

**LASER RANGING ON SPACE DEBRIS WITH THE CHANGCHUN SLR STATION.** LIU Chengzhi<sup>1</sup>. HAN Xingwei<sup>1</sup>. LIANG Zhipeng<sup>1</sup>. FAN Cunbo<sup>1</sup>. DONG Xue<sup>1</sup>. SONG Qingli<sup>1</sup>. ZHANG Nan<sup>1</sup>. ZHANG Haitao<sup>1</sup>,  
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**Abstract:** The Changchun SLR station has upgraded to track space debris in 2014. The system operates with a 60mJ/10ns/500Hz@532.0nm laser ( $M^2 < 1.5$ ) and an optical camera for closed-loop tracking. With this configuration, 466 passes of 233 different space debris targets were obtained during 19 terminator sessions, each about 1.5 h. Target distances are between 460 km and 1800 km, with RCS(radar cross sections) from  $>15 \text{ m}^2$  down to  $<1.0 \text{ m}^2$ . Measured range had an average precision of about 1.0 m RMS. The system can be conveniently operated by one person. The presentation will introduce the technical developments and the observation results obtained.