

SLR-System Upgrade and Experiments at Zimmerwald

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Astronomical Institute of the University of Bern, Bern, Switzerland The SLR-system upgrade covers a new dome, cooling system and thermal isolation of the Coudé room. Due to aging and new state of the art, this upgrade and refurbishment was necessary. Two new lasers are available to the station and are going to be integrated into the system. One laser will replace the current laser used for geodetic applications and the other will be dedicated to space debris observations. Preliminary experiments for quantum communication were carried out and some ground and ground to space optical communication experiments were conducted by some partner research institutes. The quantum communication experiments used a drone which is sending its position to the telescope. Ground to ground optical communication campaigns, e.g. from Zimmerwald to the Jungfrauoch were using the air traffic control safety system of the station.