

Observations from the low LEO orbit up to the moon

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Including very low Earth orbiting satellites and the moon in the target list of a laser ranging station is a demanding goal, since there is the need to satisfy contradicting requirements. Low Earth orbiters require fast slew rates of the telescope for example, while the ranging of lunar targets prefer larger and therefore slower telescopes. Similar differences are related to the laser and the control system. The Wettzell Laser Ranging System (WLRS) has managed to find a suitable compromise to balance these very diverse requirements by implementing a modular and flexible system design including routine operations on both the fundamental and second harmonic wavelength of the Nd:YAG laser. This paper introduces key features of the system design and also presents the latest results from Lunar Laser Ranging.