

Archimedes (81 km) is another highlight of lunar observation and probably looked very similar to Copernicus at the beginning. The outermost ejecta was later covered by the Imbrium lava flows. The crater floor was flooded by lava which came through fissures and covered the terraced walls and central mountains.

Between the Archimedes Mountains (just south of Archimedes) and the Apennines is a region that is called the "**Apennine bench**". It is a region which probably shows the original crater floor of the Imbrium basin, which was high enough to be not covered by the lava flows.

Alpetragius (40 km) is a normal impact crater, but with an extraordinary Central Mountain, which occupies almost 1/3 of the crater floor. This probably shows volcanic activity of very slow-moving lava after the impact. Throughout the region east of **Alphonsus** and **Arzachel** are some similar craters with unusual central mountains.

Alphonsus, 111 kilometers in diameter, is a distinctive but narrow system of rilles surrounded by some micro volcanoes and pyroclastic ash deposits caused by effusive volcanism. The hillside, which crosses the crater diagonally, consists of ejecta from the Imbrium impact and thus Alphonsus must be older than the Imbrium basin. The whole region shows the marks of the Imbrium impact. These marks are together referred to as the "**Imbrium Sculpture**".

The Vallis Alpes is a long land subsidence of 155 km length that divides the impact wall of the Imbrium basin into the Apennines and the lunar Alps. The base of the land subsidence is filled with lava that comes from a narrow, sinuous rille in the middle of the Vallis Alpes. The rille is only 700 to 1,000 of meters wide.

Catena Davy is a crater chain of 50 km length. It consists of more than a dozen small craters, where the largest has a diameter of roughly three kilometers. For a long time it was suspected that the craters have volcanic origin. Today the craters are seen as normal impact craters, caused by a disintegrated nucleus of a comet like Shoemaker-Levy (1994), similar to the crater chain Catena Abulfeda.

Cassini (56 km) is a strange crater, deviating from the standard profile of complex craters of this size, surrounded by a thick ring of ridges. Inside are two larger craters and a strange, "crushed" ridge between the western crater wall and the larger central crater on the crater floor.

Fra Mauro (100 km) is an ancient crater that was filled with ejecta of the Imbrium impact (landing site of Apollo 14 north of Fra Mauro). From the rocks samples which were brought back to Earth, the age of the Imbrium impact was quite accurately determined to 3.85 billion years ago.

Gambart (25 km) and **Mösting** (25 km) are two craters with the same size and with almost identical crater walls. The crater floors, however, differ vastly. While Mösting is a classic complex crater with landslides and a small central mountain the crater floor of Gambart is flooded with lava.

Did Gambart earlier on look similar to Mösting and only later was flooded with mare lava or do have both craters different origins? More craters like Gambart are for example **Tobias Mayer** and **Kunowsky**.

Hesiodus A (14 km) is the largest and most easily observable double concentric crater on the front of the moon.

Miller (61 km), **Nasiredding** (50 km) and **Huggins** (66 km) are three medium sized craters. The impact of Nasiredding happened last, as indicated by the landslides in Huggins and Miller.

Pitatus (100 km) is a prime example of a "Floor Fractured crater" with a bulged crater which is flooded with very dark lava.

Plato is, with a diameter of 101 kilometers, a Archimedes type crater, flooded with extremely dark Mare lava. In the western part there is a large, triangular landslide. At sunrise the eastern crater wall casts spectacular shadows on the lava field in the interior of the crater.

Rupes Recta and **Rima Birt** are both located in an ancient crater (200 km) of which only remnants of the eastern walls are recognizable. The western wall is only indicated by curved ridges. **Rupes Recta** (long wall) is a 400 meter high mountain slope, but it has relatively flat flank angles. The eastern part next to Rupes Recta must be much older than the western region, this is clearly visible because the crater density is significantly higher in the eastern region.

West of Rupes Recta is the rille **Rima Birt**, which in the northern part is associated with two lunar domes, which are divided by the rille. Presumably, the rille is a vertical-volcanic fissure.

Both Rupes Recta and the Rima Birt point radially towards the center of the Imbrium basin and probably have their origin in the Imbrium impact.

Rimae Plato is an approximately 180-kilometer long, complex sinusoidal system of rilles and therefore of volcanic origin. The largest of the rilles is located northeast of Plato.

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