Reduction and analysis of one-way laser ranging data from Wettzell ground station to LRO

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One-way LR (Laser Ranging) is being performed routinely from ILRS (International Laser Ranging Service) ground stations to LOLA (Lunar Orbiter Laser Altimeter), onboard NASA's LRO (Lunar Reconnaissance Orbit-er). This rather new experiment provides high accuracy spacecraft range measurements over interplanetary distances. Furthermore it can be used for monitoring the LRO clock long-term behavior and referencing the MET (Mission Elapsed Time) to UTC (Universal Time Coordinated) precisely. We present the current status of our effort to process, analyze and utilize selected LR data for LRO clock characterization, orbit determination and gravity field estimation.