

# UTC(MIKE) Atomic Bulletin 2021-08

VTT MIKES Metrology monthly Time & Frequency bulletin.

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

Date of publication: 2021-08-11 (59437)

Circular-T issues used for analysis: [401](#), [402](#), [403](#),

First day of analysis interval: 2021-05-05 (59339)

Last day of analysis interval: 2021-07-29 (59424)

ClockData for analysis: [CDMI\\_21.05](#), [CDMI\\_21.06](#), [CDMI\\_21.07](#),

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

## Notes

58966 (2020-04-27) AHM1=MC 1PPS moved backwards ~20us.

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

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.

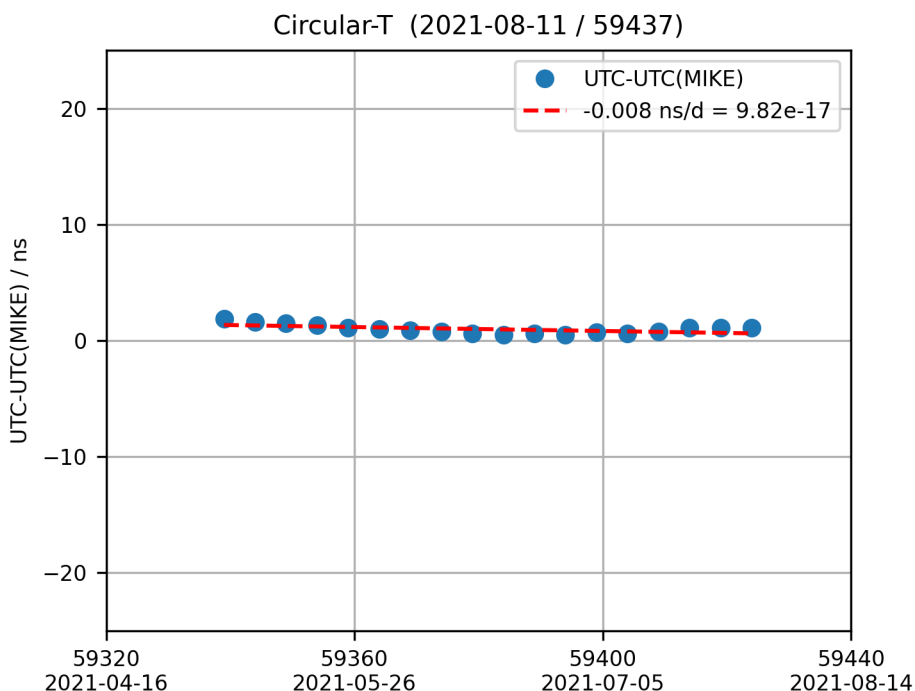
59165 (2020-11-12) Change of master clock to AHM2.  $y\_steer$  set to zero.

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

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

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

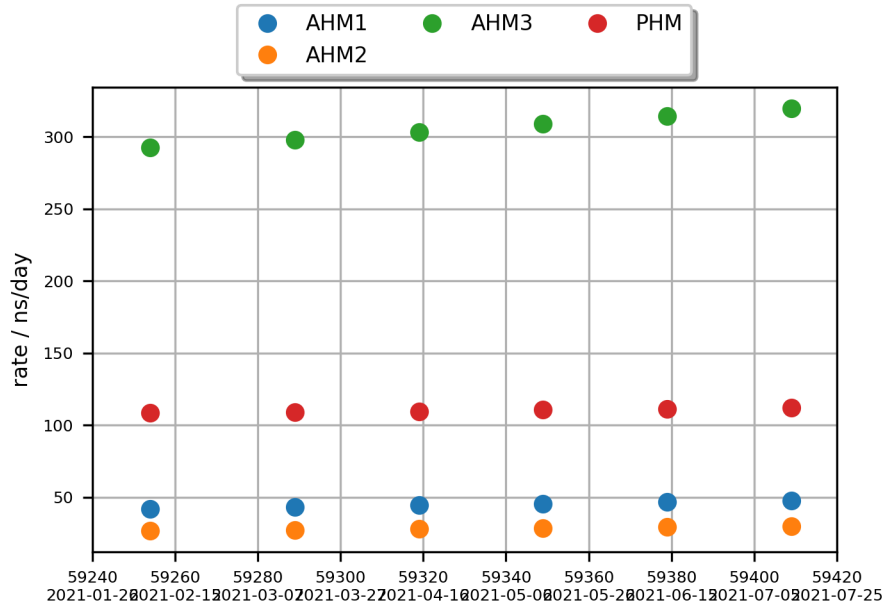
## UTC-UTC(MIKE) as reported in Circular-T



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.

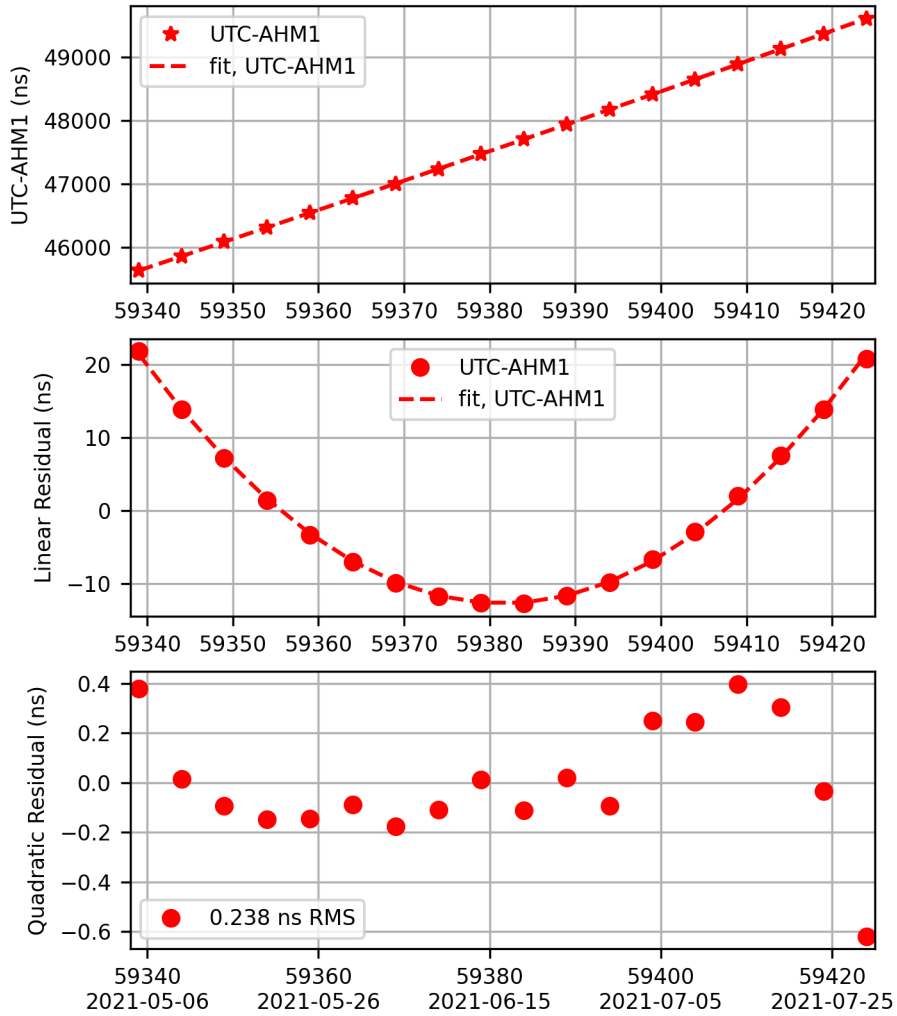
## Clock Rates - Summary

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

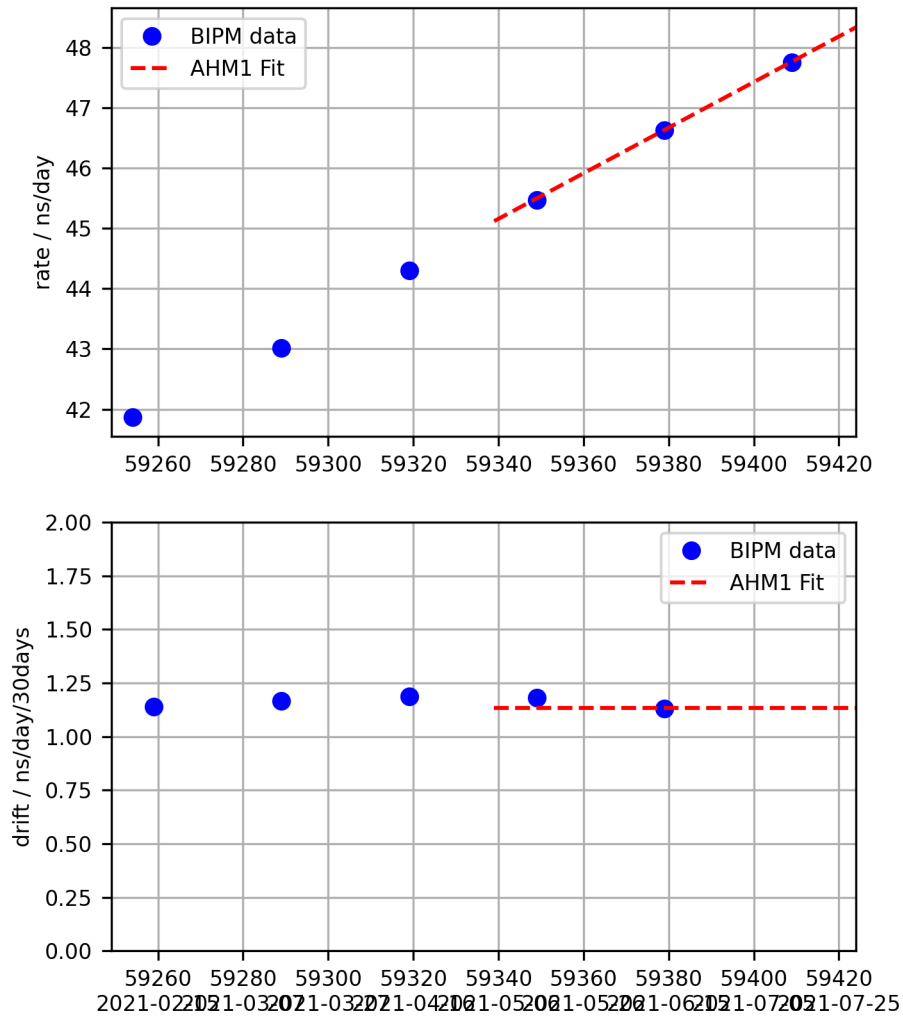


## UTC - AHM1 Fit

UTC-AHM1 (2021-08-11 / 59437)  
 $x \text{ (ns)} = 49606.118 + 48.331 *d + 0.0189 *d*d$   
 $y = -5.59389e-13 + -4.37504e-16 *d$   
 $d = (\text{mjd}-\text{mjd0}) \text{ with mjd0} = 59424$

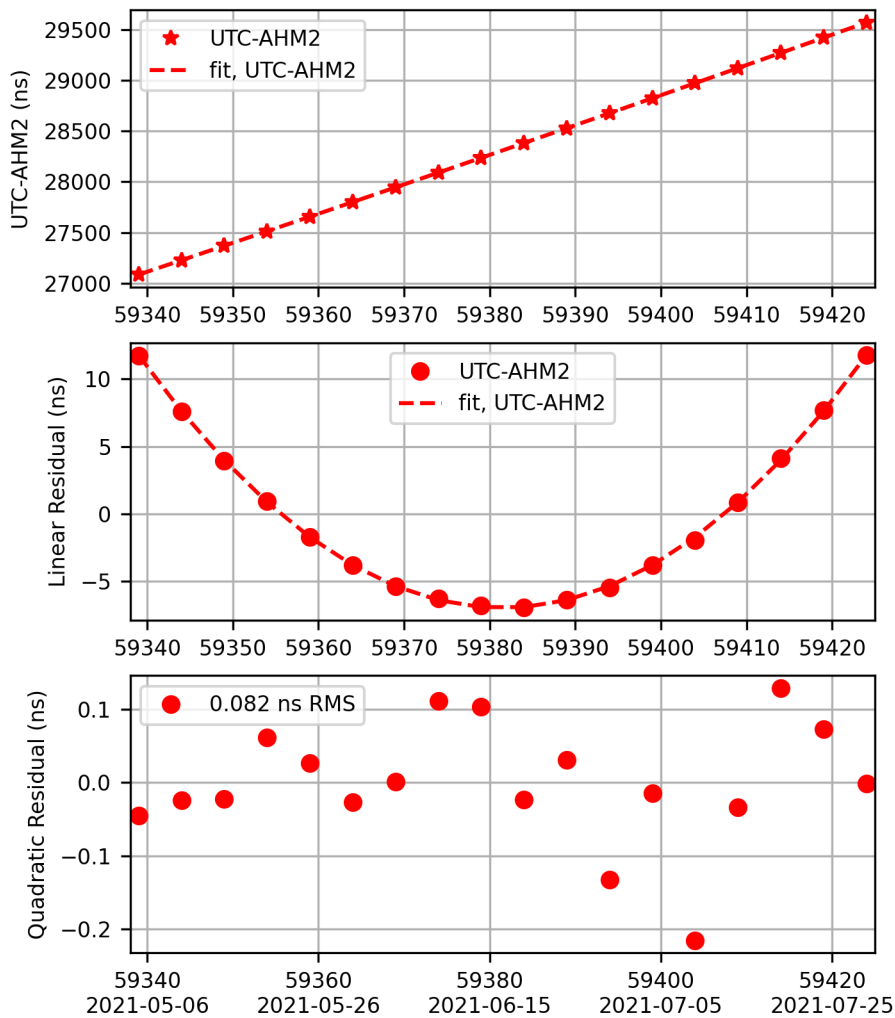


### AHM1 Rate and Drift

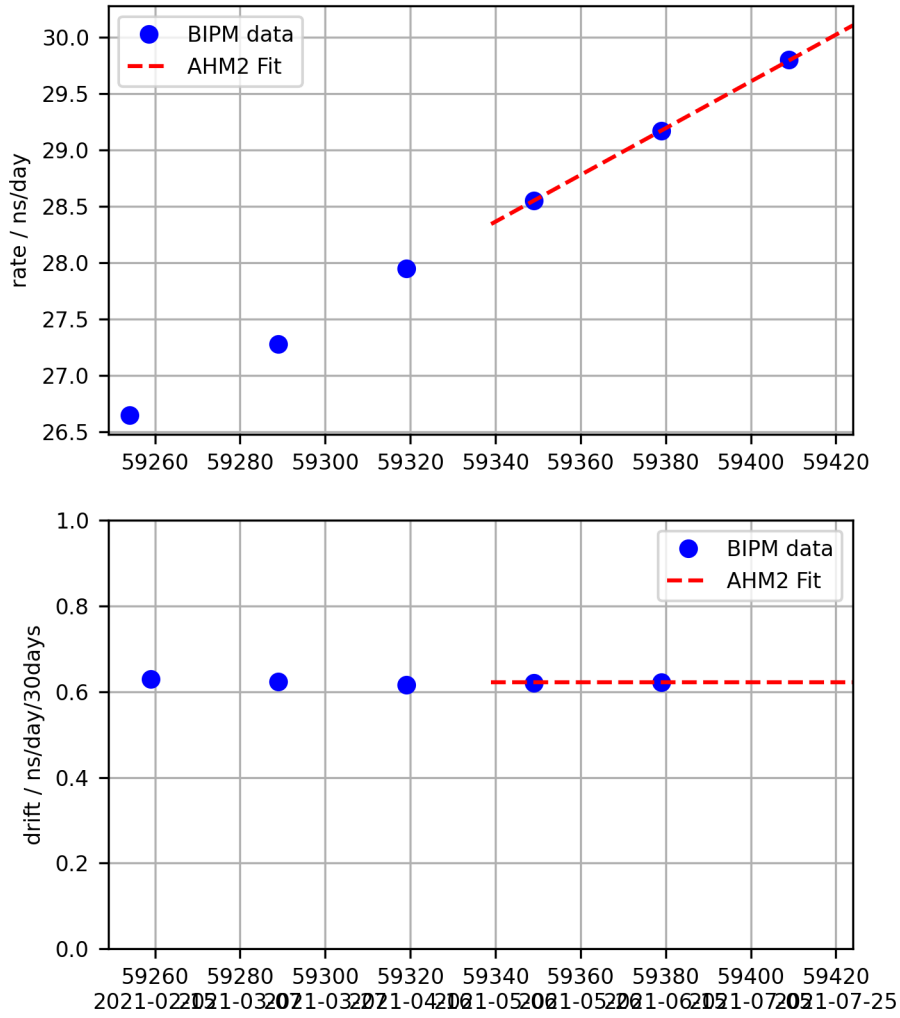


## UTC - AHM2 Fit

UTC-AHM2 (2021-08-11 / 59437)  
 $x \text{ (ns)} = 29570.101 + 30.107 *d + 0.0104 *d*d$   
 $y = -3.48457e-13 + -2.40004e-16 *d$   
 $d = (\text{mjd}-\text{mjd0})$  with  $\text{mjd0} = 59424$

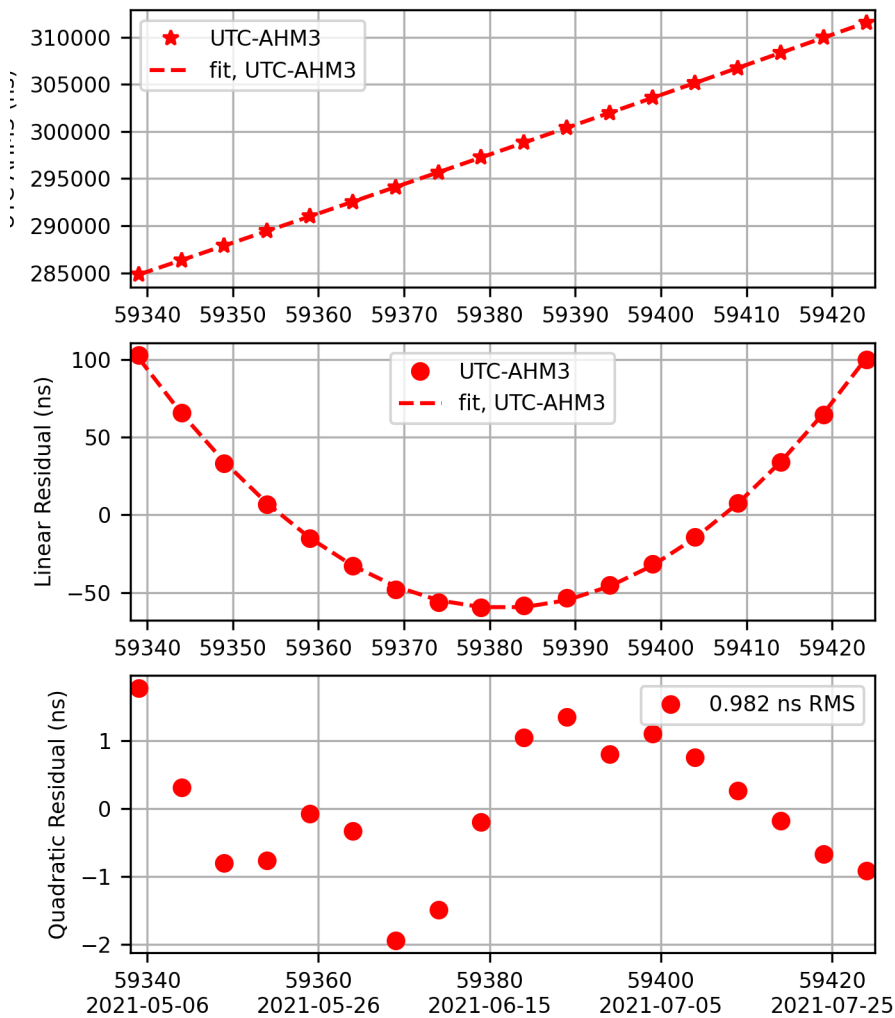


### AHM2 Rate and Drift

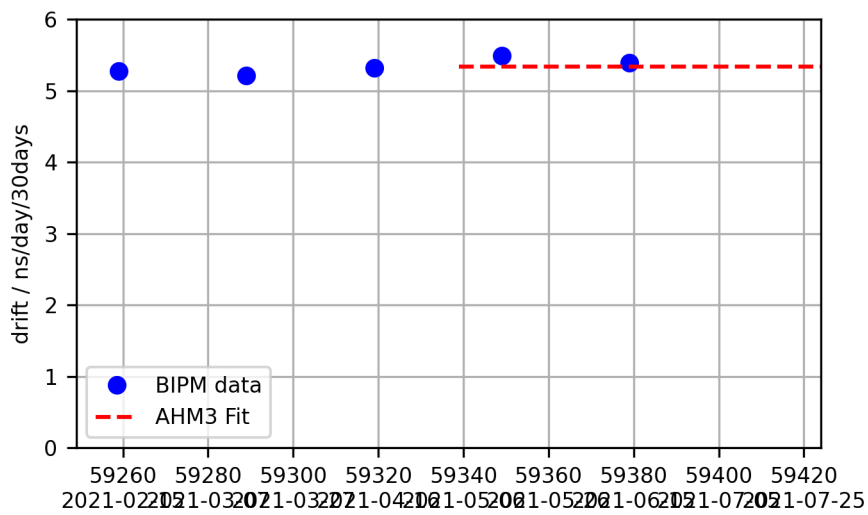
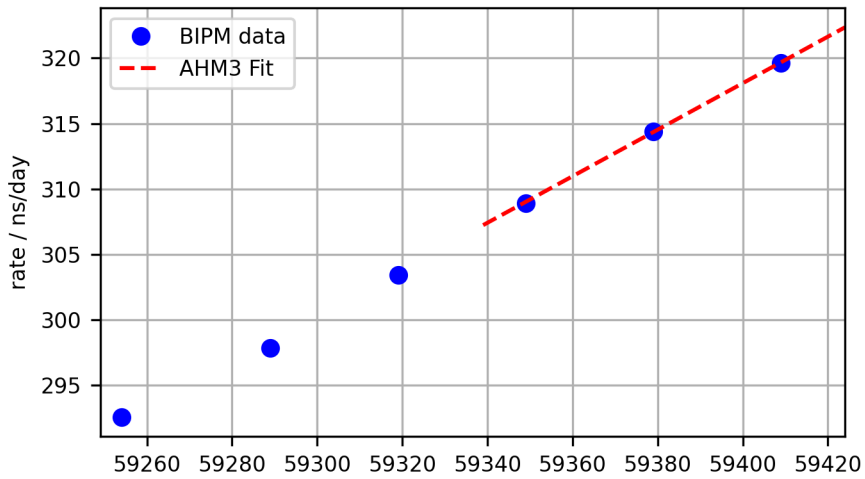


### UTC - AHM3 Fit

UTC-AHM3 (2021-08-11 / 59437)  
 $x \text{ (ns)} = 311564.815 + 322.353 * d + 0.0890 * d * d$   
 $y = -3.73094e-12 + -2.0595e-15 * d$   
 $d = (\text{mjd} - \text{mjd0}) \text{ with mjd0} = 59424$



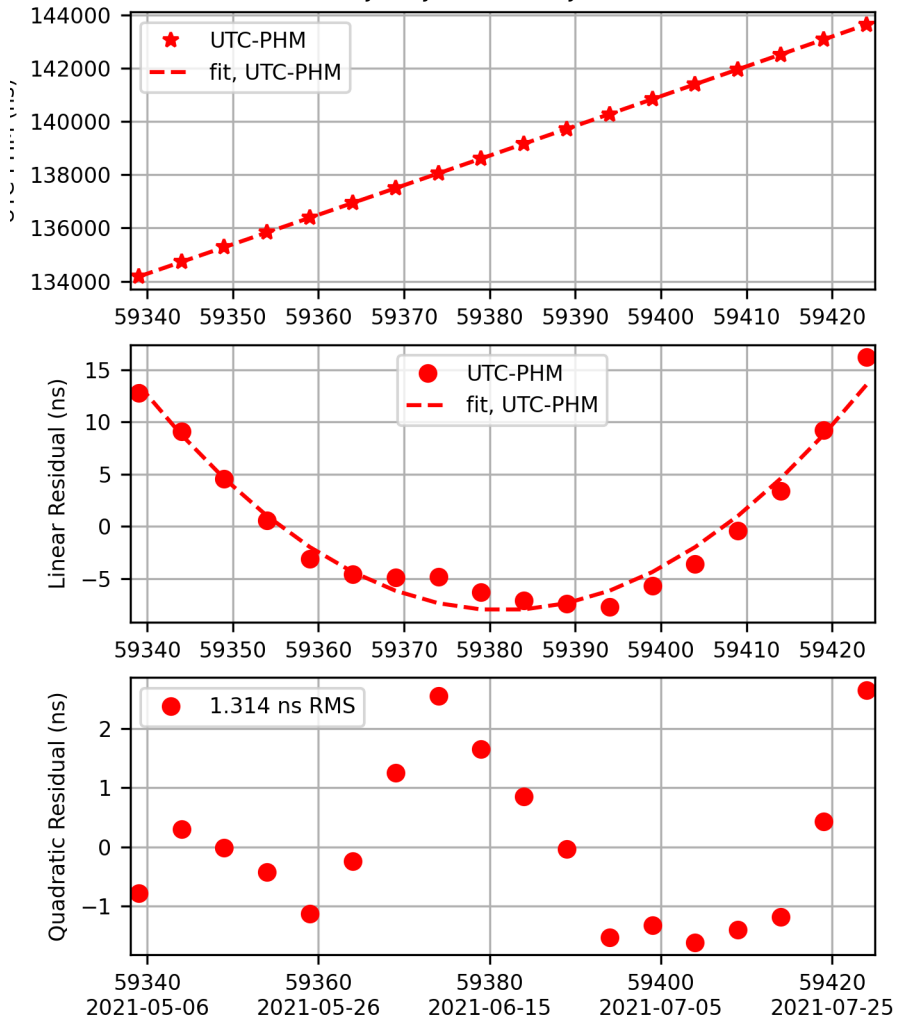
### AHM3 Rate and Drift



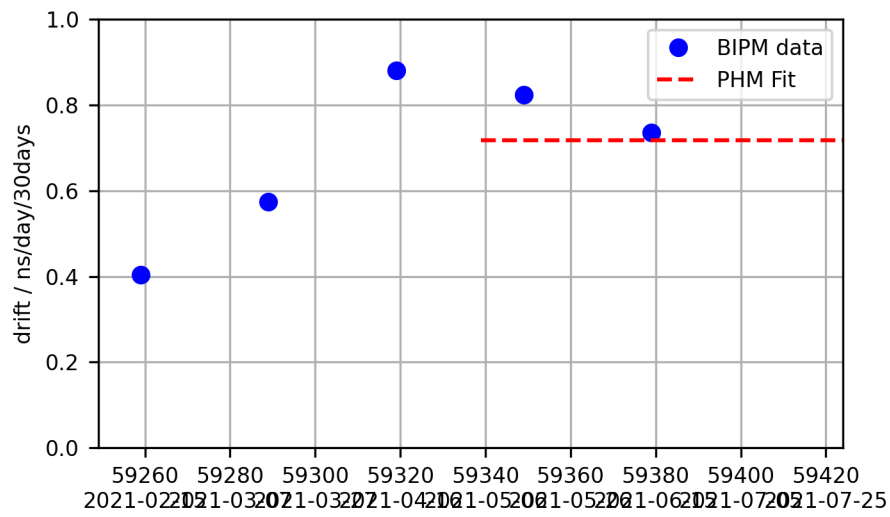
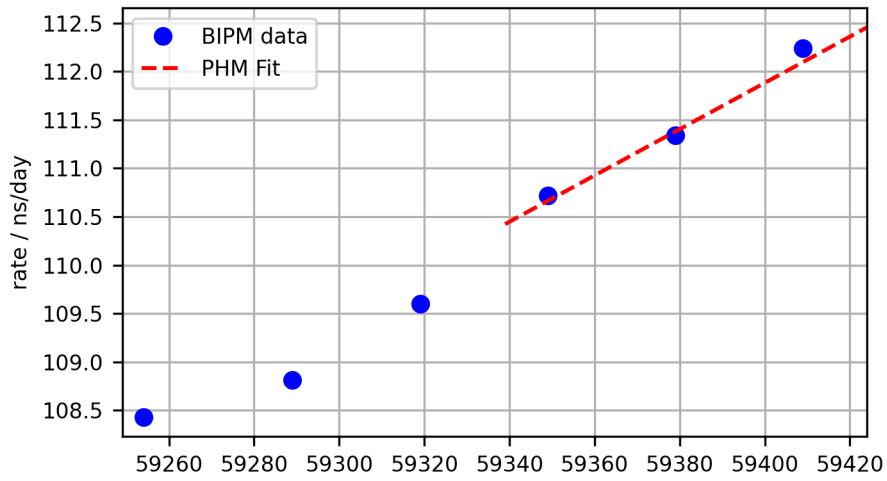


## UTC - PHM Fit

UTC-PHM (2021-08-11 / 59437)  
 $x \text{ (ns)} = 143646.247 + 112.456 * d + 0.0120 * d * d$   
 $y = -1.30157e-12 + -2.76739e-16 * d$   
 $d = (\text{mjd} - \text{mjd0}) \text{ with mjd0} = 59424$

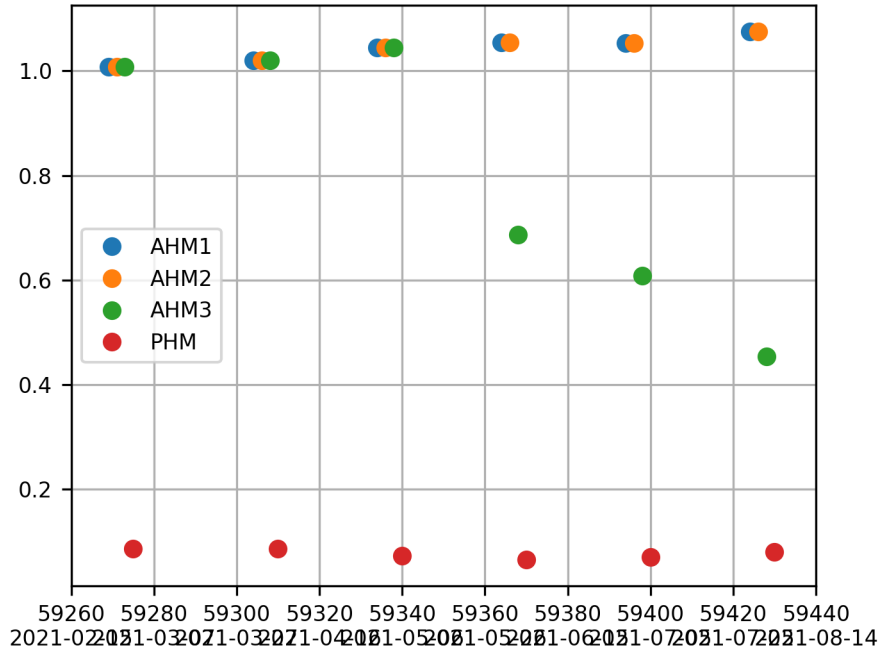


### PHM Rate and Drift



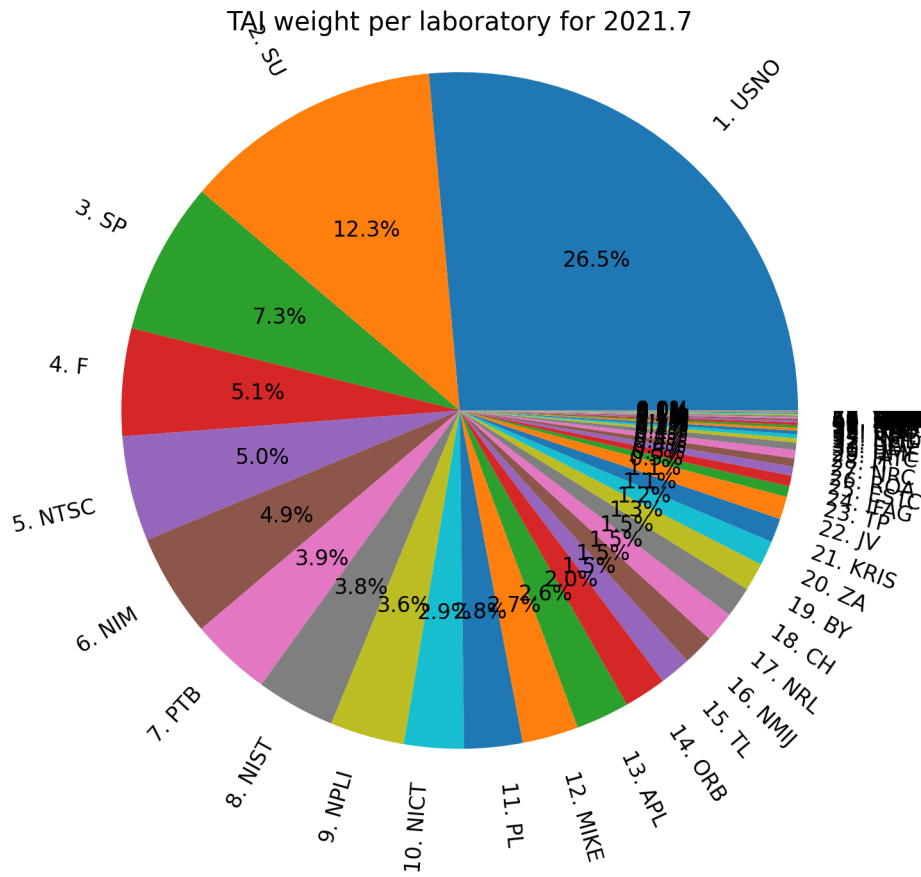
### VTT MIKES Clock Weights

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



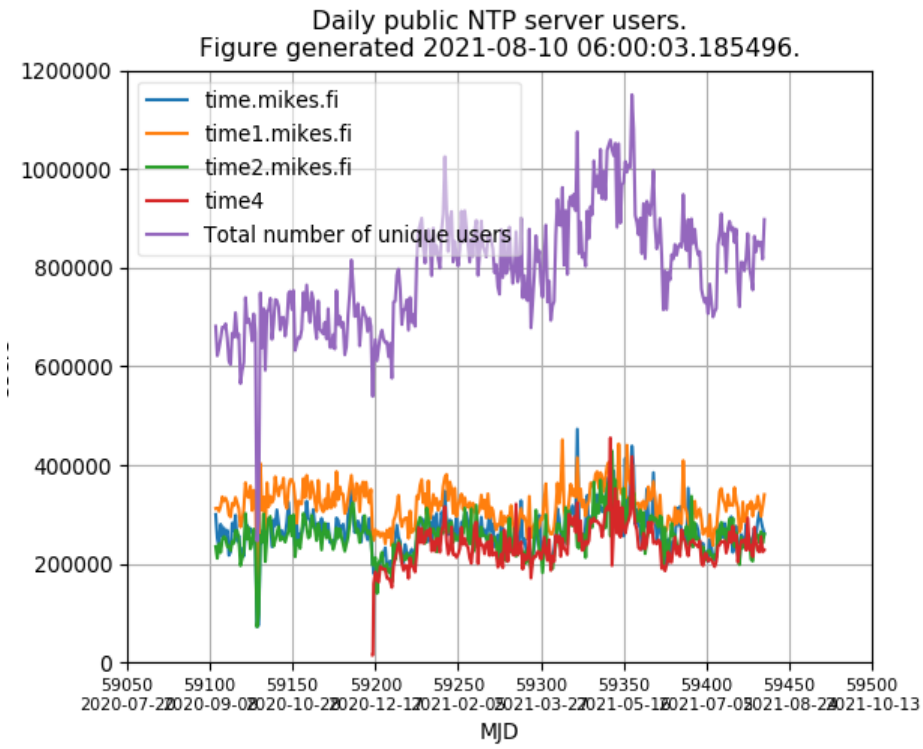
### Clock Weights per Laboratory

Relative TAI Weight per laboratory



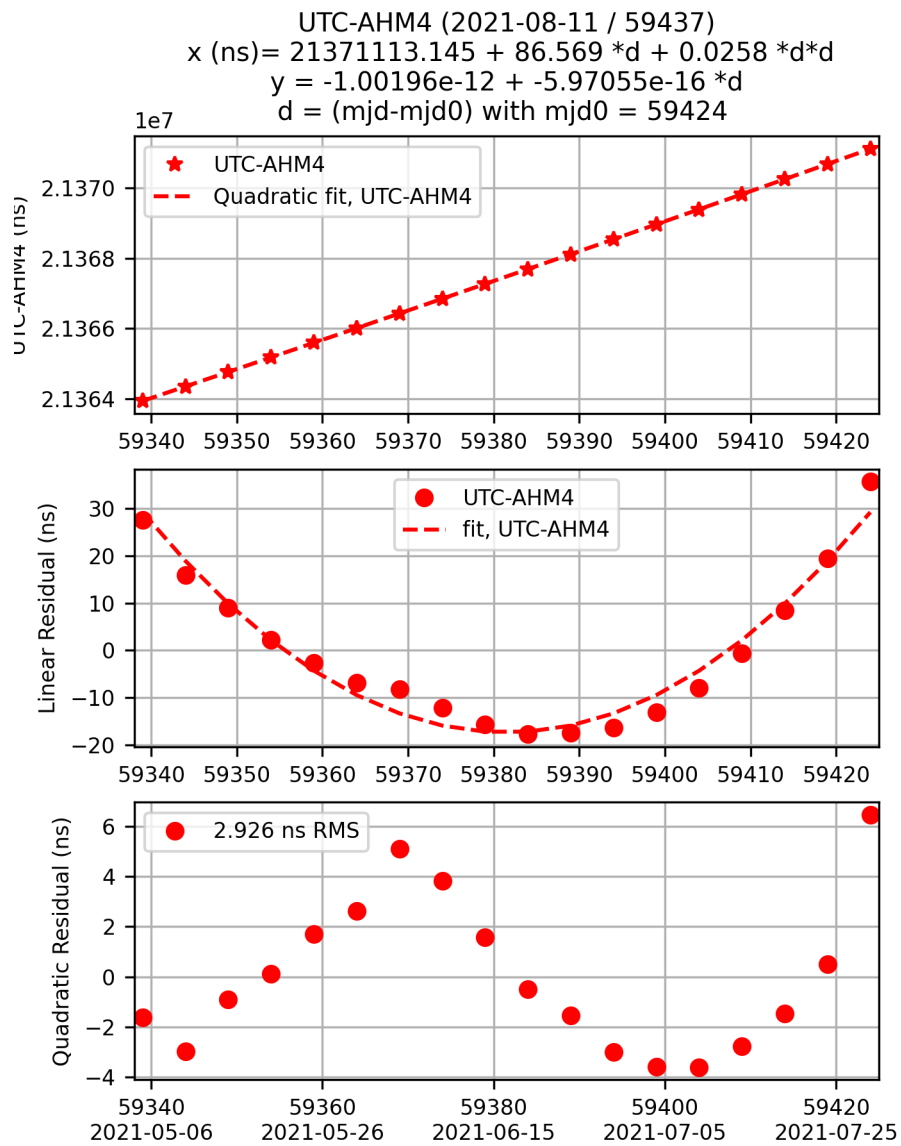
## NTP Usage Statistics

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



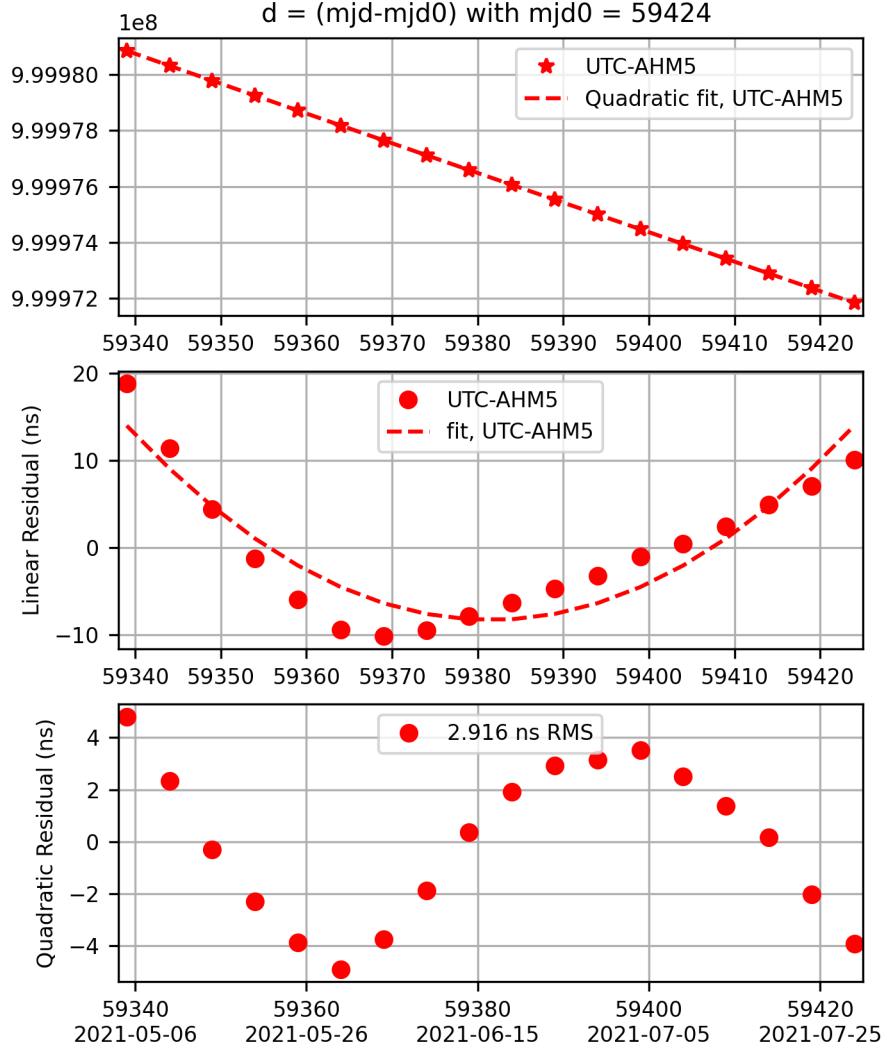
## Remote Clocks

### Remote Clock: AHM4



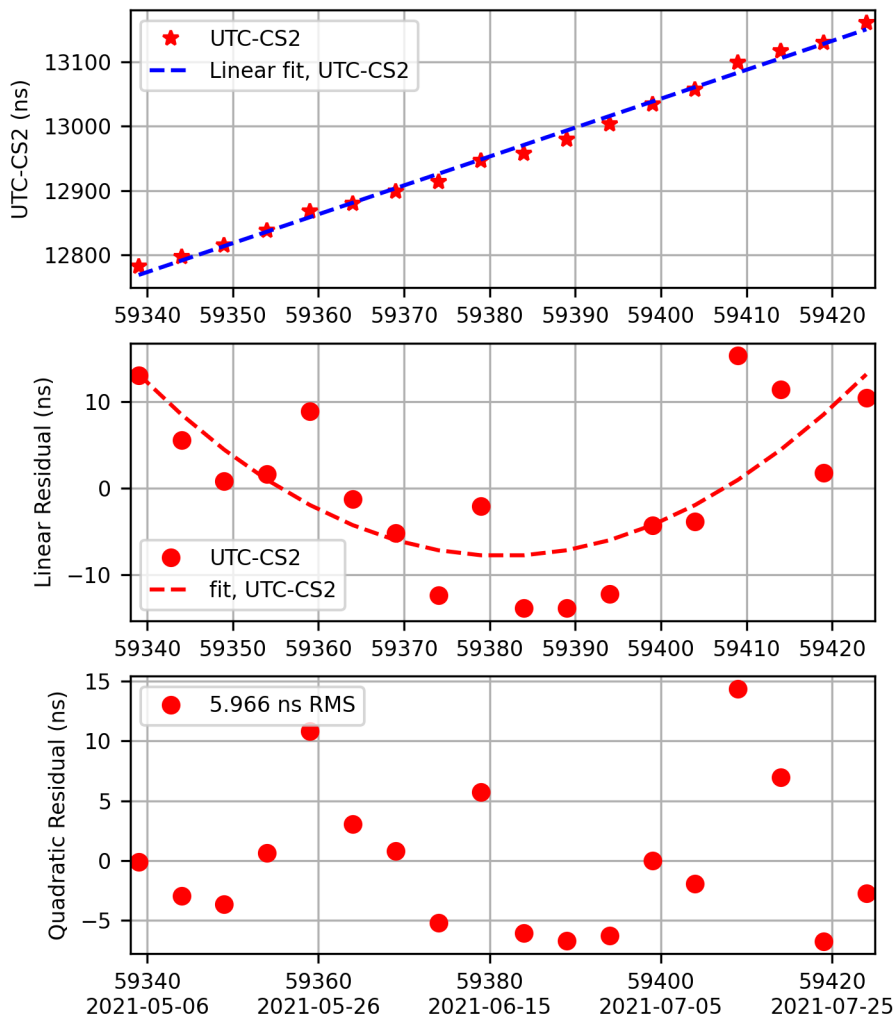
**Remote Clock: AHM5**

UTC-AHM5 (2021-08-11 / 59437)  
 $x \text{ (ns)} = 999971843.861 + -104.826 *d + 0.0123 *d*d$   
 $y = 1.21327e-12 + -2.85481e-16 *d$   
 $d = (\text{mjd}-\text{mjd0}) \text{ with mjd0} = 59424$



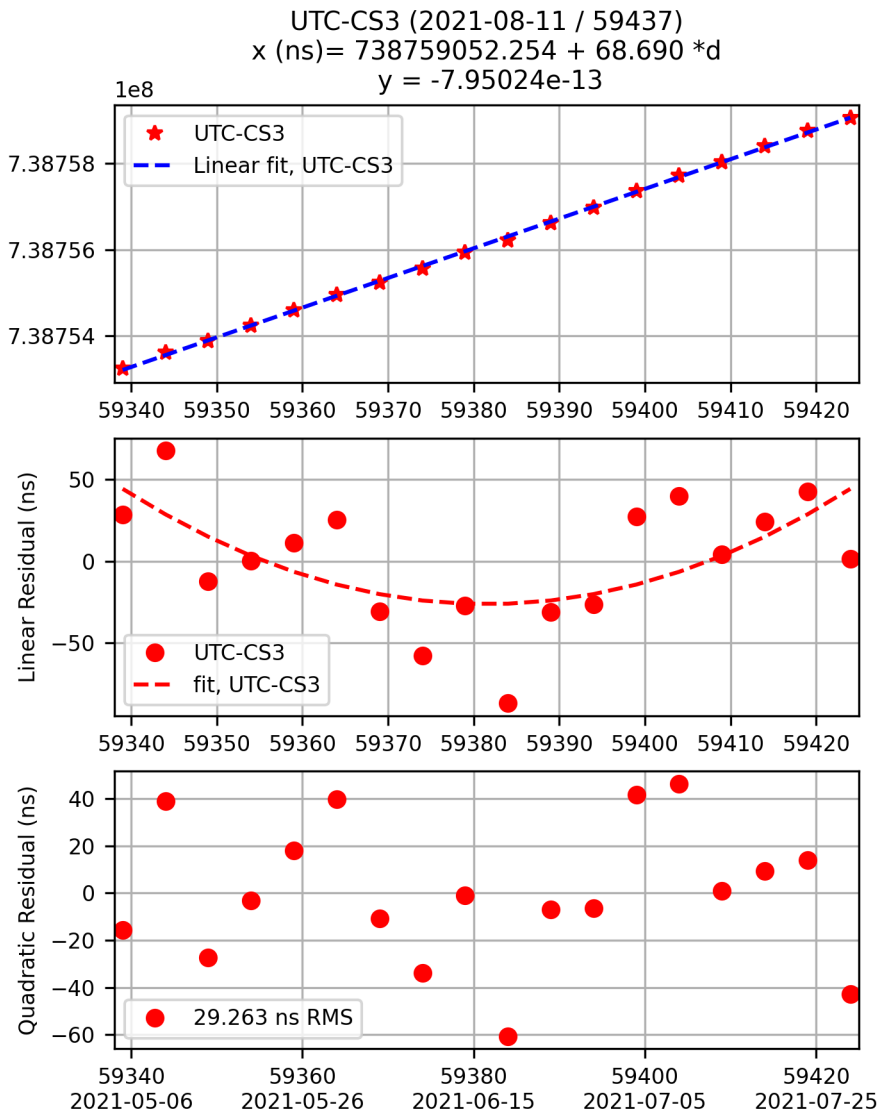
**Remote Clock: CS2**

UTC-CS2 (2021-08-11 / 59437)  
 $x \text{ (ns)} = 13150.477 + 4.490 * d$   
 $y = -5.19679e-14$

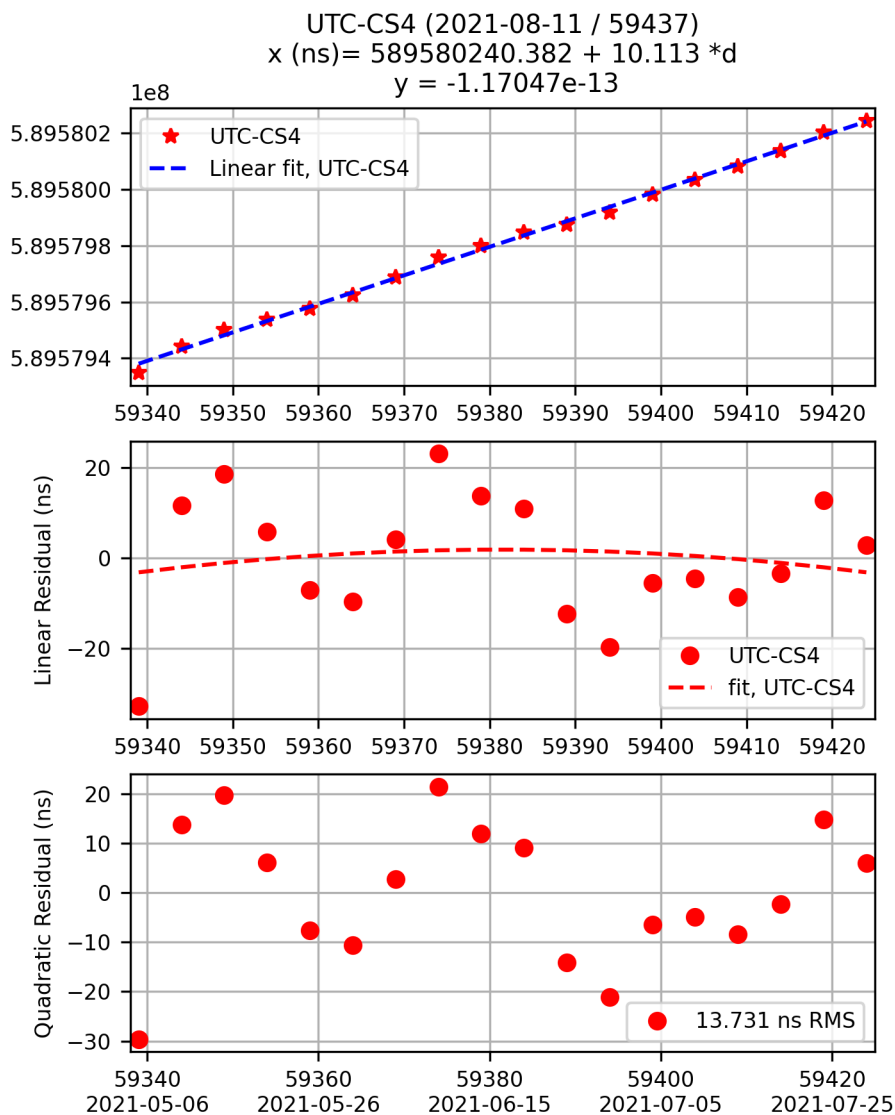




**Remote Clock: CS3**



**Remote Clock: CS4**



**End of Bulletin.**