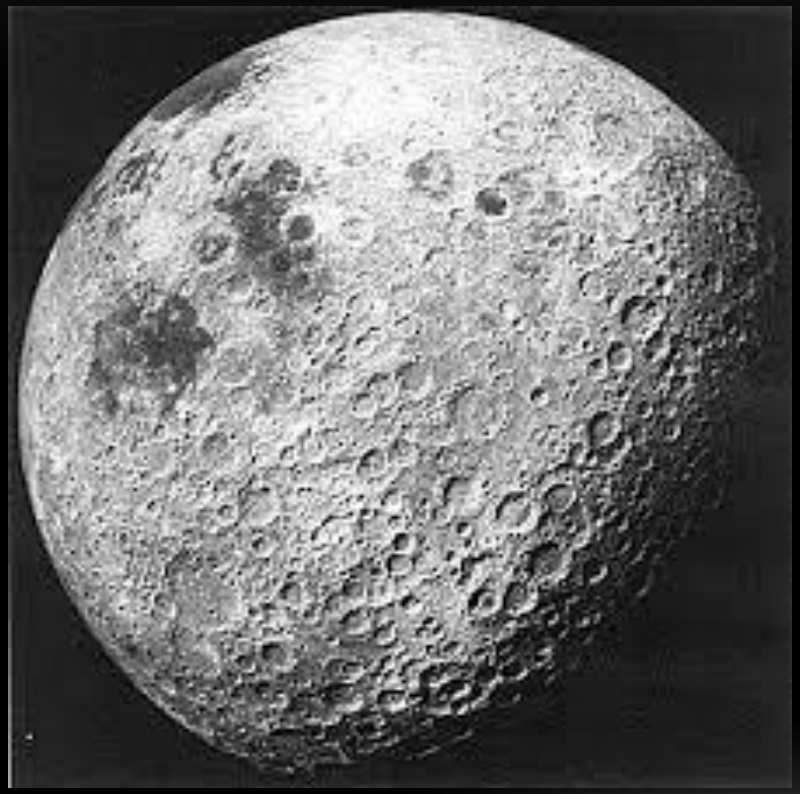
APOLLO LANDING SITES

WHAT WE LEARN FROM MOON ROCKS

- Look back in time:
  - Planet formation
  - Early melting
  - Meteorite bombardment
  - Solar activity

  Not possible from Earth because geological activity erases most clues (weather, erosion, volcanoes, tectonic plates)

THE HIGHLANDS

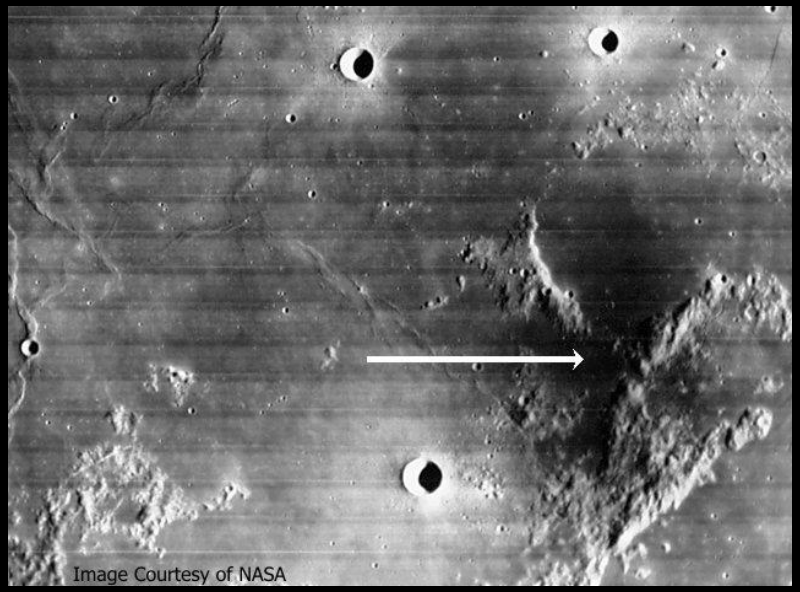


- Lightly colored
- Heavily cratered by meteorite impacts
- Dominate far side

MARIA

- Dark and smooth
- Latin for ‘seas’ – no water on Moon
- Formed when lava flows filled depressions
- Younger than highlands
- Igneous rock - basalt
- More present on near side
- Mystery: why are there more craters on the far side?

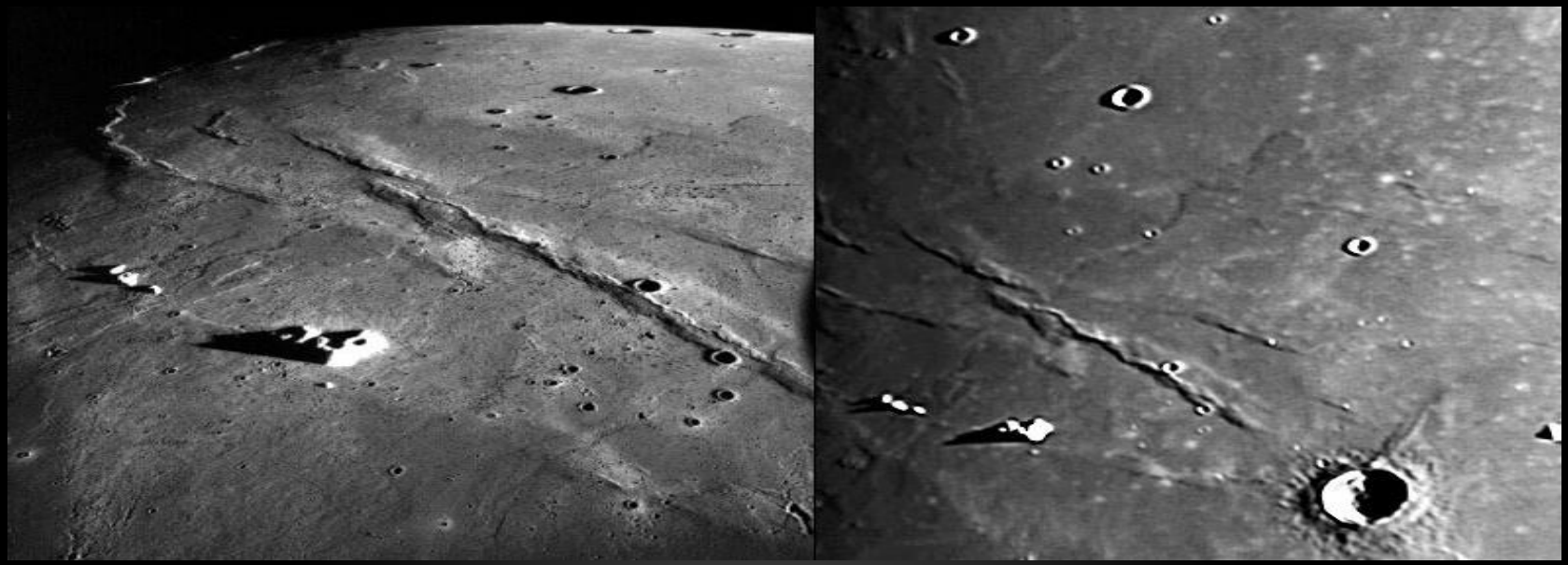
DARK MANTLE DEPOSITS



- Formed by explosive volcanic eruptions from cinder cones – similar to Earth
- ‘orange soil’ – tiny glass droplets found on Earth and Moon around eruptions

WHERE DID THE LAVA COME FROM?

- No visible volcanoes
- Some from cinder cones or edge of craters
- Most sources are unknown



REGOLITH


NASA-Apollo 16 photograph.

- Powdery surface of the Moon due to constant ‘rain’ of projectiles
- Contains a nice mixture of rock types but hides the bedrock geology
- Sometimes contain agglutinates – mineral fragments bound together by impact glass