

The Agatharchides Plateau (60 x 45km) is classified as an intrusive lunar Mega Plateau, similar to the Gardner Mega Plateau. The composition of the rocks is similar to the Gruithuisen domes and the mountain Mons Hansteen. On the eastern edge of the plateau is an extremely narrow - unnamed - rille.

Unofficially this structure is named "**The Helmet**" because its shape is reminiscent of the helmets of the famous Star Wars movies.

The Hortensius Domes are a classic small-scale lunar field of 7 lunar effusive shield volcanoes with diameters of 10 to 15 kilometers and small summit calderas. In this region between Kepler in the west and Copernicus in the east are around 2 dozen other domes, e.g. west of Milichius the great Dome Milichius Phi.

Heinzel (68 x 19km) has, due to its shape, the nickname "Peanut crater". It is the result of a superposition of 3 impacts over a total length of nearly 70 km.

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

Copernicus measures roughly 100 kilometers in diameter and is the prototype of a very young, complex crater. He has clearly terraced crater walls and the central mountains are divided into two parts. The crater floor is partially smooth and flat (covered with molten ejecta), on the opposite side there is a hilly region. The crater floor is 3.8 kilometers beneath the crater walls which rises less than 1 km above the surrounding landscape. The longest rays of the young ray system can be tracked up to a distance of 800 km. In the immediate vicinity hundreds of secondary craters can be observed.

Helicon (24 km) and **Le Verrier** (21 km) are the only larger craters in the northern region of the Imbrium region. At first glance they are very similar and are one of the best examples of the lunar stratigraphy. When observing the two craters near the terminator (sunrise) impact ejecta can be seen outside Le Verrier but it is completely lacking in Helicon. It can therefore be deduced that Helicon is significantly older than Le Verrier. The ejected material from Helicon was covered by the Imbrium lava and the impact of Le Verrier took place after the lava flows of the Imbrium impact ended.

Copernicus H is a prominent Dark Halo crater with a size of 4 km. It is not active volcanism but a normal impact crater, by which dark mare basalt was ejected to the surface.

Kies Phi (15km) is a relatively large effusive lunar shield volcano (Dome) with summit caldera of 2 km width. Because of its large diameter it is relatively easy to observe when near the terminator. The crater **Kies** (44km) lying to the east and is almost completely flooded with lava. The crater **Capuanus** is located quite a bit south of Kies and on its crater floor are three further small lunar domes. They are an exception because lunar Domes are extremely rare within craters.

Moretus (114 km) is a Tycho like crater but significantly older. Because of its location at the lunar edge it appears highly distorted. It has impressive central mountains where, when looking at photographs made through large telescopes, different stratifications can be distinguished.

Newton (75 km) consists of four, partly overlapping, craters (Newton A, G, N and D). **Newton D** has with roughly 7 kilometers one of the largest height differences between crater wall and crater floor. Best observed under favorable libration conditions.

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.

Rimae Hippalus are large fracture zones with a total length of 240 km. They originated from the subsidence of the lava shield of the Humorum basin. The maximum width of the rilles is about 4 kilometers.

In the Humorum region are many further system of rilles such as **Rima Hesiodus**, **Rimae Agatharchides**, **Rimae Ramsden**, **Rimae Palmieri**, **Rimae de Gasparis** and **Rimae Mersenius**.

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.

Sinus Iridum (250 km) - the Bay of Rainbows. A lunar highlight at sunrise. The bay looks like a safe harbor with a few shallow waves (ridges) rolling toward it from the Sea of Rains (Mare Imbrium).

Sinus Iridum is one of the largest lunar craters (maybe a small basin), which is inclined to the center of the Imbrium basin. Its entire southern and eastern wall were flooded by the Imbrium lava. The two capes, Heraclides in the western area and Laplace in the eastern region, show significant height differences. Cape Laplace is significantly higher than Cape Heraclides.

Tycho, with its diameter of 86 kilometers, is the prototype of a complex crater with a terraced wall system and complex central mountains. The crater floor lies 4.7 km below the crater walls. Observing Tycho under high illumination (full moon), a ring of molten impact material can be clearly recognized. **Tycho** is probably one of the youngest craters (100 million years) and has the biggest and brightest ray system of all lunar craters. The ray system is asymmetrical and almost absent in the western region. This points to an impact with a very flat angle from this direction.