

## New VGOS radio telescope at Metsähovi Geodetic Research Station

N. Zubko<sup>1,\*</sup>, J. Näränen<sup>1</sup>, G. Molera Calvés<sup>1</sup>, J. Virtanen<sup>1</sup>, M. Poutanen<sup>1</sup>

<sup>1</sup>*Department of Geodesy and Geodynamics, Finnish Geospatial Research Institute, National Land Survey, Geodeetinrinne 2, FIN-02430 Masala, Finland.*

The new radio telescope dedicated for the Geodetic VLBI observations will be built at the Metsähovi Geodetic Research Station. This project is funded by the Finnish Ministry of Agriculture and Forestry and the National Land Survey.

The Geodetic VLBI observations together with other space geodetic techniques contribute to the determination and maintenance of Terrestrial and Celestial Reference Frames, Earth orientation parameters and other geodynamical parameters. The telescope will be a part of the VLBI Global Observing System (VGOS) coordinated by the International VLBI Service (IVS). VGOS concept is developed to meet the highly demanding requirements to improve the geodetic VLBI observational data. New VGOS telescopes are being built all around the world. VGOS network consists of relatively small and fast moving antennas with a dish size being about 12-15 m, the telescopes are equipped with broadband receivers (2-14 GHz) and digital acquisition systems. After the telescope building project will get accomplished, FGI is planning to join the VGOS network and contribute to the Geodetic VLBI observations.

The new radio telescope is planned to be installed at the Metsähovi Geodetic Research Station during the summer of 2018. The tendering process for the acquisition of the radio telescope was successfully accomplished in late 2016. German company MT Mechatronics GmbH (MTM) was selected to construct the new telescope for Metsähovi. The telescope with a 13.2 m antenna dish and a steel tower is expected to be delivered to Finland on spring 2018. The telescope will be equipped with a signal chain developed according to the highly demanded technical requirements. First observations are expected in 2019.

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\* Corresponding author: N. Zubko (nataliya.zubko@nls.fi)