

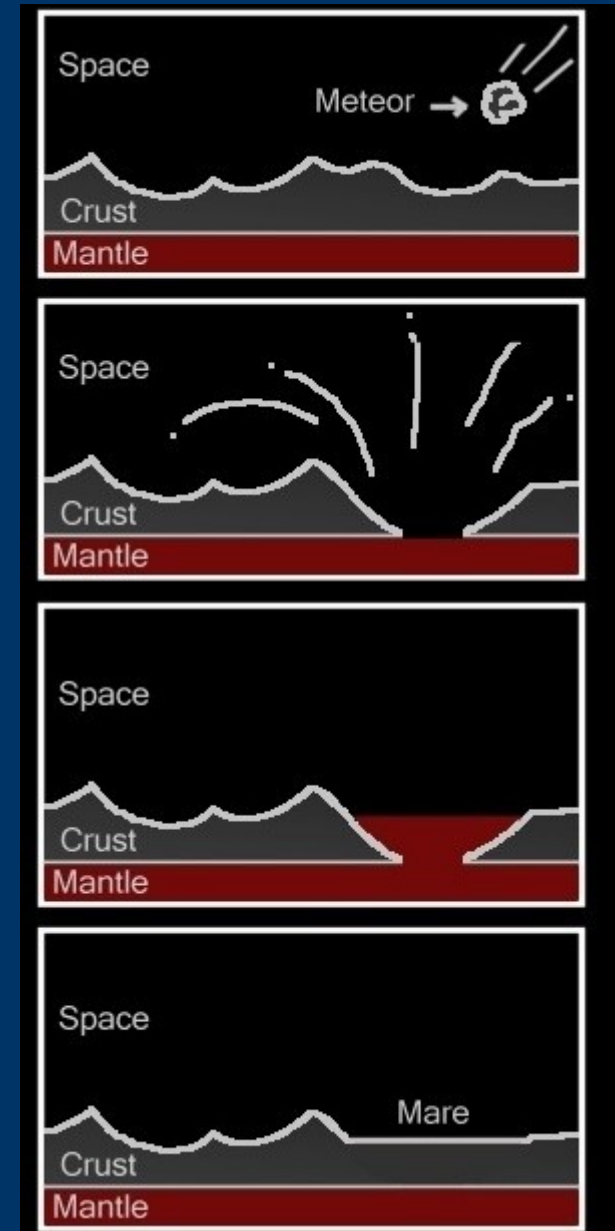
# Surface of the Moon



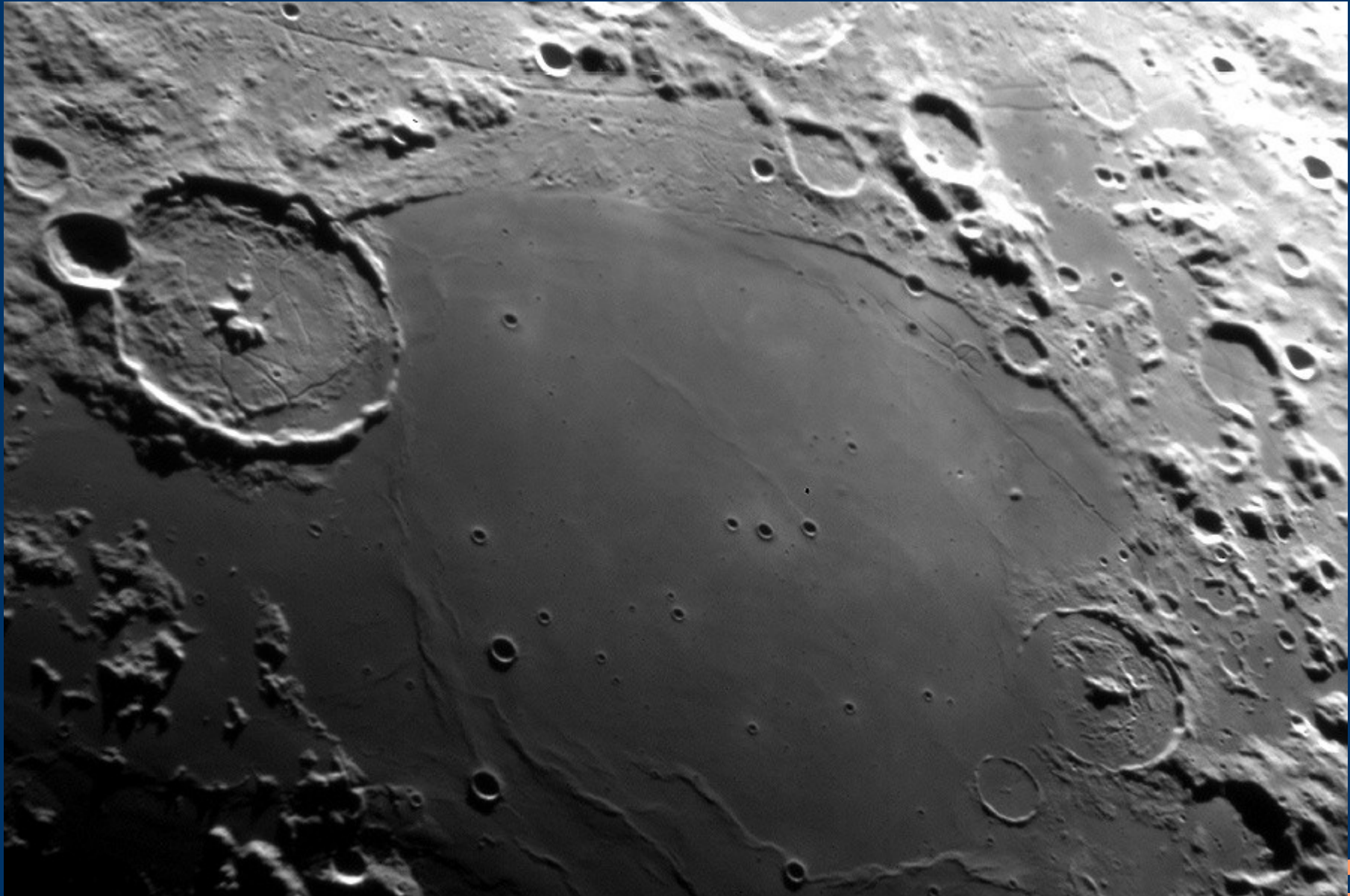


## Formation of Maria.

- \* First, a meteor impacts the surface of the moon.
- \* The crater is deep enough to make it all the way through the crust and into the mantle.
- \* Hot lava rushes in from the mantle and floods the impact crater.
- \* The lava cools to make a smooth, craterless surface.



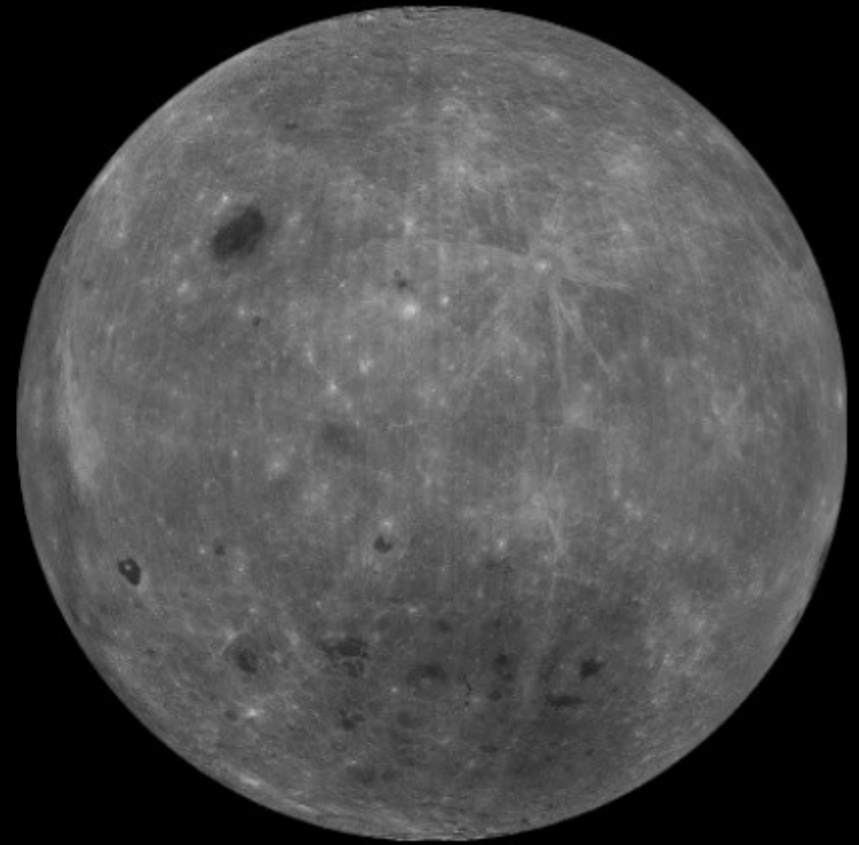
# *Example of paving in Maria*



# *Near Side vs Far Side*

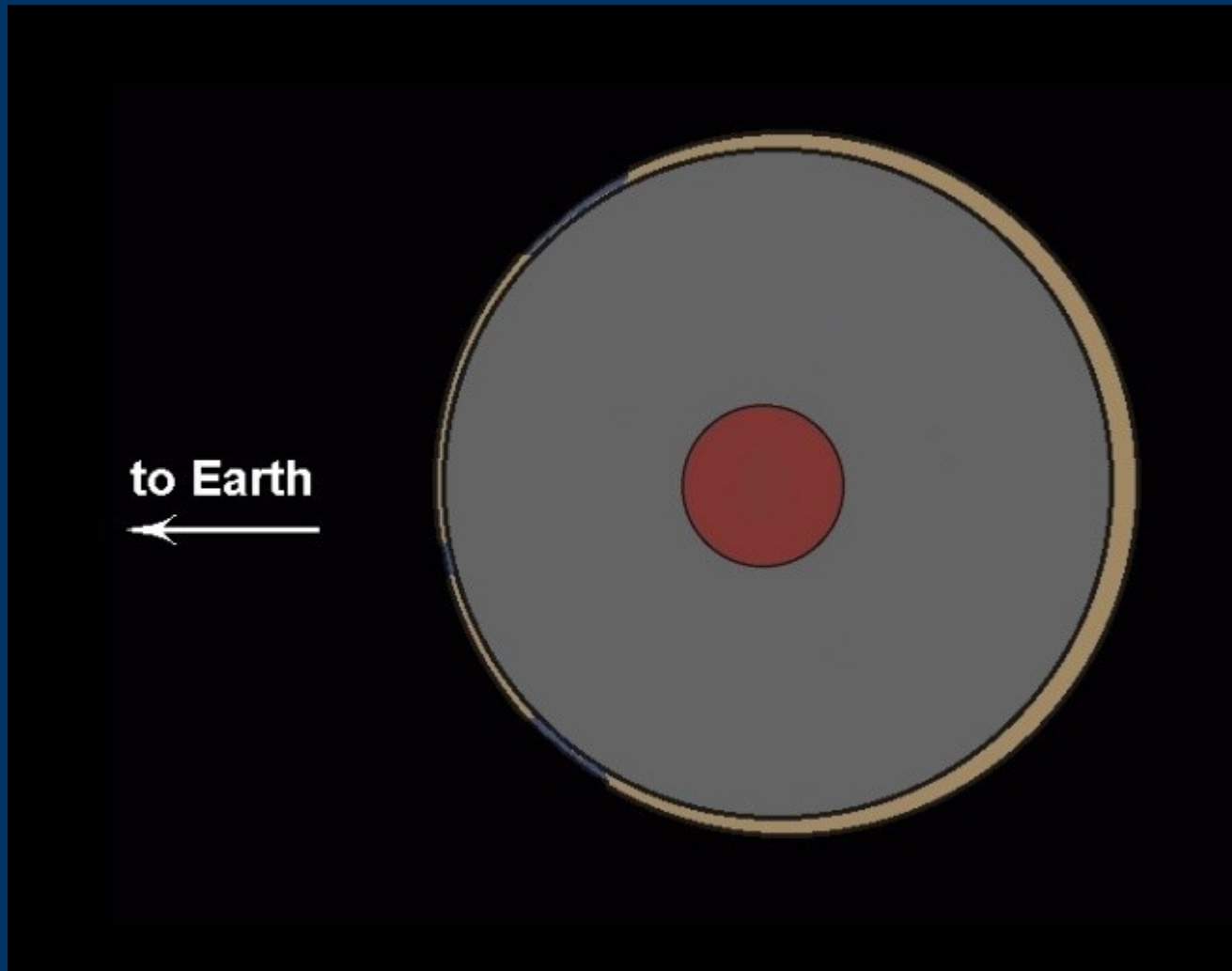


Near Side



Far Side

# *Crust thickness*



# ***Moon Formation theories***

## **Sister Theory:**

**The Moon formed right alongside Earth.**

**Problem: Where's all the Moon's iron? Composition lacking.**

## **Fission Theory:**

**Earth was spinning so fast the Moon split off.**

**Problem: Why is the Moon's orbit inclined to Earth's rotation?**

## **Capture Theory:**

**Earth's gravitational field captured the Moon.**

**Problem: Where did the orbital energy go? Also, rocks are too similar.**

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Best theory so far:

## The Giant Impact Theory

Something roughly the size of Mars hit us in an oblong collision, spewing mostly mantle into space around Earth.

