

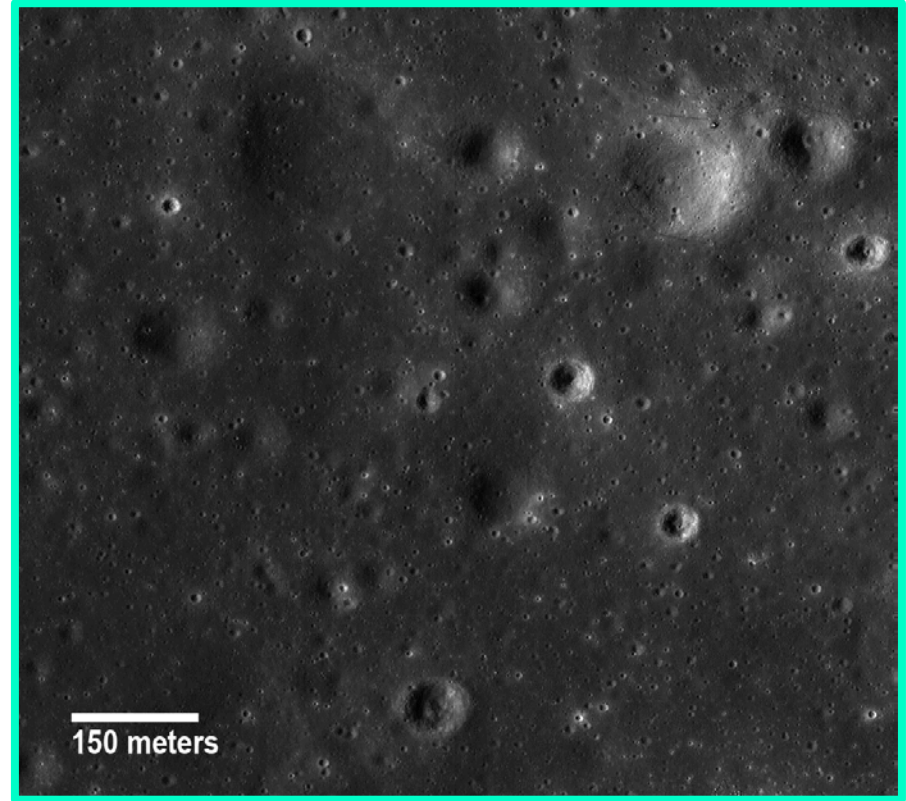
Moon 101

Joselin, Dante, Bryley, and Brad
South Sevier High School
Monroe, Utah

The geologic history of the Moon's surface

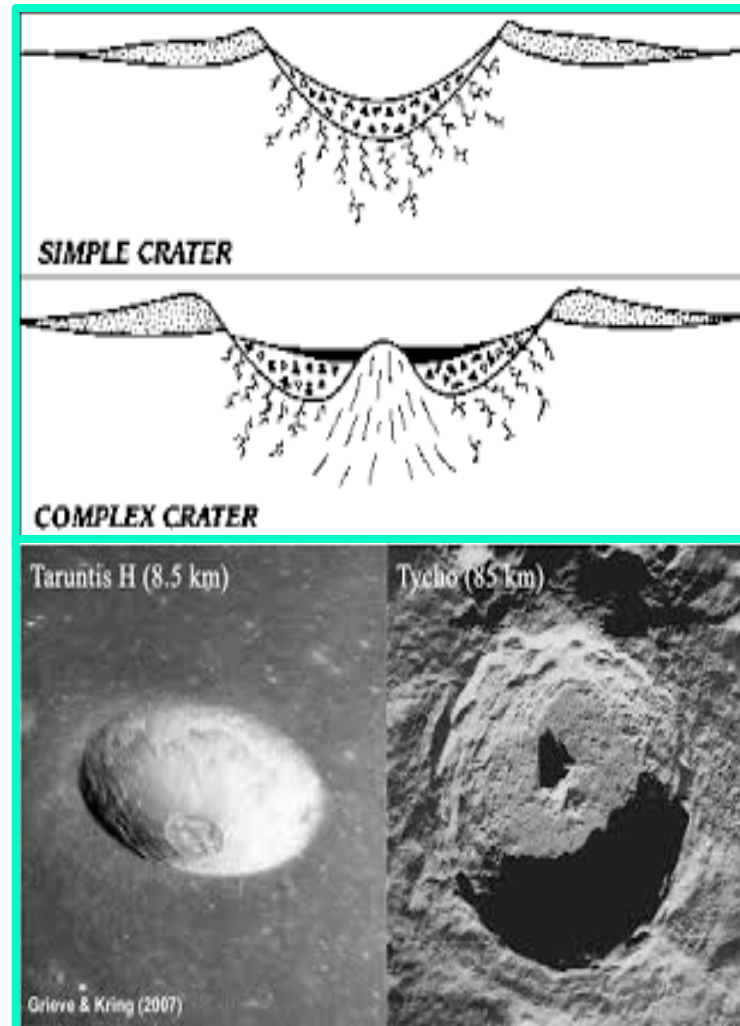
Image 1

This is an image from one of the Ranger missions. You can see the dark circles all across the image. Those are impact craters.



Impact Craters

- Simple and complex craters based on morphology
- Simple are usually smaller
- Complex craters have a bump in the middle



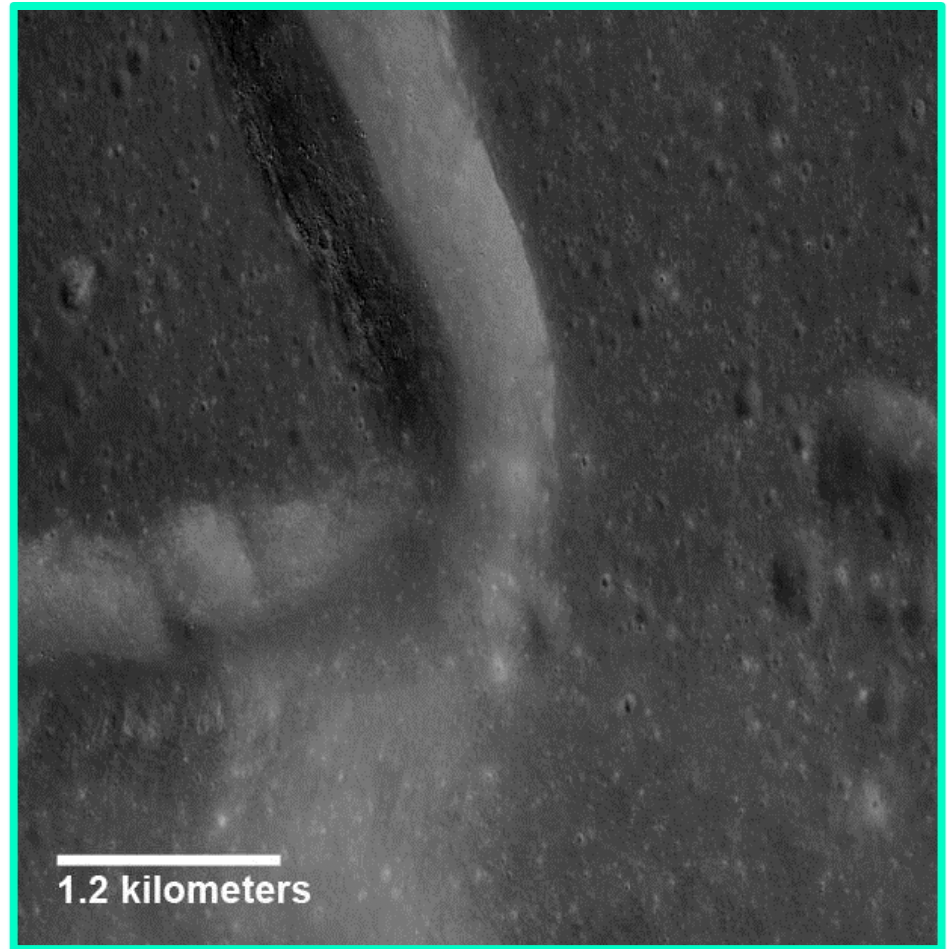
The Ranger Missions

- First mission to land on the moon
- High quality pictures
- Ranger 7,8,9 were successful
- Images were 1000 times better



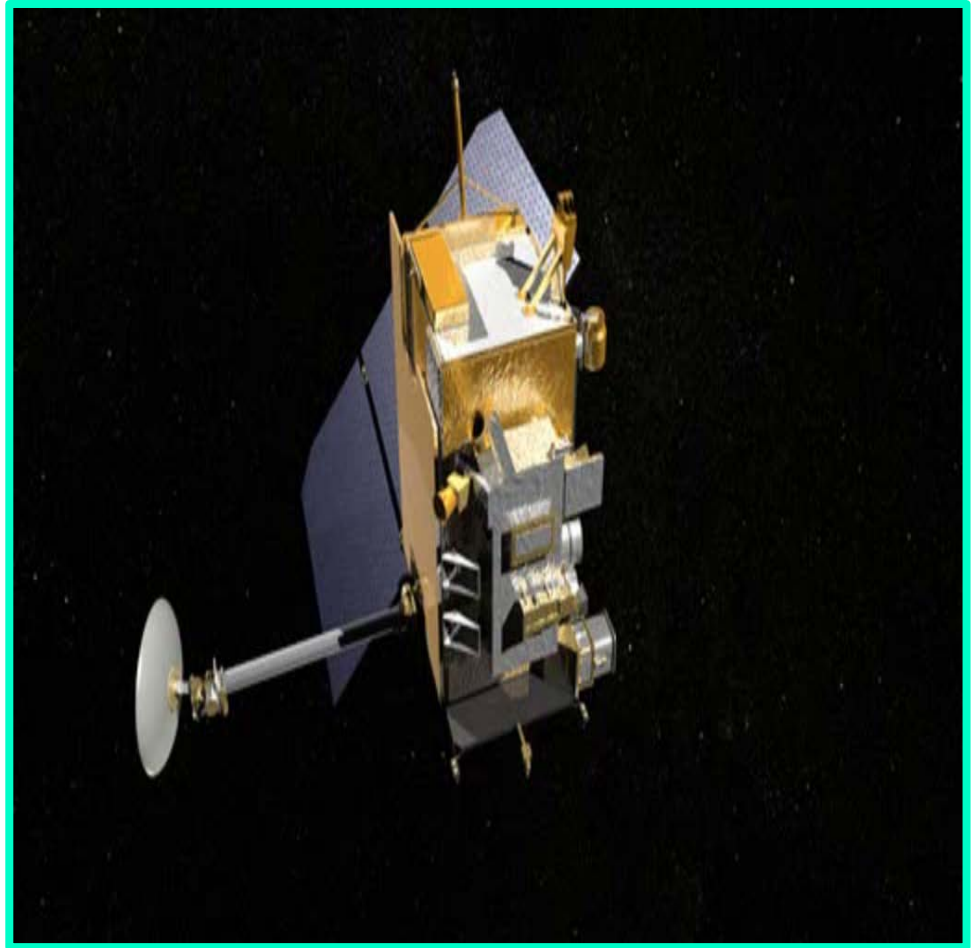
Image 2

This rilles is from the Lunar Reconnaissance Orbiter Mission. The straight and arcuate rilles are more similar to each other than sinuous.



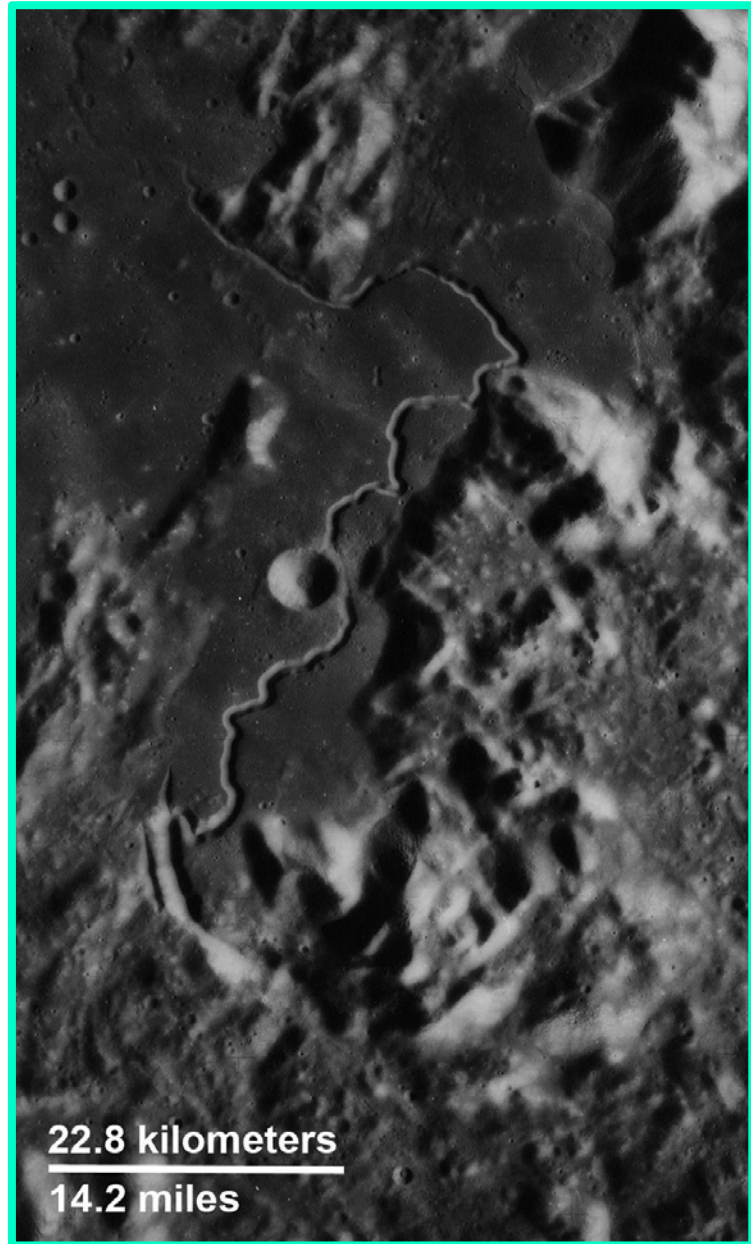
Lunar Reconnaissance Orbiter Mission

- The LRO has many different instruments that it uses
- Low polar orbit
- Collect information about the moon and its environment



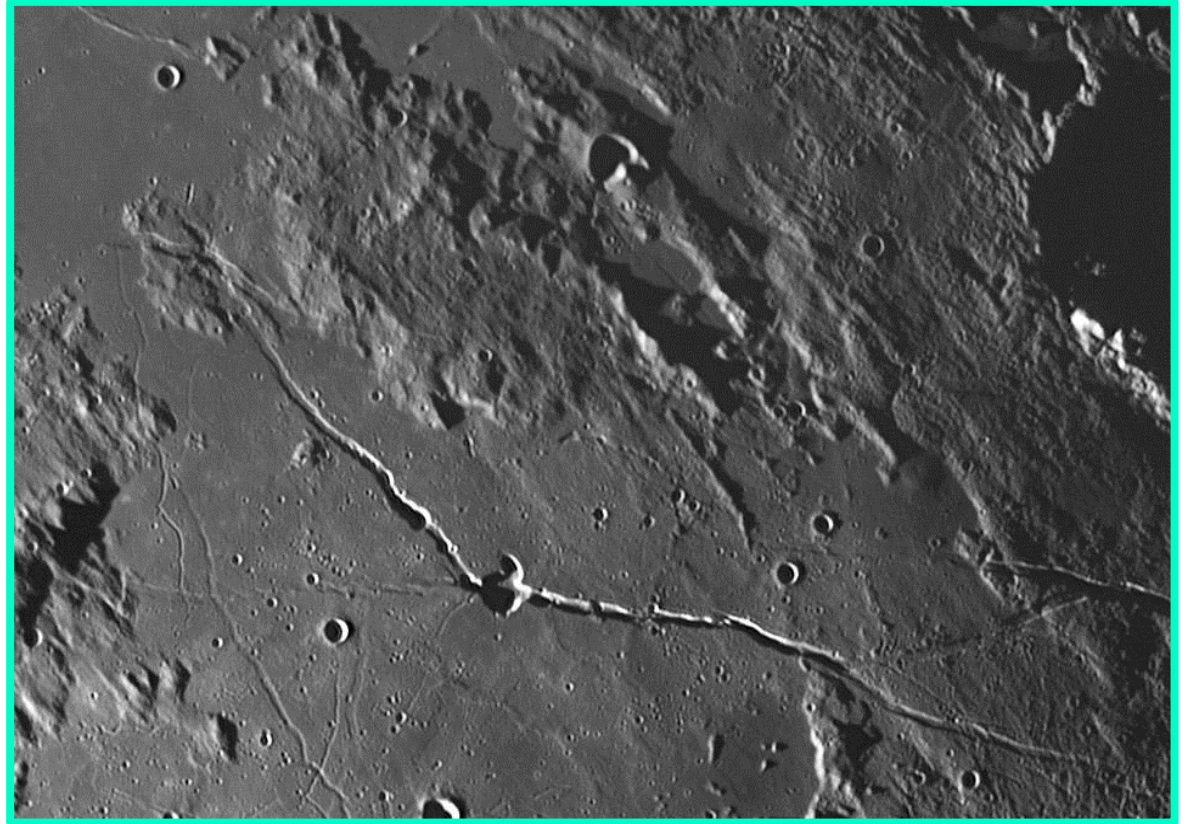
Rilles

Rilles are flat floored narrow channels on the Moon's surface. There are three different types of rilles. These include straight, arcuate and sinuous rilles.



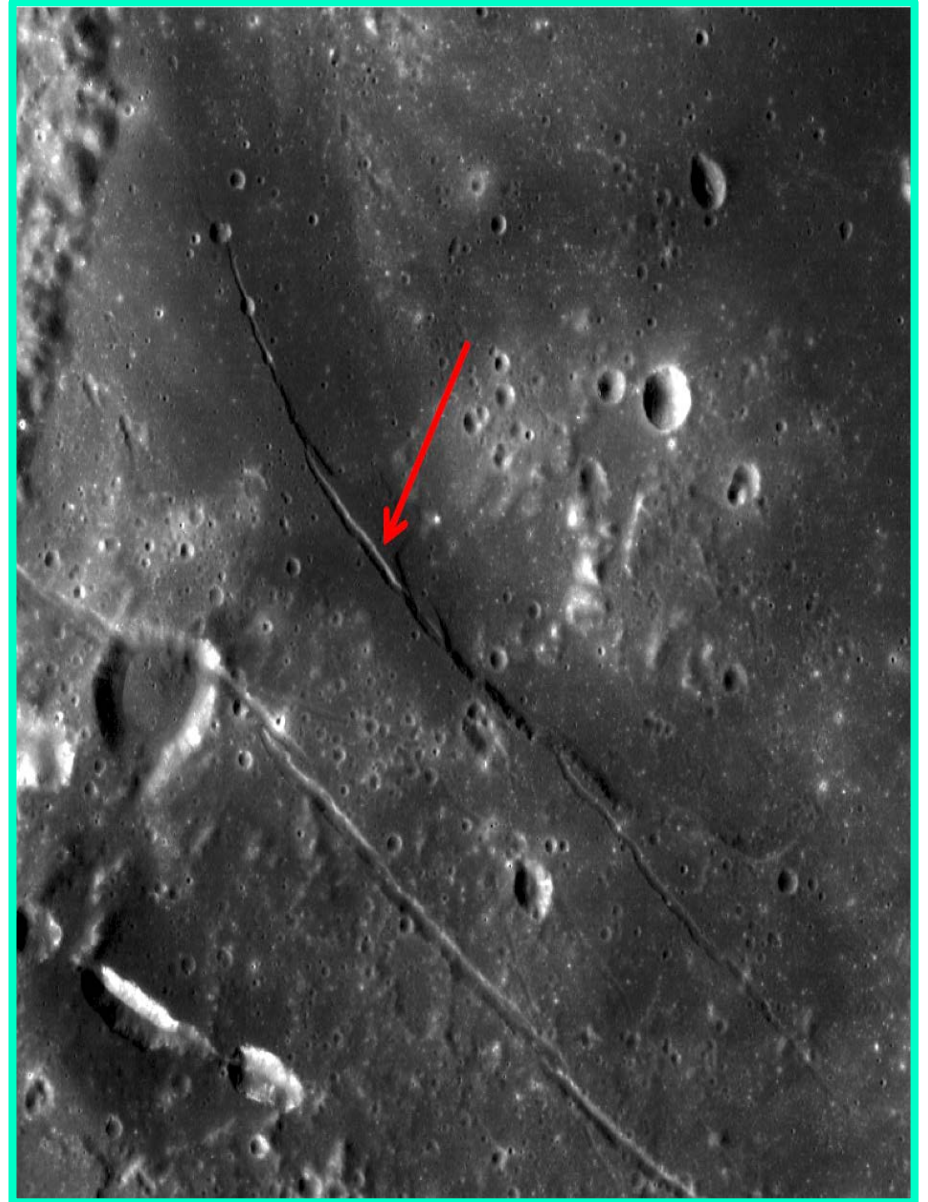
Straight Rilles

Although straight rilles have long stretches of straight pathways, most of them curve or sharply inflect as a whole.



Arcuate Rilles

Arcuate rilles have a smooth curve and are usually found at the edge of the dark lunar maria. They are believed to have formed from lava flow.



Sinuuous Rilles

Sinuuous rilles resemble river flows here on earth. Lunar samples indicate that the moon has always been bone dry so we figured that they were formed by lava flows or collapsed lava tubes.



Image 3

This is an image from the Lunar Orbiter Mission. You can see part of the Maria, a few simple compact craters, and the Hadley rille.



Maria

The Maria is the darker, smoother part of the moon that has less craters than the other side of the moon. It is the closer side that we can see from earth.

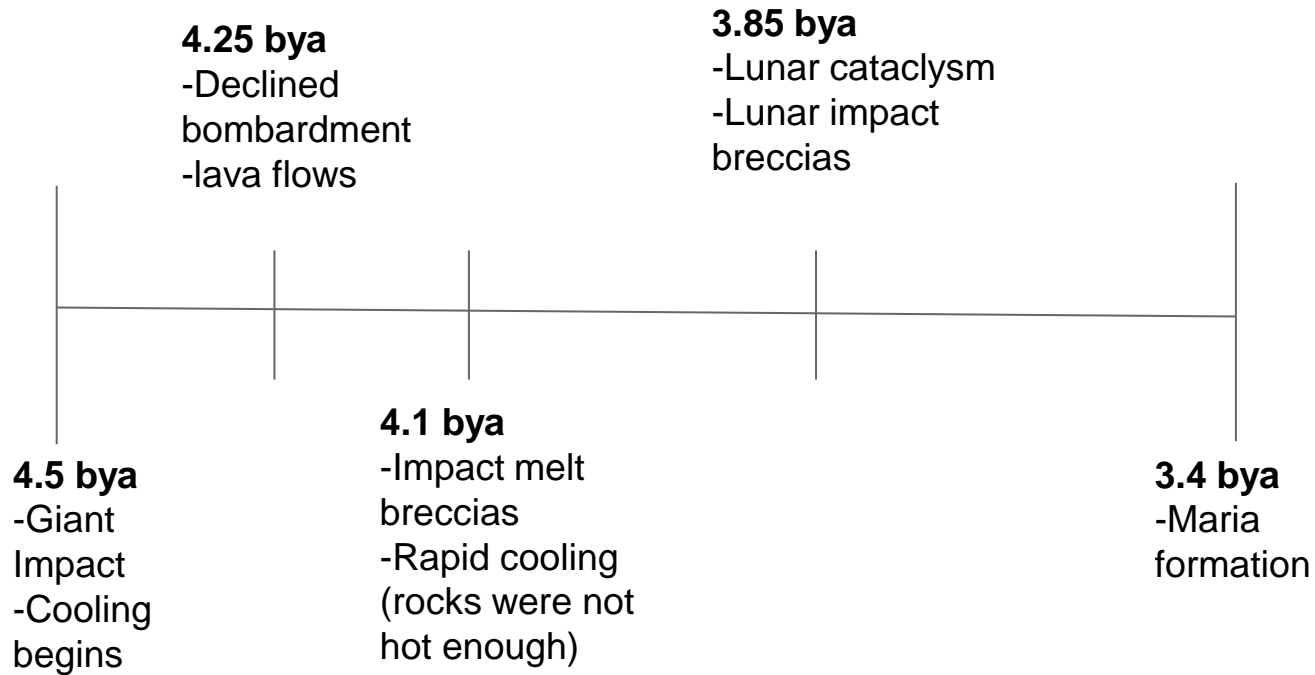


Lunar Orbiter Mission

- 5 unmanned spacecraft
- Find landing places for Apollo
- 99% of the moon photographed
- Resolution was 10 times better than the pictures from earth



Age Dating of the Moon's Geologic Features



Work Cited

A work in progress...these are at least links to where information was gathered.

<https://airandspace.si.edu/collection-objects/lunar-orbiter-engineering-mock>

<https://capritarius.wordpress.com/2015/06/21/hawaii-lunar-month/>

http://www.lpi.usra.edu/exploration/education/hsResearch/moon_101/moon101_3.jpg

<http://lroc.sese.asu.edu/posts/788>

http://www.lpi.usra.edu/exploration/education/hsResearch/moon_101/moon101_2.jpg

<https://svs.gsfc.nasa.gov/cgi-bin/details.cgi?aid=20140>

http://www.lpi.usra.edu/exploration/education/hsResearch/moon_101/moon101_1.jpg

<http://solarviews.com/cap/misc/crater.htm>

Work Cited

<https://science.nasa.gov/missions/ranger>

<http://www.lpi.usra.edu/exploration/training/illustrations/craterMorphology/>

<https://lpod.wikispaces.com/November+8,+2010>