

# Satellite Tracking Data Analysis and Comparison from Laser Ranging and Other Detection Methods

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**Abstract.** Recently, the Resident Space Objects monitoring in Low Earth Orbit has become an essential activity for space-related operations due to safety reasons. As the monitoring activity includes several processes, the detection, and tracking, are required processes for this operation, which could be employed by various sensor methods: laser ranging, radar, and electro-optical telescopes. Each sensor method provides different advantages. Also, the results could be declared in several ways as laser ranging data, radar state vectors, and TLEs.

Hence, this article aims to present the analysis and comparison of the satellite tracking data results from laser ranging and other sensing methods or sources, e.g. radar and TLEs.