

Two Color SLR at the WLRS – Scope & Limitations

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In the middle of 2019 the WLRS has started to routinely observe at the laser primary wavelength of 1064 nm. Due to the lack of suitable detectors, this wavelength has been uncommon for SLR-systems in the past. With the availability of a new generation of InGaAs detector technology this has changed, making two color SLR feasible for high repetition rate systems with a reasonable amount of observations. Recently the WLRS was upgraded for a second detection channel at 532 nm and the support of high repetition rate SLR. From the time delay between both detection channels the atmospheric range delay can now be compared against well established models. In this talk we want to provide an overview of the system setup at the WLRS, including the basic implementation concept and the detectors in operation. We present the ranging performance for both wavelengths that we obtained so far. Finally we will outline some preliminary results.