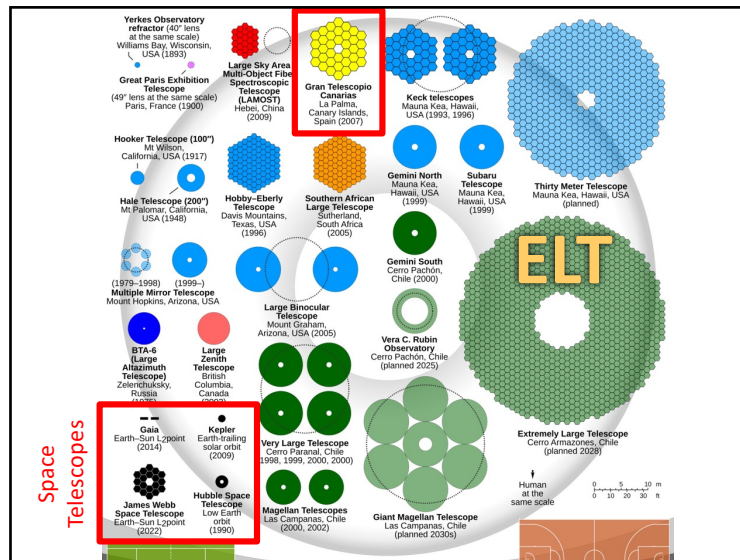
## Amateur Telescopes

Some amateur telescopes are very big and very expensive.





# Exploring the Solar System III – Telescopes

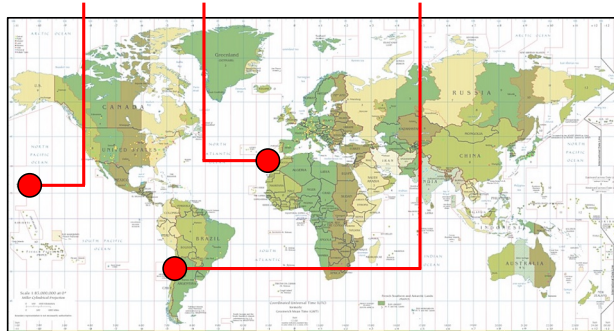


**Hale Telescope**

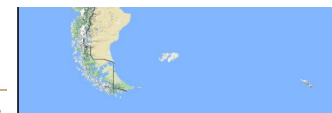


## Where Are the Big Telescopes?

The best observatory sites in the world are volcanic islands (Hawaii, La Palma, Tenerife) and the Atacama desert (Chile).

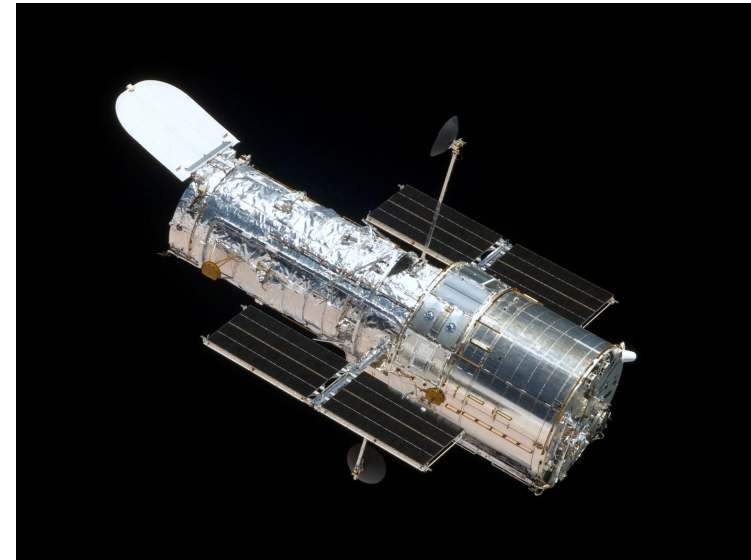


**Cerro Pachón**

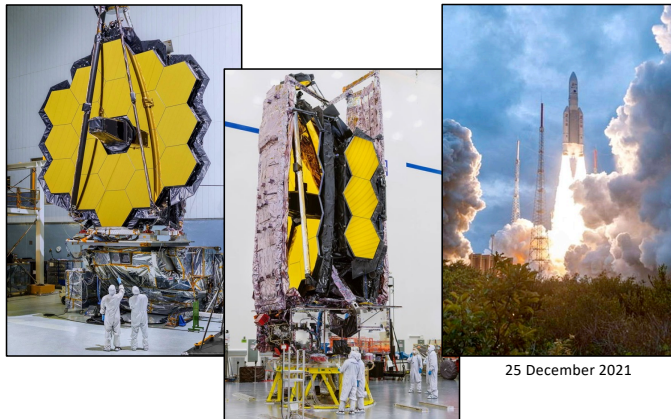


# Exploring the Solar System III – Telescopes

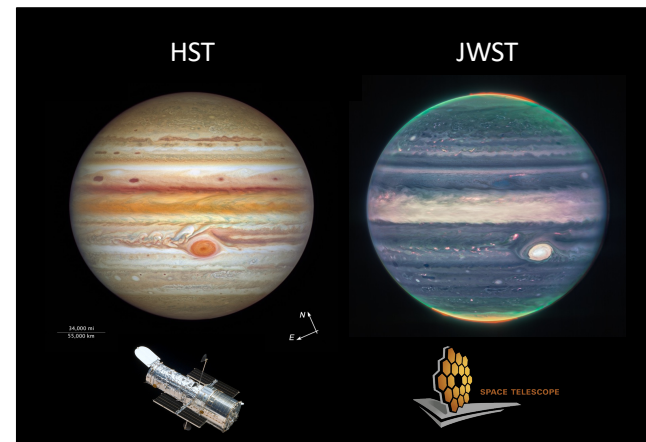
Higher Than a Mountain Top



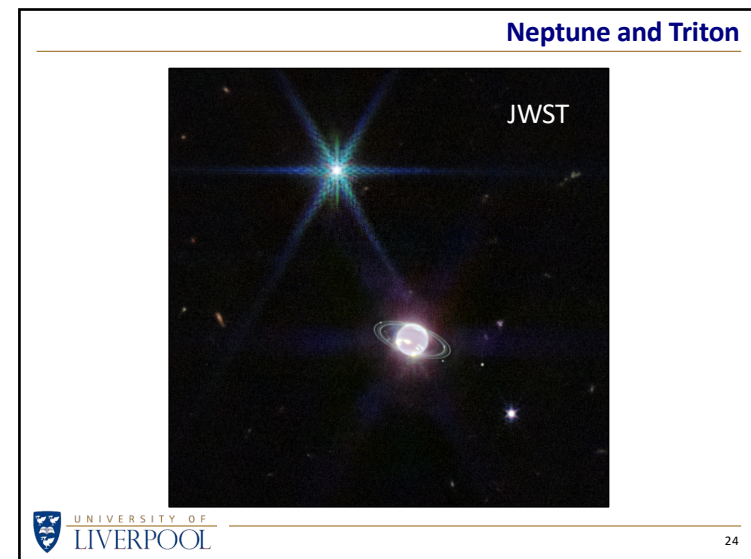
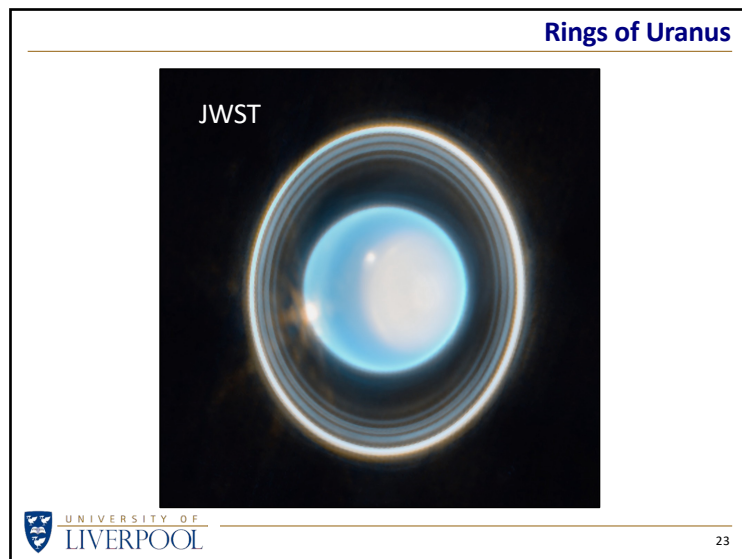
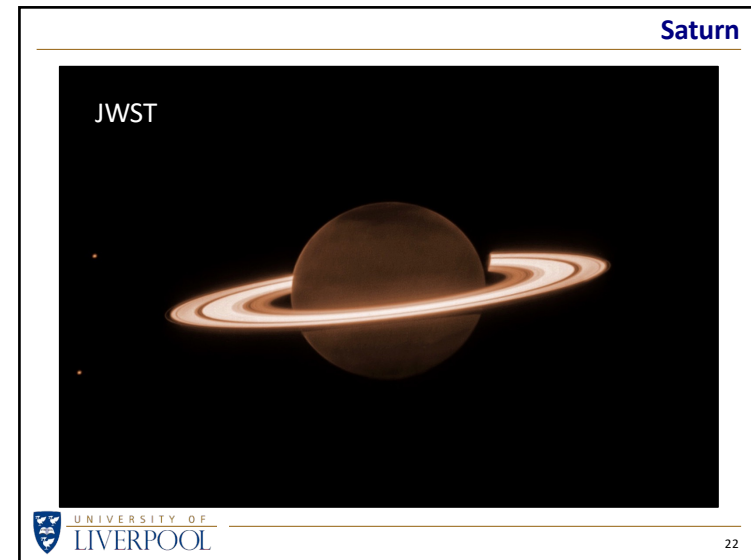
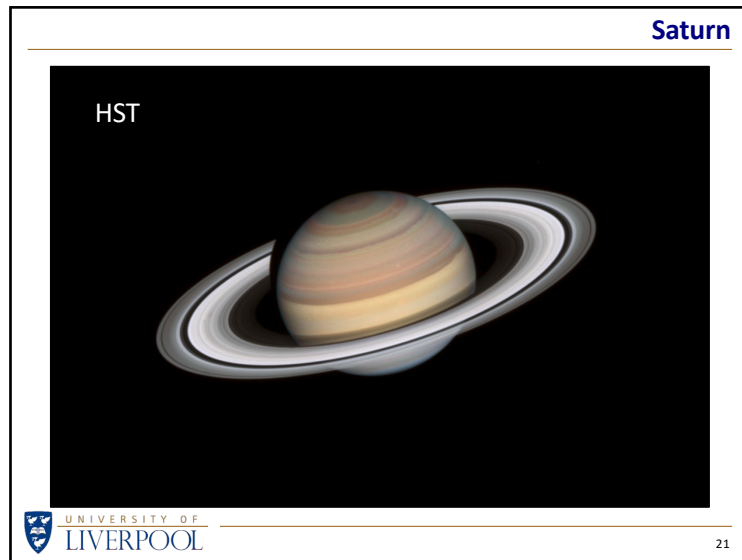
James Webb Space Telescope



Jupiter



# Exploring the Solar System III – Telescopes



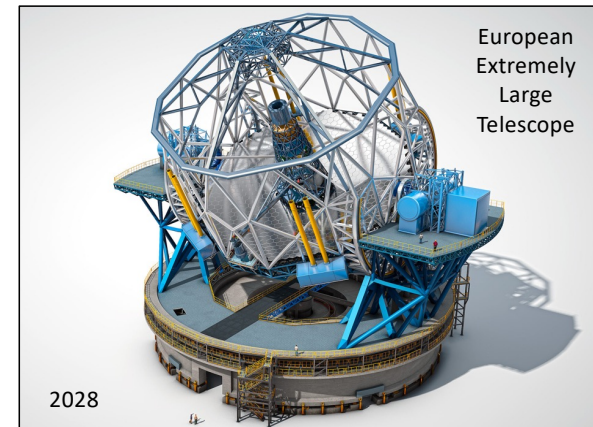


# Exploring the Solar System III – Telescopes

## Under Construction – LSST



## Under Construction – EELT



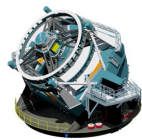
## Want To Know More?



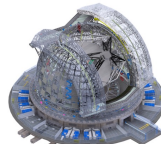
HubbleSite.org



WebbTelescope.org



LSST.org



ELT.ESO.org

Exploring the Solar System – III

## TELESCOPES



[www.liverpool.ac.uk/~sdb/Talks](http://www.liverpool.ac.uk/~sdb/Talks)

Dr Steve Barrett

Salford AS 16 Apr 2025