

## Space Debris Laser Ranging Test Based on 1064nm Laser Wavelength

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Laser ranging technology is applied to the detection of space debris. It plays an important role in the accurate determination of space debris orbits, precision cataloging, and monitoring. The more commonly used 532nm wavelength, 1064nm wavelength laser has the advantages of high energy per unit photon number and high atmospheric transmission rate, which is beneficial to improving the detection capability of the ranging system. This report describes the Chinese Academy of Sciences Yunnan Observatory based on the 1064nm high-power laser emission, receiving optical systems and small debris based on the system to carry out the test, reported the actual situation.