

The miniSLR system: a standardized solution for routine SLR observations

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An ever growing number of new SLR supported missions and many new SLR applications require the construction and operation of more and more SLR stations. Currently, these new stations are of custom design, and constructed largely on site. Recent advances in optical and electronic technology now make another approach feasible, which is pursued with the miniSLR project. It aims at developing a standardized SLR system that is capable of fully automated routine SLR measurements, e.g. to navigation satellites or geodetic and scientific missions.

The miniSLR system is minimal in several ways: First, the system is housed completely in a sealed, transportable aluminium box of less than two metres side length. Second, the system contains only the bare minimum of required components to achieve the desired technical specifications. Especially the use of a high repetition rate, on-mount laser simplifies the design significantly compared to traditional systems. Third, it is minimal in both construction and operation costs due to a focus on fully automated operation and easy maintenance.

Despite its simplicity it is designed to achieve sub-centimetre accuracy and good returns even from more distant targets such as navigation satellites. This contribution will describe the current status of the project and results from first tests.