

# UTC(MIKE) Atomic Bulletin 2023-05

VTT MIKES Metrology monthly Time & Frequency bulletin.

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

Date of publication: 2023-05-15 (60079)

Circular-T issues used for analysis: [422](#), [423](#), [424](#),

First day of analysis interval: 2023-02-04 (59979)

Last day of analysis interval: 2023-04-30 (60064)

ClockData for analysis: [CDMI\\_23.02](#), [CDMI\\_23.03](#), [CDMI\\_23.04](#),

The Atomic Bulletin is archived at: <https://monitor.mikes.fi/ftp/time-scale/>

## Notes

(2022-01-28) Change master clock to AHM3

(2022-02-14) No Remote Clocks reported in 2022-02 bulletin due to network issues.

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

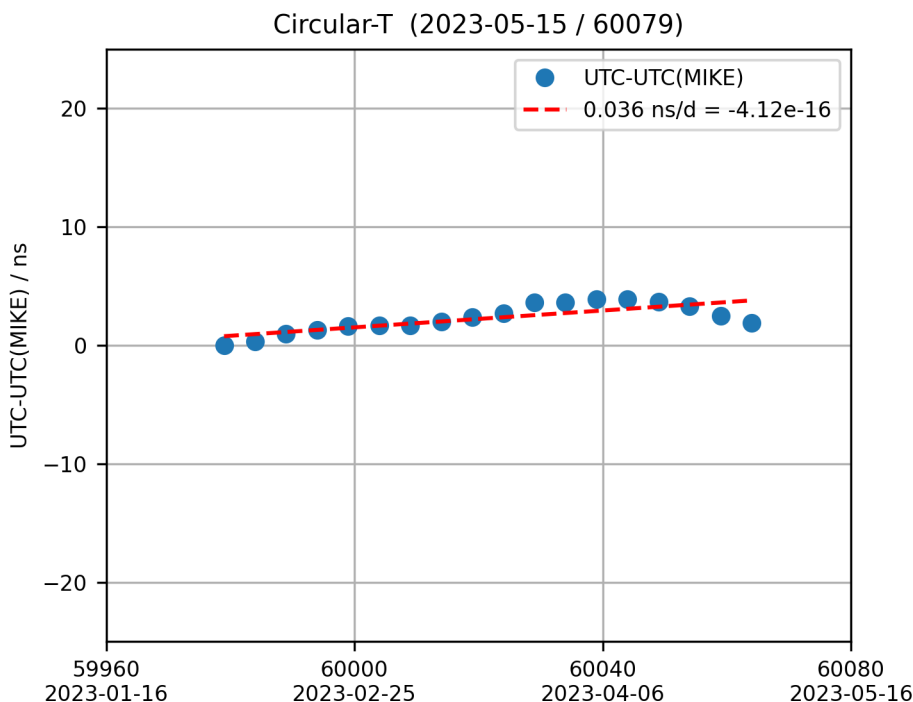
59760 (2022-06-30) steering correction set to zero

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

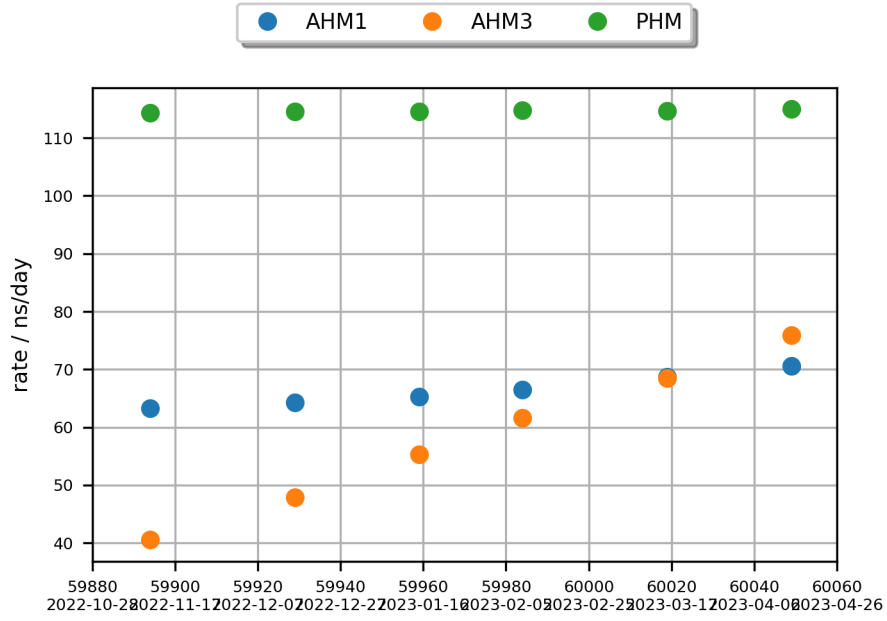
## UTC-UTC(MIKE) as reported in Circular-T



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.

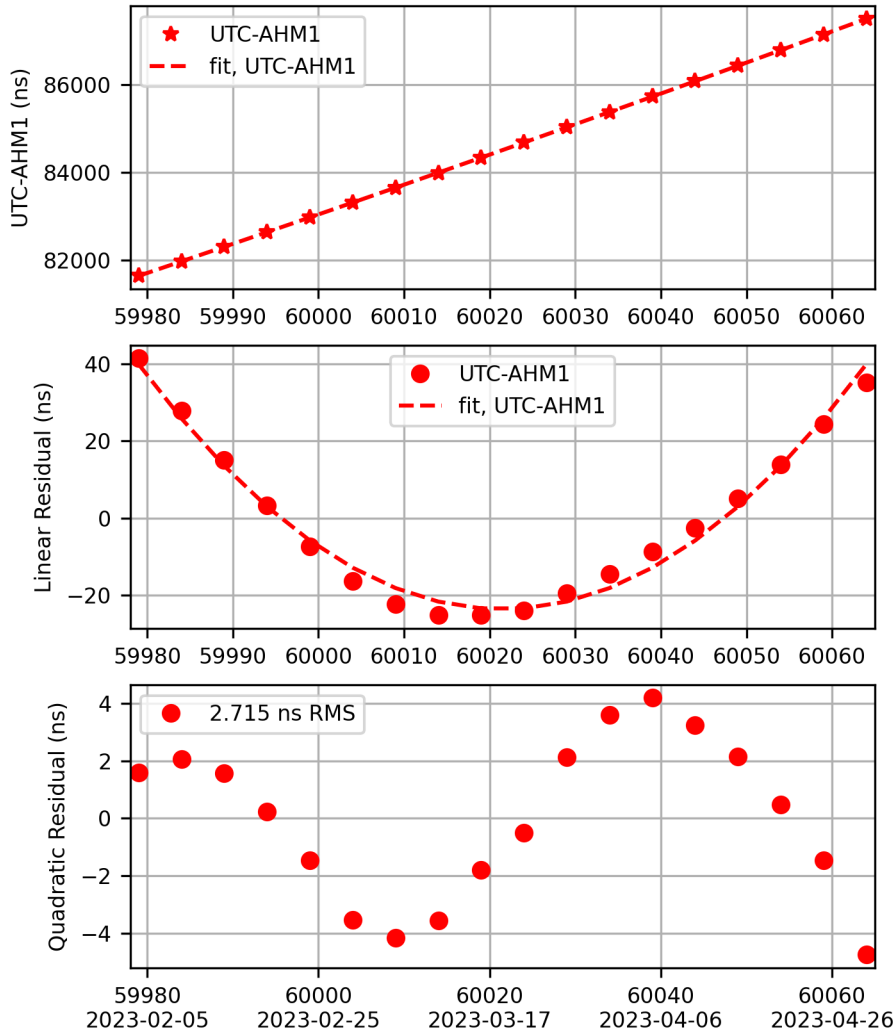
## Clock Rates - Summary

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

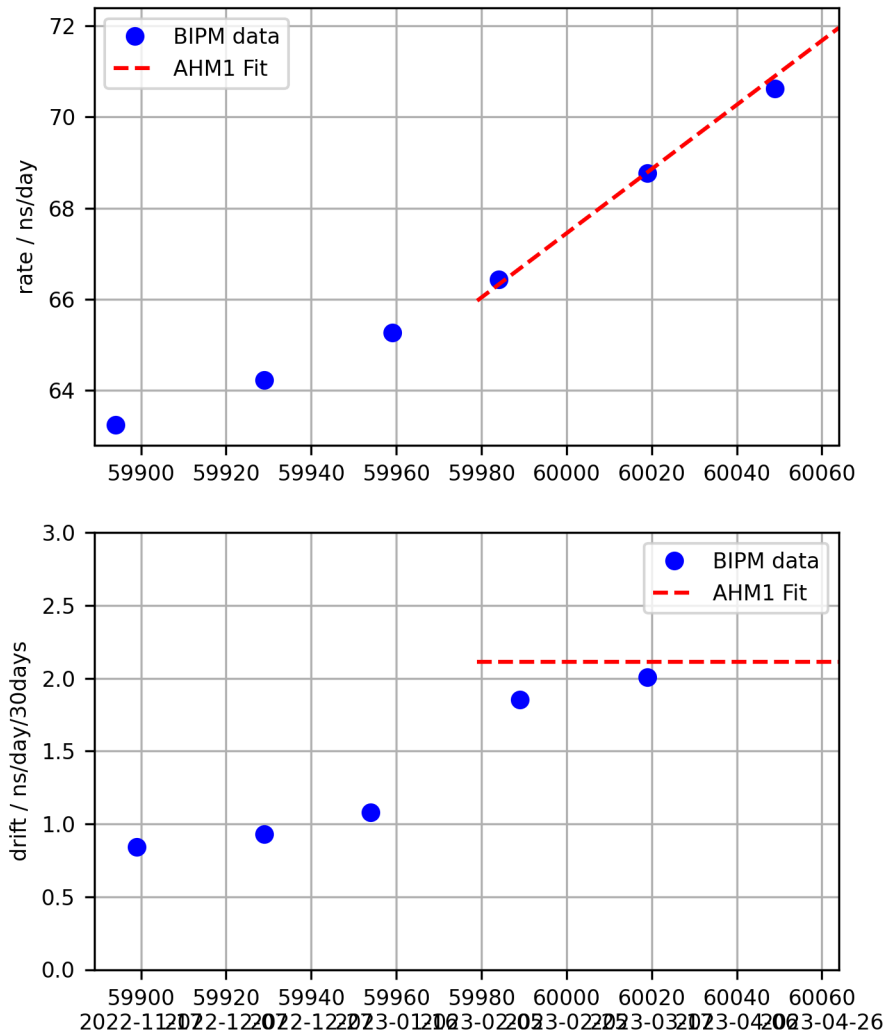


## UTC - AHM1 Fit

UTC-AHM1 (2023-05-15 / 60079)  
 $x \text{ (ns)} = 87503.454 + 71.955 *d + 0.0352 *d*d$   
 $y = -8.32809e-13 + -8.151e-16 *d$   
 $d = (\text{mjd}-\text{mjd0}) \text{ with mjd0} = 60064$

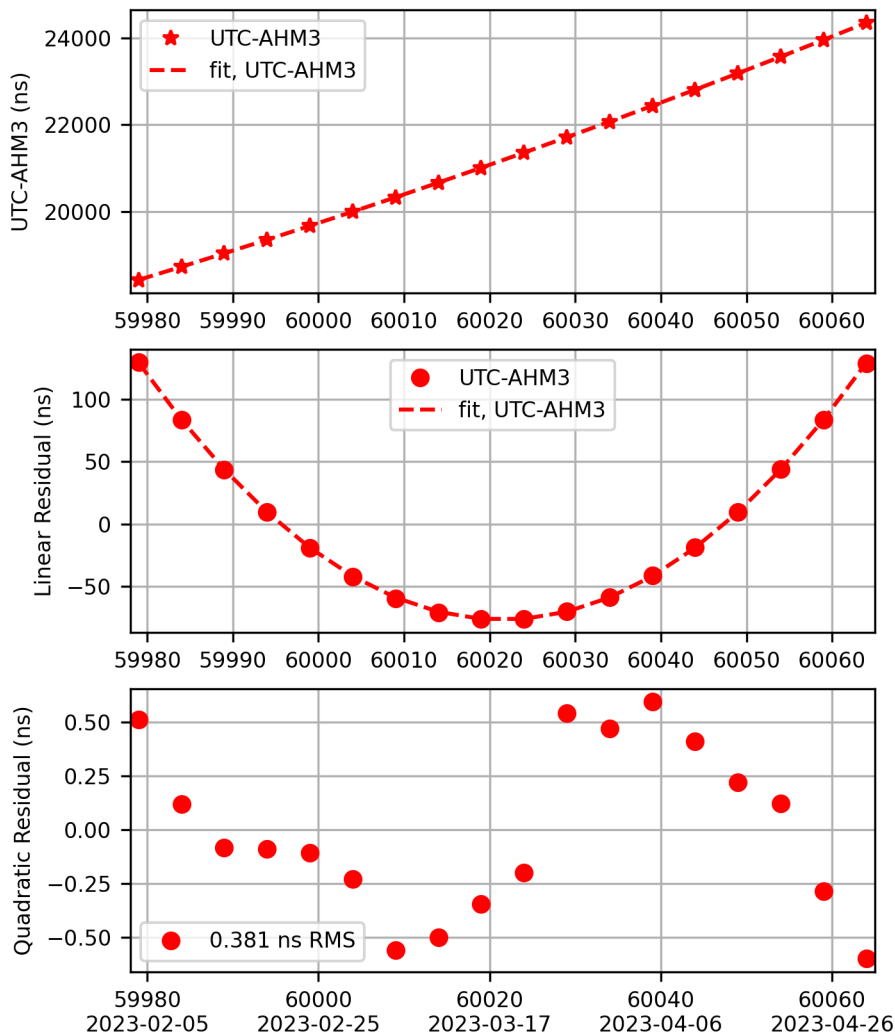


## AHM1 Rate and Drift

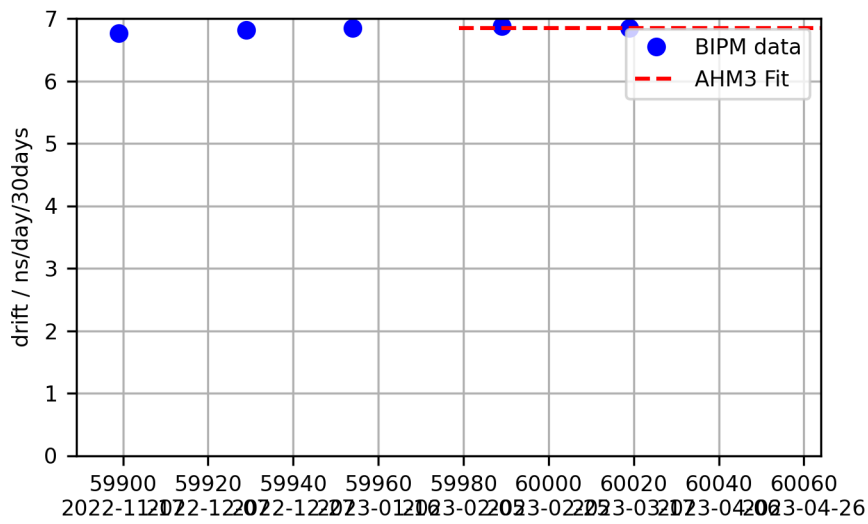
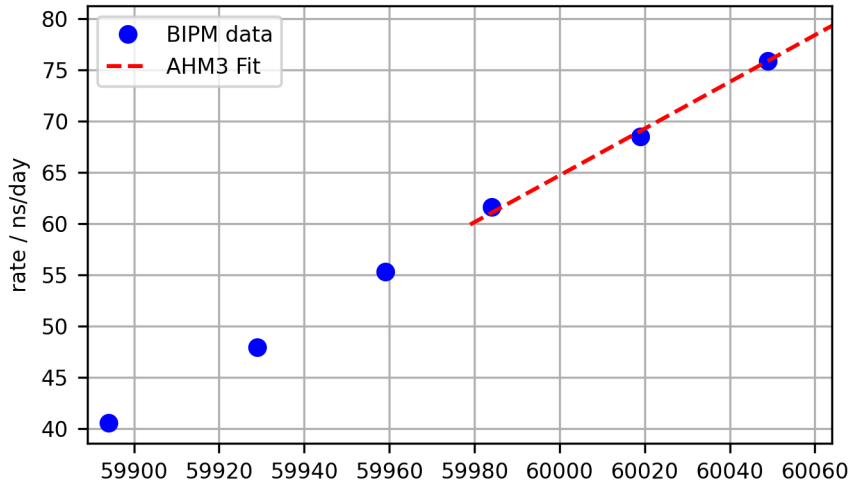


## UTC - AHM3 Fit

UTC-AHM3 (2023-05-15 / 60079)  
 $x \text{ (ns)} = 24348.799 + 79.334 *d + 0.1142 *d*d$   
 $y = -9.18213e-13 + -2.64239e-15 *d$   
 $d = (\text{mjd}-\text{mjd0}) \text{ with mjd0} = 60064$

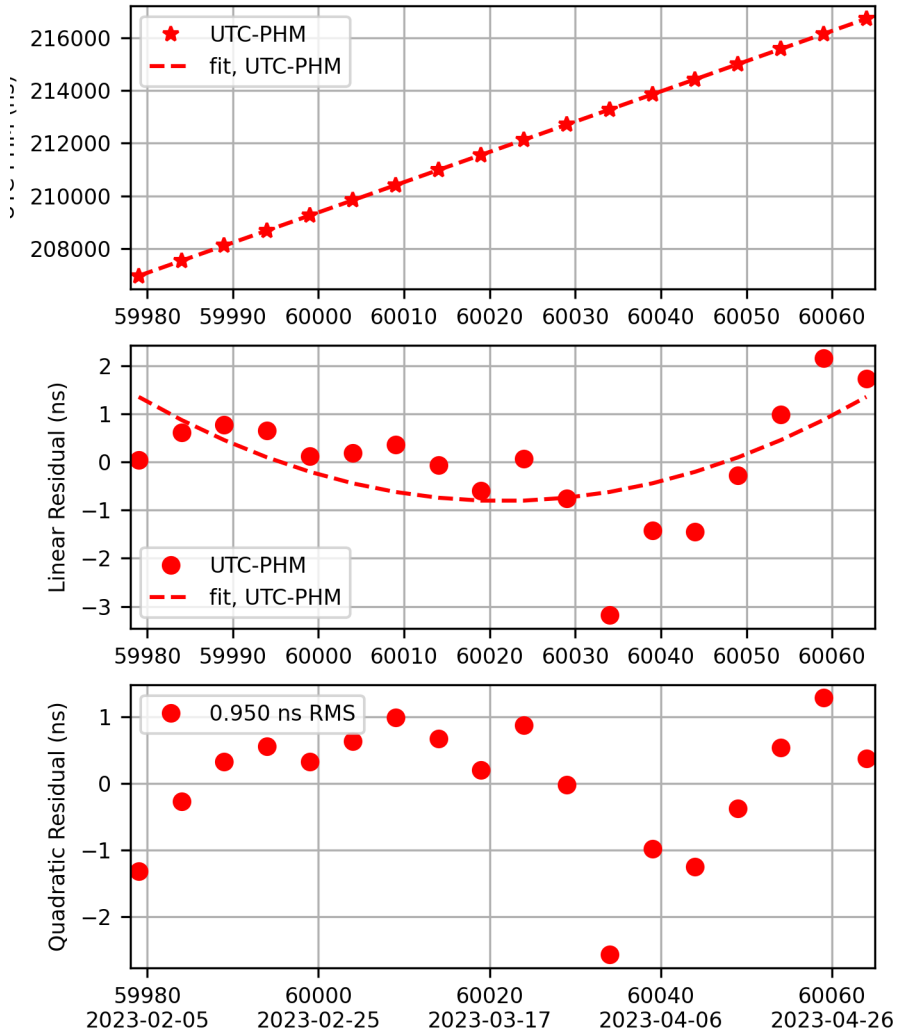


### AHM3 Rate and Drift

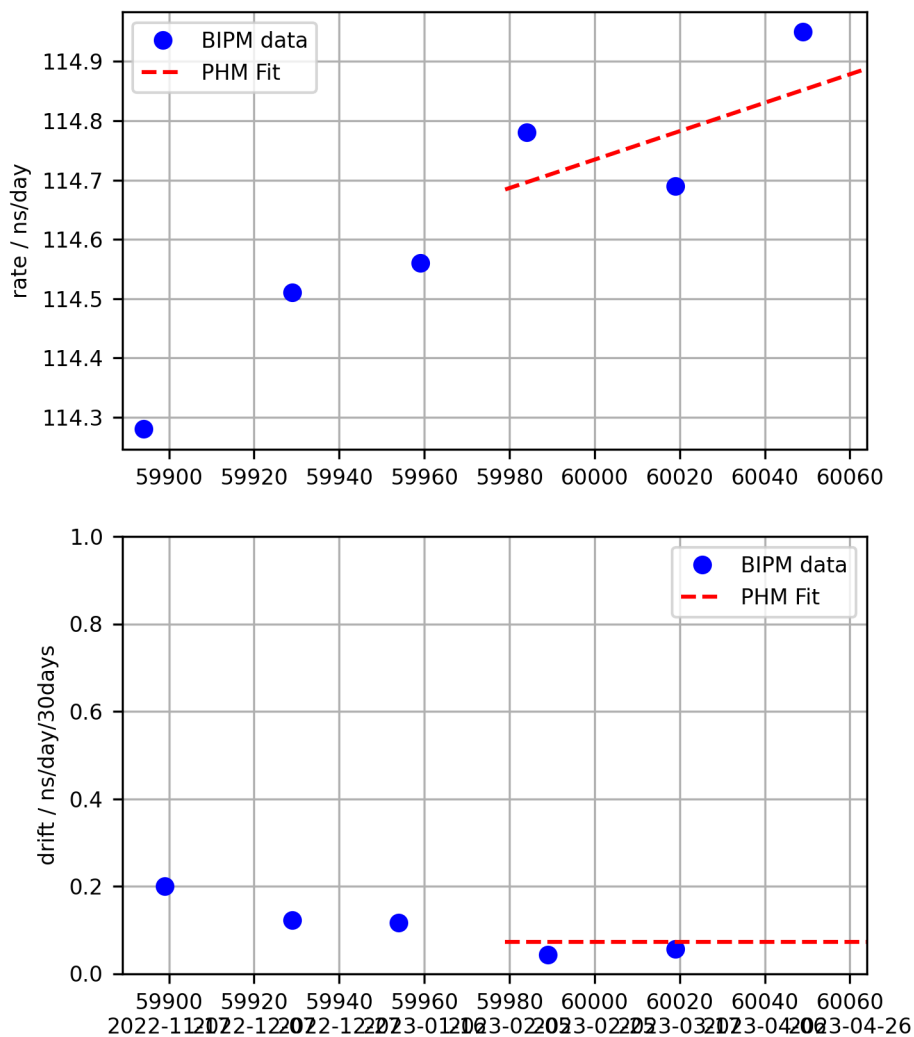


## UTC - PHM Fit

UTC-PHM (2023-05-15 / 60079)  
 $x \text{ (ns)} = 216723.025 + 114.888 *d + 0.0012 *d*d$   
 $y = -1.32972e-12 + -2.77587e-17 *d$   
 $d = (\text{mjd}-\text{mjd0})$  with  $\text{mjd0} = 60064$



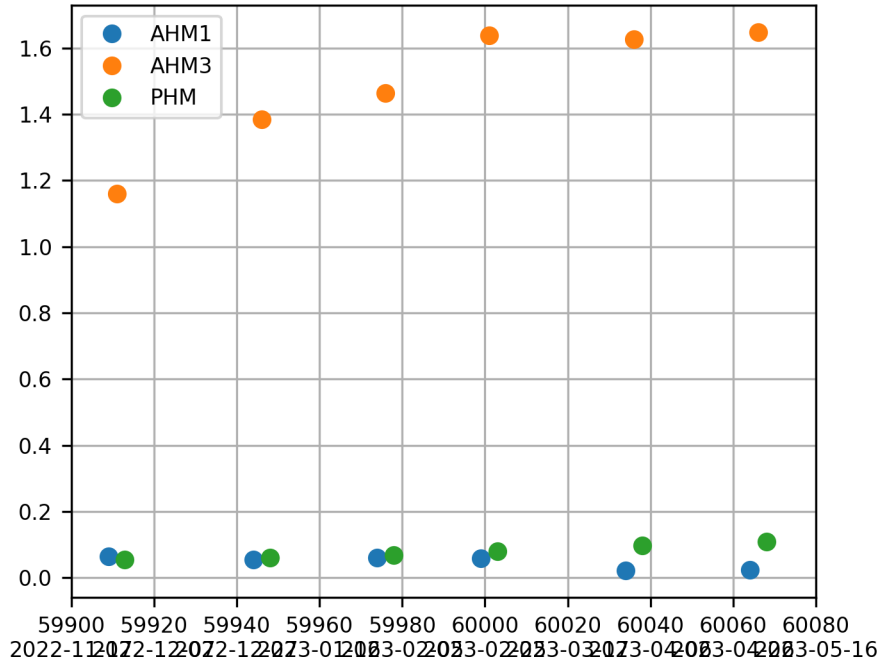
### PHM Rate and Drift





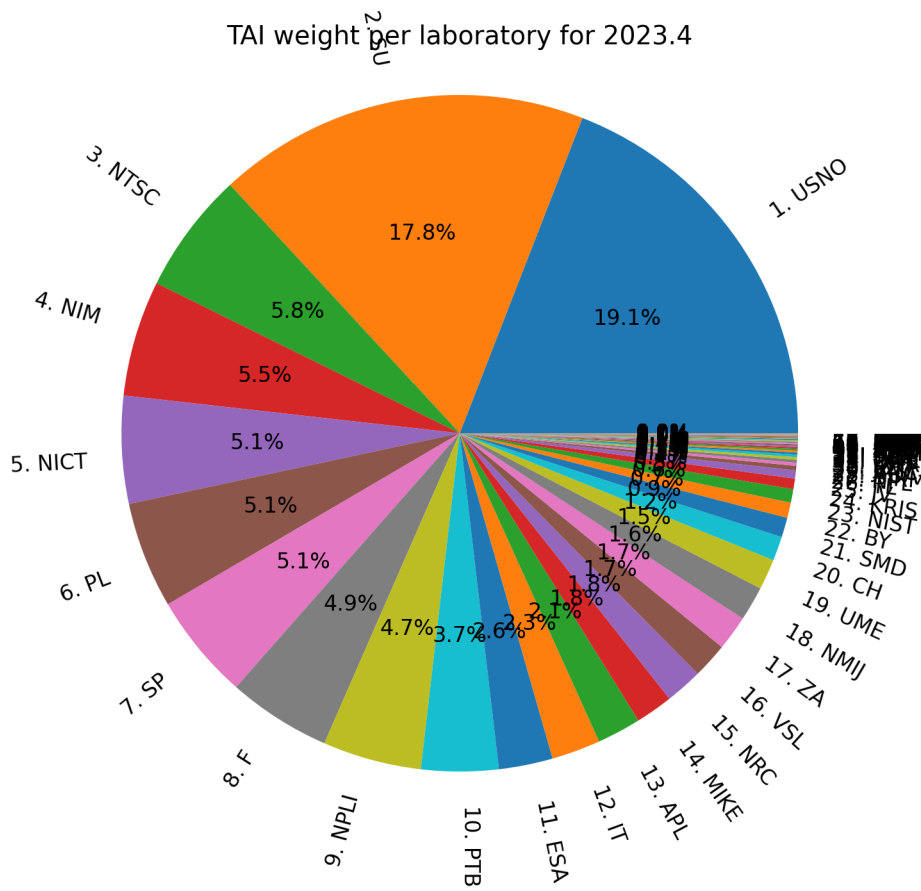
### VTT MIKES Clock Weights

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



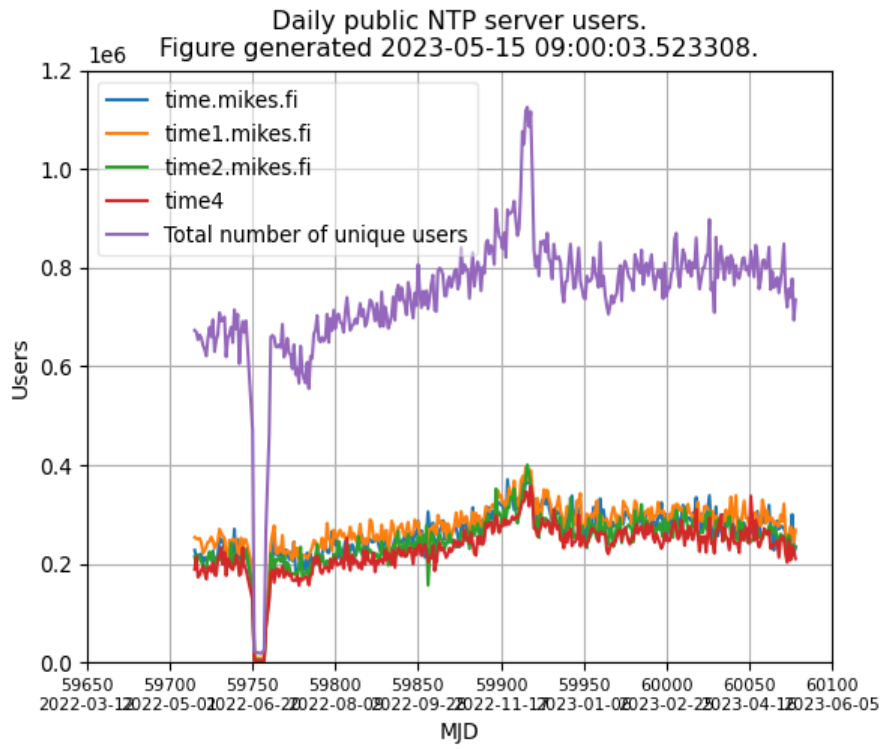
# Clock Weights per Laboratory

Relative TAI Weight per laboratory



## NTP Usage Statistics

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



**End of Bulletin.**