

SPACE DEBRIS SYMPOSIUM (A6)
Measurements (1)

Author: Dr. Igor Molotov

Keldysh Institute of Applied Mathematics, RAS, Russian Federation, im62@mail.ru

Dr. Vladimir Agapov

Keldysh Institute of Applied Mathematics, RAS, Russian Federation, avm@kiam1.rssi.ru

DEDICATED ISON SUBNETWORK OF OBSERVATORIES FOR ROSCOSMOS PROJECT

Abstract

ISON optical network represents one of largest ground systems specialized in observation of space debris and other objects on high geocentric orbits. Currently the ISON network collaborates with 23 observatories and observation facilities in 10 countries. 35 telescopes during 2200 telescope-nights provide 2.1 million measurements in 275 thousands tracklets on about 2000 objects to KIAM database in 2010. KIAM maintains now the orbits of 1557 objects in GEO region including 404 operational and 518 non-functional spacecrafts, 257 upper stages and 378 debris fragments and undetermined type objects.

Last years a part of the ISON was involved in the Roscosmos project “Automated System for Prediction and Warning on the dangerous situations in the near-Earth space”. Dedicated ISON subnetwork of observatories is now in development under grant of Roscosmos – 21 telescopes will be made in 2011, including three 65 cm, six 40 cm, five 25 cm and six 19 cm apertures. The elaboration of 80 cm aperture telescope is started. These telescopes will be installed around the world to support the collision prediction task. The KIAM expeditions visited Argentina, Armenia, Brazil, Bulgaria, Italy, Kazakhstan, Mexico, Mongolia, Venezuela, North Caucasus and Far East to find the acceptable places for telescope installation.