GNSS calibration of JV receiver
with respect to PTB G1 (1201-2021)

Summary

In March 2021, a GNSS receiver owned by the Justervesenet (Norwegian Metrology Service, UTC acronym JV) was installed at the PTB and calibrated against the Group1 reference station PT13. The method of calibration is the “golden system calibration” which comprises just one period of data taking at the PTB.

The operation and report of measurements at the PTB are described in the report by the PTB.

- Final results for the calibrated system

The INTDLY values of the JV03 receiver given in Table 1 have been computed by the PTB based on the results of the 1001-2018 Group 1 trip for PT13 and should not be updated to reflect later changes in the conventional INTDLY values of PT13.

The uncertainty for a P3/E3/PPP link or a C1 link involving JV03 is \(U_{\text{CAL0}} = 4.0\) ns at the time of calibration, as given conventionally to ”golden system calibrations”.

Changes in the set-up of the receivers after the calibration must be accounted for as described in section A.3.6 of the most recent Calibration guidelines in https://webtai.bipm.org/ftp/pub/tai/publication/gnss-calibration/guidelines/.

<table>
<thead>
<tr>
<th>System</th>
<th>BIPM</th>
<th>Meas. date</th>
<th>INTDLY P1</th>
<th>INTDLY P2</th>
<th>INTDLY C1</th>
<th>INTDLY E1</th>
<th>INTDLY E5a</th>
<th>REFDLY</th>
<th>CABDLY</th>
<th>Note</th>
<th>Impl. date</th>
</tr>
</thead>
<tbody>
<tr>
<td>JV03</td>
<td>JV03</td>
<td>2021/03/23</td>
<td>16.9</td>
<td>14.7</td>
<td>19.5</td>
<td>19.8</td>
<td>22.2</td>
<td>0.9</td>
<td>196.1</td>
<td>(1,2)</td>
<td>No plan</td>
</tr>
</tbody>
</table>

Notes:
(1) The REFDLY and CABDLY values represent the set-up during the measurements at the PTB.
(2) JV03 is a PolaRx5 operated in mode “Autocompensation ON”.

Version history

V1.0 2021/05/04: Publication of results from V1.0 of the PTB calibration report.