

SYMPOSIUM ON SPACE DEBRIS (A6)  
Measurements (1)

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INCREASING OF NEW GEO/HEO SPACE DEBRIS DISCOVERY RATE WITH ISON OPTICAL  
NETWORK**Abstract**

International Scientific Optical Network (ISON) represents one of largest systems specializing in observation of space objects. ISON provides permanent monitoring of the whole GEO region, regular surveying of Molniya type orbits, and tracking of objects at GEO, GTO, HEO and LEO. ISON project is continuously developing and is joining now the 37 observation facilities in 15 countries with 79 telescopes of different class (aperture from 12.5 cm to 2.6 m). 15.4 millions measurements in 2.1 millions of tracklets for about 5000 objects are collected by KIAM in 2015. 339 new space objects have been discovered, 307 previously lost objects have been rediscovered. For comparison, 160 new objects have been discovered in 2014, and 250 in 2013. 2014 was devoted to putting into operation of small survey and follow up telescopes (including new subsystem for extended GEO surveys to determine more precise orbits for conjunction analysis). This caused some decreasing of new space debris discovery rate in 2014. During 2015 ten (five 40 cm, three 50 cm and two 65 cm) telescopes have been installed. In addition, the methodology of quick identification and follow up of new space objects has been adjusted in part of ISON observatories. This resulted significant increasing of GEO/HEO space debris discovery rate. Achieved parameters of the above mentioned telescopes and obtained results will be presented and discussed. It is planned to start the printing of KIAM monthly bulletin with orbits of new discovered space debris.