



**LUNAR
MADNESS**

&

**PLANETARY
THRILLS**

Observing the 12 day Moon

&

6 Targets for Moonstruck

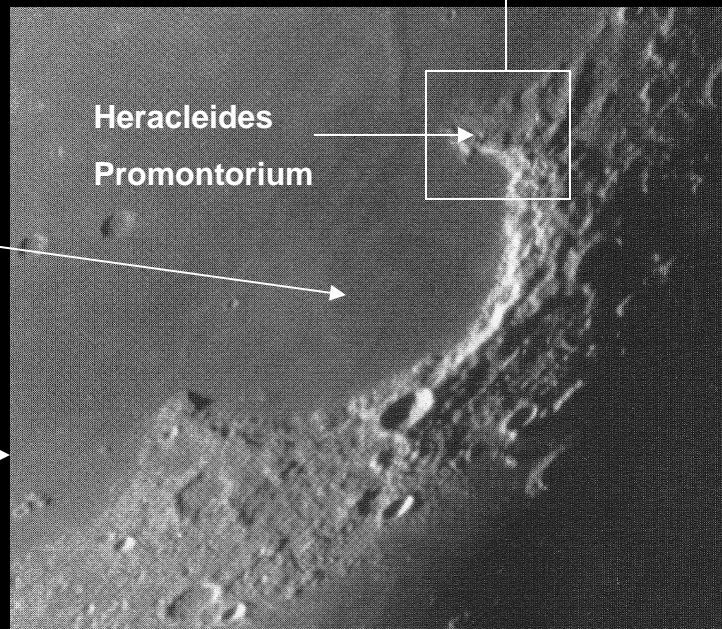
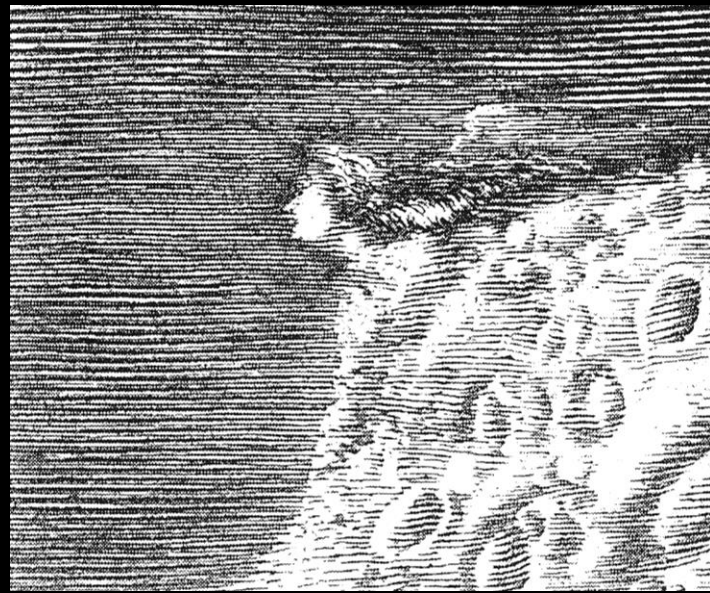
(10 ½ day Moon)

Richard Orr

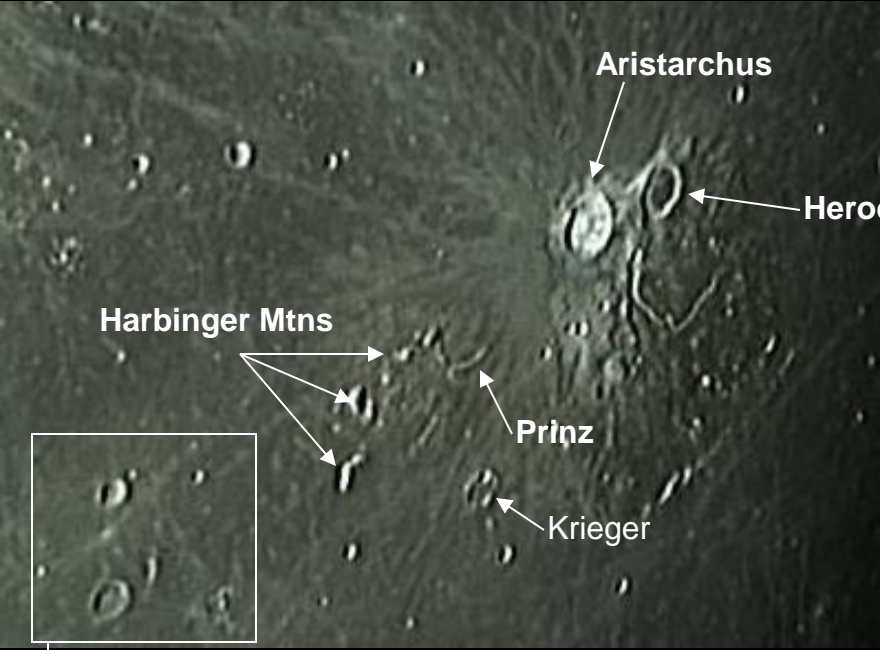
October 21, 2004



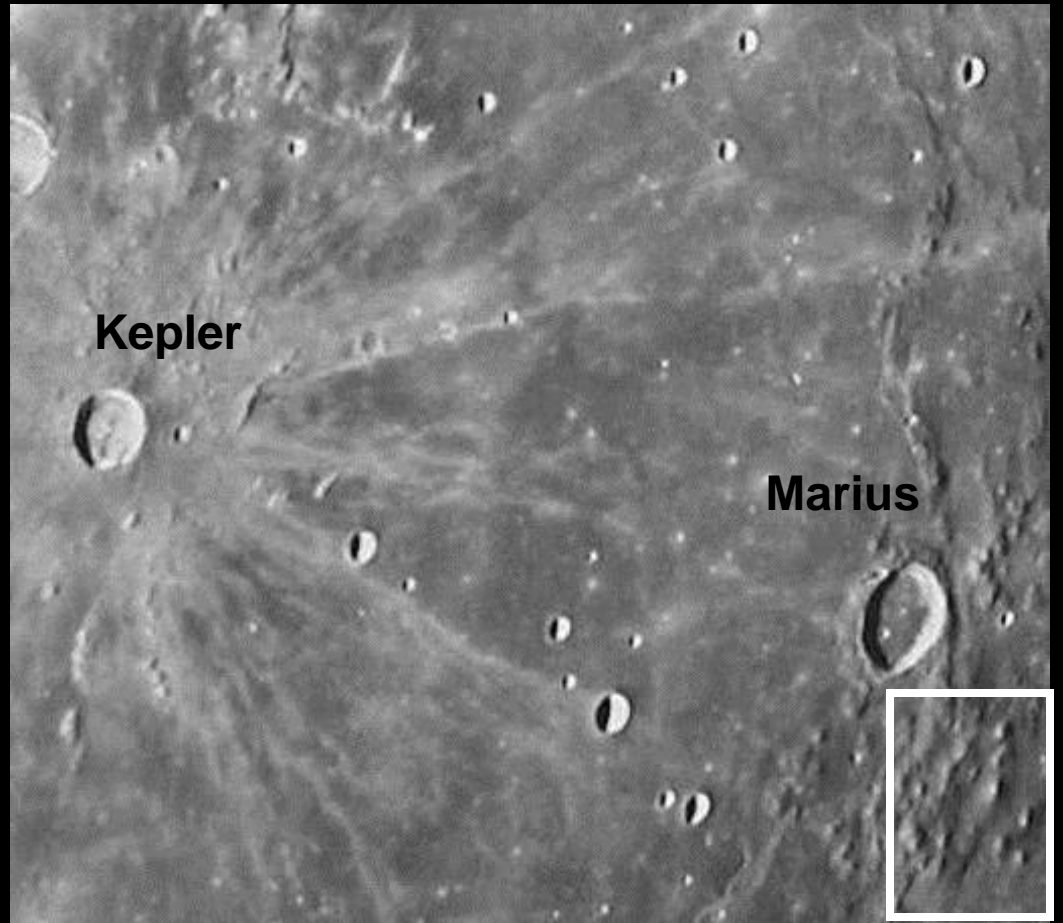
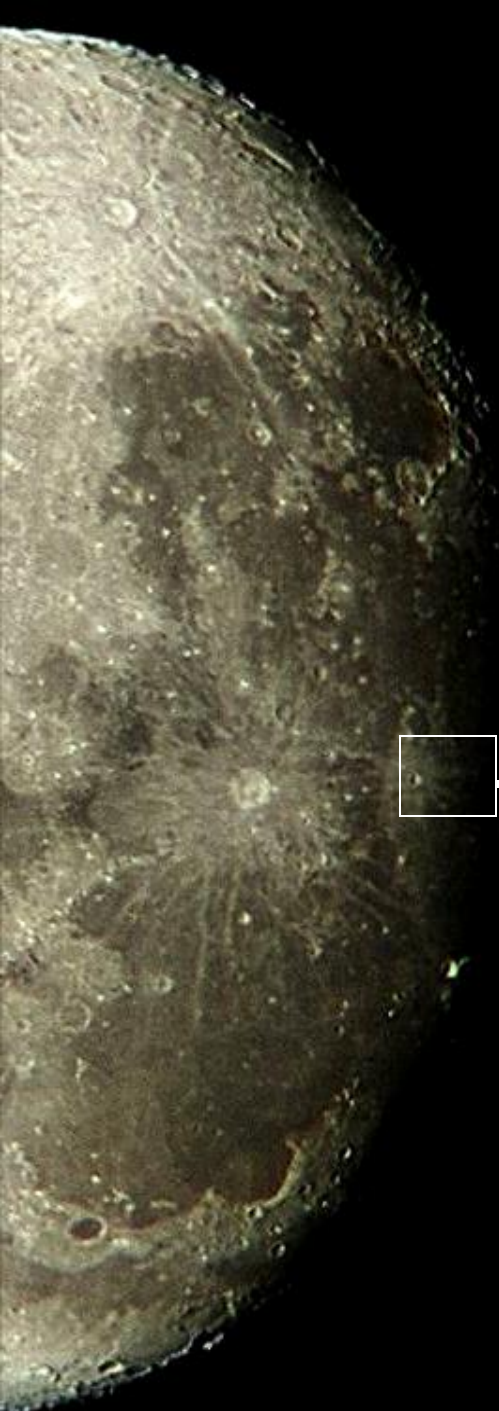
Sinus Iridum
Bay of Rainbow



Heracleides
Promontorium



Marius Hills



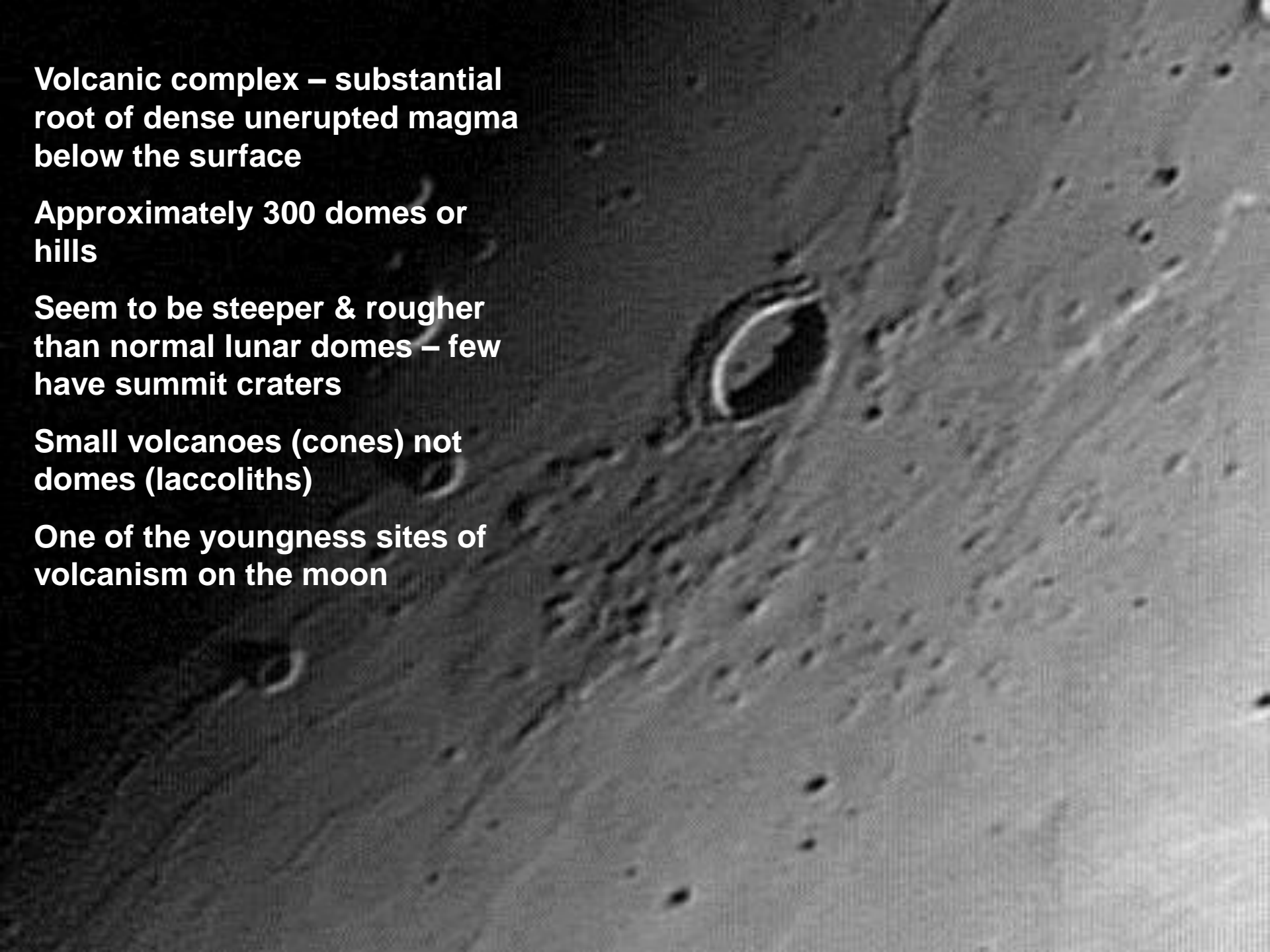
**Volcanic complex – substantial
root of dense unerupted magma
below the surface**

**Approximately 300 domes or
hills**

**Seem to be steeper & rougher
than normal lunar domes – few
have summit craters**

**Small volcanoes (cones) not
domes (laccoliths)**

**One of the youngest sites of
volcanism on the moon**



HOME WORK

Where the moon is smooth is the terminator a distinct sharp line as seen through your telescope?

- 1) No atmosphere – the sun is as bright on the horizon as overhead
- 2) But at sunrise/sunset only part of the sun is above the horizon so there is less light at different times; but can this difference be picked up by your telescope?

Hint – the effect would be greatest where the terminator crosses the seas and less pronounced in the highlands

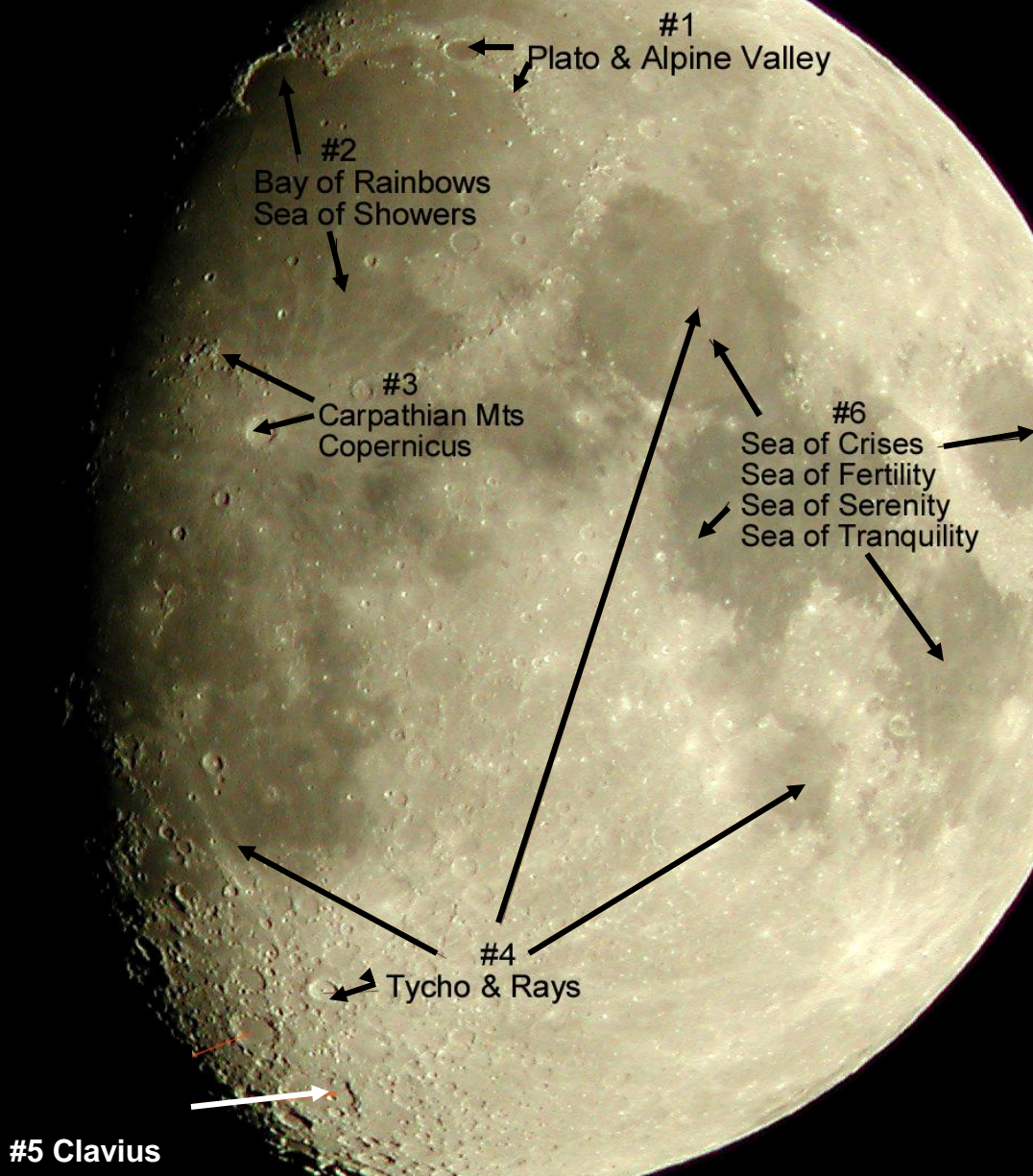


MOON-STRUCK

October 23, 2004

- Ten and half day old moon
- Volunteers needed for 6 viewing stations
- Four telescopes at medium to high power (Stations 1, 2, 3, 5)
- Two telescopes at low to medium power (whole moon view) (Stations 4 & 6)

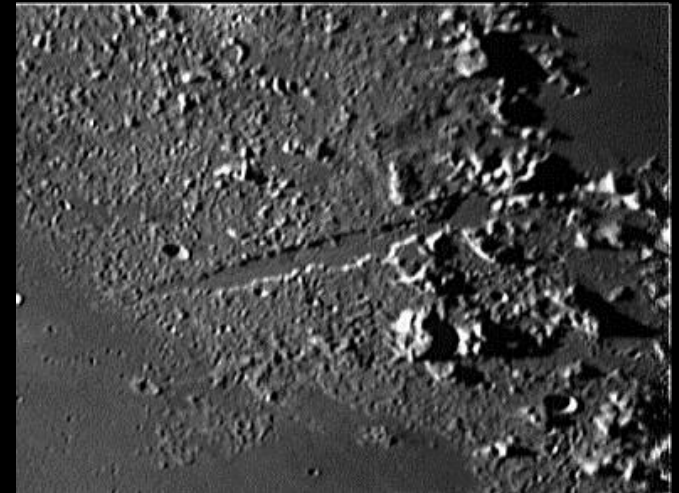




STATION #1: Plato and the Alpine Valley



Alpine Valley – artificial looking
Cuts through the heart of the Alps
110 miles long -1 to 13 miles wide
It is a “Graben” filled with basalt
not a “gouge”

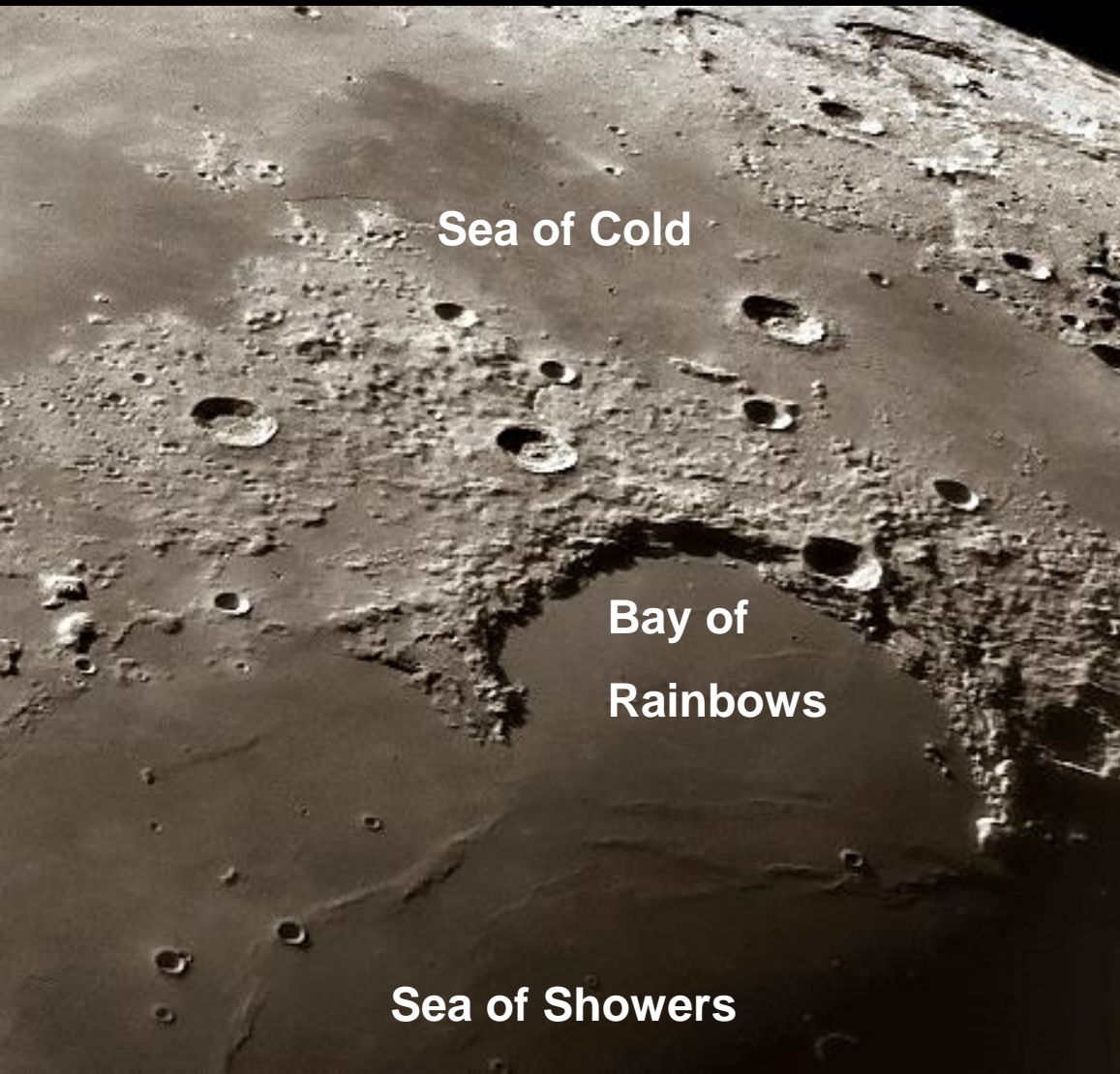


Plato – 64 miles by 67 miles
Rim rises 8,000 feet from floor
Dark Mare basalt layer on floor
Plato formed after the Imbrium basin
impact but before the Imbrium basalt
filled the basin making it the sea of
showers – central peak is buried



STATION #2

Bay of Rainbows & Sea of Showers



Sea of Cold

Bay of
Rainbows

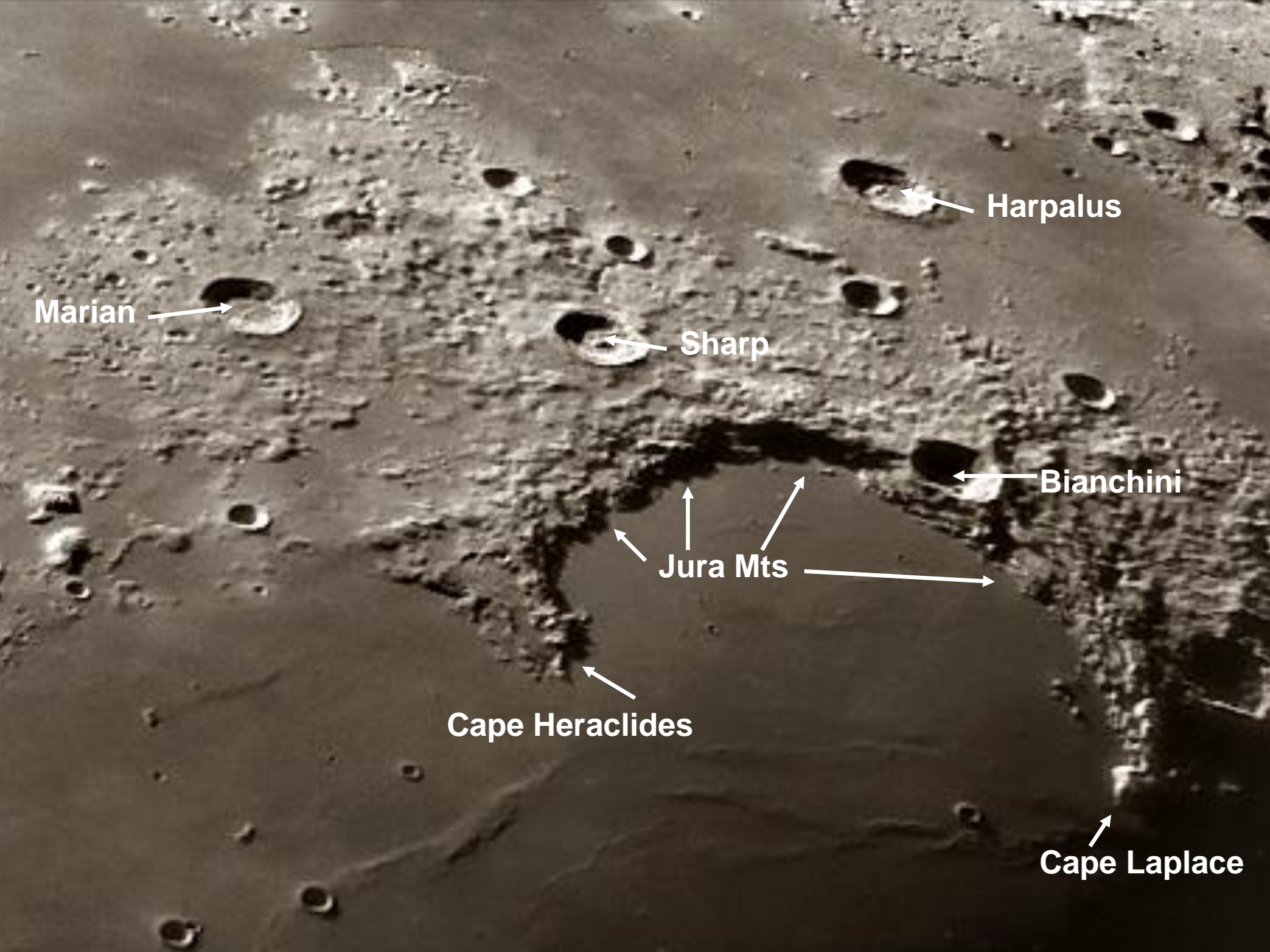
Sea of Showers

Mare Imbrium = Sea of Showers

Elliptical plain 670 by 750 miles

Sinus Iridum = Bay of Rainbows

Circular crater 160 miles across



Marian

Harpalus

Sharp

Bianchini

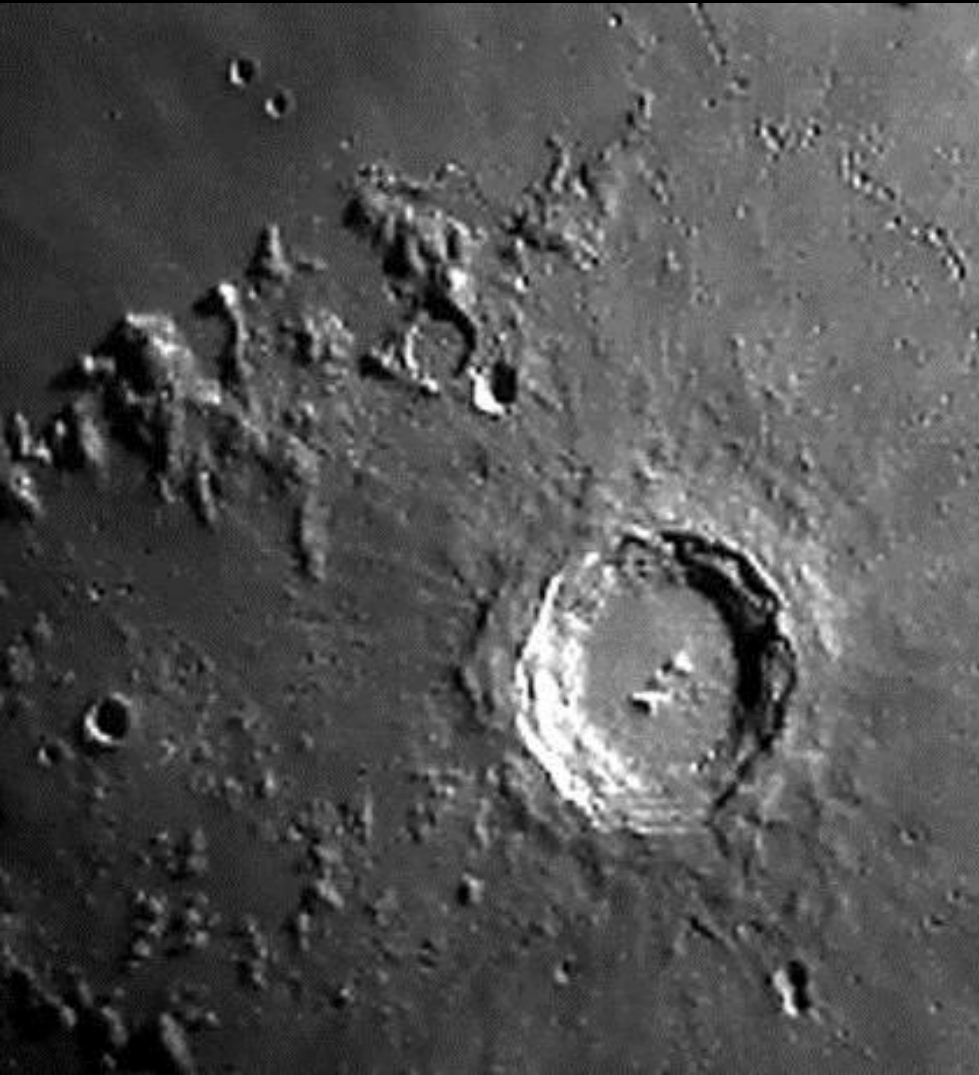
Jura Mts

Cape Heraclides

Cape Laplace

STATION #3

Copernicus (the young) & the Carpathian Mts (the old)



Copernicus

60 miles across – 12,600 ft rim

Central Peaks – 2,000 ft

Conspicuous rays & secondary
craters & terraced walls

Very Young – 1 billion years

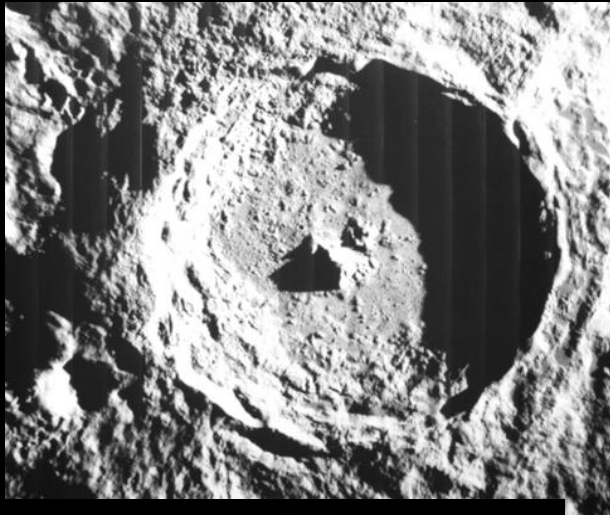
Carpathian Mts

Formed from the Imbrian
basin impact

Very old 3.9 – 4.3 billion years

STATION #4

Tycho and its Rays



56 miles across – rim 13,800 ft

Central Peak 5,200 ft

Youngest of the Prominent Craters

500 million years old

When moon is full Tycho is surrounded by a dusky ring (nimbus)



Rays are feather-like splashes of crushed rock derived chiefly from the impact of individual large fragments or clusters of fragments

STATION #5

Clavius



132 miles by 152 miles

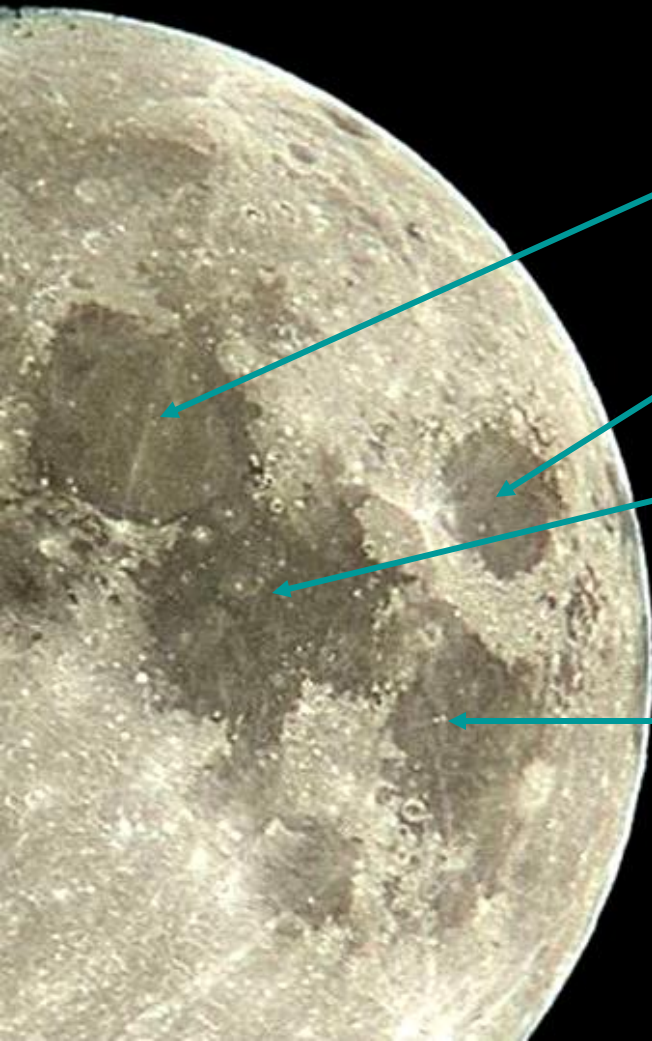
One of the largest walled plains (craters too big to have rebound peaks) – so large that the curvature of the moon makes the center higher than the rim – at sunrise the light hits the floor of the crater before the edges.

Very old

Note inter arch of descending sized craters

STATION #6

The Seas of Crises, Fertility, Tranquility & Serenity



Mare Serenitatis = Sea of Serenity

Mare Crisium = Sea of Crises

Mare Tranquillitatis = Sea of Tranquility

Mare Fecunditatis = Sea of Fertility

THANKS FOR COMING

Old moon in new moon's arms

2 days 17 hours



New moon in old moon's arms

28 days 2 hours

