



Borowiec, 22. 12. 2013

CALIBRATION CERTIFICATE 10/2012

Astrogeodynamical Observatory Space Research Centre (SRC) certifies that:

- From November 14th 2012, 18:14 UTC, till November 29th 2012, 06:22 UTC the following set of instruments supplied by:

Piktime Systems Ltd
company having its registered office at:
Cytrynowa 22, 62-002 Poznań, Poland

was calibrated by a **Common View** method at the Time and Frequency Laboratory of the Observatory:

- TTS-4 receiver, s.n. 137,
 - RingAnt-G3T antenna, s.n.: 0632,
 - Antenna cable assembly (TTS4-137),
- The calibration was carried with respect to the main GPS/GLONASS s.n. 112 TTS-4 receiver at the Observatory.
 - The s.n.112 receiver was several times calibrated against traveling receivers from BIPM Time Section.

The calibration yielded the following results:

Differential delay of the calibrated receiver:

GPS, L1C: -31.31, RMS: 0.4 ns

GLONASS, L1C: -232.71, RMS: 1.0 ns

Antenna cable assembly: 139.91 ns, RMS: 0.3 ns

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Borowiec, 22. 12. 2013

CALIBRATION CERTIFICATE 11/2012

Astrogeodynamical Observatory Space Research Centre (SRC) certifies that:

- From November 20th 2012, 00:00 UTC, till November 29th 2012, 06:22 UTC the following set of instruments supplied by:

Piktime Systems Ltd
company having its registered office at:
Cytrynowa 22, 62-002 Poznań, Poland

was calibrated by a **Common View** method at the Time and Frequency Laboratory of the Observatory:

- TTS-4 receiver, s.n. 138,
 - RingAnt-G3T antenna, s.n.: 0631,
 - Antenna cable assembly (TTS4-138),
- The calibration was carried with respect to the main GPS/GLONASS s.n. 112 TTS-4 receiver at the Observatory.
 - The s.n.112 receiver was several times calibrated against traveling receivers from BIPM Time Section.

The calibration yielded the following results:

Differential delay of the calibrated receiver:

GPS, L1C: -34.35, RMS: 0.5 ns

GLONASS, L1C: -244.38, RMS: 1.5 ns

Antenna cable assembly: 143.38 ns, RMS: 0.3 ns

Dr Jerzy Nawrocki

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