Contribution ID: **116** Type: **Oral Presentation**

New generation VLBI: Intraday UT1 estimations

Tuesday, 15 March 2016 10:15 (15 minutes)

IAA finished work on creation of new generation radio interferometer with two VGOS antennas at the Badary and Zelenchukskaya co-location stations. The series of 48 one base 1 hour VLBI sessions (up to four sessions per day) were performed from 04 Nov to 18 Nov 2015. Observations were carried out using wideband S/X receivers, 3 X-band and 1 S-band 512 MHz channels at one or two circular polarizations. Sessions consisted of about 60 scans with 22 seconds minimum scan duration. Stations broadband acquisition systems generate 1.5-3 TB data per session which are transferred via Internet to the IAA FX correlator. Accuracy of group delay in single channel was 10-20 ps what allows to use every single channel observations for geodetic analysis without synthesis. 156 single channel NGS-cards were obtained in total. UT1-UTC estimations give 19 μs RMS of differences when comparing with the IERS finals.

Primary author: Prof. IPATOV, Alexander (Institute of Applied Astronomy RAS)

Co-authors: Dr SALNIKOV, Alexander (Institute of Applied Astronomy RAS); VYTNOV, Alexander (Institute of Applied Astronomy RAS); Mr MELNIKOV, Alexey (IAA RAS); Dr MIKHAILOV, Andrey (Institute of Applied Astronomy RAS); Dr IVANOV, Dmitriy (Institute of Applied Astronomy RAS); Dr ILIN, Gennadiy (Institute of Applied Astronomy RAS); Dr SURKIS, Igor (Institute of Applied Astronomy RAS); Dr GAYAZOV, Iskander (Institute of Applied Astronomy RAS); Dr FEDOTOV, Leonid (Institute of Applied Astronomy RAS); Dr KURDUBOV, Sergei (Institute of Applied Astronomy RAS); Dr SMOLENTSEV, Sergei (Institute of Applied Astronomy RAS); Dr STEMPKOVSKI, Victor (Institute of Applied Astronomy RAS); Dr MARDYSHKIN, Vyacheslav (Institute of Applied Astronomy RAS)

Presenter: Prof. IPATOV, Alexander (Institute of Applied Astronomy RAS)

Session Classification: Oral2: VGOS Strategies and Expected Results

Track Classification: 2: VGOS Strategies and Expected Results