

Progress Report on the New SLR System of GGOS'S Core Site Metsähovi, Finland. Arttu Raja-Halli¹, Jyri Näränen¹, Markku Poutanen¹, André Kloth² and Jens Steinborn², ¹Finnish Geodetic Institute, (arttu.raja-halli@fgi.fi), ²SpaceTech GmbH.

Introduction: Finnish Geodetic Institute's (FGI) Metsähovi research station is one of the GGOS's core sites and equipped with all the fundamental space geodetic techniques. First SLR observations in Finland were made at the Metsähovi research station already in 1978. However, the SLR operations in Metsähovi have been offline since 2005 when the system was shut down for renovation. In 2007 a new HighQ 532nm laser with a 2kHz shot repetition rate was purchased to replace an old dye-based laser. This was followed by purchase of a C-SPAD detector. In 2012 the Ministry of Agriculture and Forestry granted a special fund for upgrading the instrumentation of Metsähovi and the national GNSS network FinnRef. With this funding it became possible to acquire a completely new modern kHz-capable SLR system. In December 2013 after an international open call for tenders, contract for manufacturing a new bistatic SLR-telescope with a 0.5 meter main mirror was awarded to Cybioms Corp. (USA). During 2014 a new observatory building with a 5.3m slit-type Baader Planetarium GmbH (GER) dome will be constructed to house the new SLR-system. Master control software of the new SLR system, including a new range-gate generator and integration of the ET-A033, will be produced during 2014 by SpaceTech GmbH (GER), who have also been responsible for the renovation of the Potsdam SLR system. Auxiliary instrumentation at Metsähovi will also be upgraded. The aim is to resume SLR operations in Metsähovi in 2016. We present the current status of the upgrade process and the future plans for the new Metsähovi kHz-SLR system.