

# UTC(MIKE) Atomic Bulletin 2023-07

VTT MIKES Metrology monthly Time & Frequency bulletin.

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

Date of publication: 2023-07-14 (60139)

Circular-T issues used for analysis: [424](#), [425](#), [426](#),

First day of analysis interval: 2023-04-05 (60039)

Last day of analysis interval: 2023-06-29 (60124)

ClockData for analysis: [CDMI\\_23.04](#), [CDMI\\_23.05](#), [CDMI\\_23.06](#),

The Atomic Bulletin is archived at: [https://monitor.mikes.fi/ftp/atomic\\_bulletin/](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.

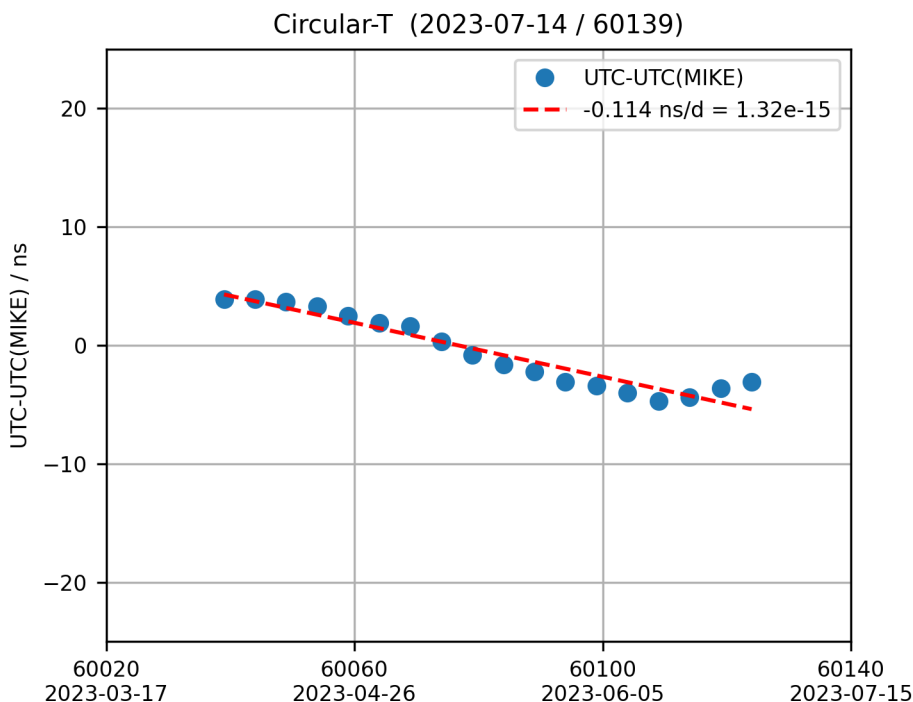
59929 (2022-12-16) AB2022-12 remove AHM2 (BIPM 1404108) from analysis.

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.

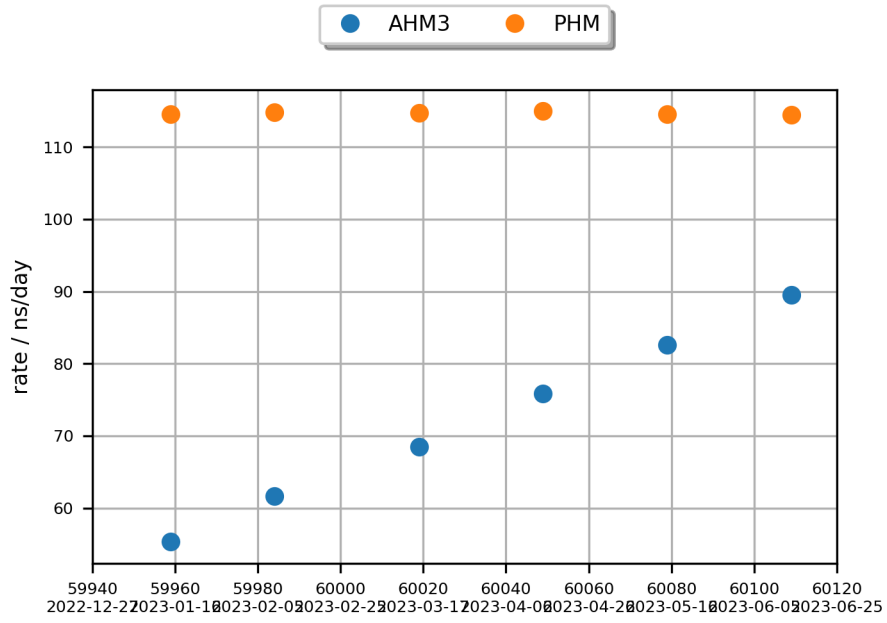
## UTC-UTC(MIKE) as reported in Circular-T



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.

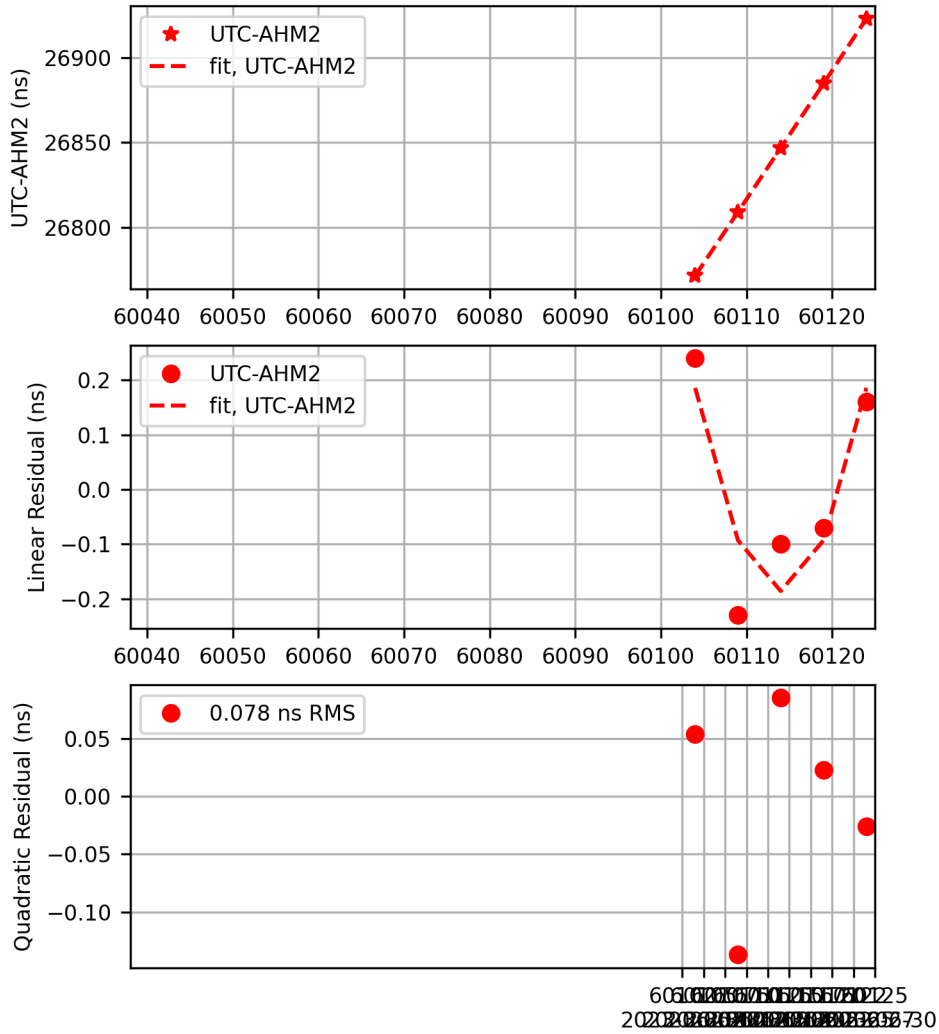
## Clock Rates - Summary

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

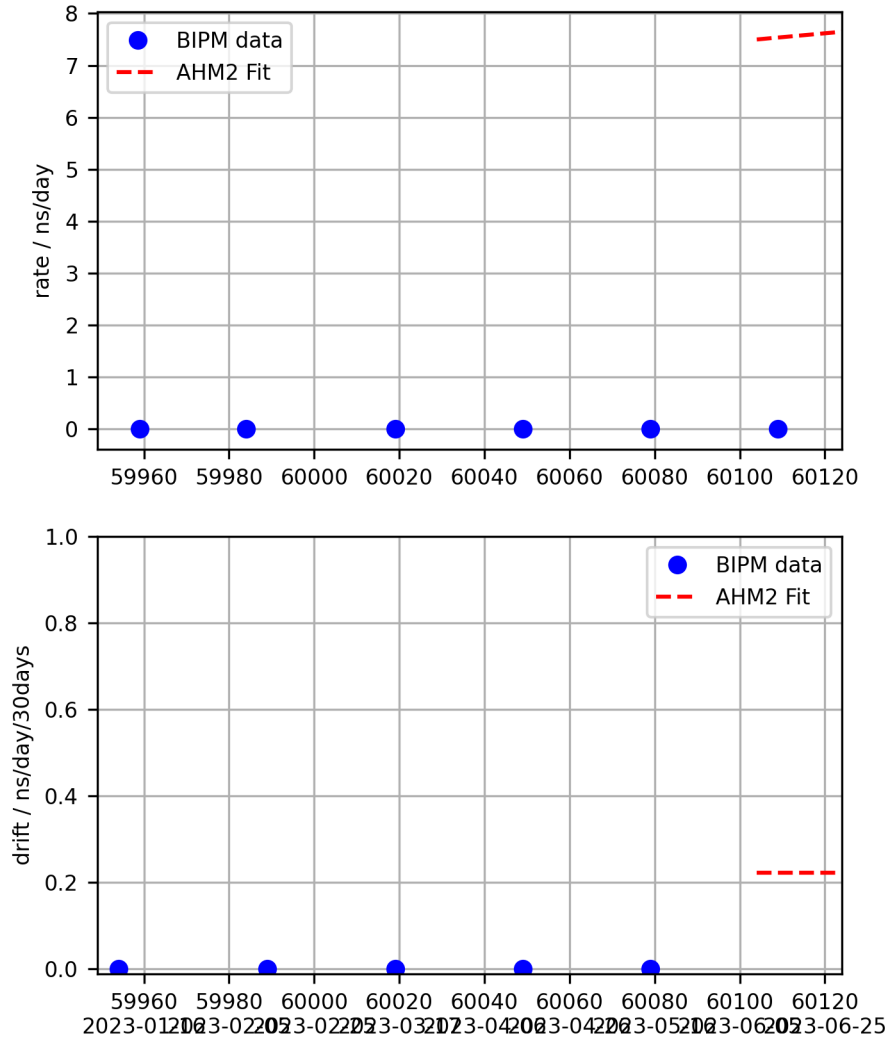


## UTC - AHM2 Fit

UTC-AHM2 (2023-07-14 / 60139)  
 $x \text{ (ns)} = 26922.926 + 7.648 *d + 0.0037 *d*d$   
 $y = -8.85218e-14 + -8.59788e-17 *d$   
 $d = (\text{mjd}-\text{mjd0}) \text{ with } \text{mjd0} = 60124$

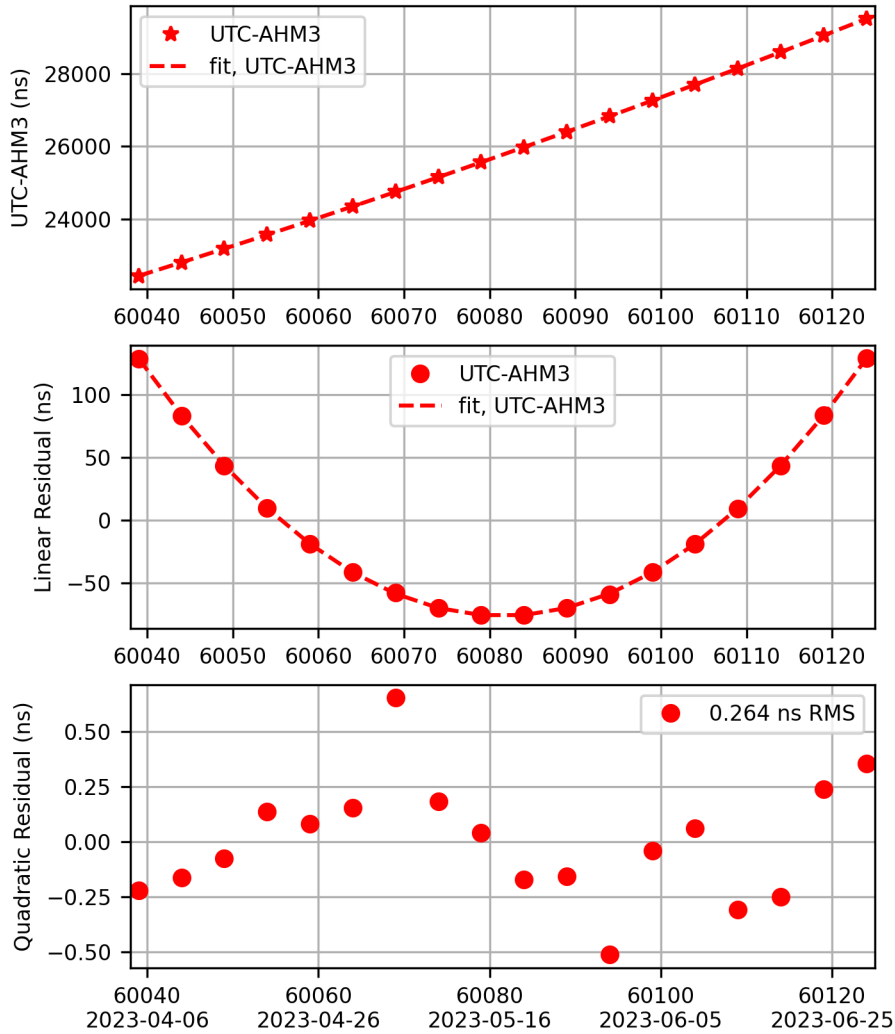


## AHM2 Rate and Drift

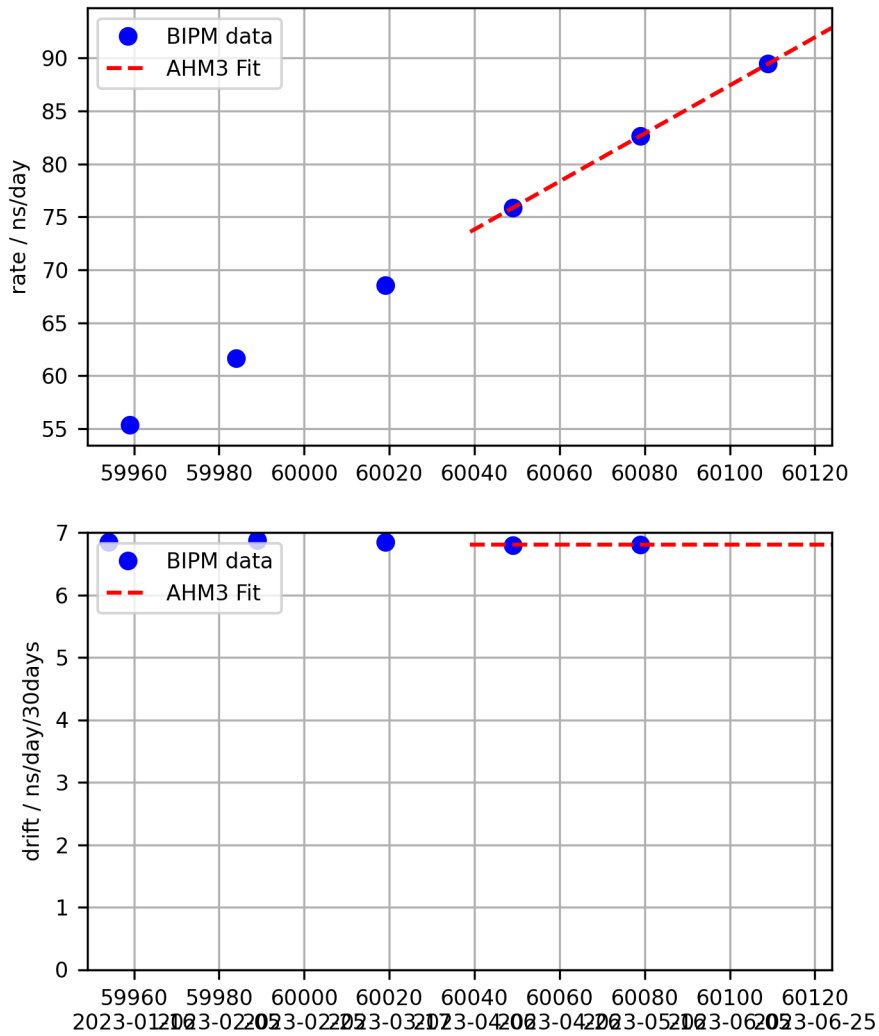


## UTC - AHM3 Fit

UTC-AHM3 (2023-07-14 / 60139)  
 $x \text{ (ns)} = 29511.546 + 92.864 *d + 0.1134 *d*d$   
 $y = -1.07481e-12 + -2.62561e-15 *d$   
 $d = (\text{mjd}-\text{mjd0}) \text{ with mjd0} = 60124$

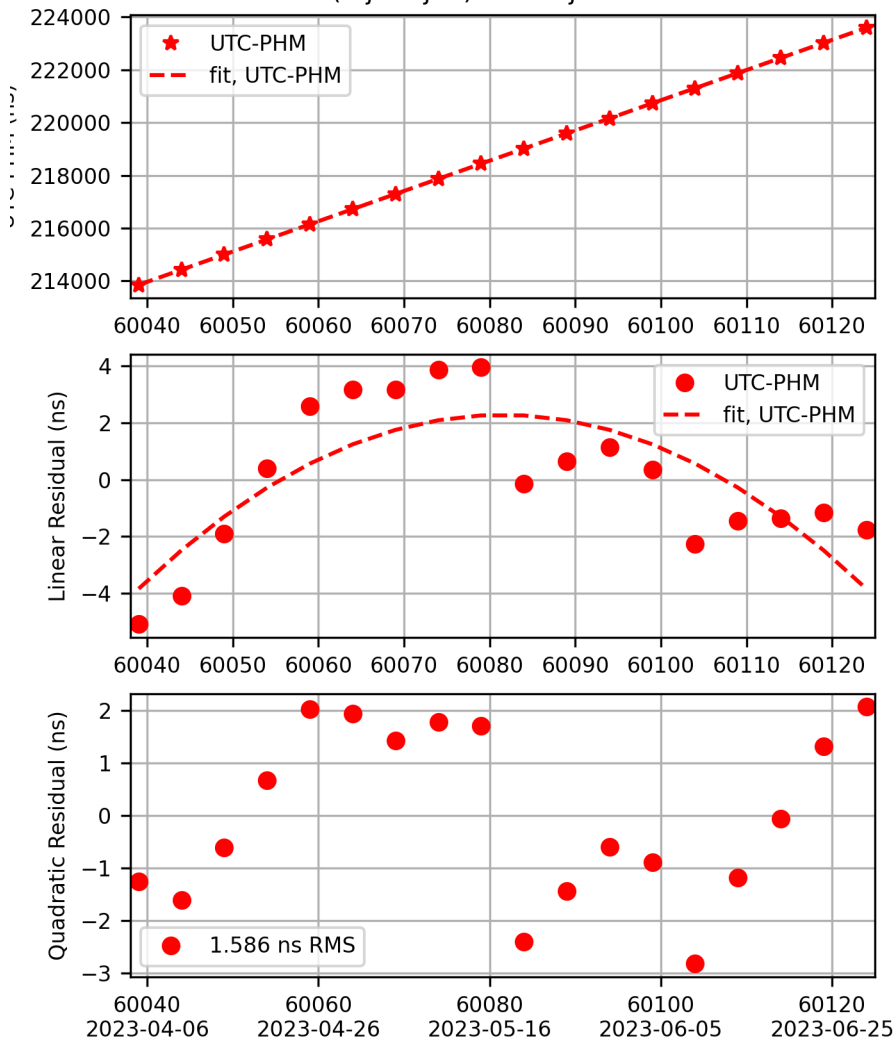


### AHM3 Rate and Drift

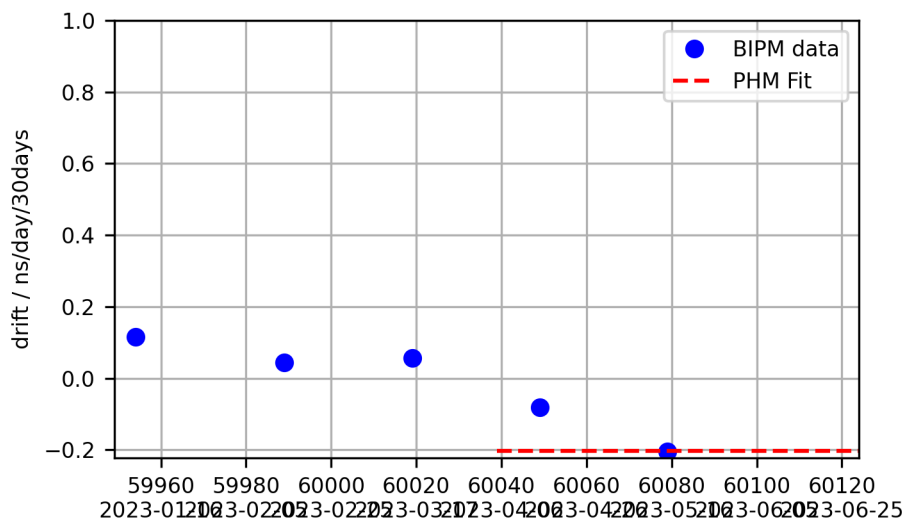
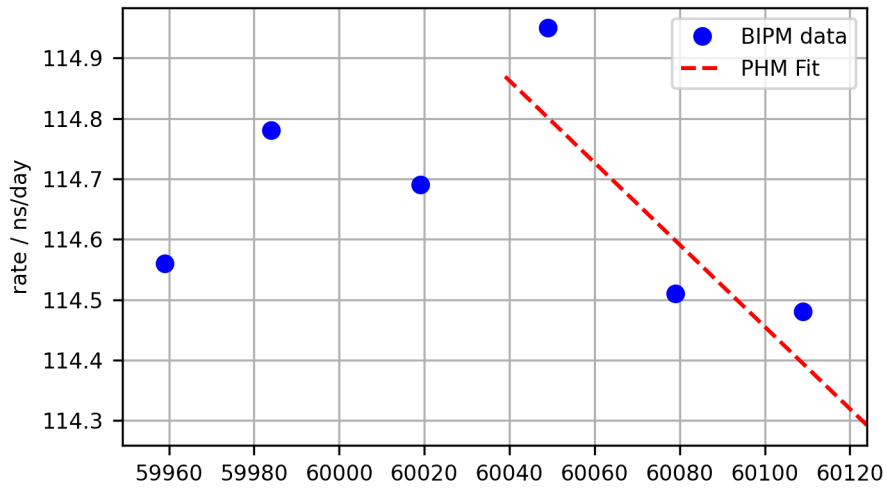


## UTC - PHM Fit

UTC-PHM (2023-07-14 / 60139)  
 $x \text{ (ns)} = 223591.230 + 114.292 *d + -0.0034 *d*d$   
 $y = -1.32283e-12 + 7.85699e-17 *d$   
 $d = (\text{mjd}-\text{mjd0}) \text{ with } \text{mjd0} = 60124$



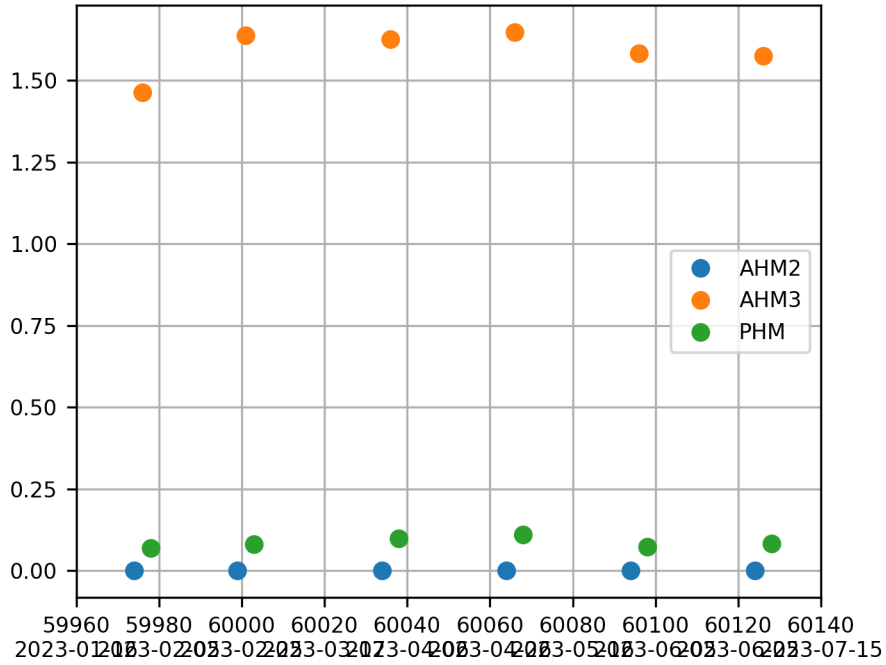
## PHM Rate and Drift





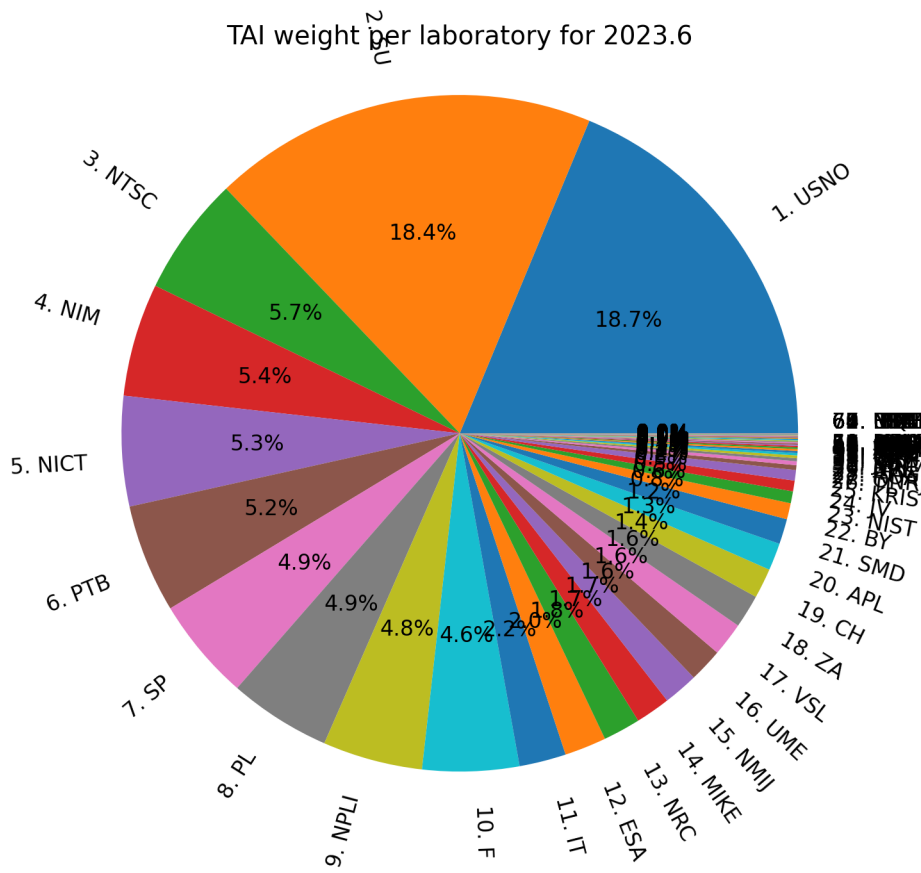
### VTT MIKES Clock Weights

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



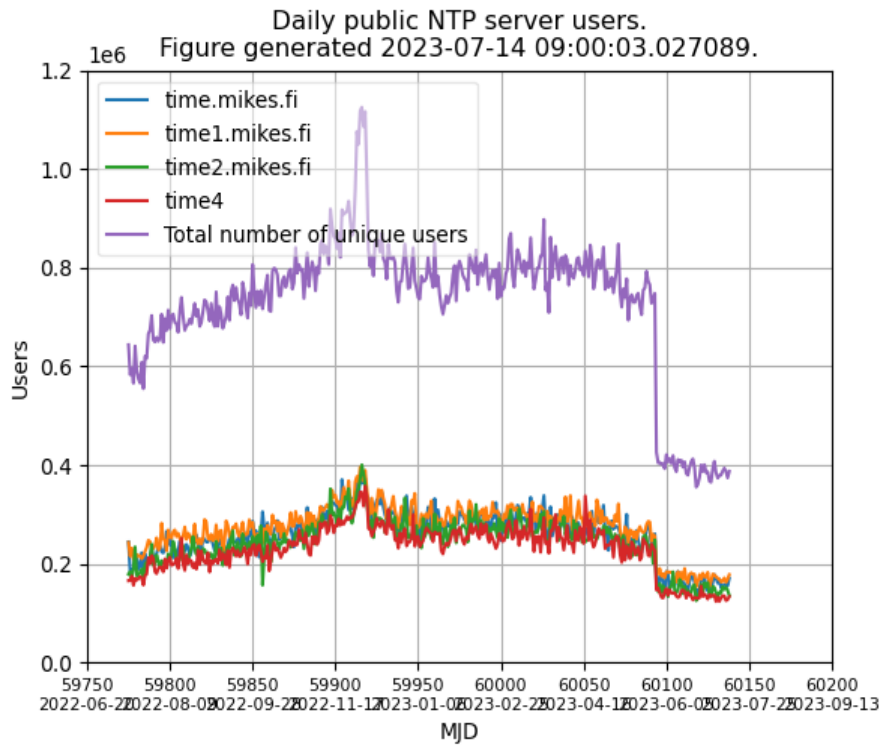
# Clock Weights per Laboratory

Relative TAI Weight per laboratory



## NTP Usage Statistics

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



**End of Bulletin.**