

# UTC(MIKE) Atomic Bulletin 2021-10

VTT MIKES Metrology monthly Time & Frequency bulletin.

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

Date of publication: 2021-10-13 (59500)

Circular-T issues used for analysis: [403](#), [404](#), [405](#),

First day of analysis interval: 2021-07-04 (59399)

Last day of analysis interval: 2021-09-27 (59484)

ClockData for analysis: [CDMI 21.07](#), [CDMI 21.08](#), [CDMI 21.09](#),

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

## Notes

59071 (2020-08-10) AB2020-08, add steering correction  $y\_steer = 0.5 \cdot (+14\text{ns}/30\text{d}) = +2.7\text{e-15}$

59082 (2020-08-21) AB2020-09, WR GM upgraded to FW 6.0, -100ns jump in WR timescale

59105 (2020-09-13) AB2020-10, Large temperature-swing down to +19.5C (from +22.25C) in clock room.

59165 (2020-11-12) Change of master clock to AHM2.  $y\_steer$  set to zero.

59225 (2021-01-11) AB2021-01, Add remote clock AHM5. Add steering correction  $+7.2\text{ns}/60\text{d} = +1.4\text{e-15}$

59257 (2021-02-12) AB2021-02, Keep steering correction  $+7.2\text{ns}/60\text{d} = +1.4\text{e-15}$

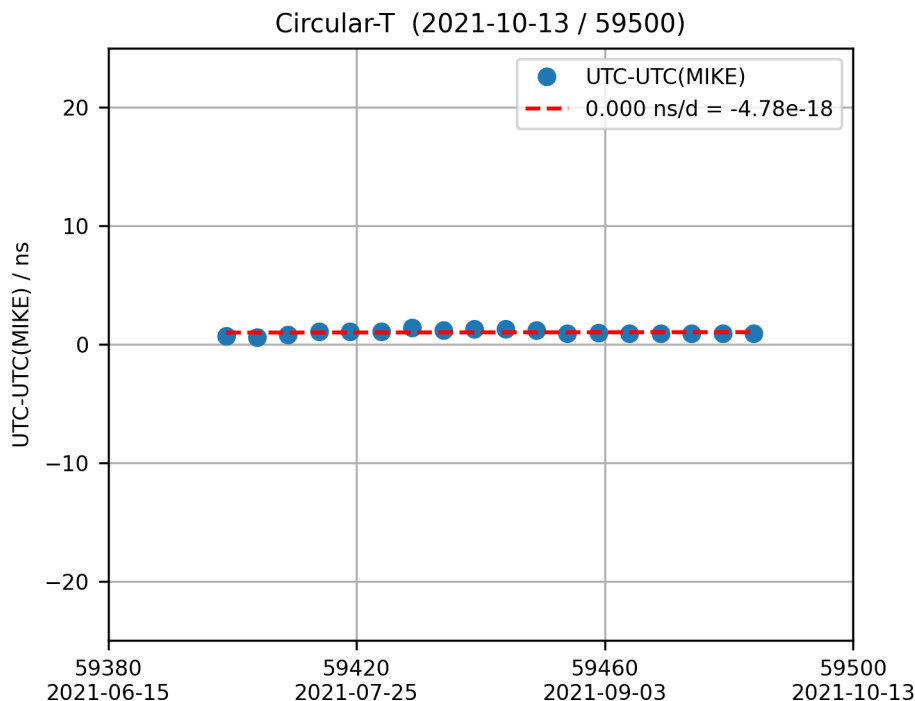
59285 (2021-03-12) AB2021-03, Set steering correction to zero.

(2021-08-24) AHM3 OCXO-voltage at limit, maser re-started, DDS adjustment

SETFSREL=+4.47E-12 giving  $\text{DDS\_old} = 1420405750.291768$ ,  $\text{DDS\_new} =$

1420405750.298116. set DRIFTCOMP=+3.93E-15;

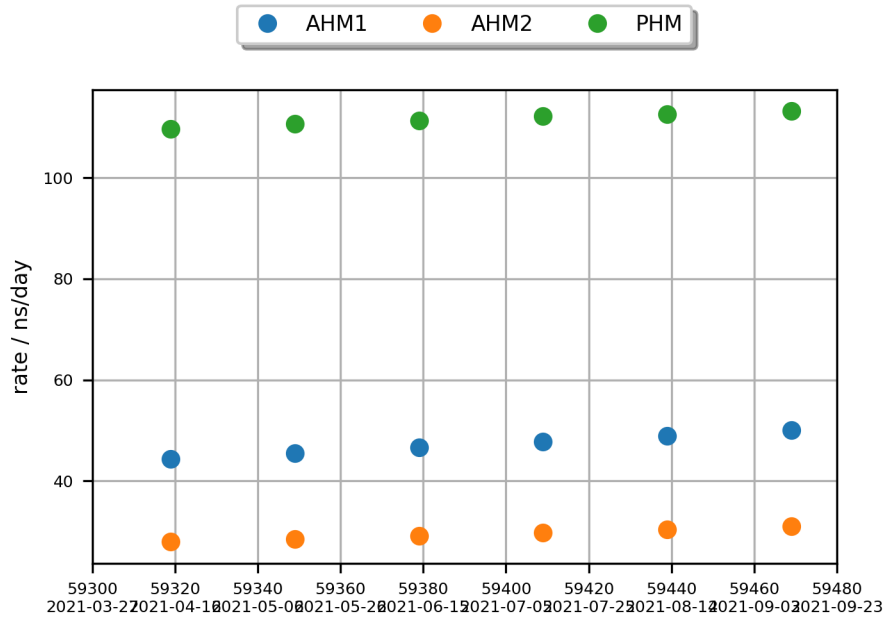
## UTC-UTC(MIKE) as reported in Circular-T



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.

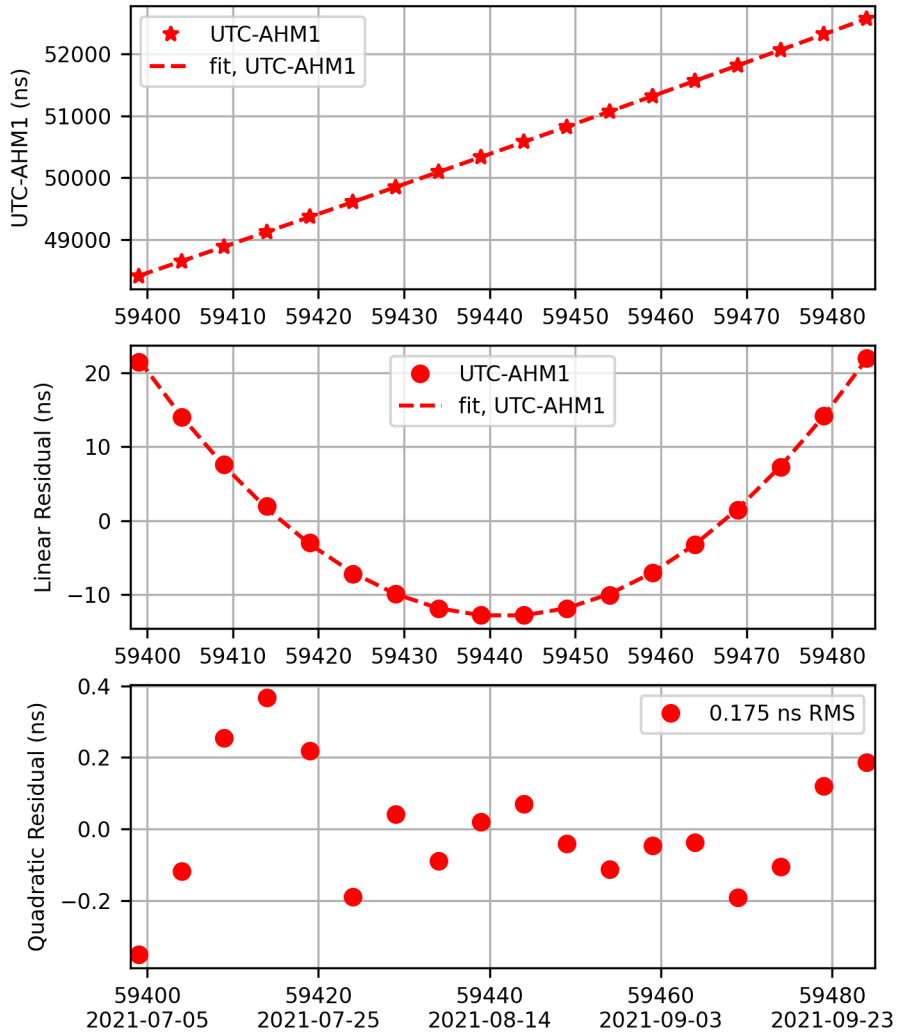
## Clock Rates - Summary

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

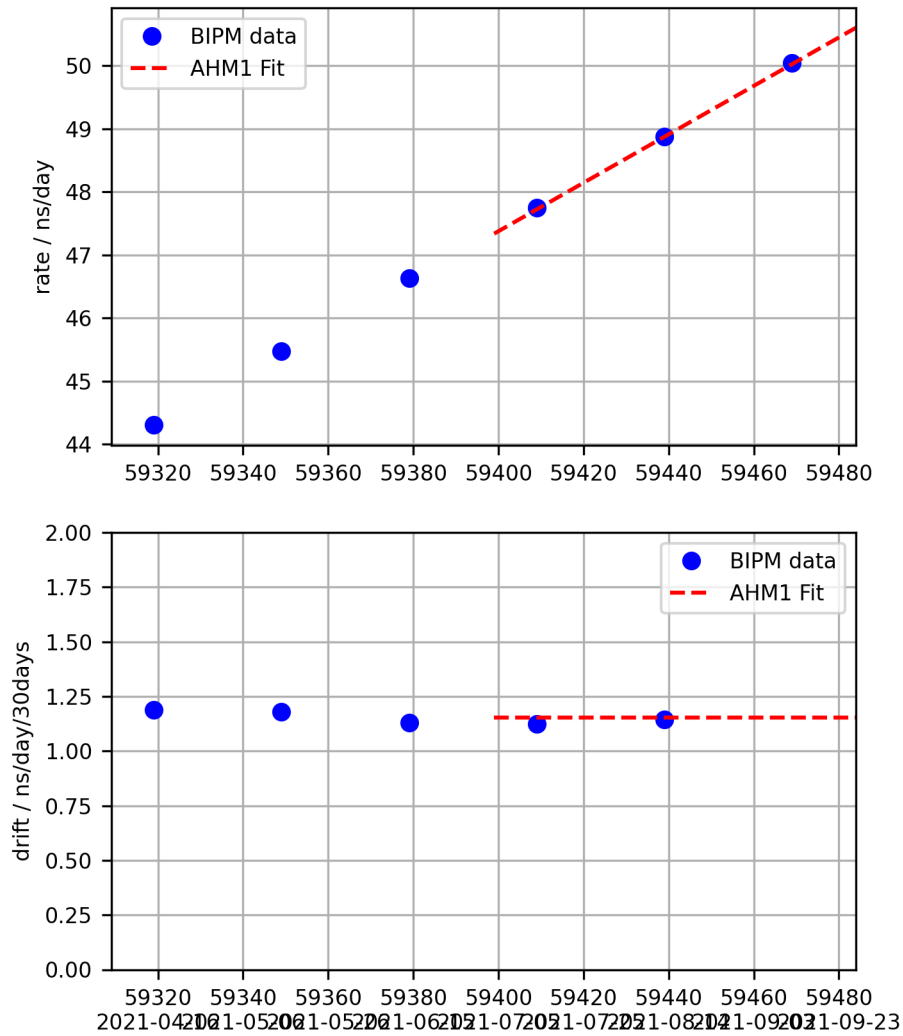


## UTC - AHM1 Fit

UTC-AHM1 (2021-10-13 / 59500)  
 $x \text{ (ns)} = 52572.714 + 50.603 *d + 0.0192 *d*d$   
 $y = -5.85683e-13 + -4.44676e-16 *d$   
 $d = (\text{mjd}-\text{mjd0}) \text{ with mjd0} = 59484$

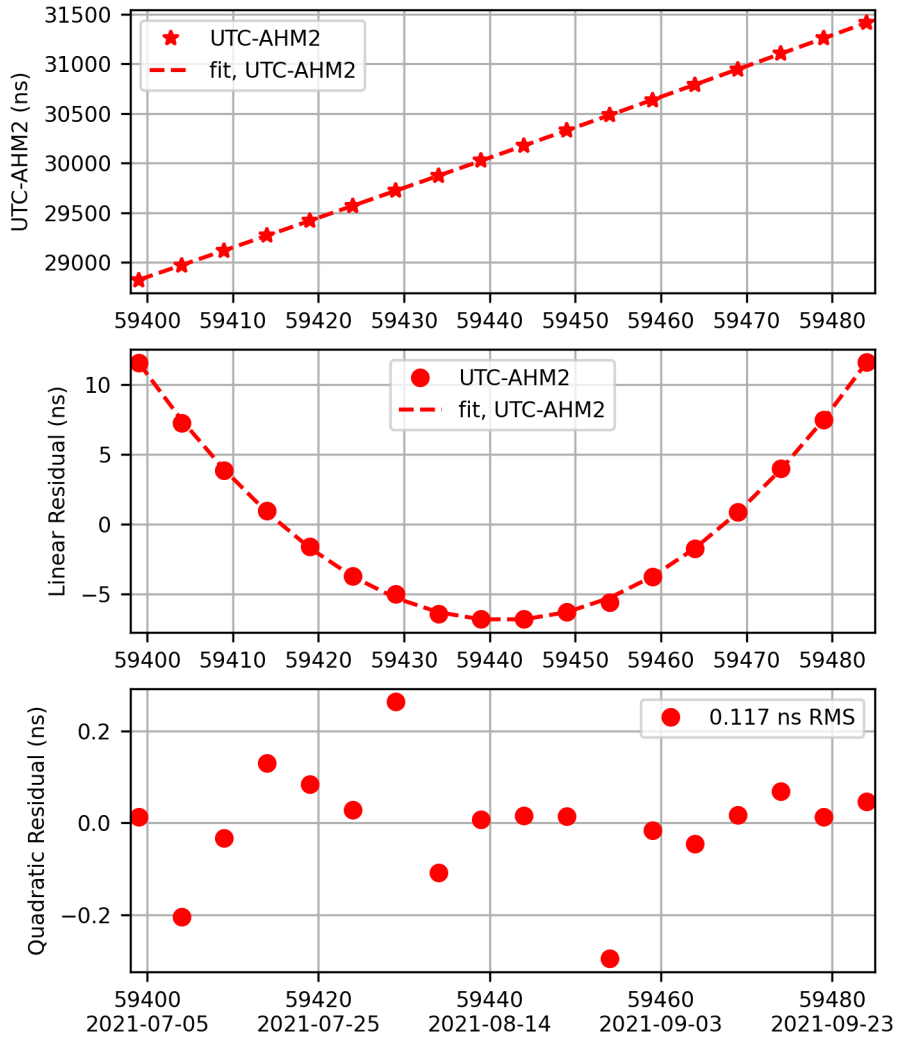


## AHM1 Rate and Drift

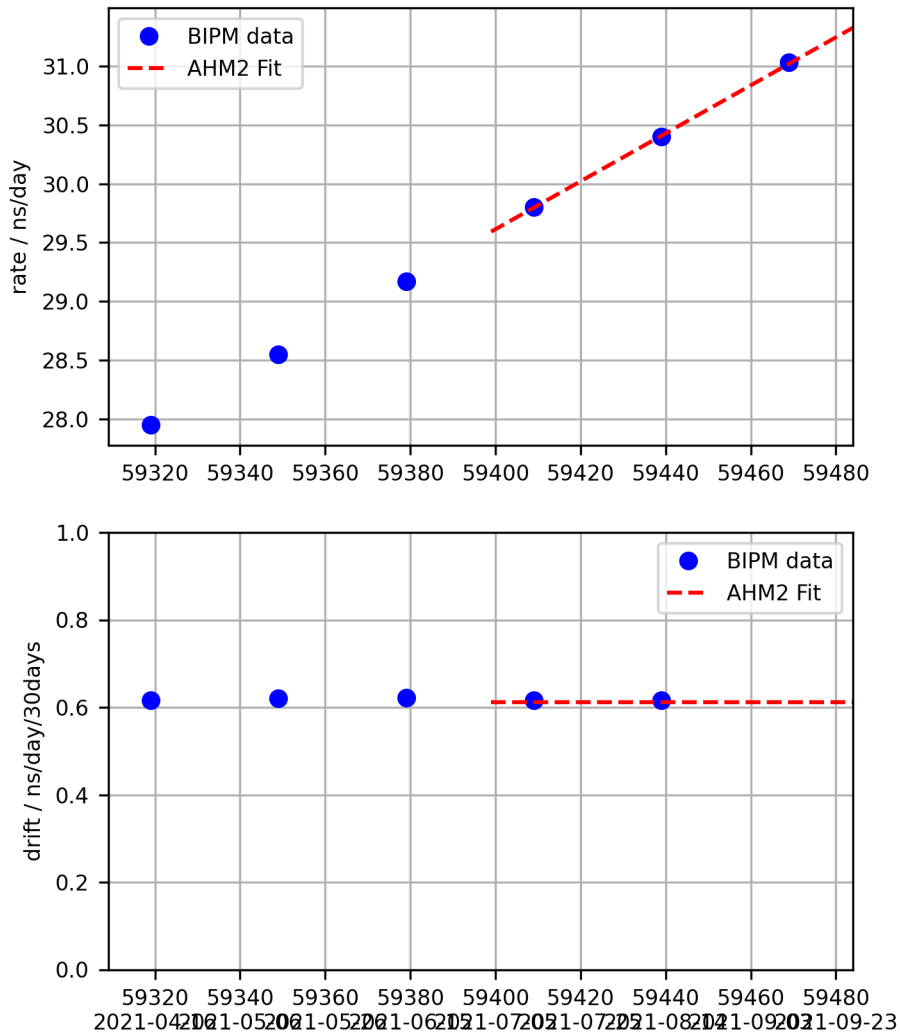


## UTC - AHM2 Fit

UTC-AHM2 (2021-10-13 / 59500)  
 $x \text{ (ns)} = 31412.854 + 31.324 *d + 0.0102 *d*d$   
 $y = -3.62548e-13 + -2.35752e-16 *d$   
 $d = (\text{mjd}-\text{mjd0}) \text{ with mjd0} = 59484$

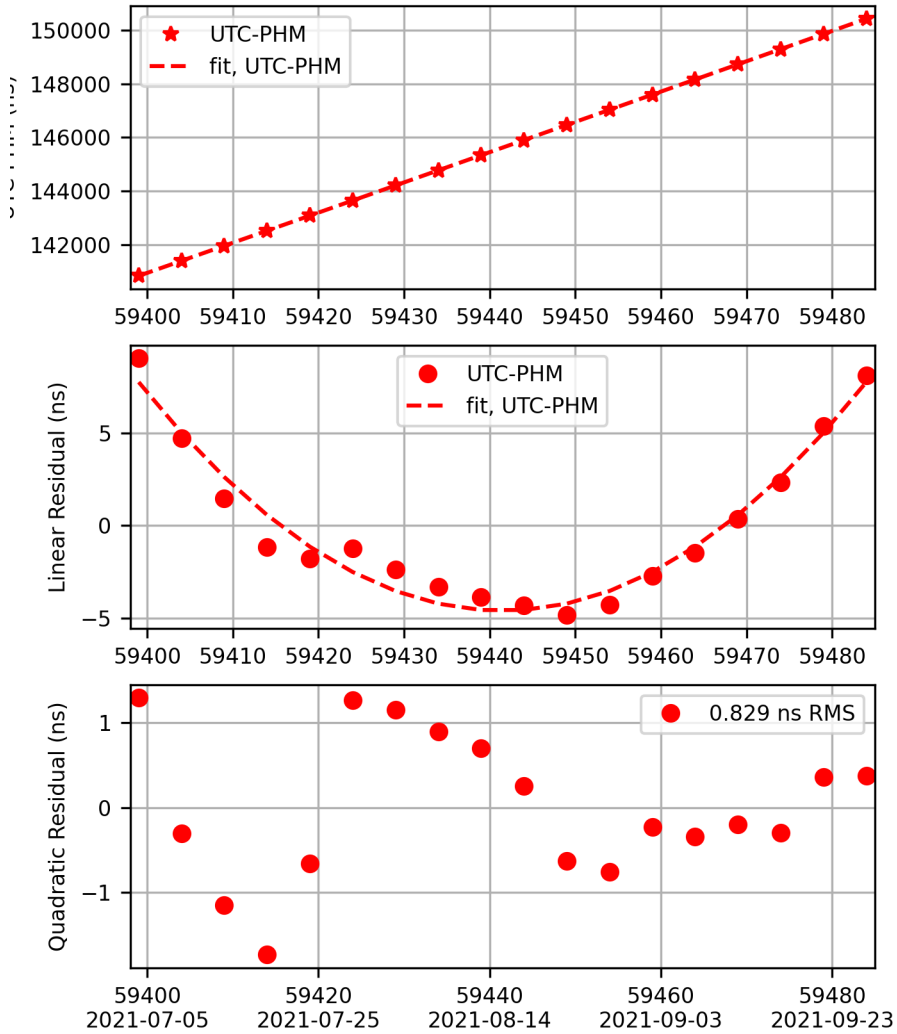


### AHM2 Rate and Drift

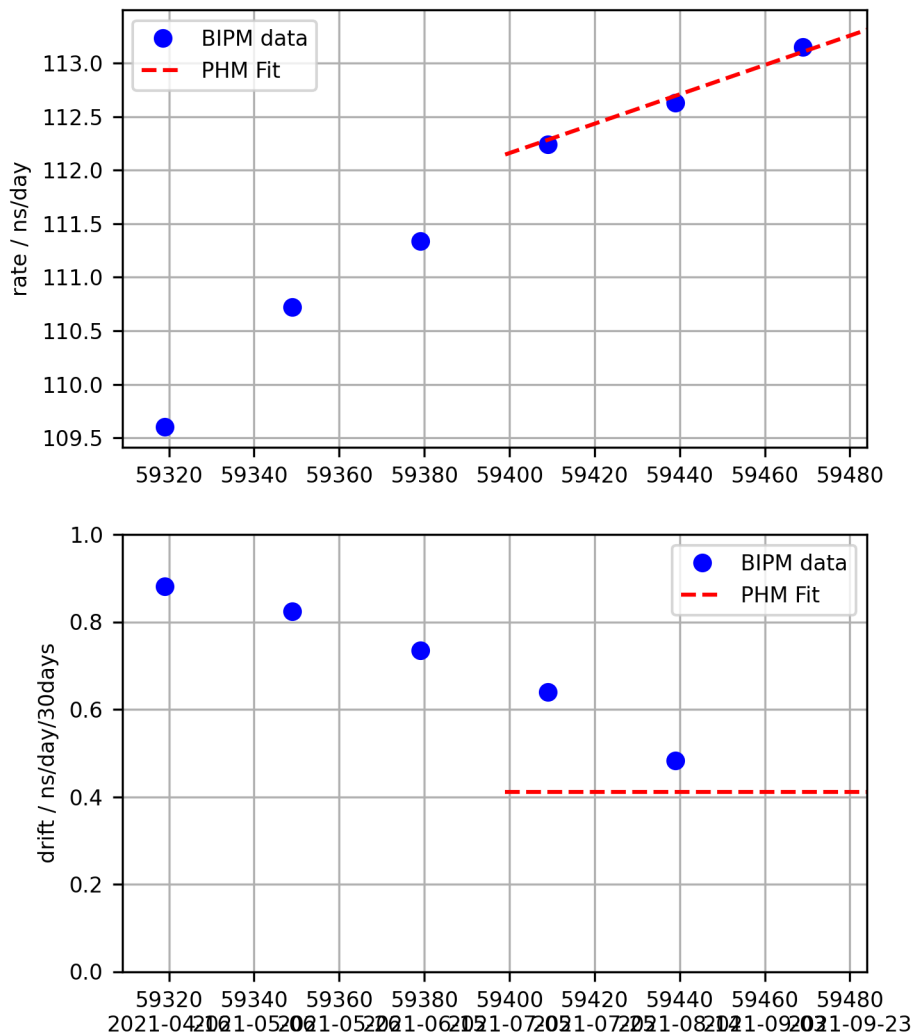


## UTC - PHM Fit

UTC-PHM (2021-10-13 / 59500)  
 $x \text{ (ns)} = 150421.625 + 113.311 *d + 0.0069 *d*d$   
 $y = -1.31147e-12 + -1.58711e-16 *d$   
 $d = (\text{mjd}-\text{mjd0}) \text{ with mjd0} = 59484$



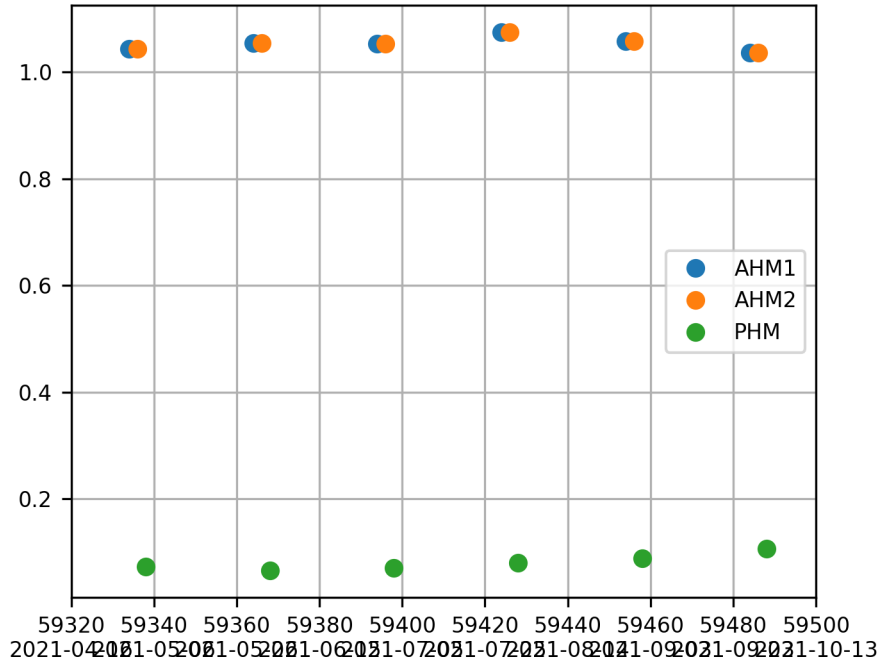
### PHM Rate and Drift





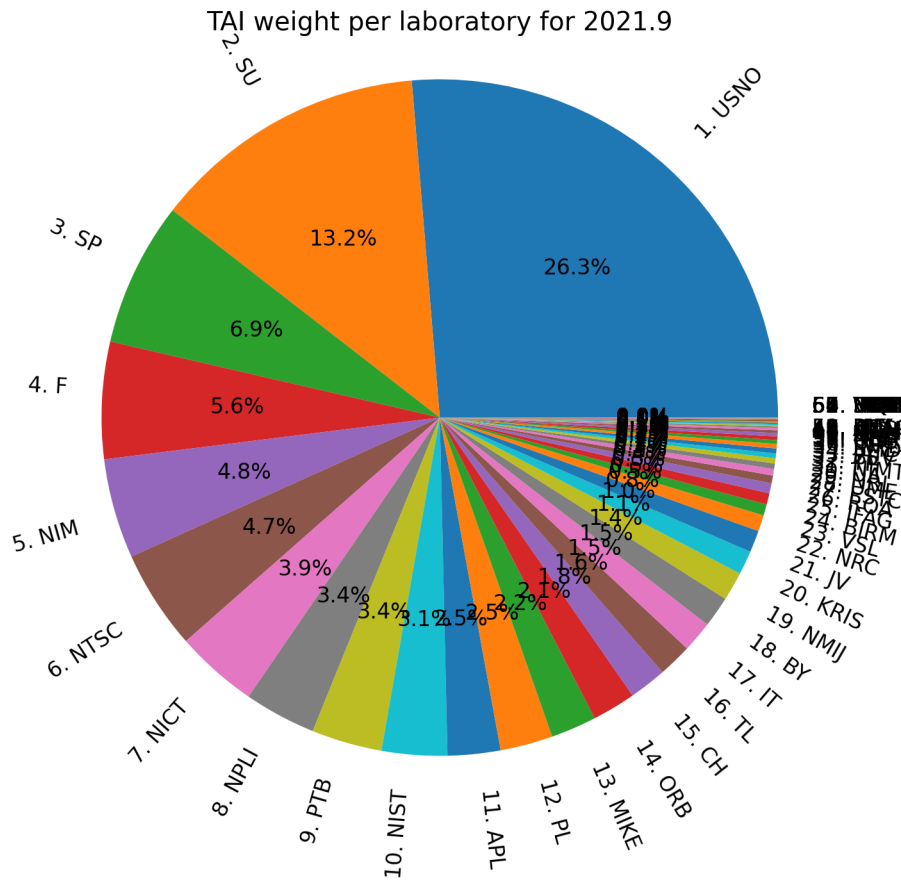
### VTT MIKES Clock Weights

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



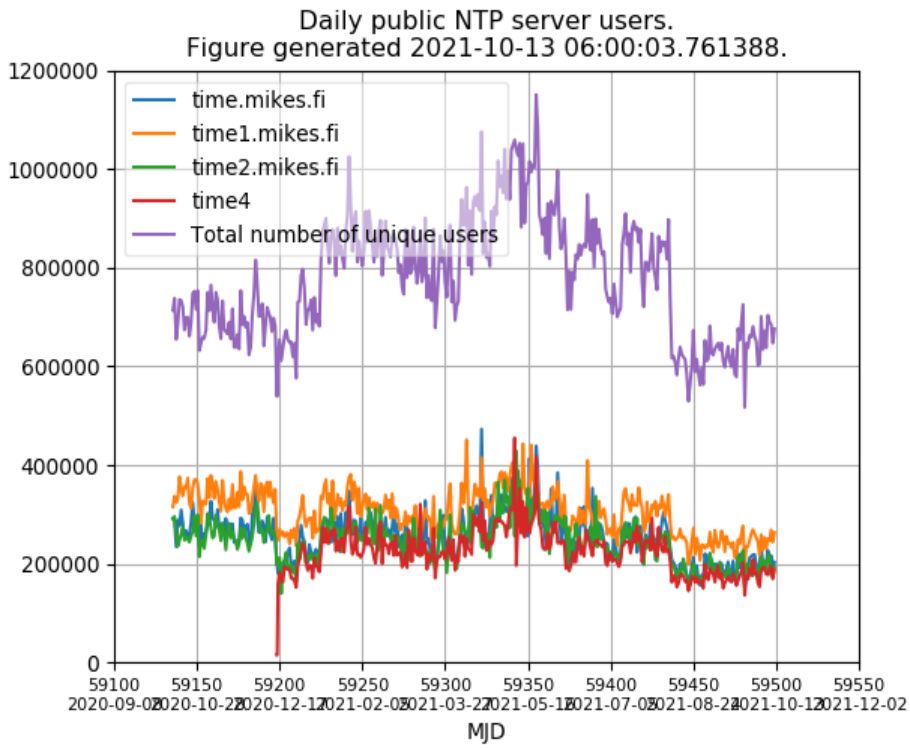
# Clock Weights per Laboratory

Relative TAI Weight per laboratory



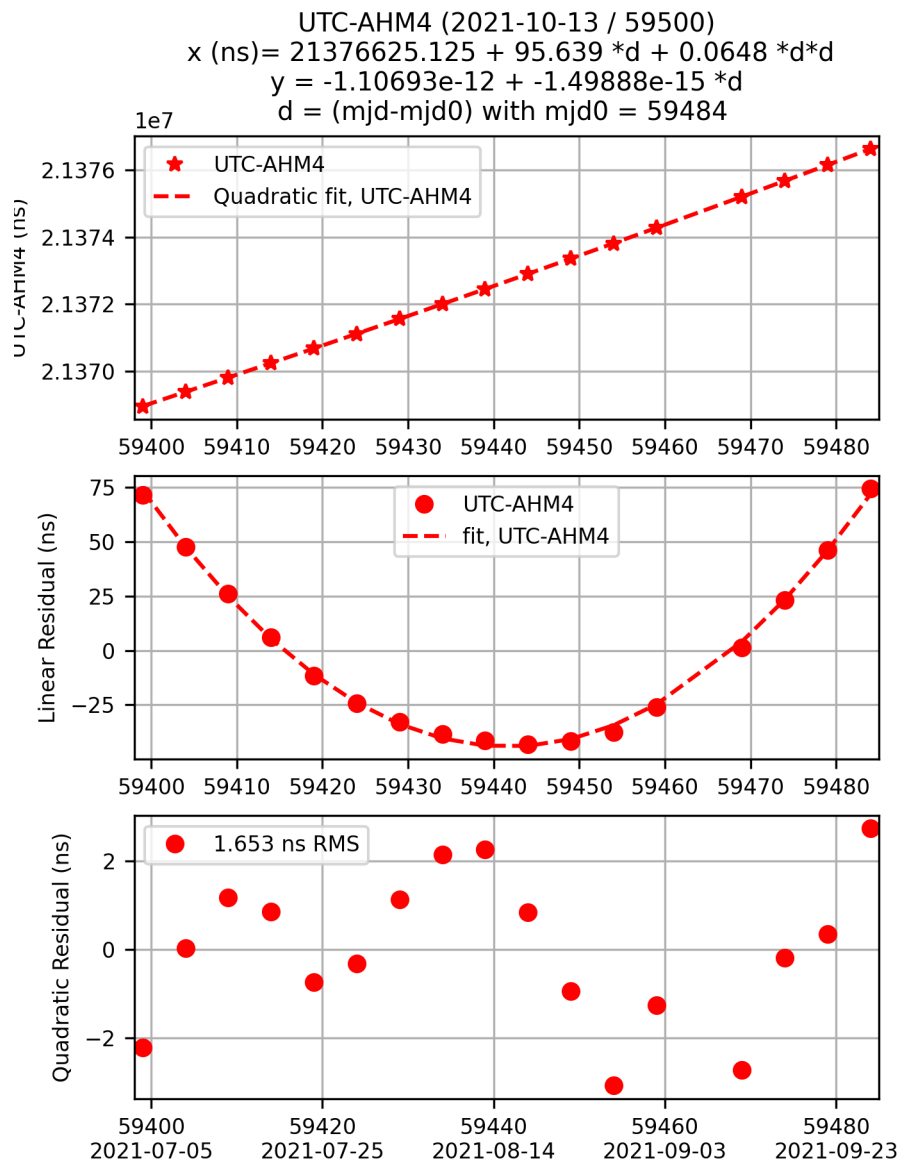
## NTP Usage Statistics

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

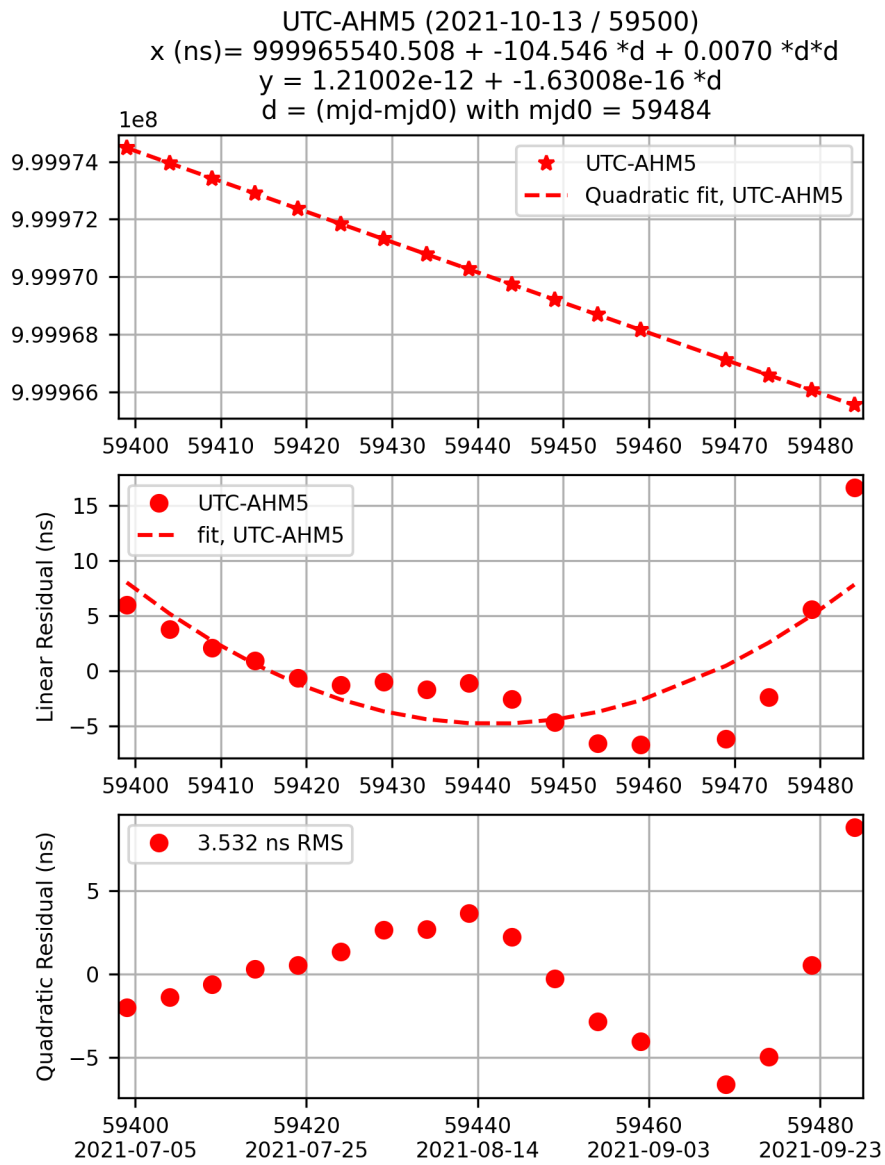


## Remote Clocks

### Remote Clock: AHM4

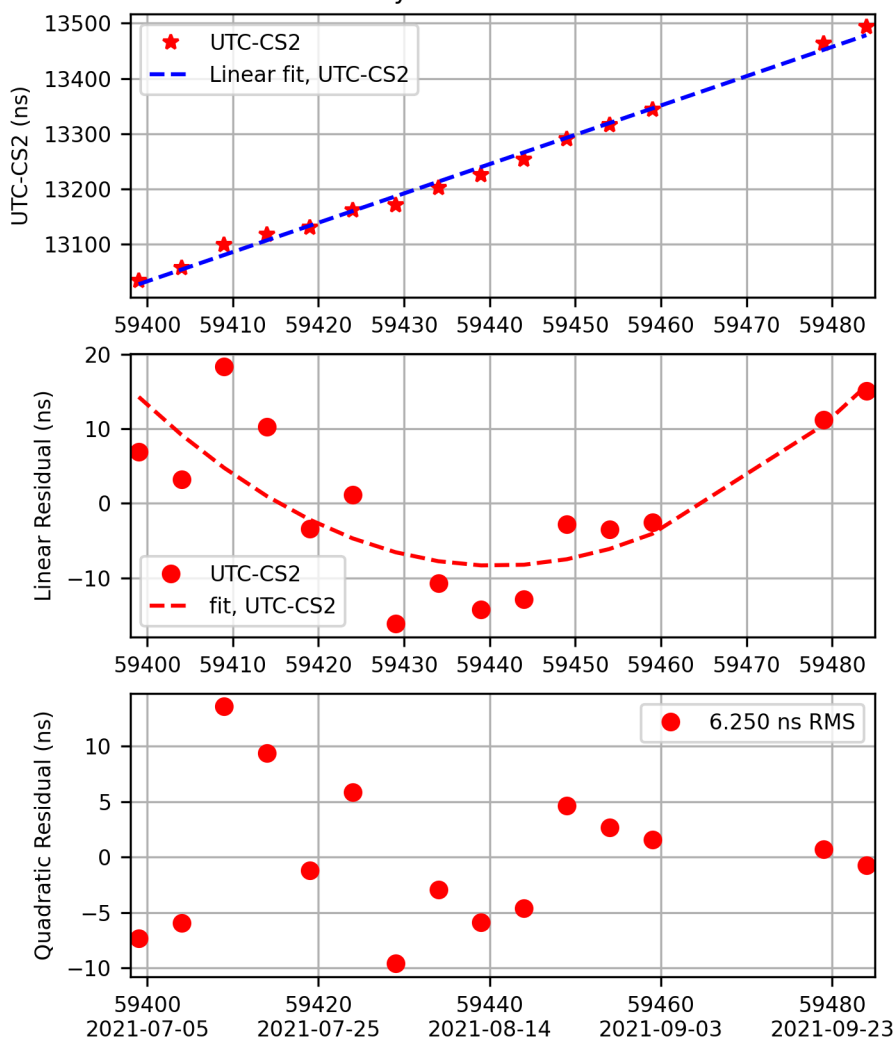


**Remote Clock: AHM5**

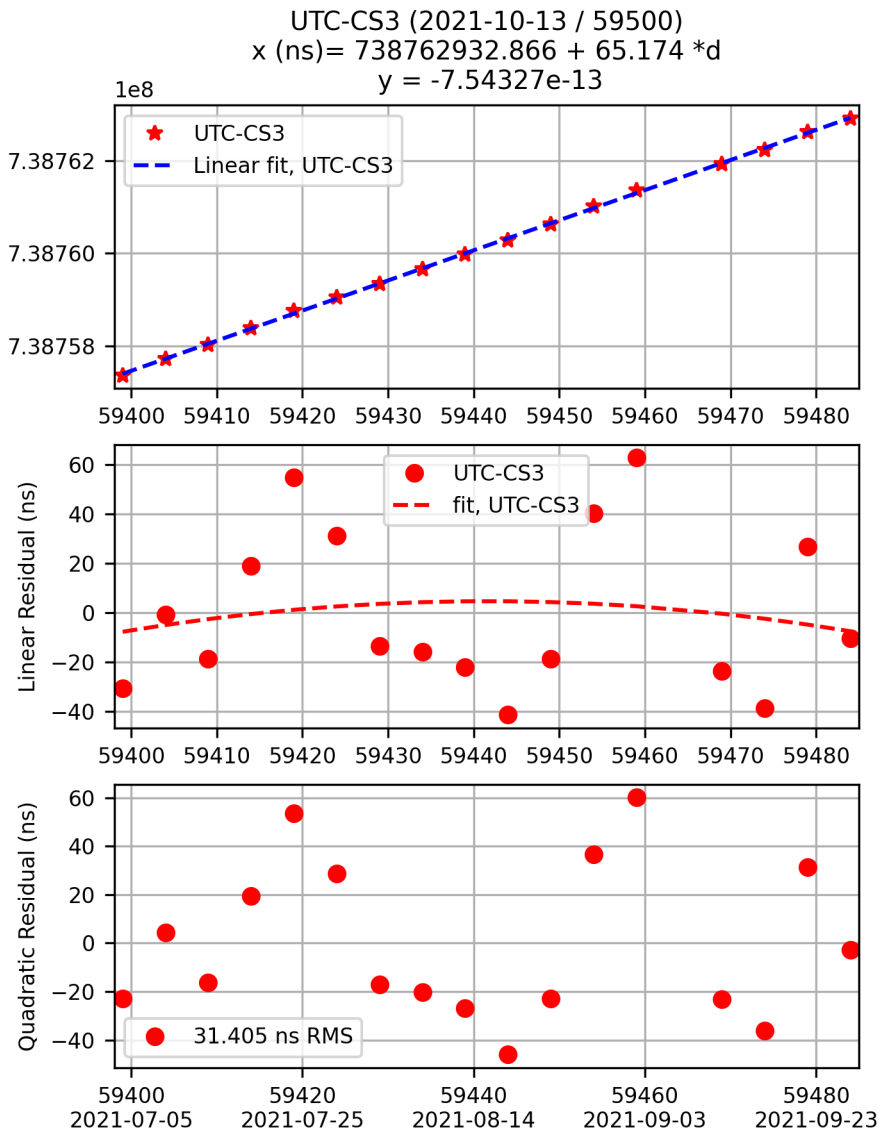


**Remote Clock: CS2**

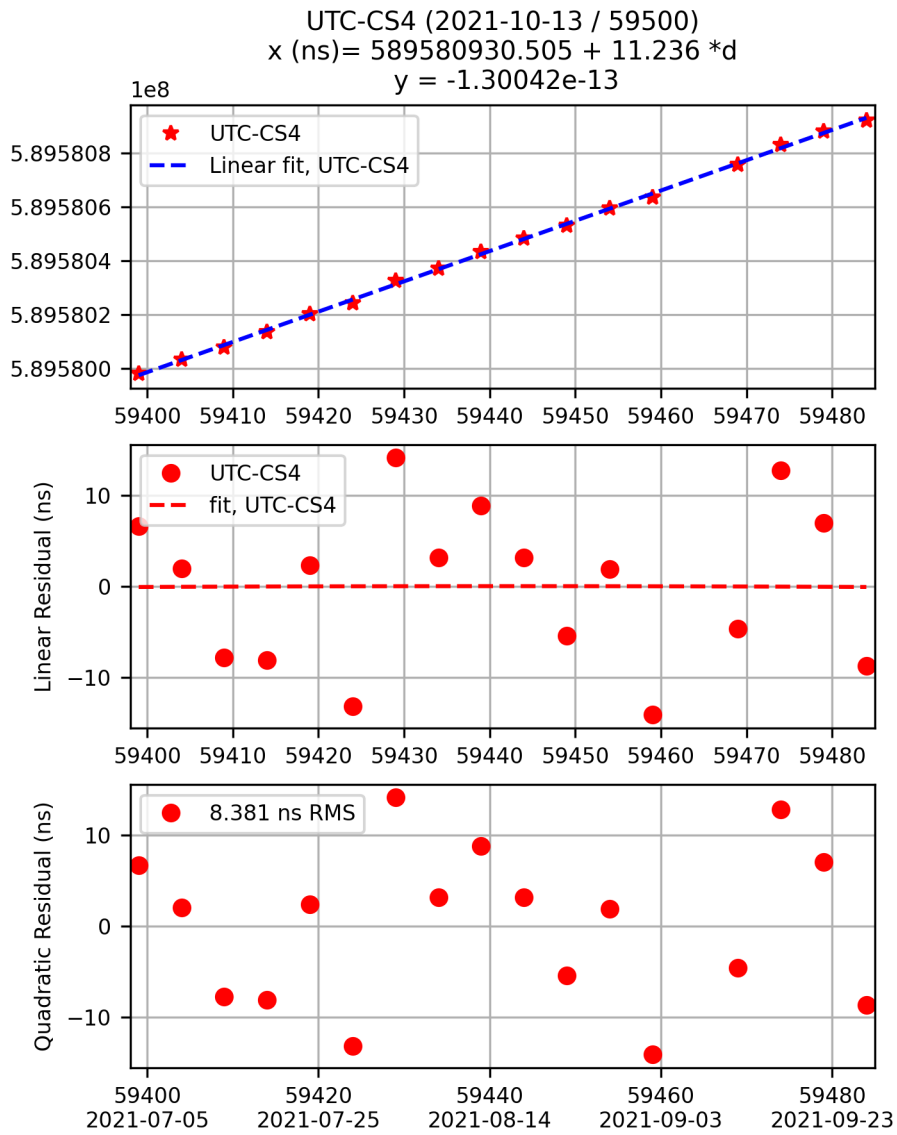
UTC-CS2 (2021-10-13 / 59500)  
 $x \text{ (ns)} = 13478.474 + 5.311 * d$   
 $y = -6.14718e-14$



**Remote Clock: CS3**



**Remote Clock: CS4**



**End of Bulletin.**