

# UTC(MIKE) Atomic Bulletin 2023-01

VTT MIKES Metrology monthly Time & Frequency bulletin.

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

Date of publication: 2023-01-16 (59960)

Circular-T issues used for analysis: [418](#), [419](#), [420](#),

First day of analysis interval: 2022-10-02 (59854)

Last day of analysis interval: 2022-12-31 (59944)

ClockData for analysis: [CDMI 22.10](#), [CDMI 22.11](#), [CDMI 22.12](#),

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  $+1.5e-15$

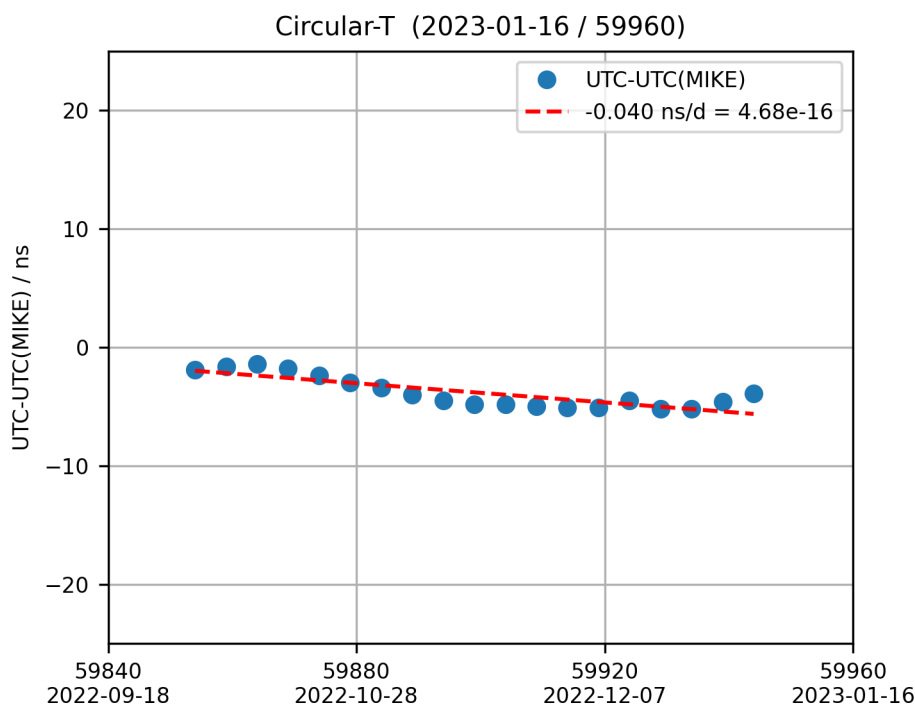
59760 (2022-06-30) steering correction set to zero

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

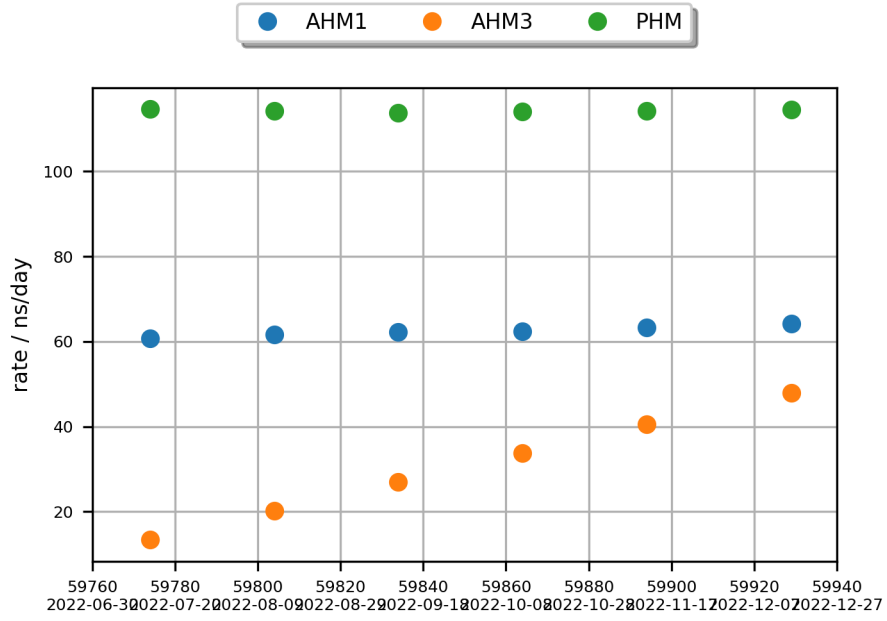
## UTC-UTC(MIKE) as reported in Circular-T



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.

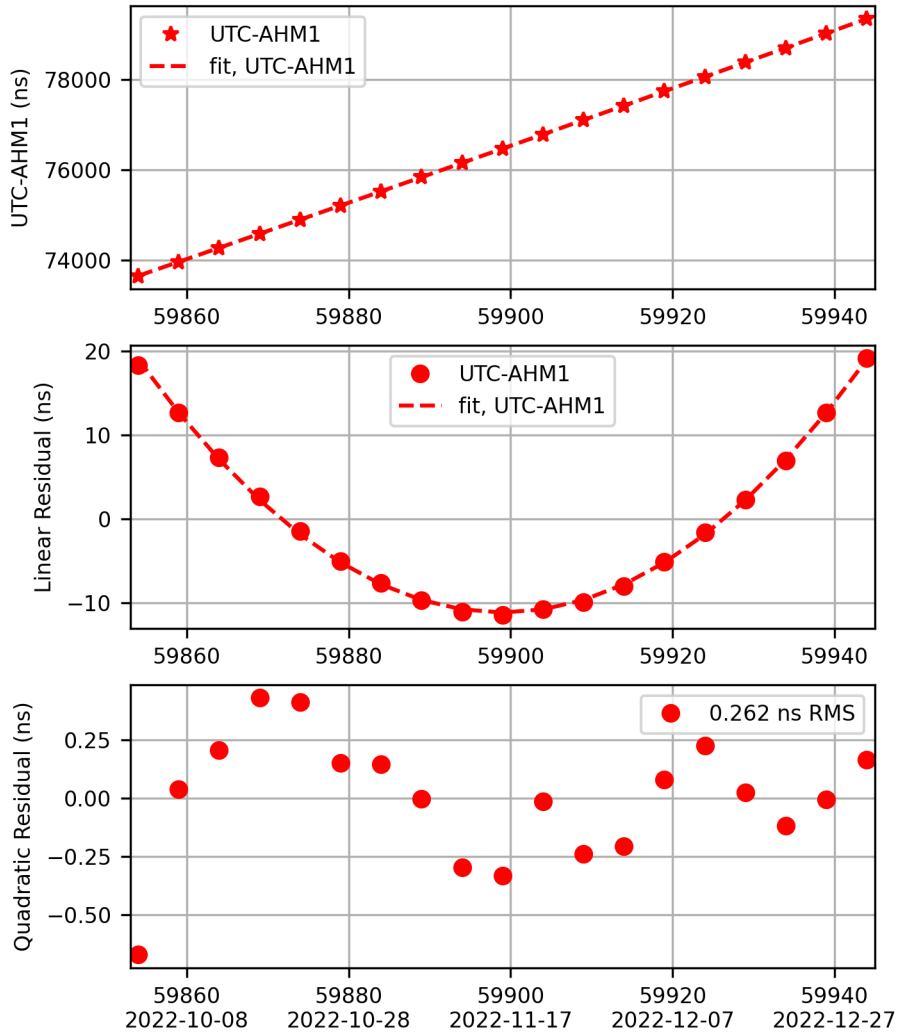
## Clock Rates - Summary

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

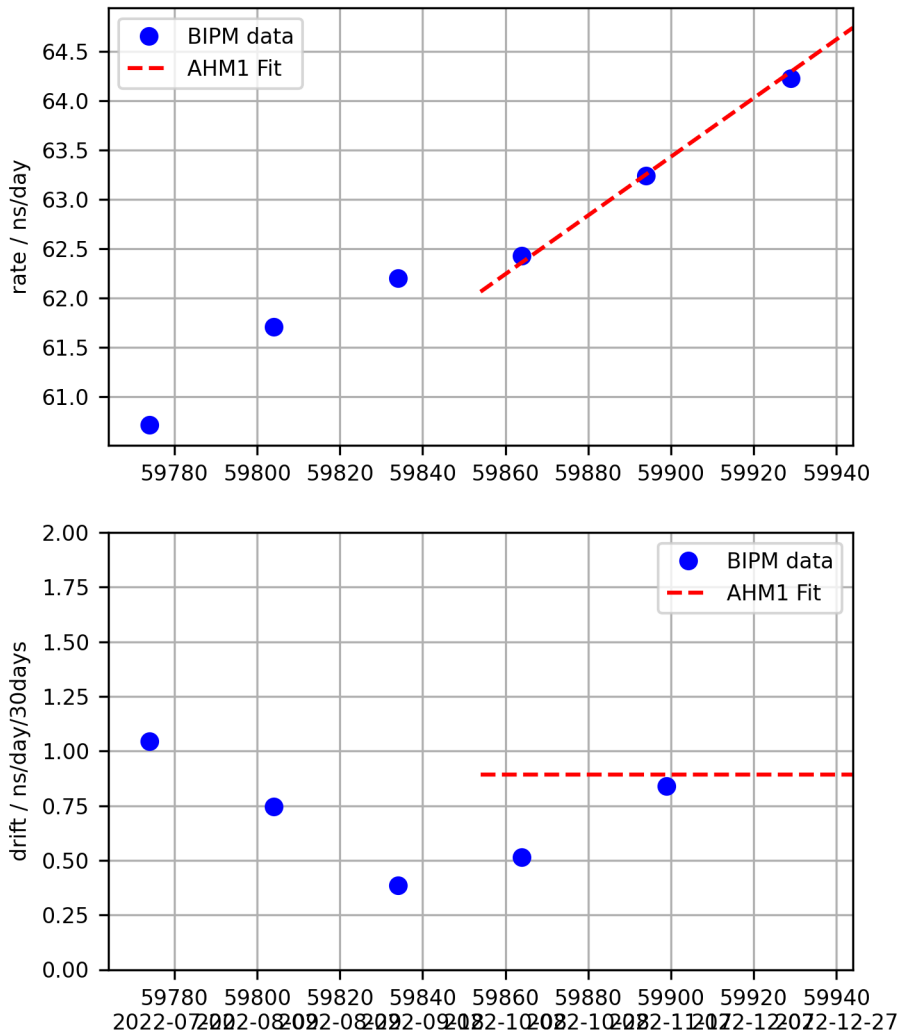


## UTC - AHM1 Fit

UTC-AHM1 (2023-01-16 / 59960)  
 $x \text{ (ns)} = 79354.434 + 64.740 *d + 0.0149 *d*d$   
 $y = -7.49311e-13 + -3.44304e-16 *d$   
 $d = (\text{mjd}-\text{mjd0}) \text{ with mjd0} = 59944$

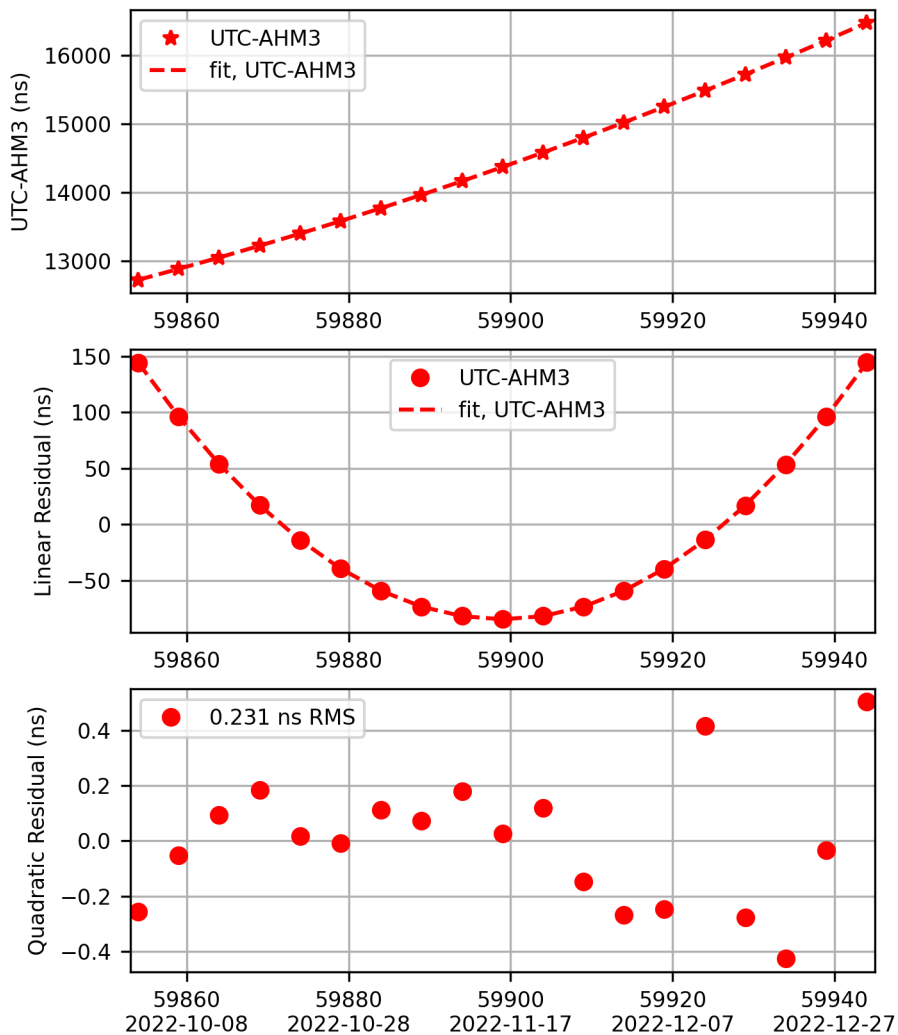


## AHM1 Rate and Drift

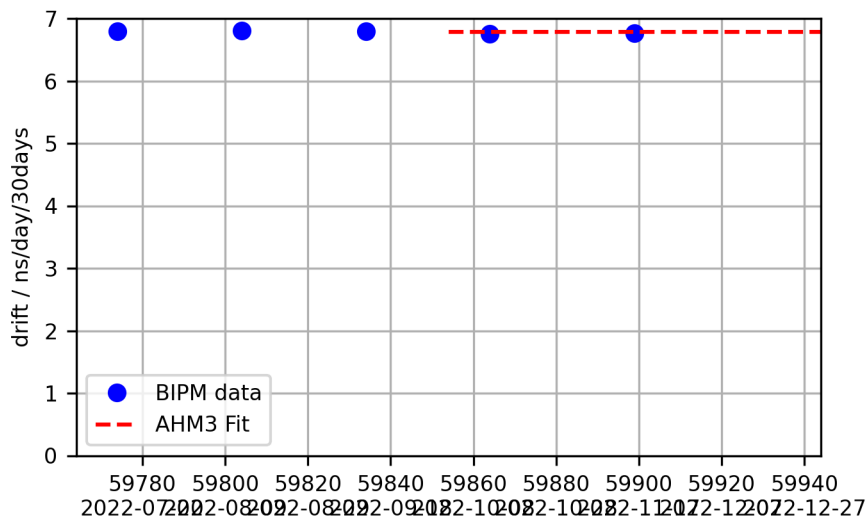
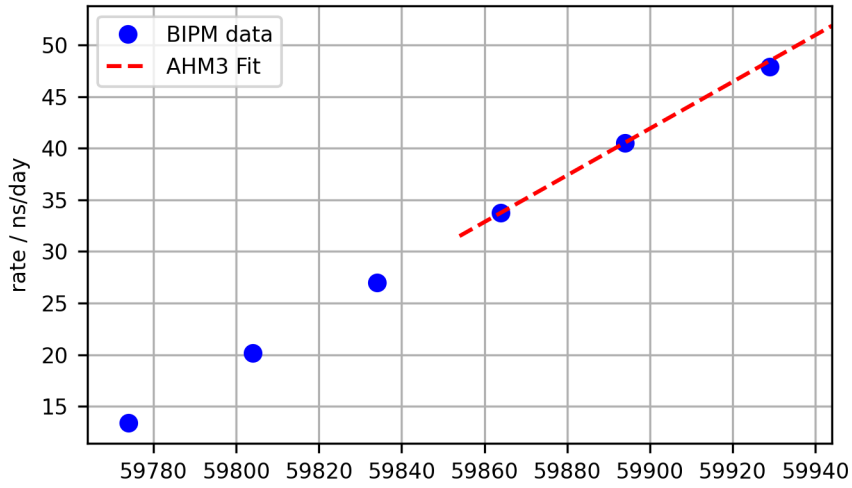


## UTC - AHM3 Fit

UTC-AHM3 (2023-01-16 / 59960)  
 $x \text{ (ns)} = 16473.297 + 51.858 *d + 0.1131 *d*d$   
 $y = -6.00213e-13 + -2.61892e-15 *d$   
 $d = (\text{mjd}-\text{mjd0})$  with  $\text{mjd0} = 59944$

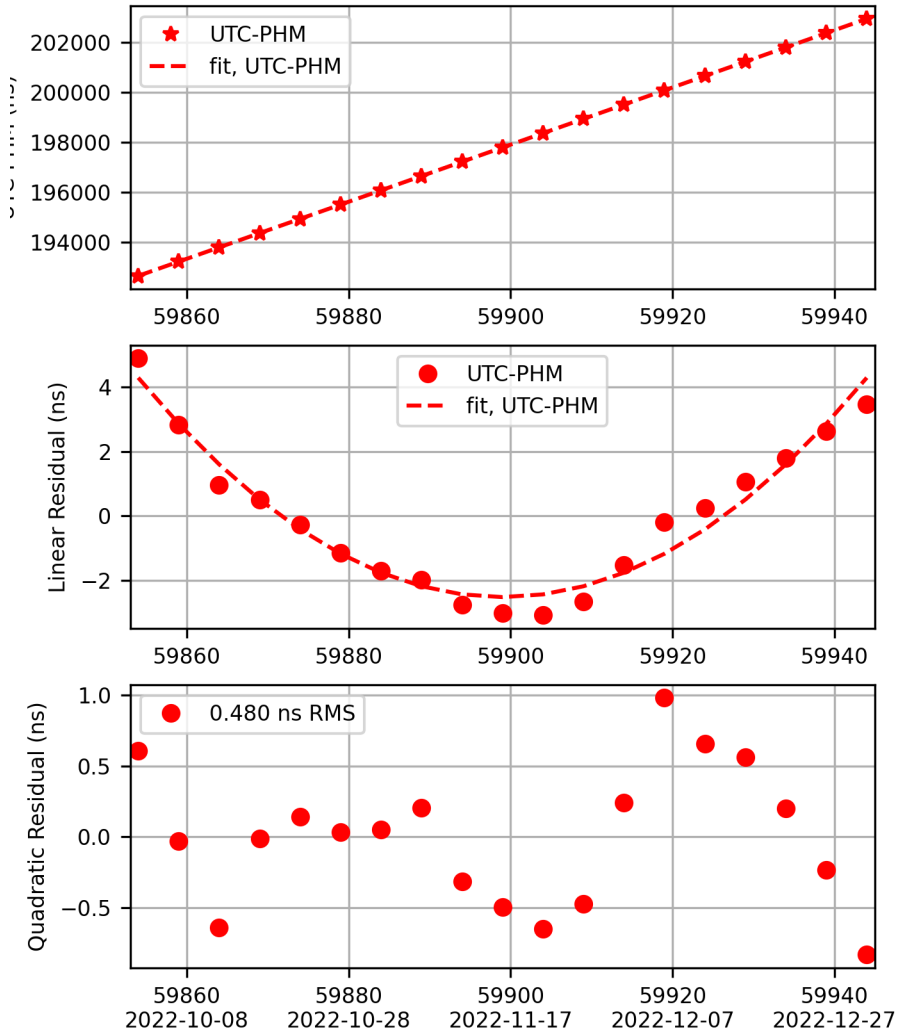


## AHM3 Rate and Drift

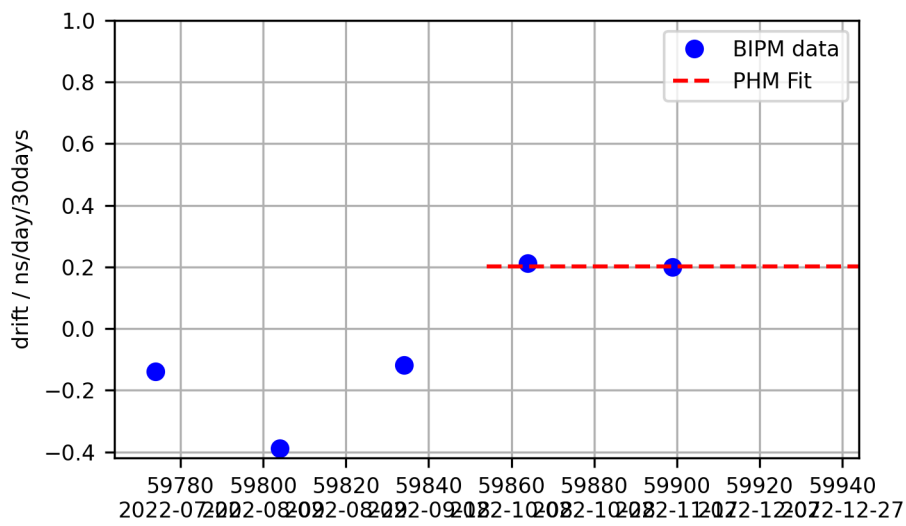
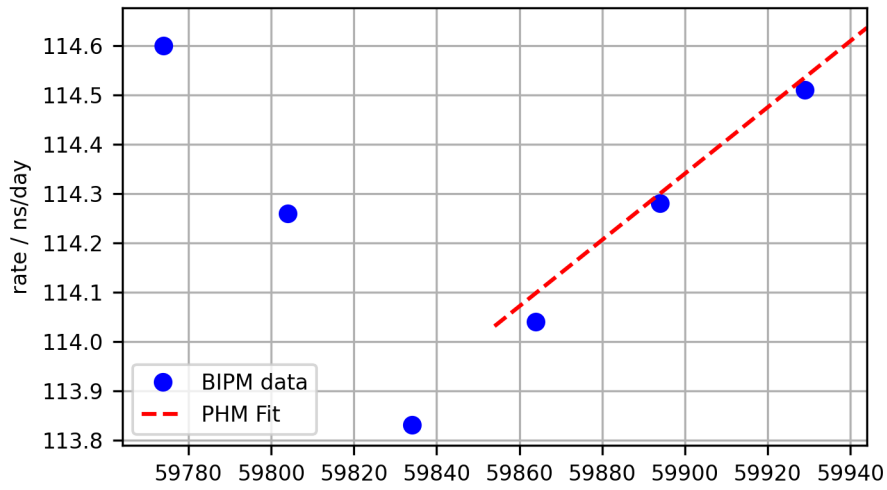


## UTC - PHM Fit

UTC-PHM (2023-01-16 / 59960)  
 $x \text{ (ns)} = 202955.131 + 114.637 *d + 0.0034 *d*d$   
 $y = -1.32681e-12 + -7.79045e-17 *d$   
 $d = (\text{mjd}-\text{mjd0}) \text{ with mjd0} = 59944$



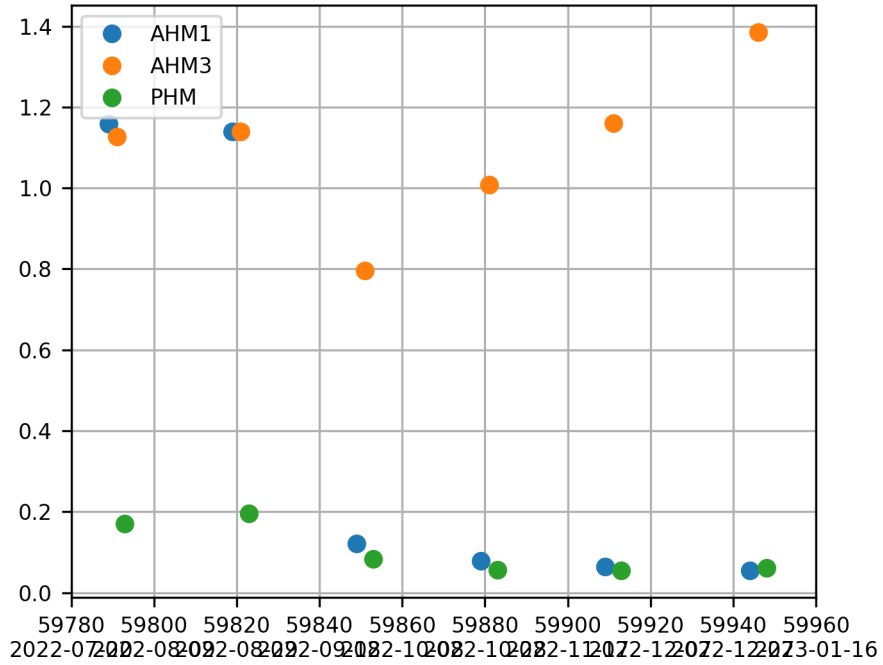
## PHM Rate and Drift





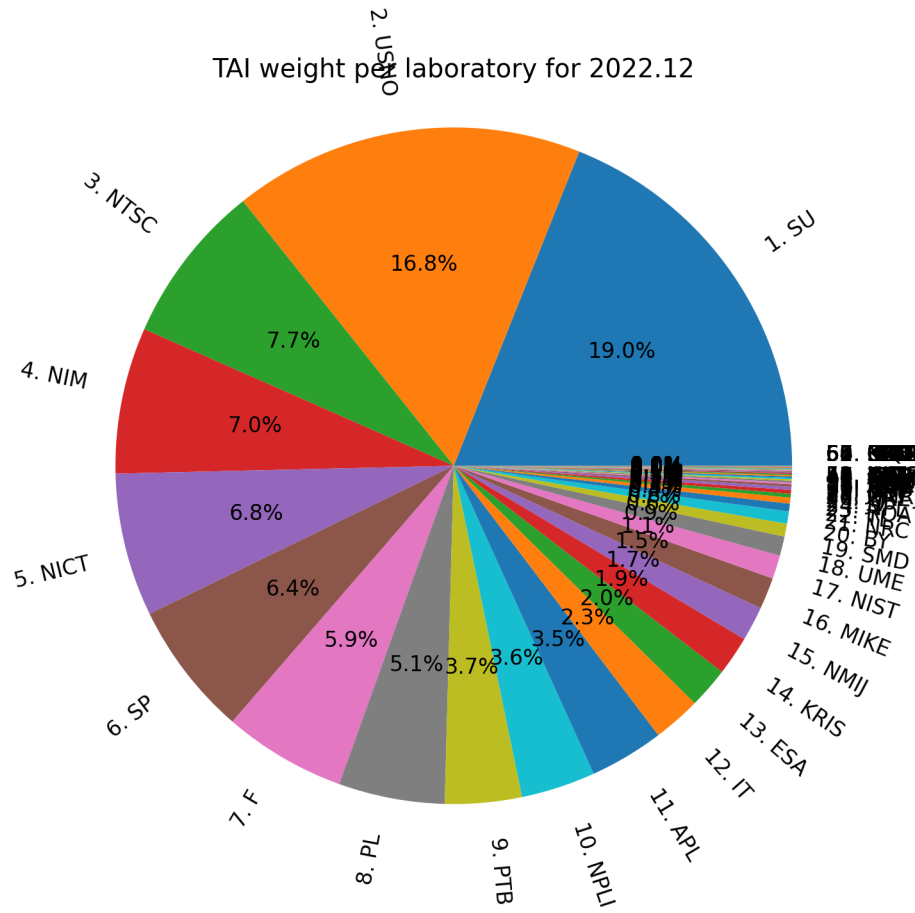
### VTT MIKES Clock Weights

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



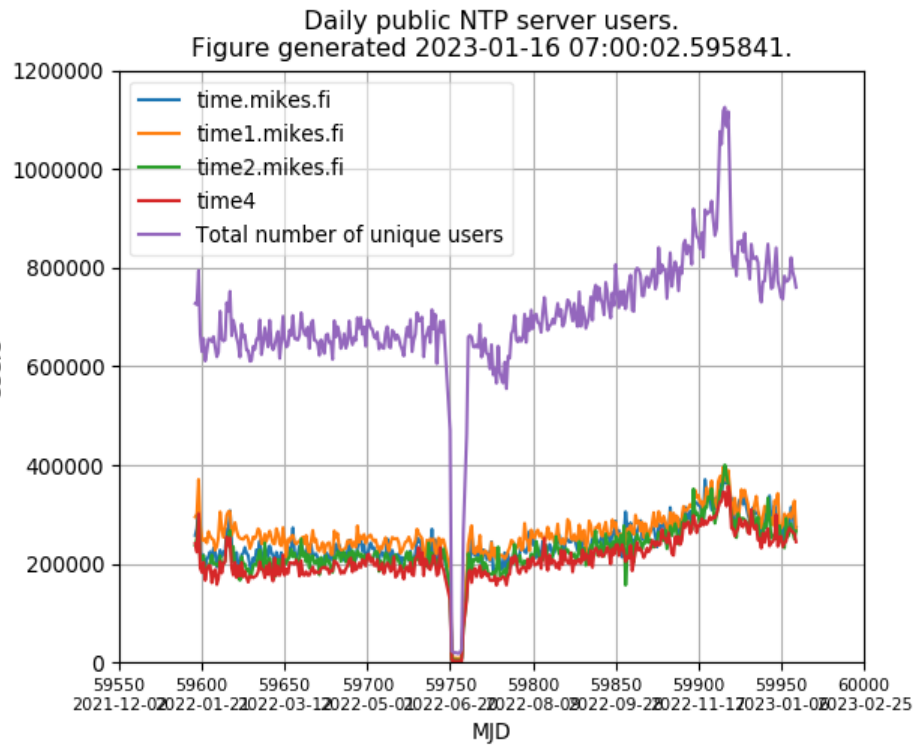
# Clock Weights per Laboratory

Relative TAI Weight per laboratory



## NTP Usage Statistics

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



**End of Bulletin.**