

# UTC(MIKE) Atomic Bulletin 2022-10

VTT MIKES Metrology monthly Time & Frequency bulletin.

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

Date of publication: 2022-10-11 (59863)

Circular-T issues used for analysis: [415](#), [416](#), [417](#),

First day of analysis interval: 2022-07-04 (59764)

Last day of analysis interval: 2022-09-27 (59849)

ClockData for analysis: [CDMI 22.07](#), [CDMI 22.08](#), [CDMI 22.09](#),

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

## Notes

(2022-01-21) Master clock AHM2 sudden change of frequency drift (autotuner issue?)

(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  $+1.5e-15$

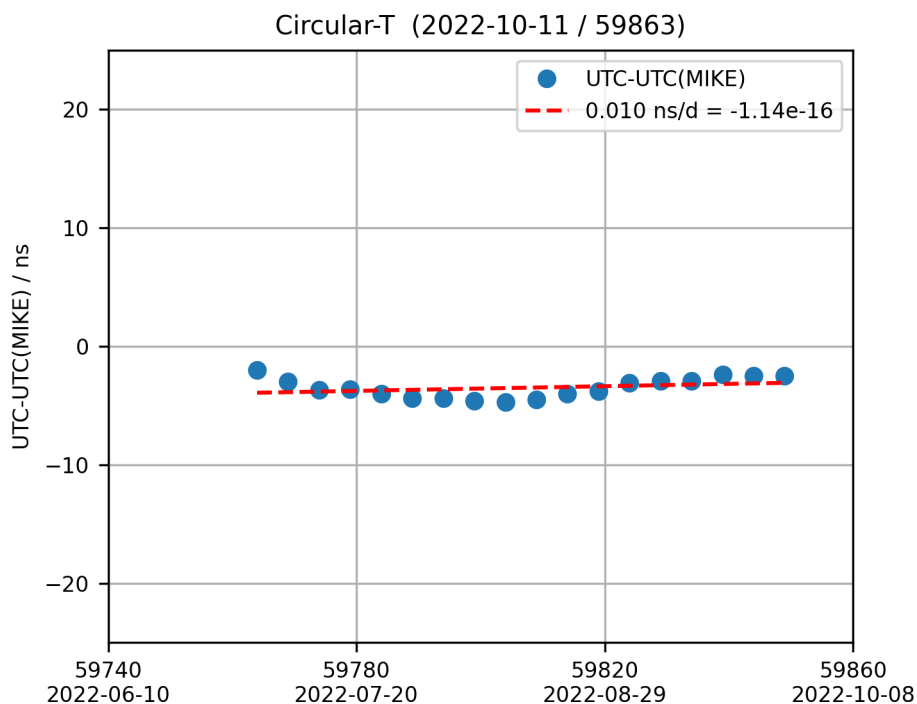
59712 (2022-05-13) AB2022-05 keep steering correction  $+1.5e-15$

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.

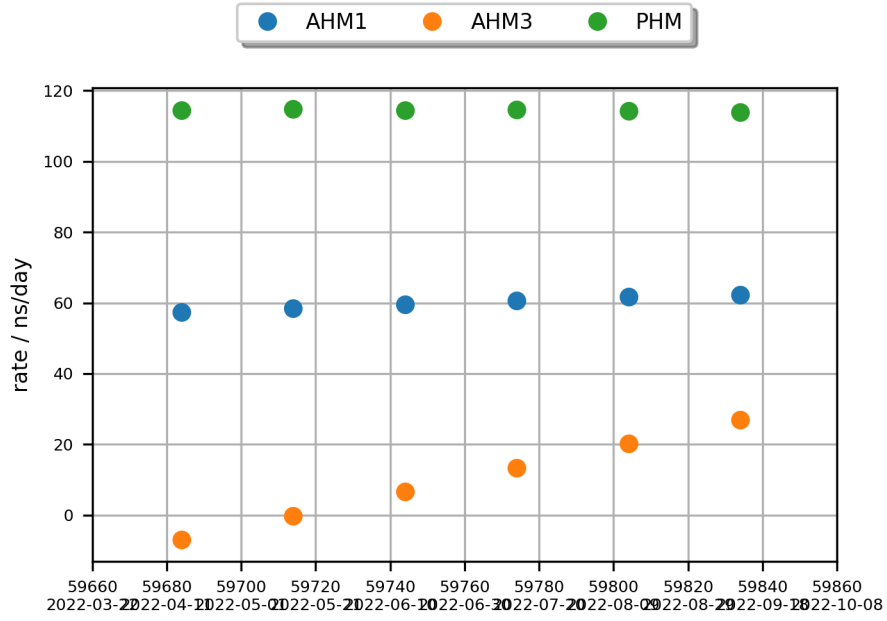
## UTC-UTC(MIKE) as reported in Circular-T



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.

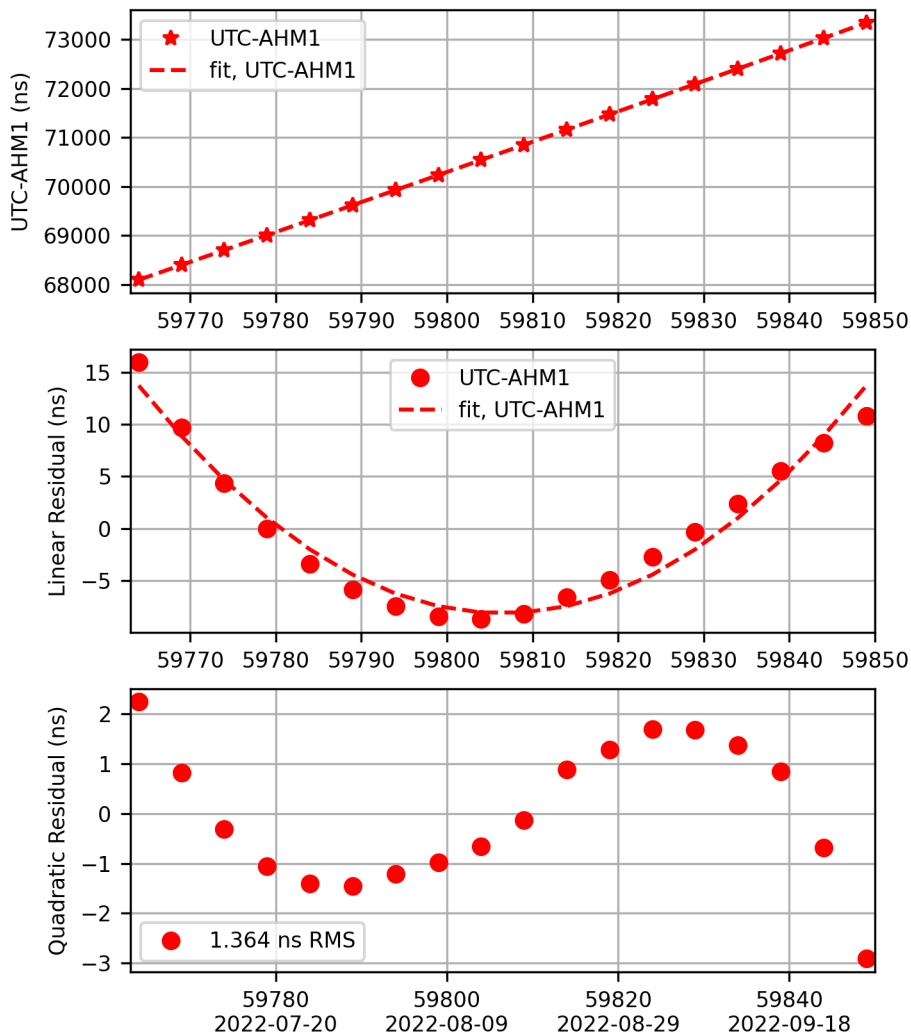
## Clock Rates - Summary

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

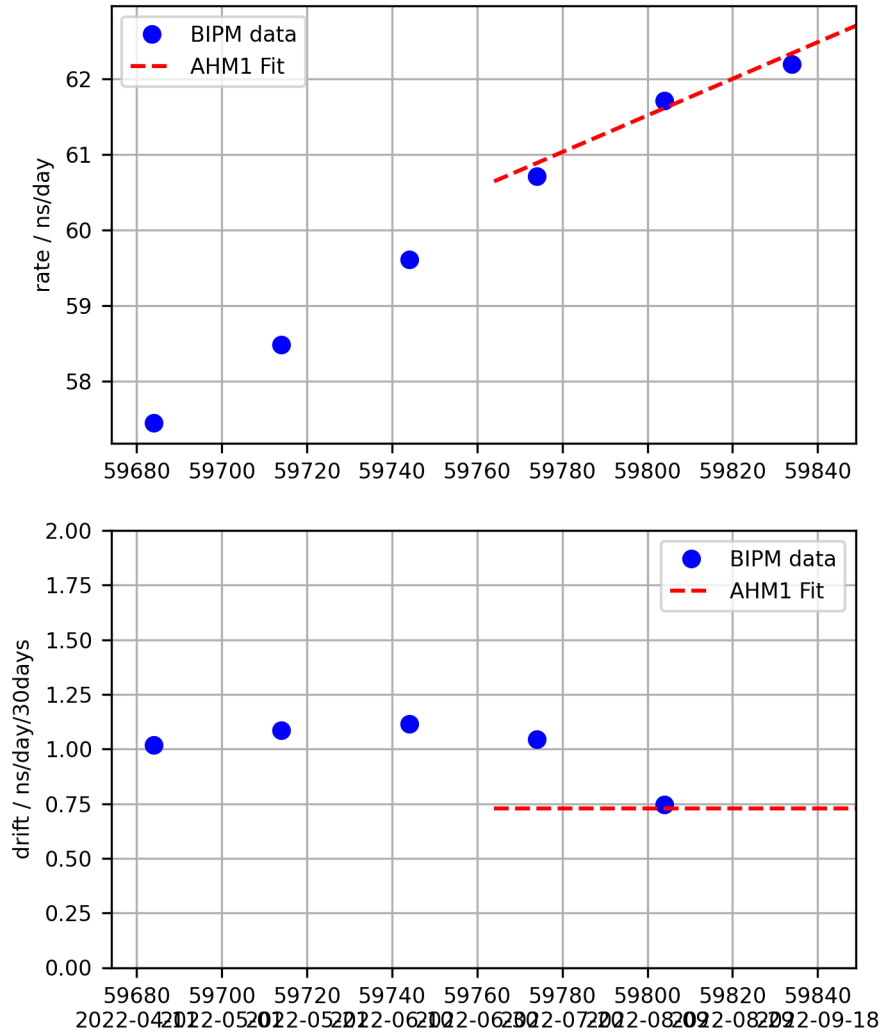


## UTC - AHM1 Fit

UTC-AHM1 (2022-10-11 / 59863)  
 $x \text{ (ns)} = 73339.211 + 62.707 *d + 0.0121 *d*d$   
 $y = -7.25778e-13 + -2.80842e-16 *d$   
 $d = (\text{mjd}-\text{mjd0})$  with  $\text{mjd0} = 59849$

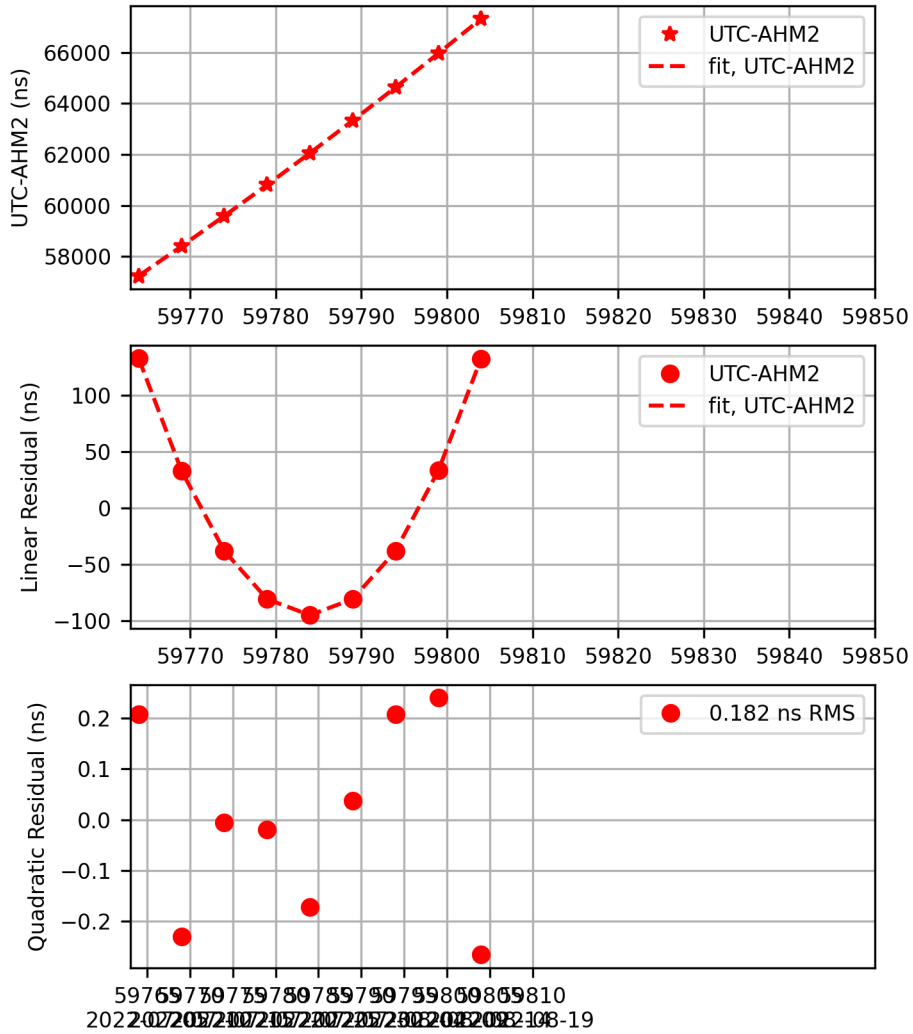


### AHM1 Rate and Drift

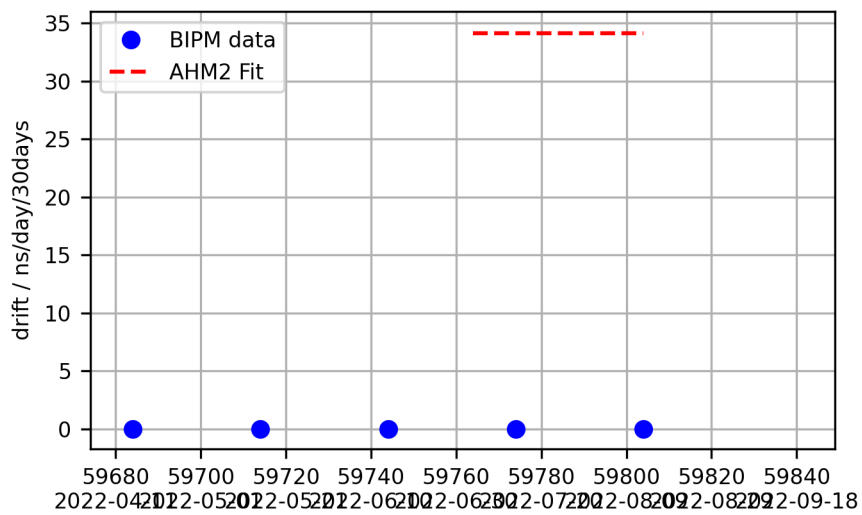
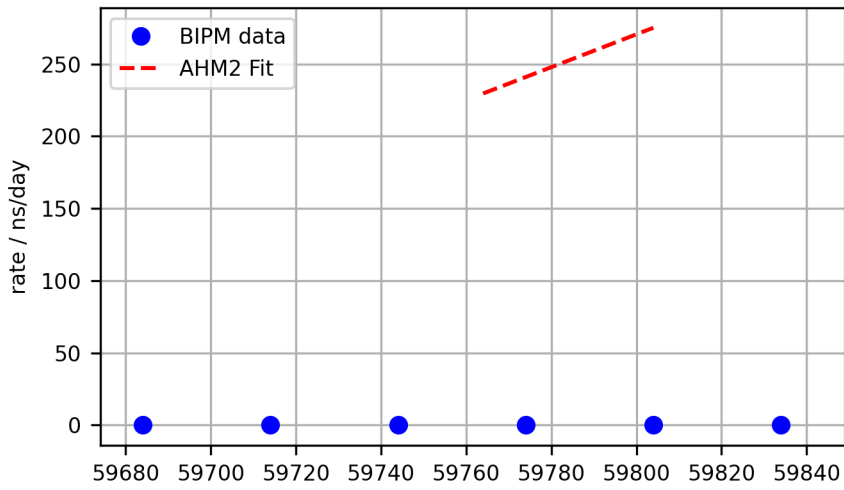


## UTC - AHM2 Fit

UTC-AHM2 (2022-10-11 / 59863)  
 $x \text{ (ns)} = 80858.241 + 326.254 * d + 0.5688 * d * d$   
 $y = -3.77609e-12 + -1.31659e-14 * d$   
 $d = (\text{mjd} - \text{mjd0}) \text{ with } \text{mjd0} = 59849$

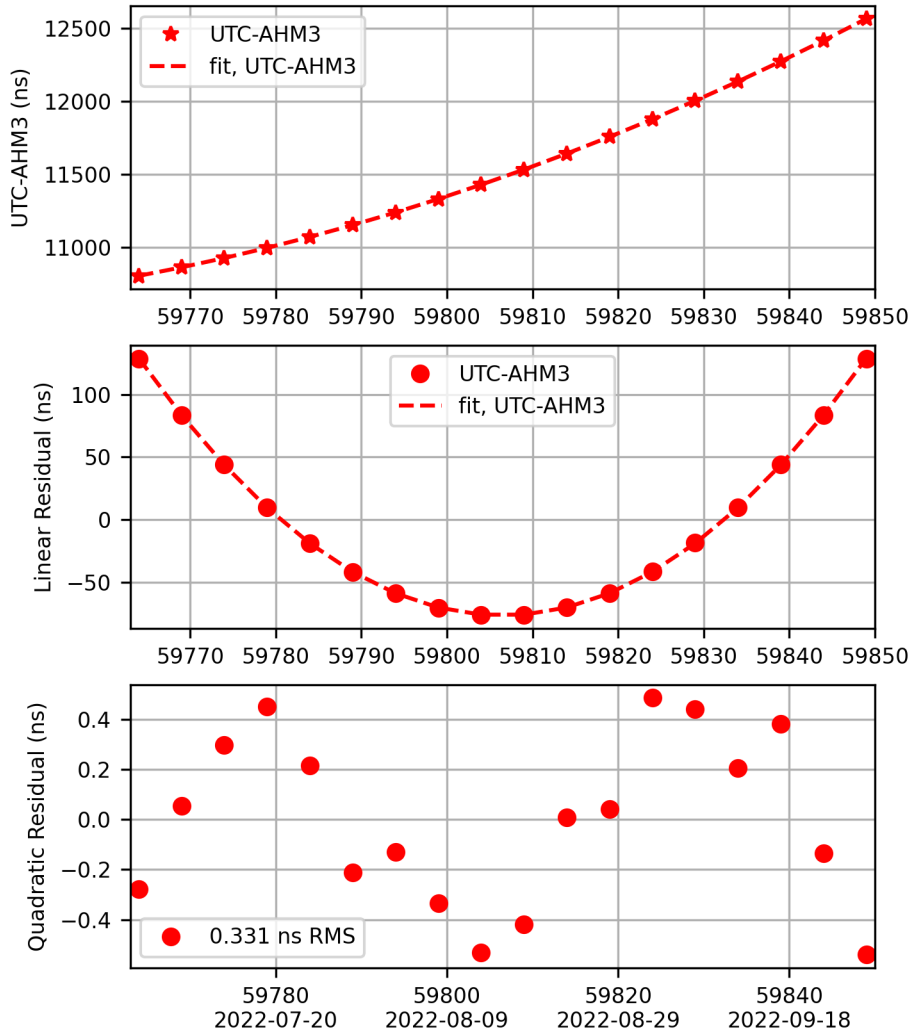


## AHM2 Rate and Drift

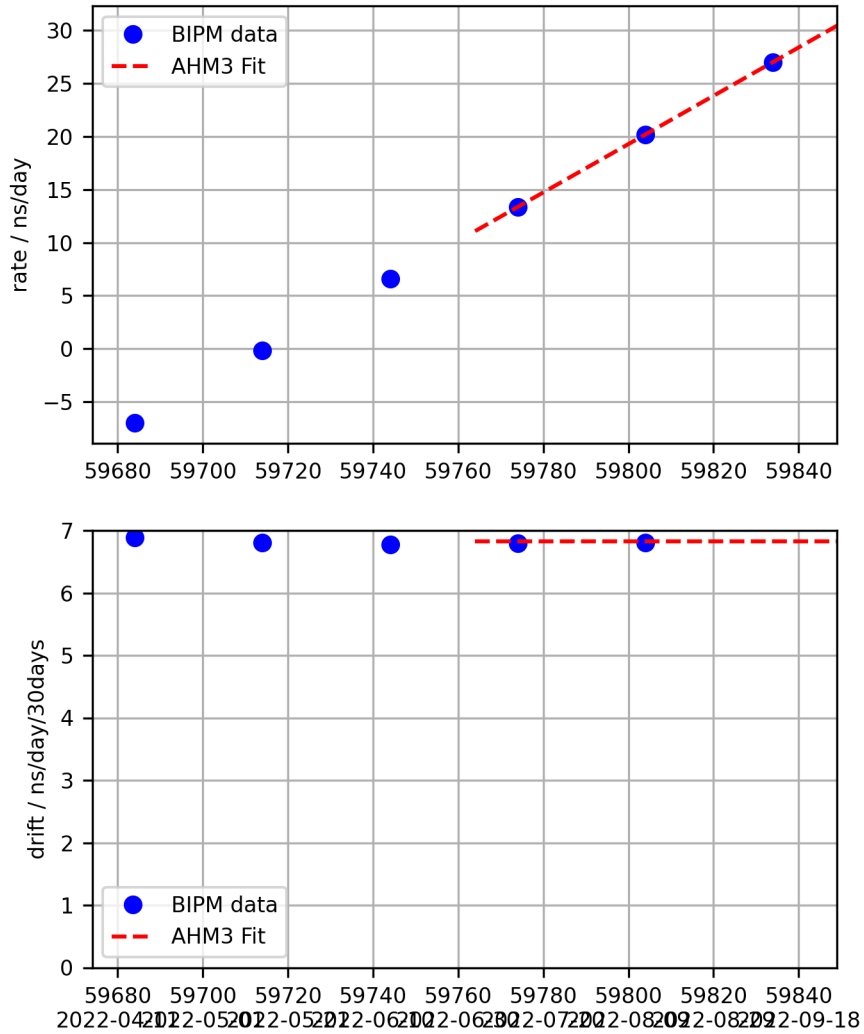


## UTC - AHM3 Fit

UTC-AHM3 (2022-10-11 / 59863)  
 $x \text{ (ns)} = 12567.539 + 30.430 *d + 0.1138 *d*d$   
 $y = -3.52198e-13 + -2.63419e-15 *d$   
 $d = (\text{mjd}-\text{mjd0}) \text{ with mjd0} = 59849$



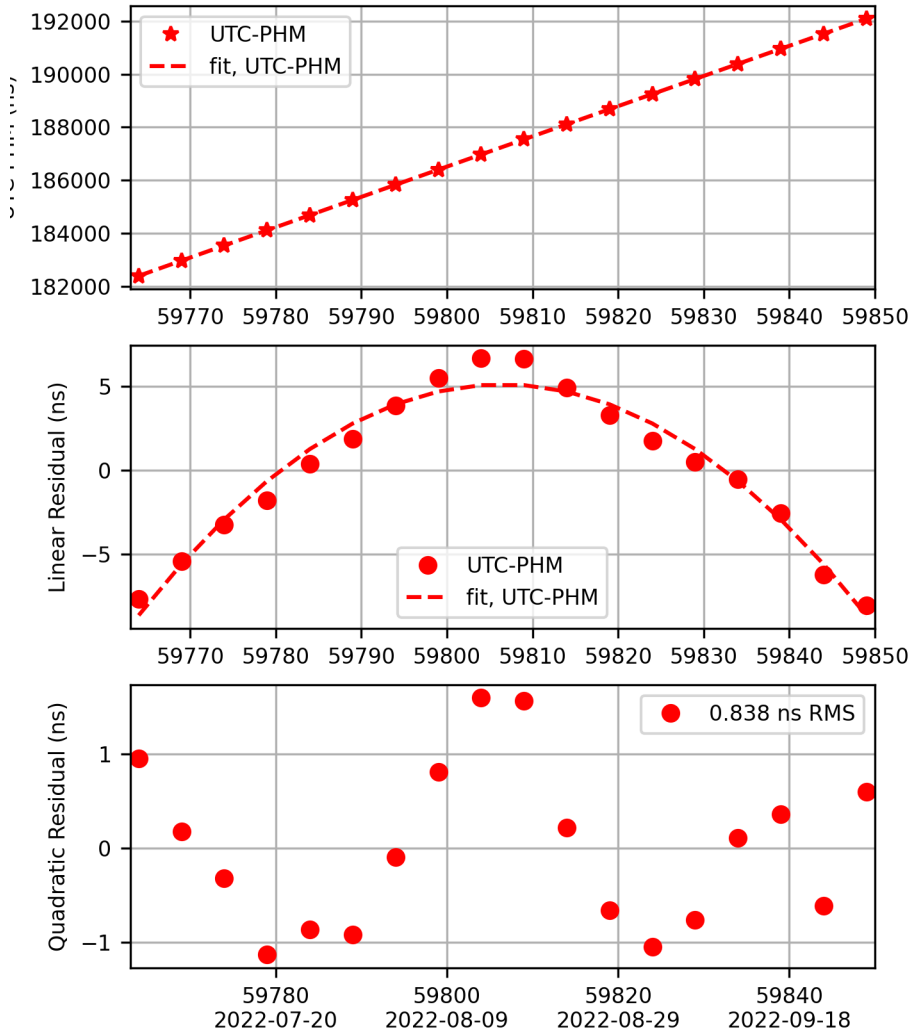
### AHM3 Rate and Drift



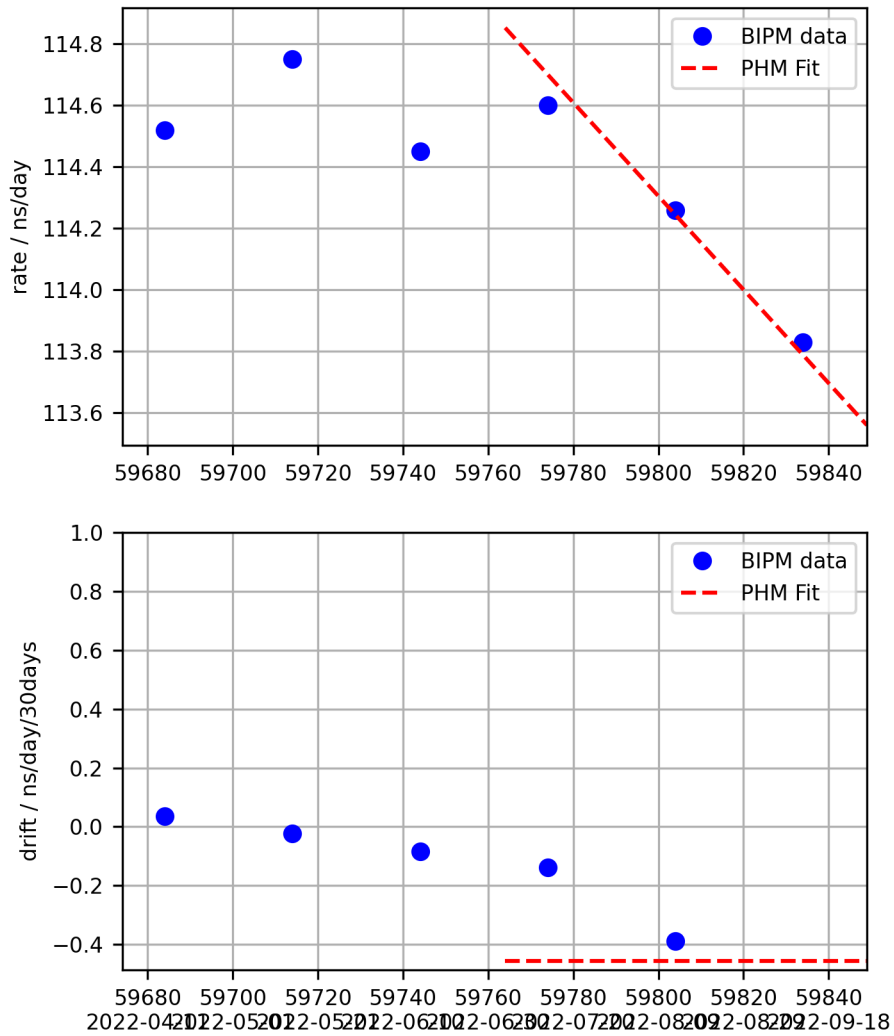


## UTC - PHM Fit

UTC-PHM (2022-10-11 / 59863)  
 $x \text{ (ns)} = 192096.102 + 113.560 *d + -0.0076 *d*d$   
 $y = -1.31435e-12 + 1.7606e-16 *d$   
 $d = (\text{mjd}-\text{mjd0}) \text{ with mjd0} = 59849$

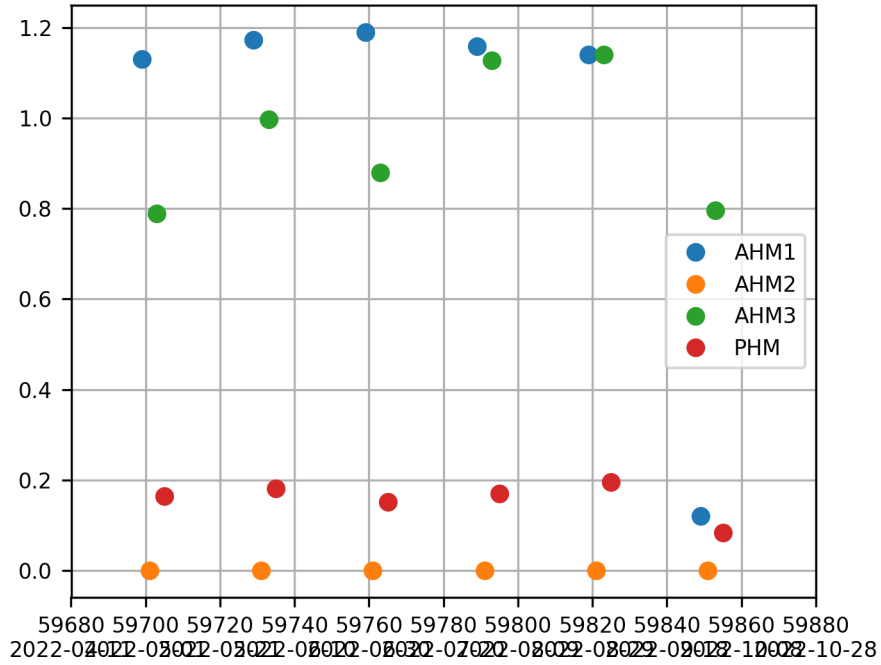


## PHM Rate and Drift



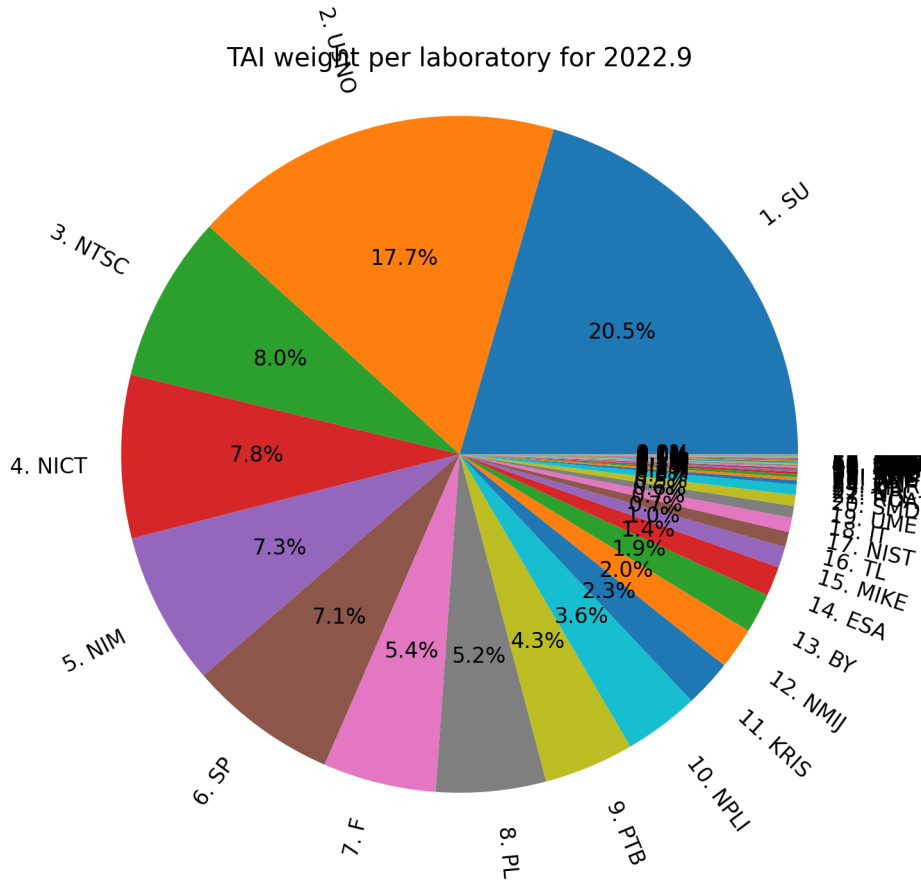
### VTT MIKES Clock Weights

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



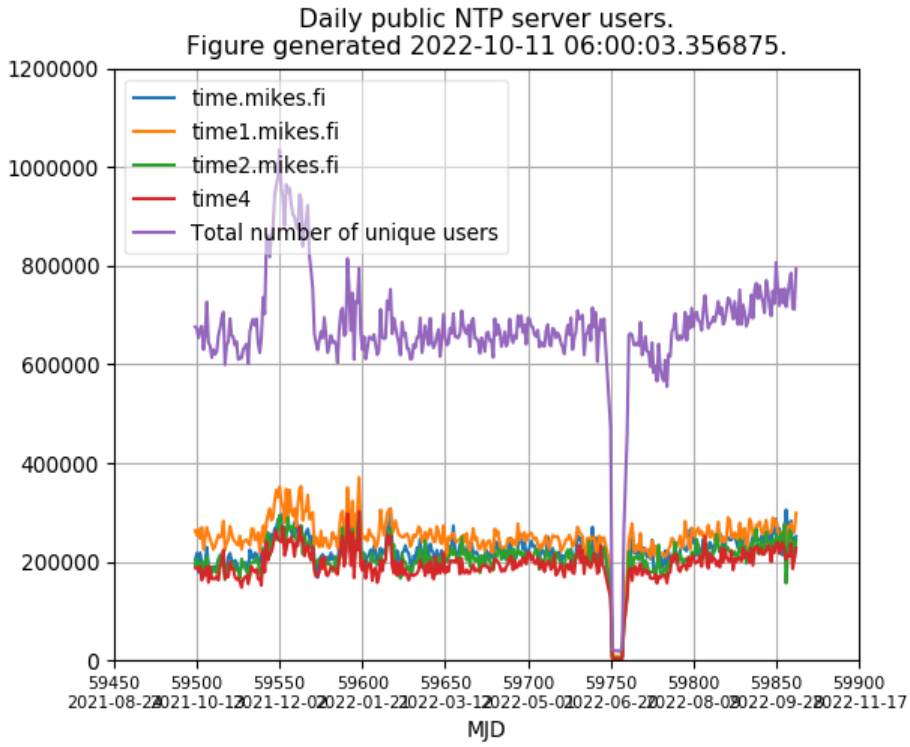
# Clock Weights per Laboratory

Relative TAI Weight per laboratory



## NTP Usage Statistics

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



**End of Bulletin.**