

UTC(MIKE) Atomic Bulletin 2023-12

VTT MIKES Metrology monthly Time & Frequency bulletin.

Comments and questions to: time "at" vtt.fi

Date of publication: 2023-12-12 (60290)

Circular-T issues used for analysis: [429](#), [430](#), [431](#),

First day of analysis interval: 2023-09-02 (60189)

Last day of analysis interval: 2023-11-26 (60274)

ClockData for analysis: [CDMI 23.09](#), [CDMI 23.10](#), [CDMI 23.11](#),

The Atomic Bulletin is archived at: https://monitor.mikes.fi/ftp/atomic_bulletin/

Notes

59626 (2022-02-16) Steering correction of 8 ns / 30 days = +3e-15 applied to UTC(MIKE) microstepper

59652 (2022-03-14) AB2022-03 keep steering correction +3e-15

59681 (2022-04-12) AB2022-04 reduce steering correction to +1.5e-15

59712 (2022-05-13) AB2022-05 keep steering correction +1.5e-15

59744 (2022-06-14) AB2022-06 keep steering correction +1.5e-15

59760 (2022-06-30) steering correction set to zero

59809 (2022-08-18) Stop reporting ClockData for AHM2 (BIPM 1404108). Maser auto-tuning seems broken.

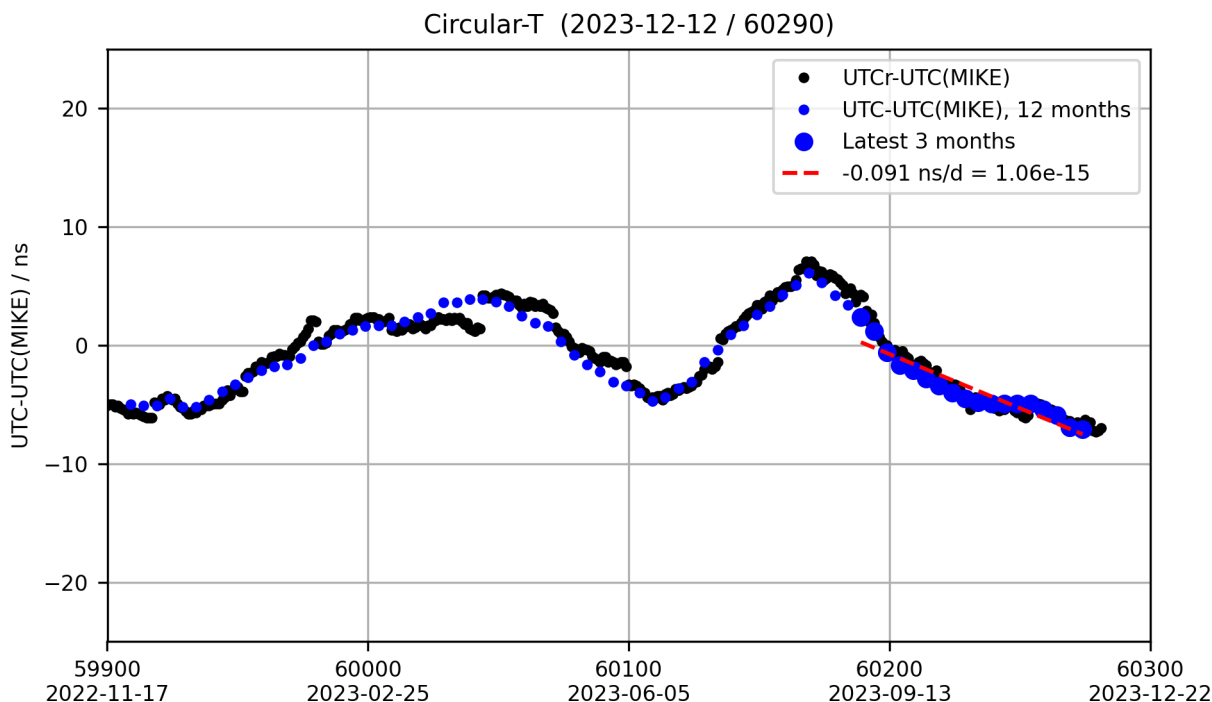
59929 (2022-12-16) AB2022-12 remove AHM2 (BIPM 1404108) from analysis.

59960 (2023-01-16) AB2023-01 GNSS link uncertainty increased to 3.0 ns in Circular-T no.420

60100 (2023-06-05) AHM1 maser stopped working (out of Hydrogen?).

60139 (2023-07-14) remove AHM1, add AHM2 to analysis.

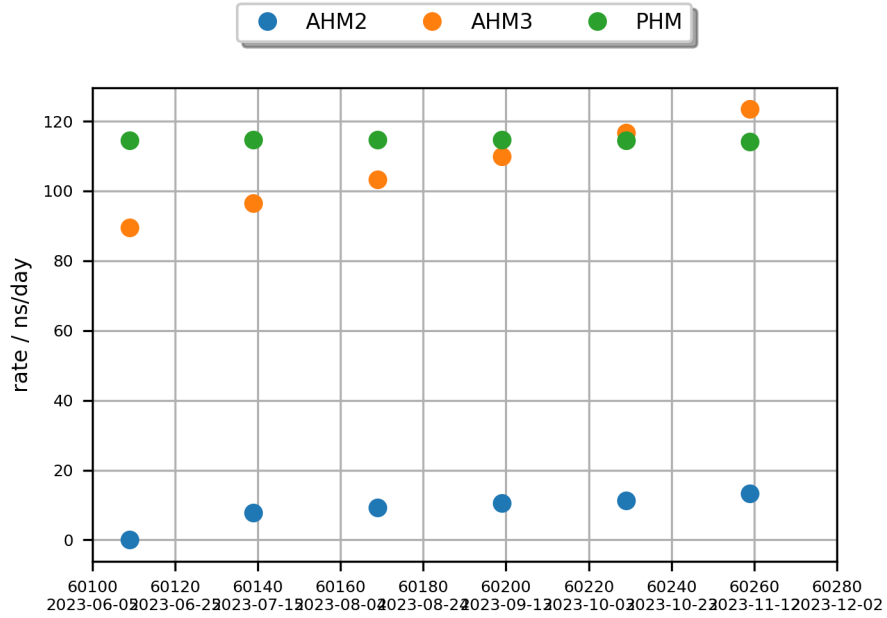
UTC-UTC(MIKE) as reported in Circular-T



UTC-UTC(MIKE) is available on 5 day intervals on MJD dates ending with 4 or 9. Values are published monthly by the BIPM in Circular-T.

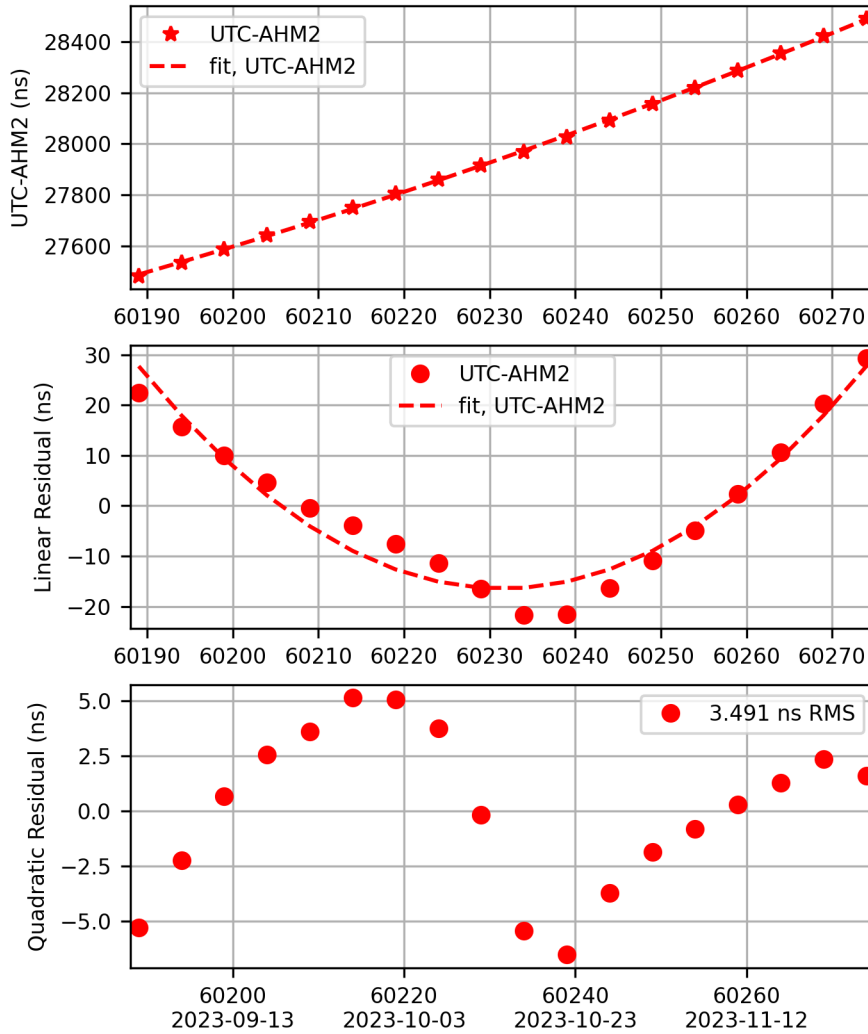
Clock Rates - Summary

Clock rates as reported by the BIPM in the monthly r-report.

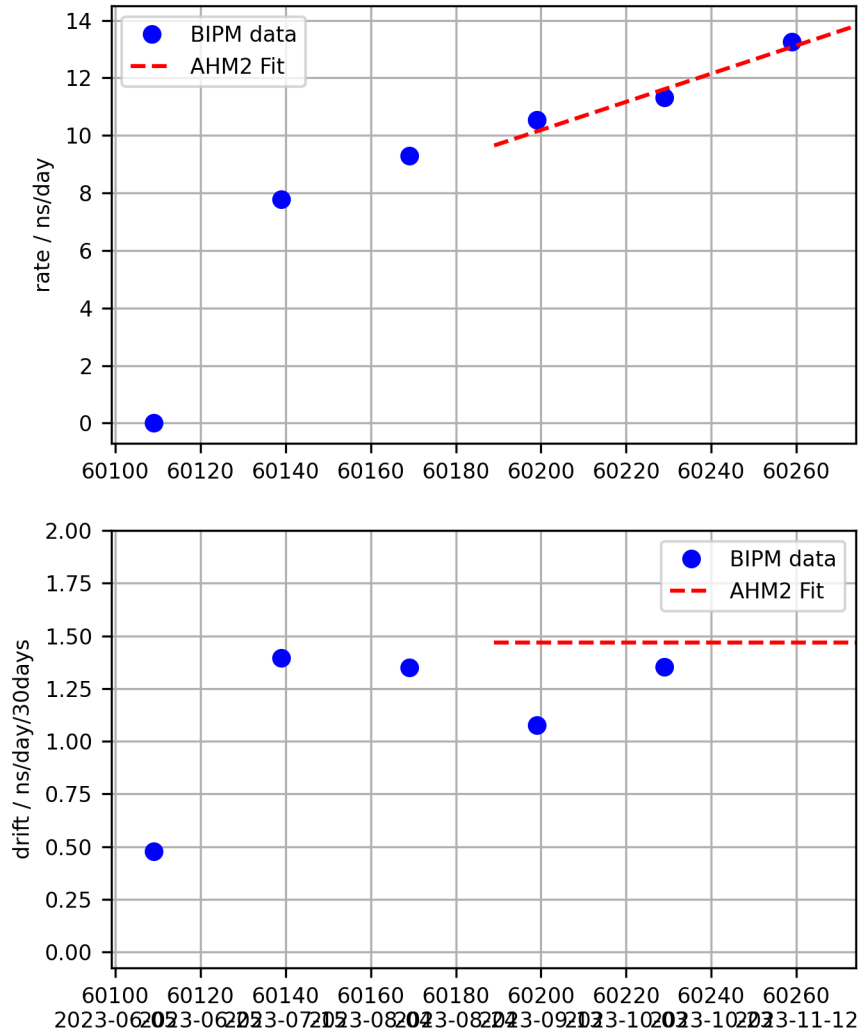


UTC - AHM2 Fit

UTC-AHM2 (2023-12-12 / 60290)
 $x \text{ (ns)} = 28487.112 + 13.813 *d + 0.0245 *d*d$
 $y = -1.59878e-13 + -5.66843e-16 *d$
 $d = (\text{mjd}-\text{mjd0}) \text{ with mjd0} = 60274$

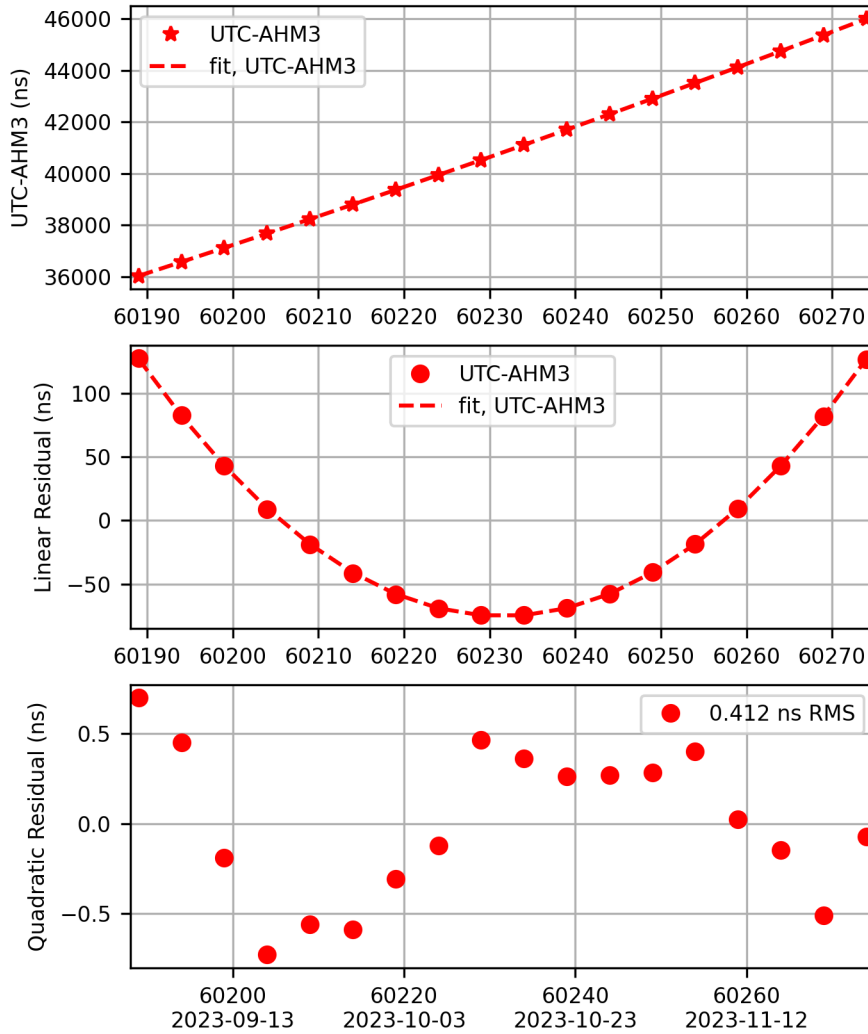


AHM2 Rate and Drift

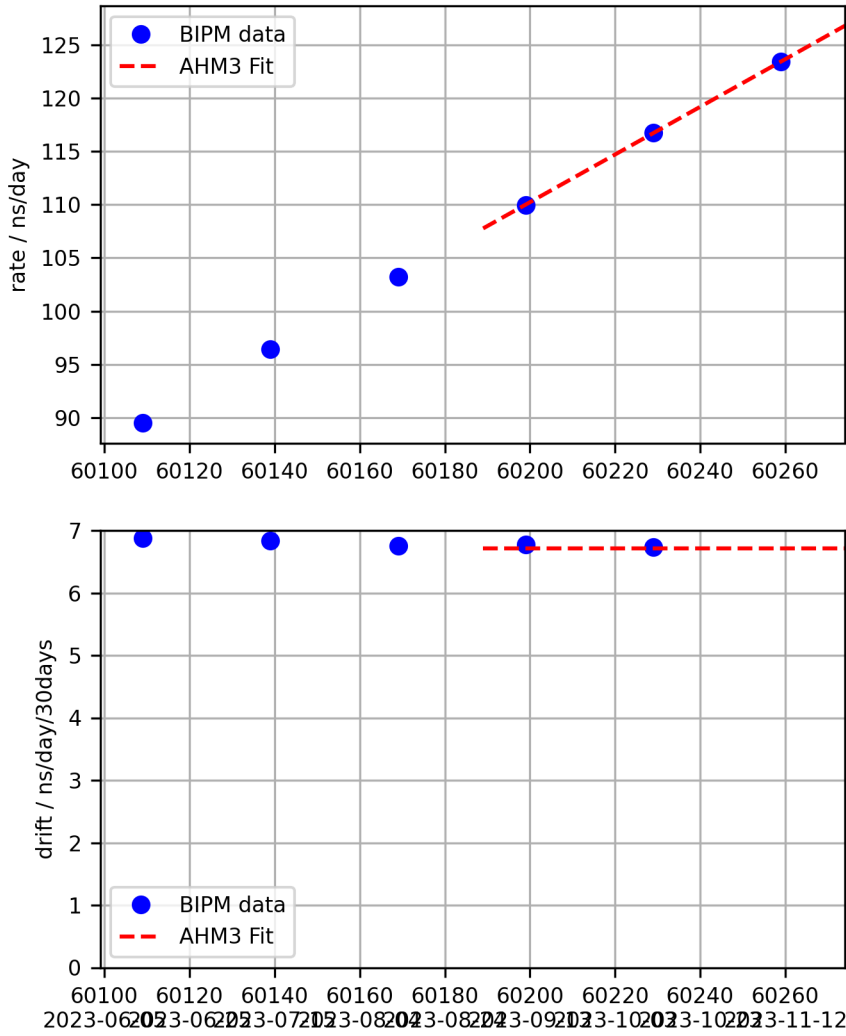


UTC - AHM3 Fit

UTC-AHM3 (2023-12-12 / 60290)
 $x \text{ (ns)} = 46005.171 + 126.791 * d + 0.1119 * d * d$
 $y = -1.46749e-12 + -2.59002e-15 * d$
 $d = (\text{mjd} - \text{mjd0}) \text{ with } \text{mjd0} = 60274$

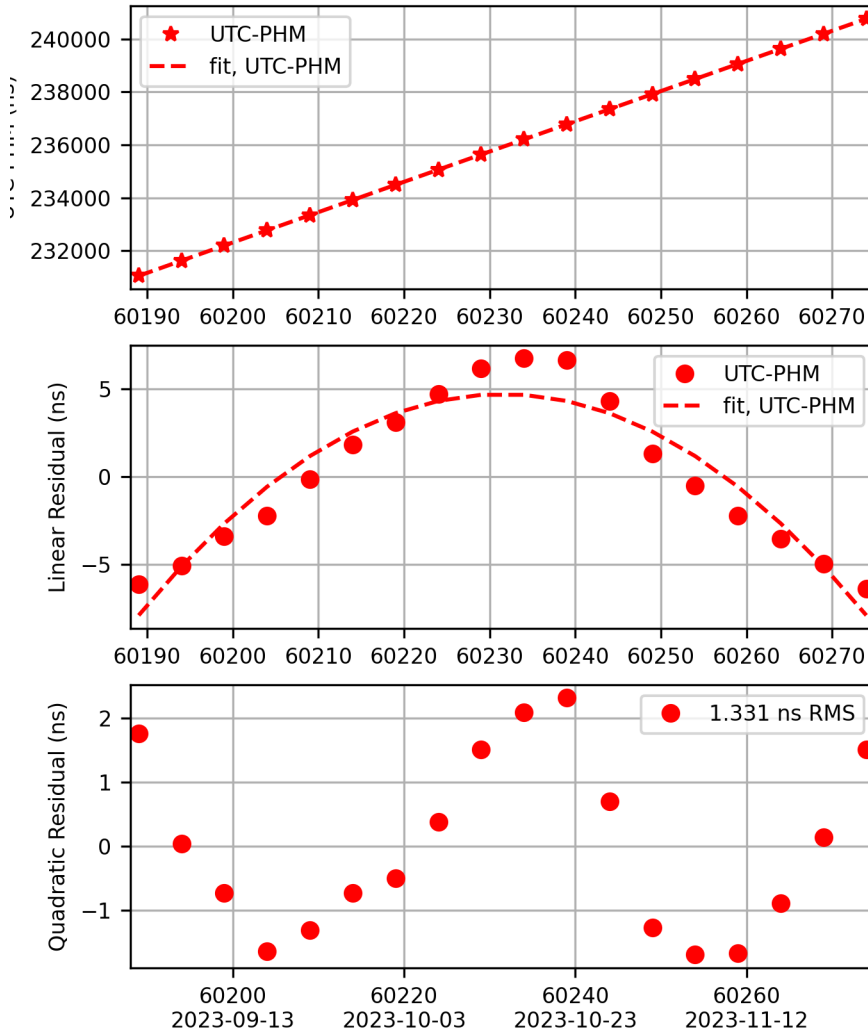


AHM3 Rate and Drift

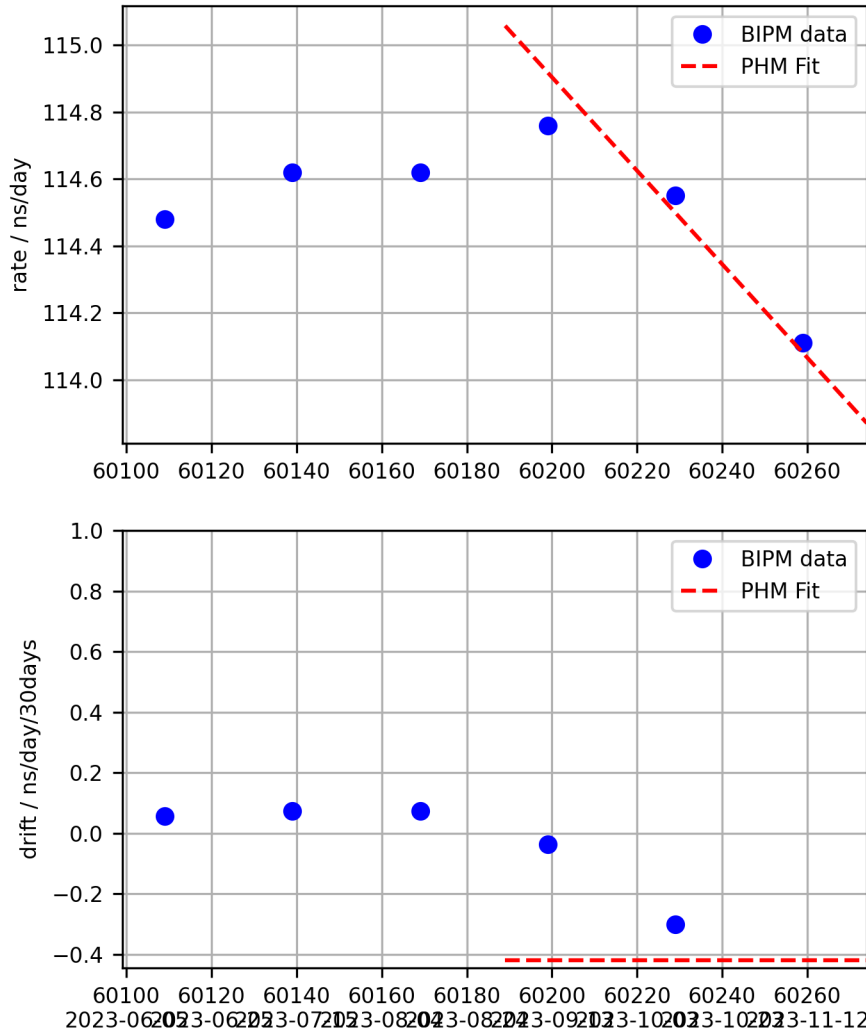


UTC - PHM Fit

UTC-PHM (2023-12-12 / 60290)
 $x \text{ (ns)} = 240771.589 + 113.870 * d + -0.0070 * d*d$
 $y = -1.31794e-12 + 1.6181e-16 * d$
 $d = (\text{mjd} - \text{mjd0})$ with $\text{mjd0} = 60274$

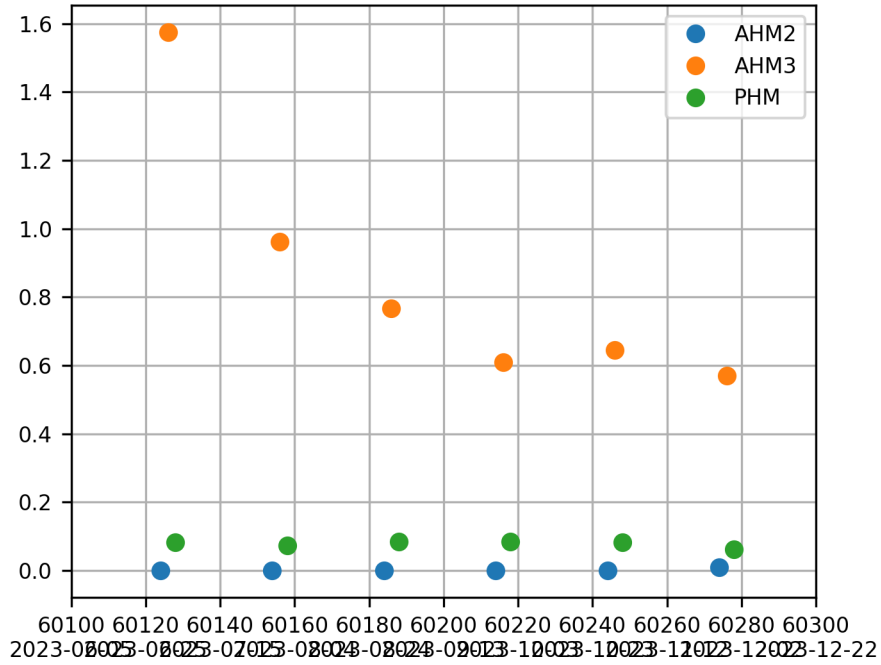


PHM Rate and Drift



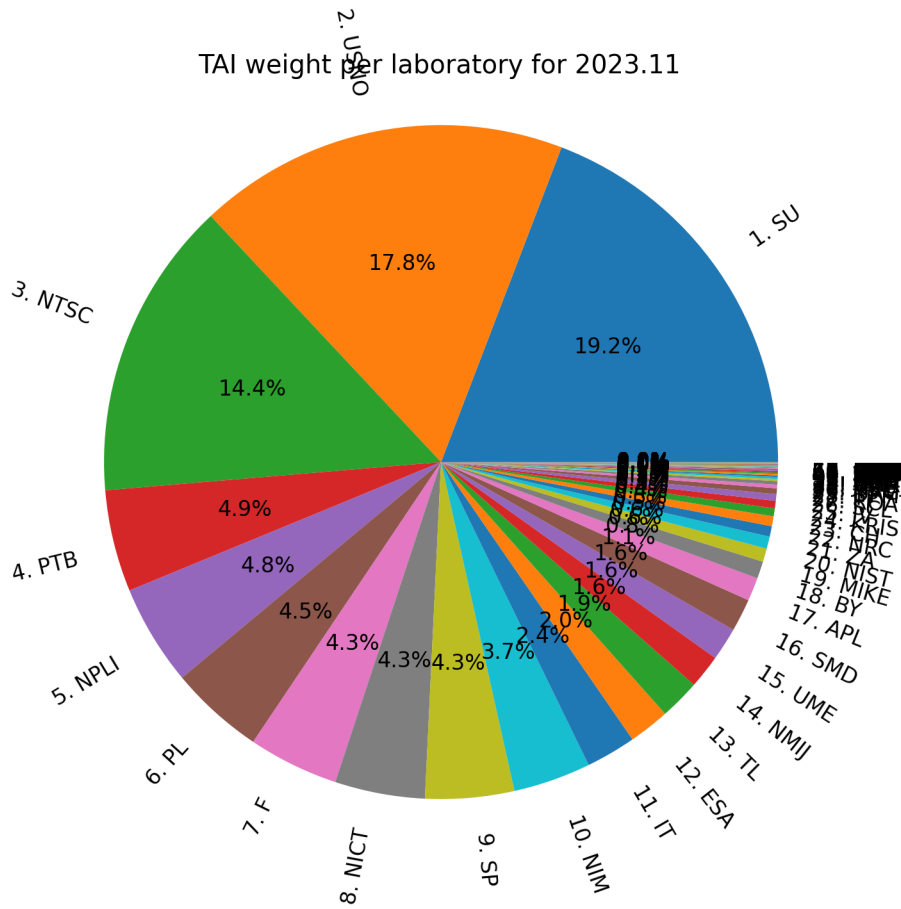
VTT MIKES Clock Weights

RELATIVE WEIGHTS (IN PERCENT) OF THE CLOCKS FOR INTERVALS OF ONE MONTH ENDING AT THE GIVEN DATES



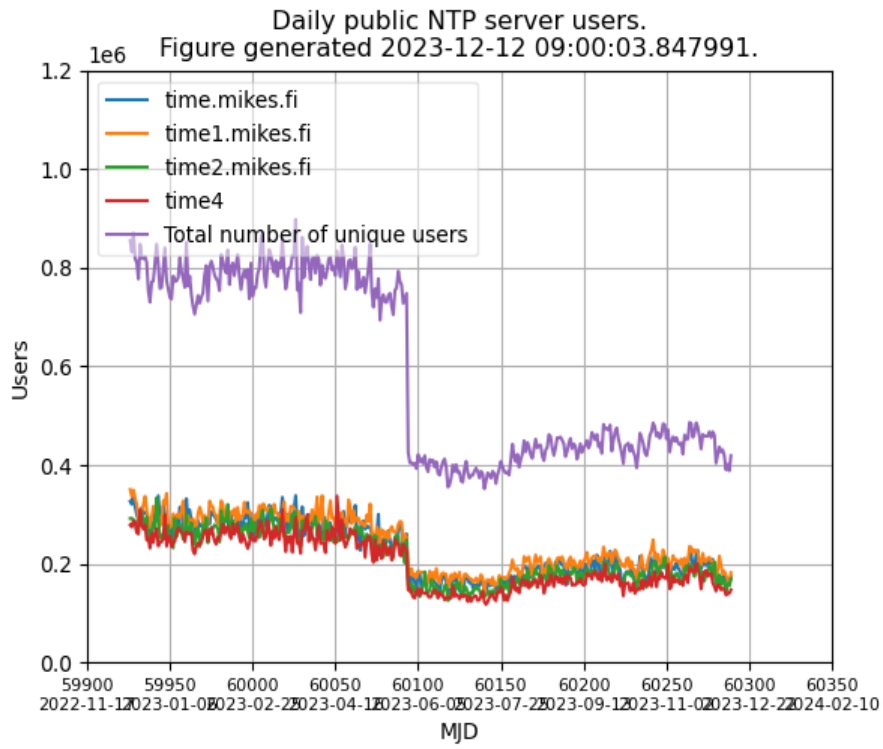
Clock Weights per Laboratory

Relative TAI Weight per laboratory



NTP Usage Statistics

Number of unique IPv4 addresses using our public NTP-servers.



End of Bulletin.