

Atlas (87 km) and **Hercules** (71 km) – are a crater pair of nearly the same size, but with completely different crater floors. Atlas is a "Floor Fractured crater" with a system of rilles and pyroclastic ash deposits. Hercules shows a young, smooth crater floor, flooded with mare lava.

Boussingault (128km) is close to the south pole of the moon. For its observation a favourable libration is needed. It is a double crater, the second crater, half the size of Boussingault, is located eccentric to the middle.

Crozier H is with a diameter of 11 kilometers, the second largest concentric double crater on the front of the moon. The largest is Hesiodus A which lies on the edge of the Mare Nubium.

Daguerre (45 km) is an almost entirely lava flooded crater with strange concentric ridge remnants and dark pyroclastic ash deposits. Maybe Daguerre and the complete region is of volcanic origin.

Endymion, 122 km in diameter, is a Plato-like crater with smooth lava on the crater floor.

Fabrizius (80 km) differs in its appearance from the normal standard crater model, because it has two central mountain massives, one of them far from the middle of the crater.

Fracastorius (130 km) is a complex crater which is strongly tilted to the center of the Nectaris basin. The northern crater rim and the crater floor are completely flooded by the lava of the Nectaris basin. After the lava cooled off and the Nectaris lava shield further subsided a thin fracture zone formed which crossed Fracastorius. The smaller crater Beaumont is also tilted towards the Nectaris basin but doesn't show any fraction zones.

Franklin (56 km) and **Cepheus** (40 km) are a smaller versions of the crater pair Atlas and Hercules. Franklin a "Floor Fractured crater" with bulged floor and system of rilles, Cepheus with a lava flooded crater floor.

Gardner Megadome is a 70 km large, elevated area, south of the crater Gardner (18 km). The plateau is interpreted as a huge shield volcano with a huge caldera.

Jansen (23 km) is almost completely flooded with lava. The many nearby lunar domes and the sinusoidal rille **Rima Jansen** suggest that the whole area is of volcanic origin.

Janssen is with a diameter of 200 kilometers a superposition of craters, because it is not round but elliptically shaped. The southern crater floor is smooth, the northern floor is covered with ejecta of Fabricius. Both areas are divided by the spectacular, slightly curved Janssen rille. Such a rille is rare in the highlands and therefore noteworthy to be addressed.

Lamont is about 80 kilometers across and a unique lunar structure. Possible a completely flooded impact basin with a double wall ("Two ring basin"), indicated by concentric ridges. In any case, Lamont is the center of a so-called **mascon**, a mass concentration that changes the local gravitational field. Next to the crater **Arago** (26 km) are two large complex lunar domes: Arago Alpha and Arago Beta, which are easy to observe when the Terminator is close by.

Messier (14 km) and **Messier A** (11 km) are probably the most bizarre crater pair on the moon. Messier was created by a grazing impact from the east, Messier A by a "rebound". The two comet-like beams are also spectacular. When the sun is rising, two further rays become visible which run perpendicular into the northern and southern direction. The entire beam system - with a little imagination – has the appearance of a butterfly. Overall, the ray system is similar to all other systems which are created by a shallow impact such as the ray system of Proclus.

Proclus (27 km in diameter) has a distinctly polygonal shape and a distinctive asymmetric ray system. It originated from an impact with very shallow impact angle, the projectile came from an easterly direction.

Taruntius comprises 57 km in diameter and is a typical "Floor Fractured crater". It shows concentric ridges, a system of rilles and two dark pyroclastic deposits on the crater floor.

Rima Goclenius is a 190 km long fault zone, which probably originated when the center of Fecunditatis basin slowly sank under the weight of the lava.

Rima and Rupes Cauchy - The region around the 12.5 km wide crater Cauchy is rich in lunar domes and other structures of lunar volcanism. **Rupes Cauchy** is a 170-km long slope with a height of 340 meters which merges into a rille at its end. Southerly are the two major lunar domes Cauchy Tau and Omega. Many of the lunar domes as well as Rupes and Rima Cauchy are radially aligned to the center of the Imbrium basin - coincidence?

Rupes Altai is with a length of 550 kilometer part of the crater walls of the Nectaris impact (similar to the Apennines). The Wall reaches a height of 3 to 4 km above the surrounding highlands and reaches impressive 7 km above the center of the Nectaris basin.

Theophilus (100 km) is a magnificent and complex crater which is relatively young, it has a very distinct central mountain. Its crater rim rises 4.5 km above the crater floor. Easy to observe are smooth, partially melted ejecta on the crater floor and in the northern surrounding of the crater. In the area towards the crater **Torrichelli** secondary craters are visible.

Vallis Rheita is with a length of over 500 km, the largest secondary crater chain on the near side of the moon and not a valley such as the Vallis Alpes. The chain is aligned radially to the center of the Nectaris basin and was apparently created by the Nectaris impact. At the crater Mallet (56km) the Vallis Rheita shows a slight change in direction. They might be two different rows of secondary craters.