

# **RIGA SATELLITE LASER RANGING STATION: 2024 OVERVIEW**

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This paper outlines the operational status and key developments at the Satellite Laser Ranging (SLR) Station 1884 Riga during the year 2024. The station's activities are structured around three key areas: system modernisation, routine satellite laser ranging operations, and research and development initiatives in support of space situational awareness.

In October 2024, significant meteorological instrumentation upgrades were implemented. These included the installation of a Vaisala WXT-56 automatic weather transmitter as replacement for the old WXT-512 model, a PACE 1000 absolute barometer, a soil moisture sensor, and a new groundwater level measurement device.

System modernisation efforts focused on expanding the station's capabilities to include satellite photometry and bistatic laser ranging. Bistatic space debris observation campaigns were conducted in collaboration with the Graz and Borowiec SLR stations, both equipped with high-intensity lasers. Furthermore, the Riga station participated in a photometric observation campaign of the rocket body 87074G and the defunct satellite 82092A.

Performance metrics and contributions to the International Laser Ranging Service (ILRS) network will be presented, highlighting main achievements and possible improvements.