

# UTC(MIKE) Atomic Bulletin 2021-02

VTT MIKES Metrology monthly Time & Frequency bulletin.

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

Date of publication: 2021-02-12 (59257)

Circular-T issues used for analysis: [395](#), [396](#), [397](#),

First day of analysis interval: 2020-11-01 (59154)

Last day of analysis interval: 2021-01-30 (59244)

ClockData for analysis: [CDMI 20.11](#), [CDMI 20.12](#), [CDMI 21.01](#),

## Notes

58953 (2020-03-14) AB2020-04, set steering correction to zero.

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

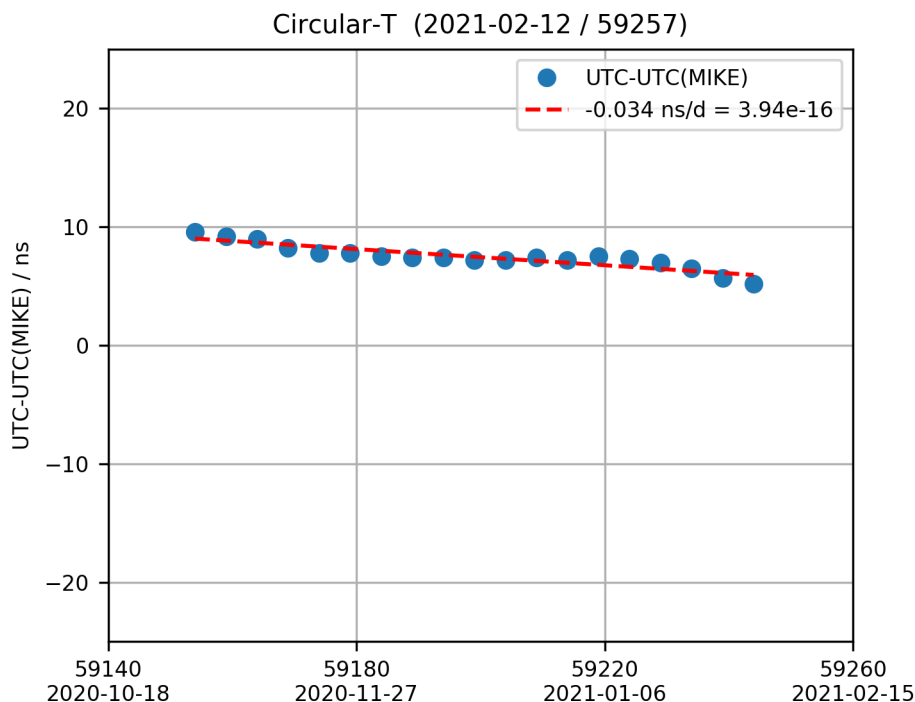
59105 (2020-09-13) AB2020-10, Large temperature-swing down to +19.5C (from +22.25C) in clock room.

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  $+7.2ns/60d = +1.4e-15$

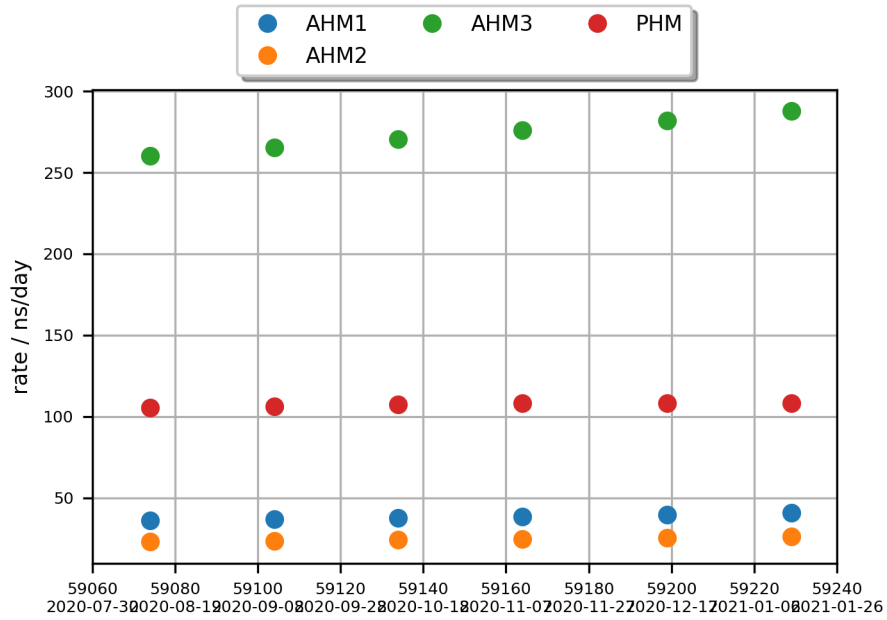
## UTC-UTC(MIKE) as reported in Circular-T



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.

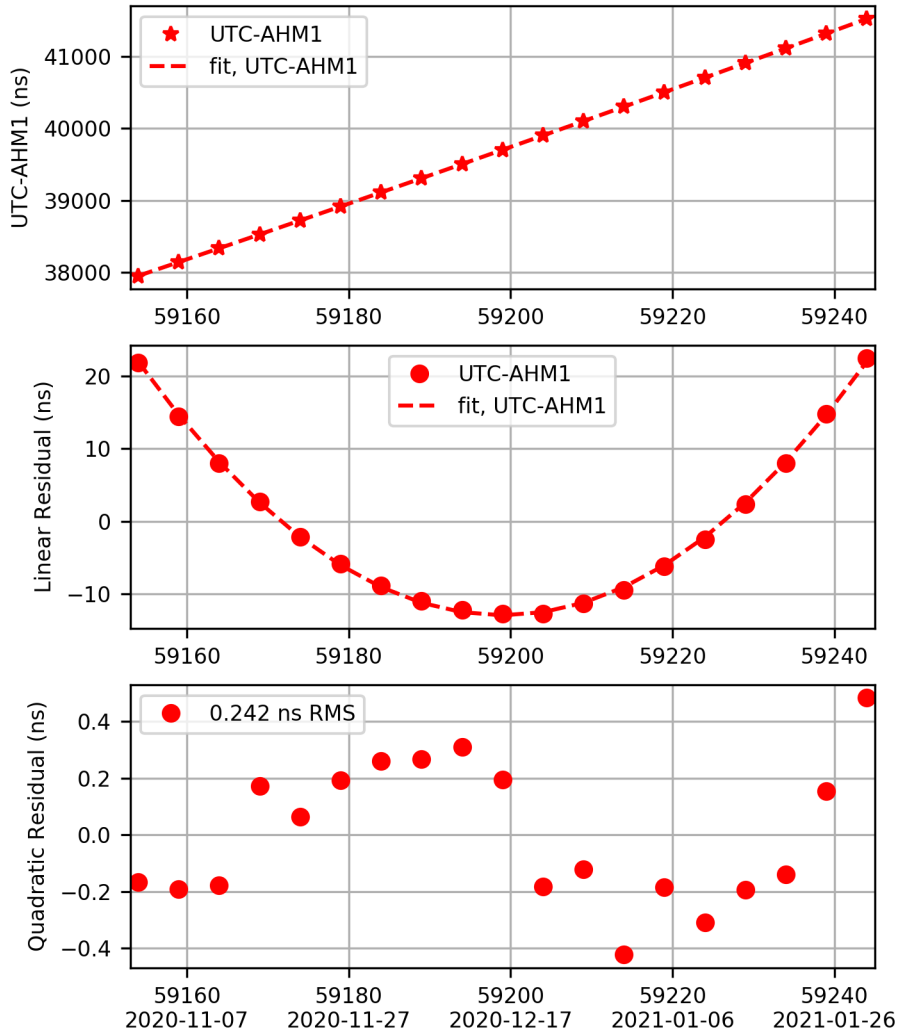
## Clock Rates - Summary

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

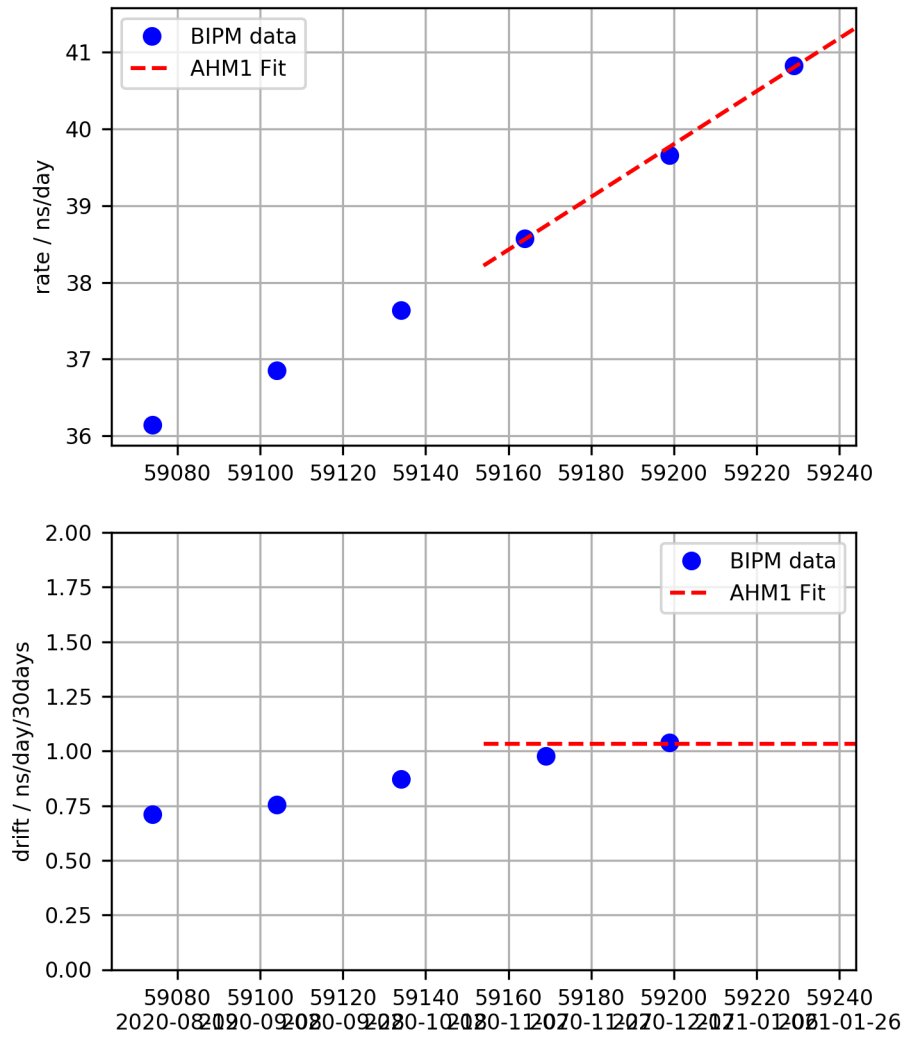


## UTC - AHM1 Fit

UTC-AHM1 (2021-02-12 / 59257)  
 $x \text{ (ns)} = 41528.016 + 41.320 *d + 0.0172 *d*d$   
 $y = -4.7824e-13 + -3.98784e-16 *d$   
 $d = (\text{mjd}-\text{mjd0})$  with  $\text{mjd0} = 59244$

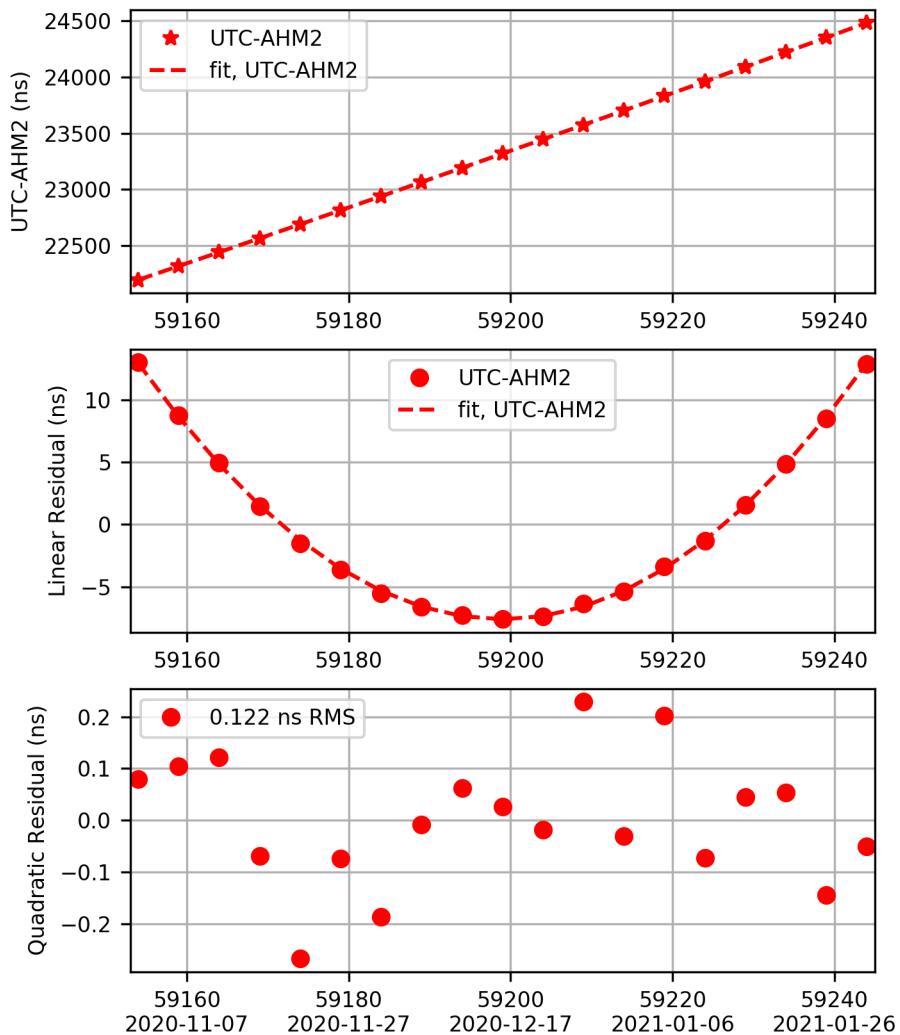


## AHM1 Rate and Drift

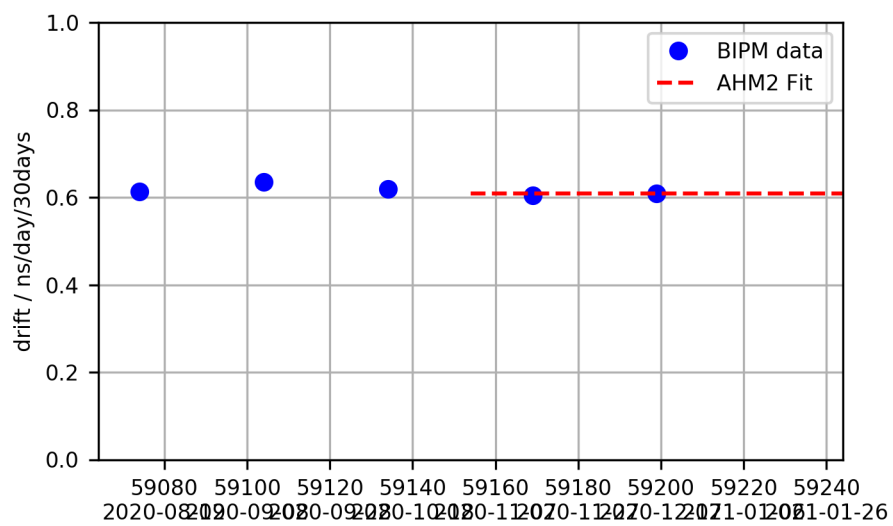
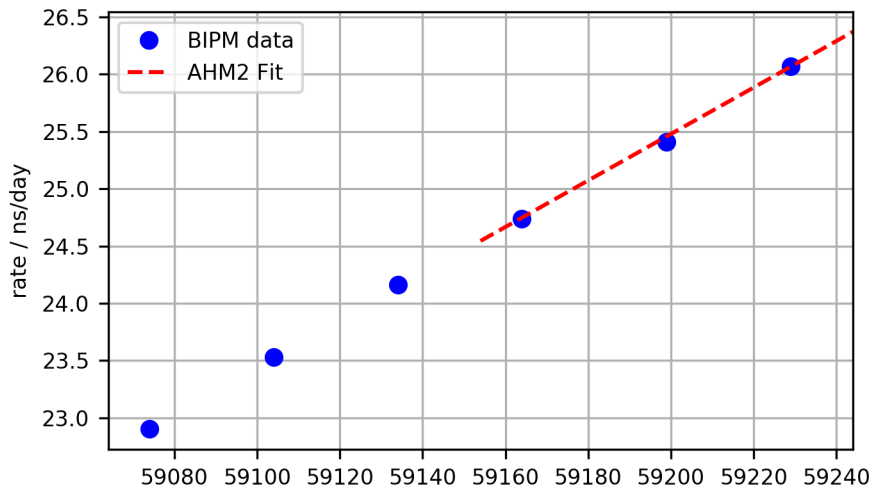


## UTC - AHM2 Fit

UTC-AHM2 (2021-02-12 / 59257)  
 $x \text{ (ns)} = 24484.750 + 26.372 *d + 0.0102 *d*d$   
 $y = -3.05231e-13 + -2.35037e-16 *d$   
 $d = (\text{mjd}-\text{mjd0}) \text{ with mjd0} = 59244$

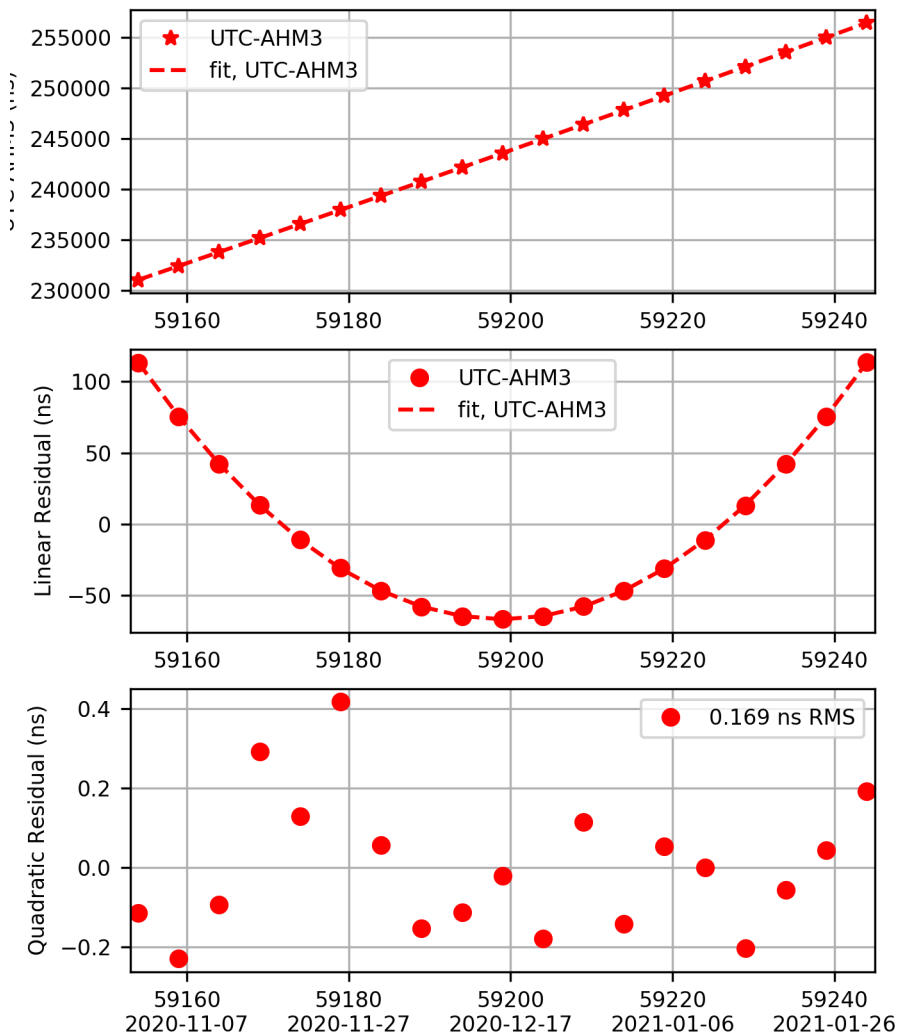


## AHM2 Rate and Drift

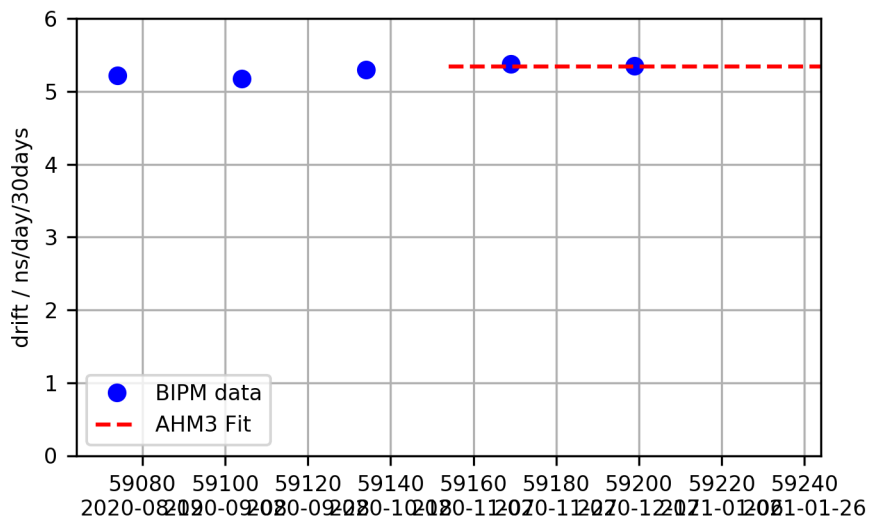
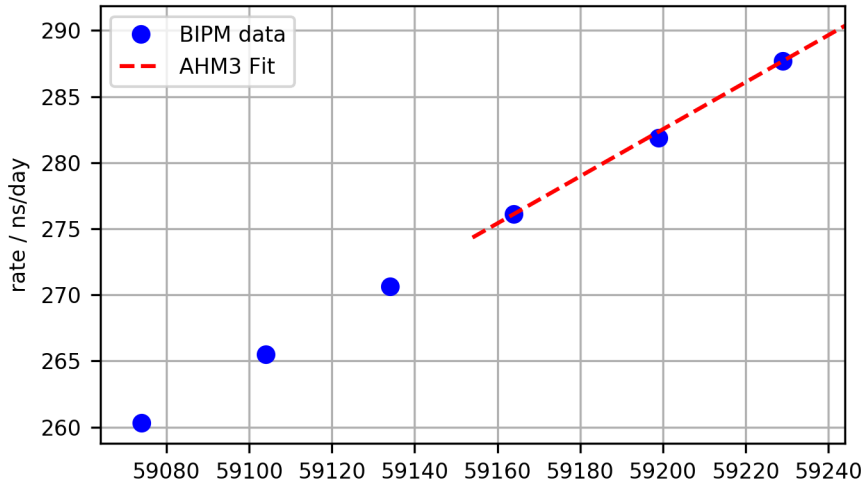


## UTC - AHM3 Fit

UTC-AHM3 (2021-02-12 / 59257)  
 $x \text{ (ns)} = 256437.307 + 290.355 * d + 0.0890 * d * d$   
 $y = -3.36059e-12 + -2.05978e-15 * d$   
 $d = (\text{mjd} - \text{mjd0}) \text{ with mjd0} = 59244$



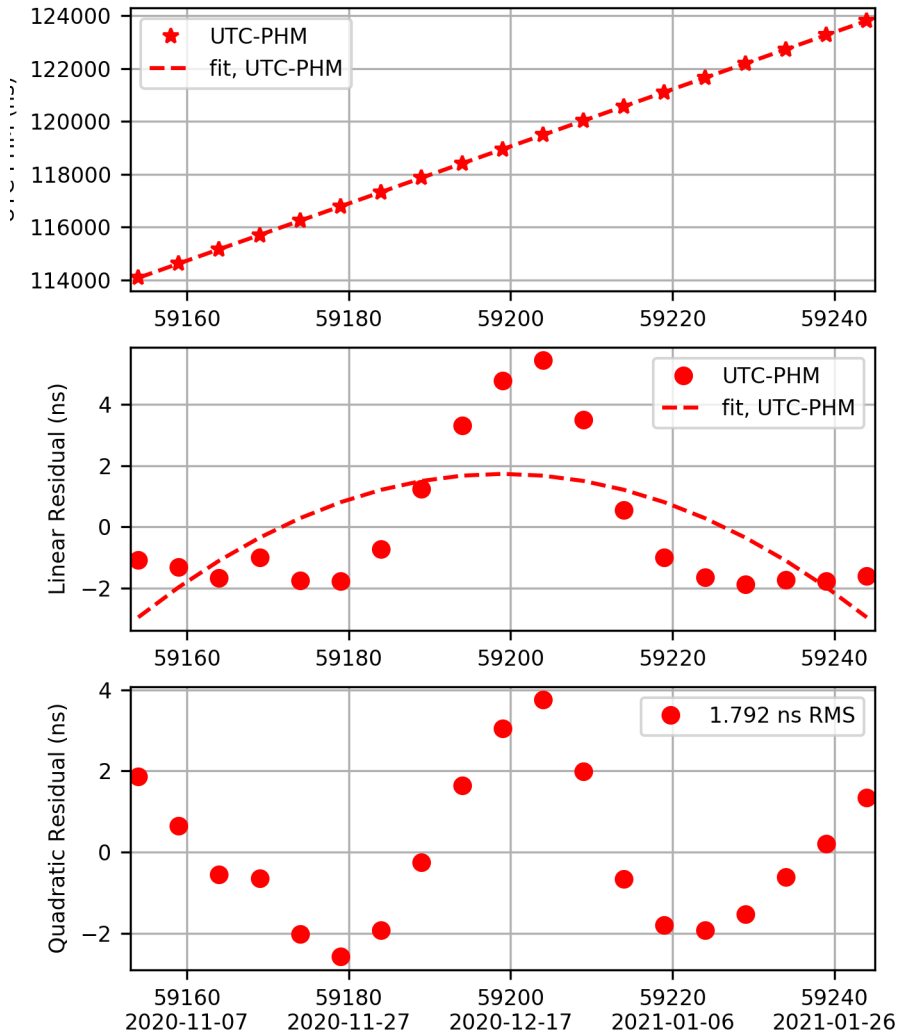
### AHM3 Rate and Drift



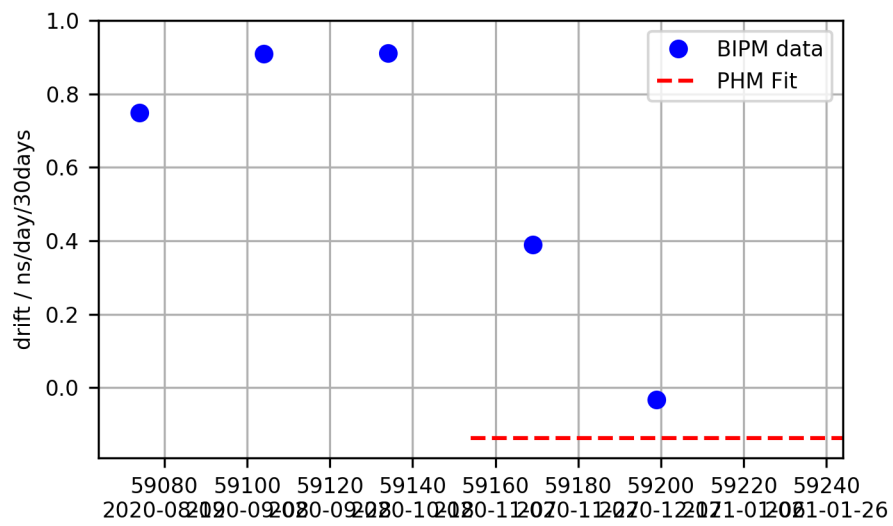
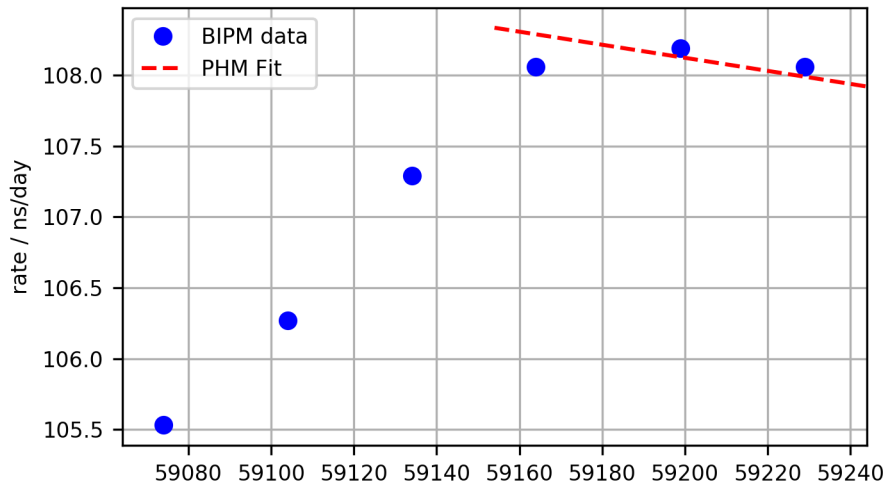


## UTC - PHM Fit

UTC-PHM (2021-02-12 / 59257)  
 $x \text{ (ns)} = 123811.454 + 107.921 * d + -0.0023 * d*d$   
 $y = -1.24908e-12 + 5.33537e-17 * d$   
 $d = (\text{mjd} - \text{mjd0}) \text{ with mjd0} = 59244$

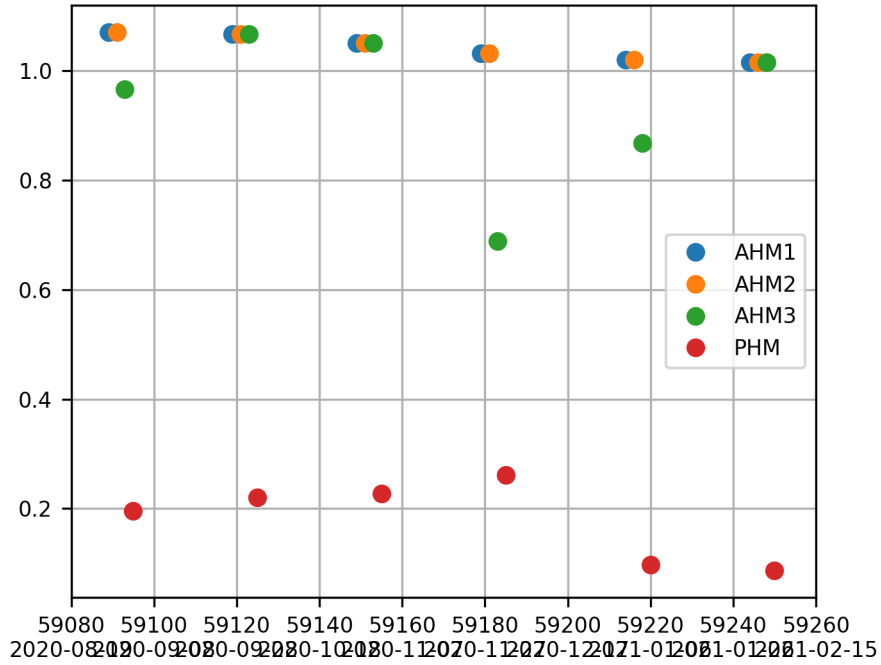


## PHM Rate and Drift

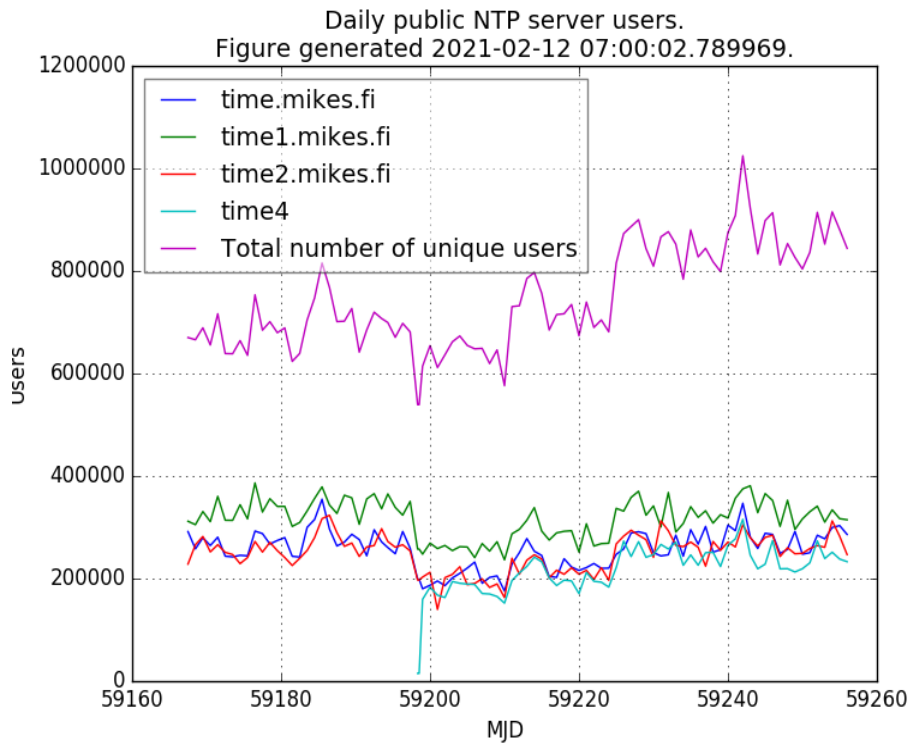


### Clock Weights

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

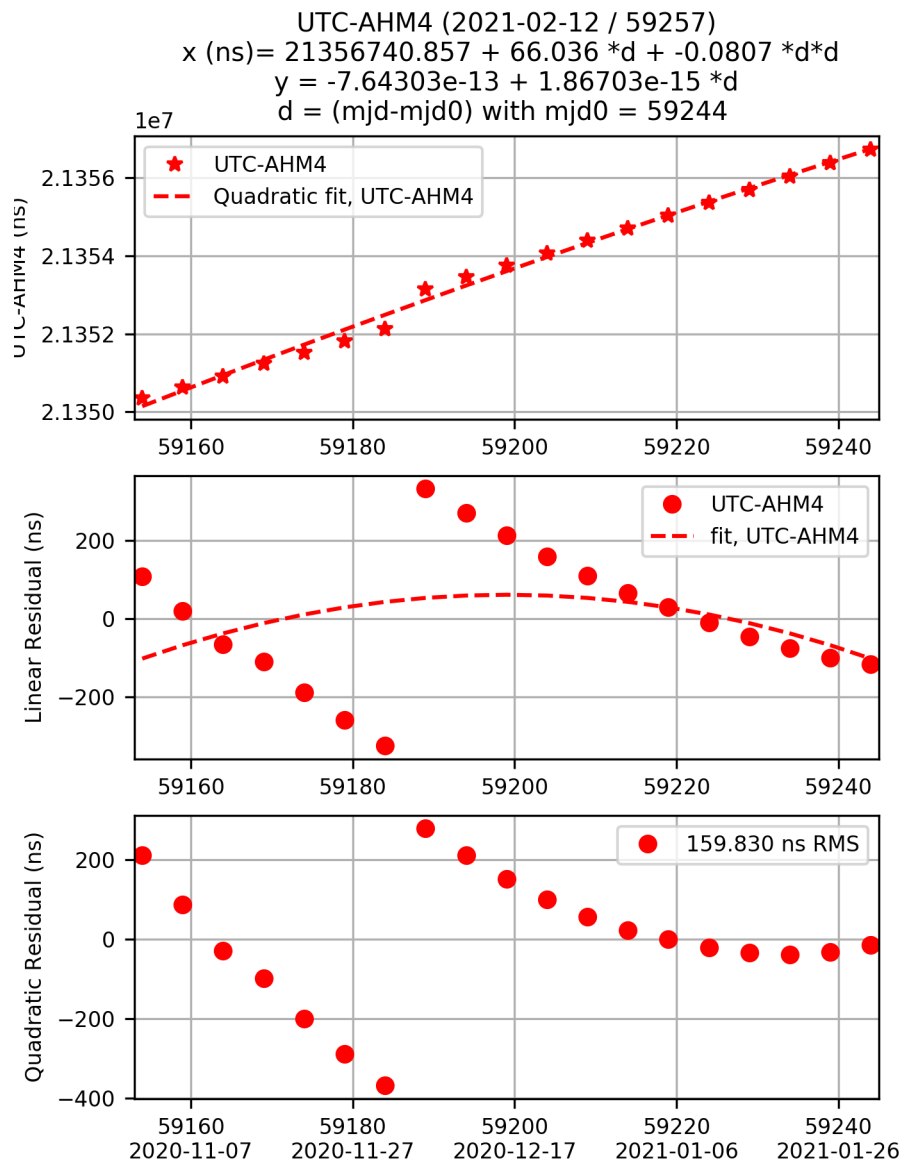


## NTP Usage Statistics



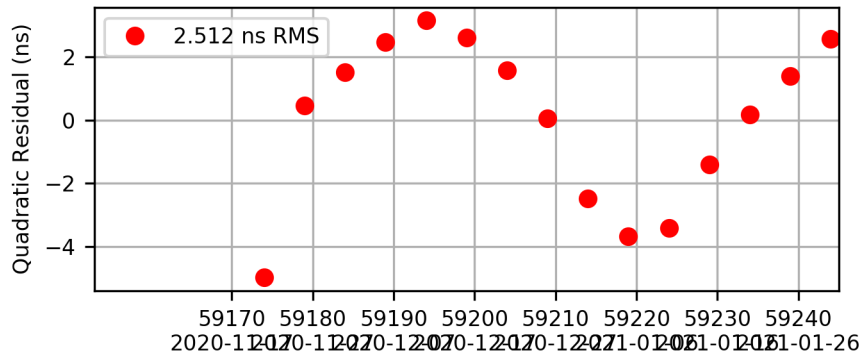
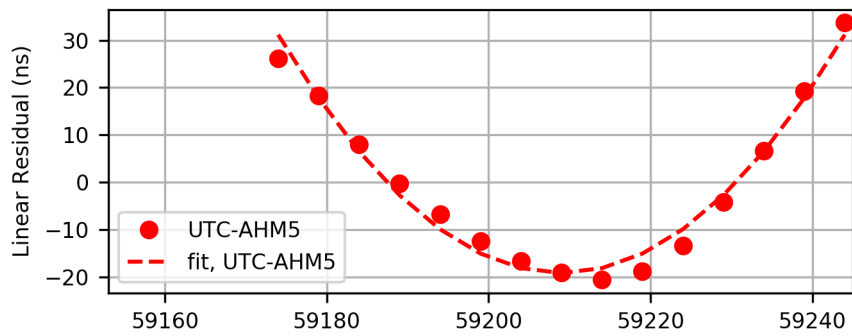
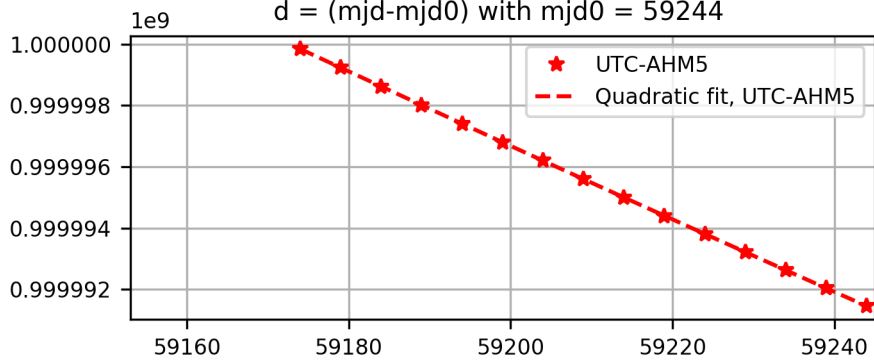
## Remote Clocks

### Remote Clock: AHM4



**Remote Clock: AHM5**

UTC-AHM5 (2021-02-12 / 59257)  
 $x \text{ (ns)} = 999991449.311 + -117.101 *d + 0.0411 *d*d$   
 $y = 1.35534e-12 + -9.51384e-16 *d$   
 $d = (\text{mjd}-\text{mjd0})$  with  $\text{mjd0} = 59244$

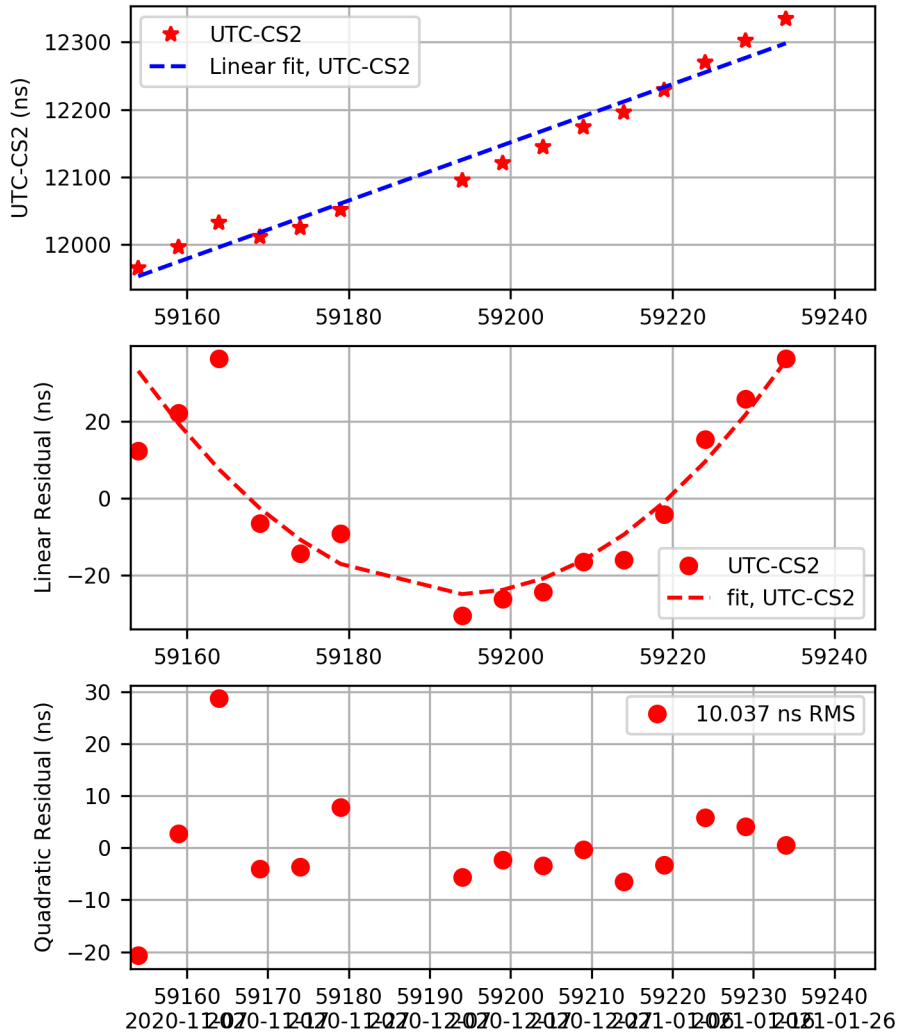


**Remote Clock: CS2**

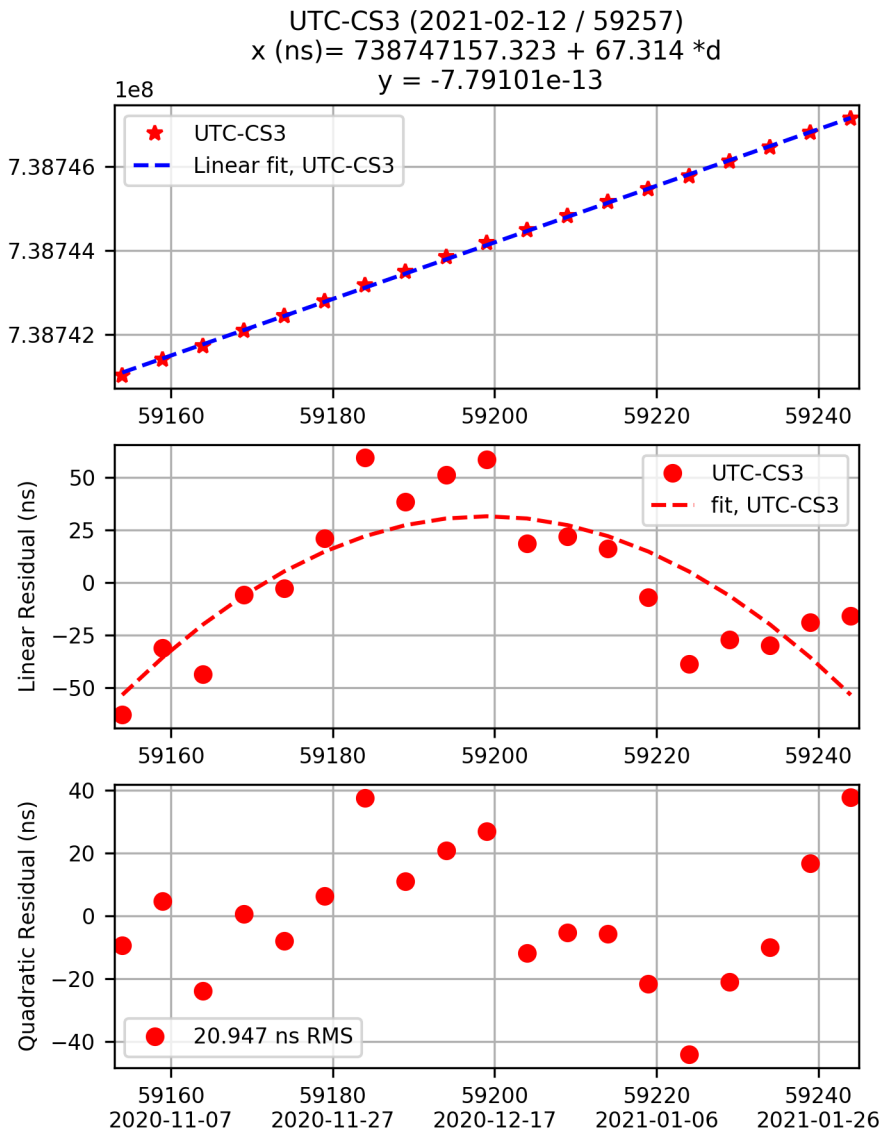
UTC-CS2 (2021-02-12 / 59257)

$$x \text{ (ns)} = 12341.485 + 4.313 * d$$

$$y = -4.99227e-14$$

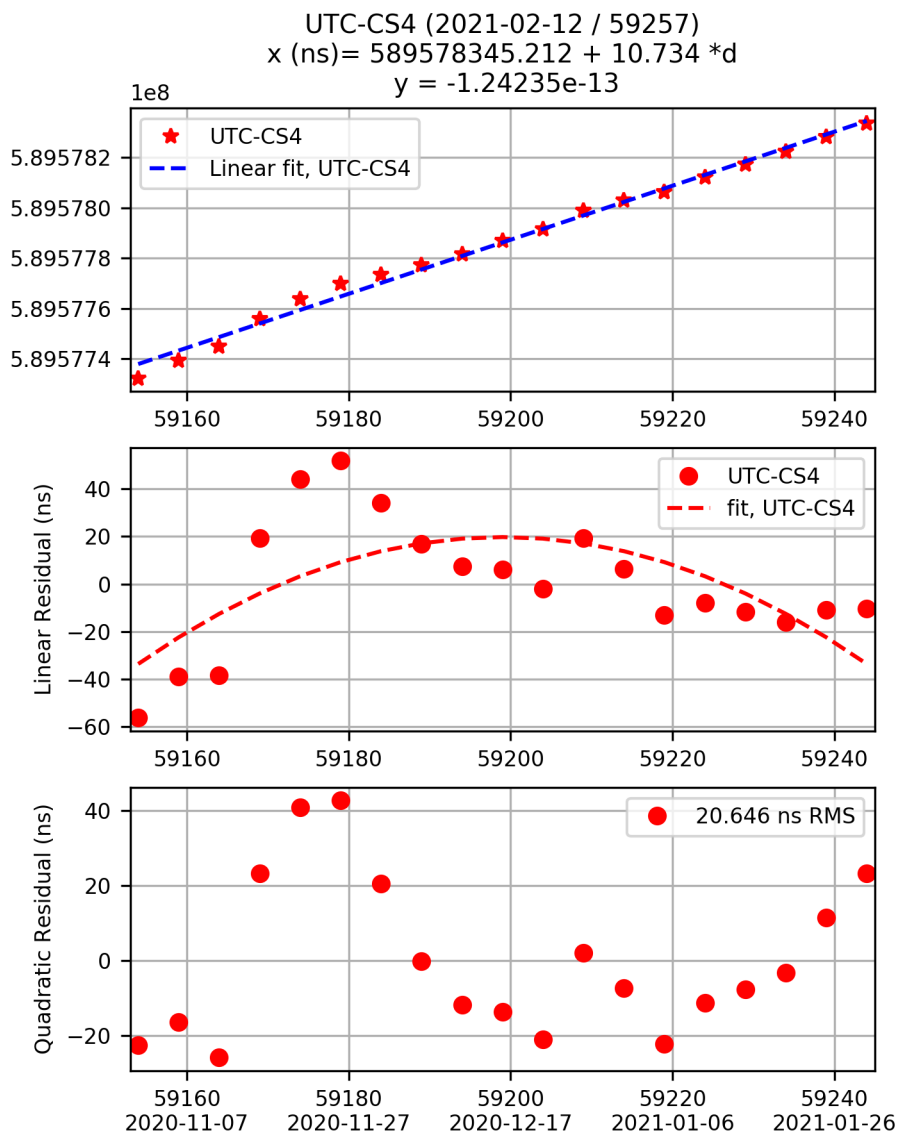


**Remote Clock: CS3**





**Remote Clock: CS4**



**End of Bulletin.**