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## Twenty-Two Day Old Moon‡

The Moon on this night is at or has just passed its Last Quarter, depending on your location and the season. It will rise around midnight and set around noon, approximately. It will transit at around dawn, so ideal viewing will be during the last hours of darkness. It is be bright enough to be prominent in the daylight, but contrast is much reduced.

**Key Features to Observe Tonight**

Our first stop tonight is the long east-west running **Mare Frigoris** in the north, now more than half in darkness. Close to the terminator further north lies the weathered crater **Goldschmidt**, with the smaller and younger **Anaxagoras** interrupting its western wall. Anaxagoras is so deep, and so close to the lunar pole, that parts of its floor remain in permanent darkness.

Looking further south, **Mare Imbrium** lies about half way towards the equator from the northern cusp, in the northern hemisphere. The westward-moving terminator has tonight arrived at the eastern end of the mare. The low angle of illumination improves the relief most features of this vast lava flooded sea and its rim. Especially dynamic tonight are the **Alps**, which form the northeastern rim of Imbrium and the **Apennines**, which mark its southeastern end.

Inside Mare Imbrium, slightly south of its center and about halfway to the Apennines, lies the large **Archimedes** crater. It shows an unusual massif "handle" extending from its southeastern rim. Just to its east is **Autolycus**, and to the north of Autolycus, is **Aristillus**. They make a nice trio to observe on this night. The lava flooded floor of Archimedes is relatively light, compared to interiors of its two smaller neighbors, an indication of their greater depth. The area within this trio of craters has been named the **Sinus Lunicus**, to memorialize the Luna 2 space probe which crashed here in 1959, becoming the first manmade object to reach the Moon.

North of Aristillus by roughly twice the distance between Aristillus and Autolycus lies the unusual, isolated mountain peak named **Piton**. To its east, lies the crater **Cassini**, easily identified by the two craters on its floor (depending on exact age and libration of the Moon, it may be hidden on this night, lying to the east of the terminator).

Below the lunar equator, to the south of Imbrium, the terminator now bisects **Mare Vaporum**, but has not quite reached the **Sinus Medii**, the dark spot southwest it, about a diameter away. Continuing south from Medii are several interesting craters in the heavily impacted southern region. The first we'll note is the smaller crater **Herschel**, with its dark deep floor similar to Autolycus. Its southern rim wall touches the large walled plain **Ptolemaeus** (**Ptolemy**), which in turn shares its southern wall with the smaller ring mountain **Alphonsus**. This string of distinctive craters ends with the ring mountain **Arzachel**. All make excellent objects for detailed study at high power.

Further south is a jumbled field of crater impacts in the southern "arctic circle" of the Moon. Much fruitful time can be spent here studying the intricacies of the many features.

‡with permission from **Lunar Discoverer User's Manual** by Robert Duvall, 2013

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