

Progress on the implementation of two-color high count rate laser ranging at Grasse

Hervé Mariey, Clément Courde, Nicolas Maurice, Julien Chabé, Duy-Hà Phung, Grégoire Martinot-Lagarde, Julien Scariot, Mourad Aïmar, Hervé Viot

Université Côte d'Azur, Observatoire de la Côte d'Azur, CNRS, IRD, Géoazur, 2130 Route de l'Observatoire, 06460 Caussols, France

Advancing our understanding of the dynamic Earth system in the context of global warming requires observations with millimetric accuracy. Since 2014, we are developing at the Grasse laser station (GRSM) an experiment to demonstrate two-color Satellite Laser Ranging (SLR) at high repetition rate. In the presentation, we will report the difficulties encountered in the implementation of the new instrumentation in parallel of the current setup. We will present some preliminary results on calibration, on ground link and on satellite links. We will briefly talk about the measurement campaign done in September 2022 for the Geometre Project and we will conclude with the perspective of new developments and measurements.