

UTC(MIKE) Atomic Bulletin 2021-01

VTT MIKES Metrology monthly Time & Frequency bulletin.

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

Date of publication: 2021-01-11 (59225)

Circular-T issues used for analysis: [394](#), [395](#), [396](#),

First day of analysis interval: 2020-10-02 (59124)

Last day of analysis interval: 2020-12-31 (59214)

ClockData for analysis: [CDMI 20.10](#), [CDMI 20.11](#), [CDMI 20.12](#),

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 $y_steer = 0.5*(+14ns/30d) = +2.7e-15$

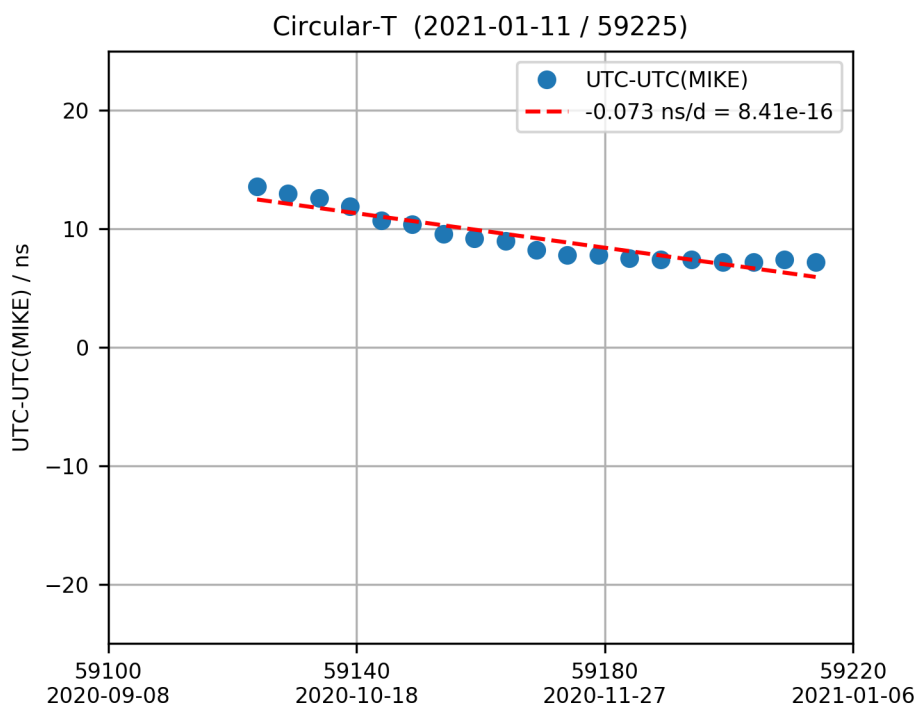
59082 (2020-08-21) AB2020-09, WR GM upgraded to FW 6.0, -100ns jump in WR timescale

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

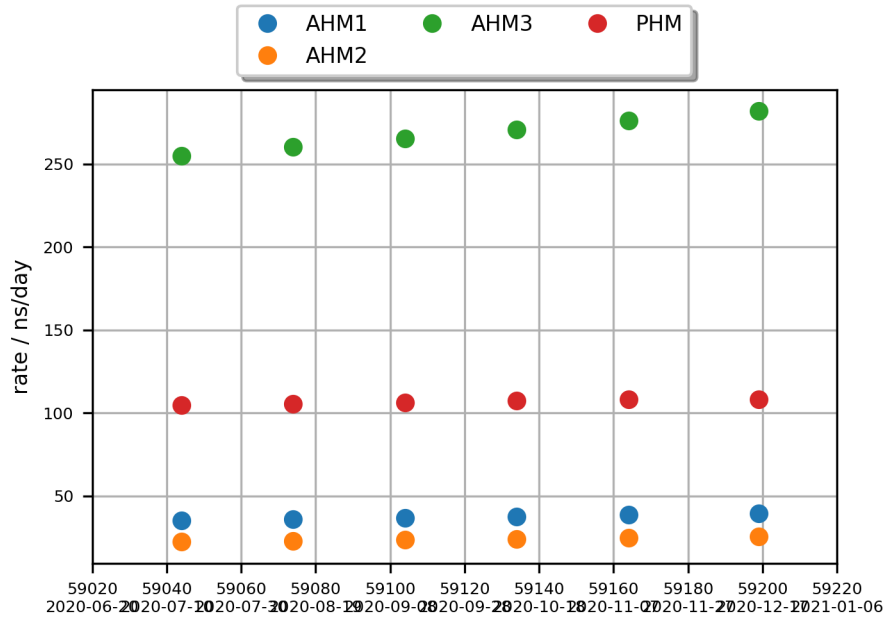
UTC-UTC(MIKE) as reported in Circular-T



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.

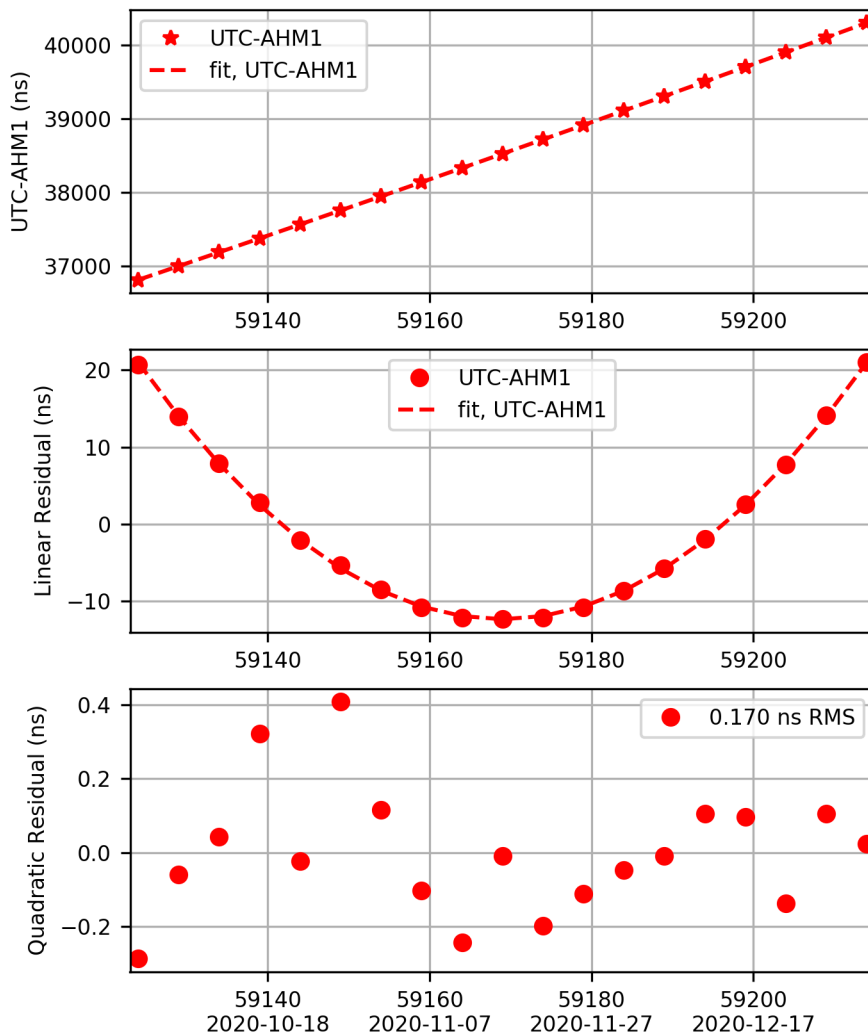
Clock Rates - Summary

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

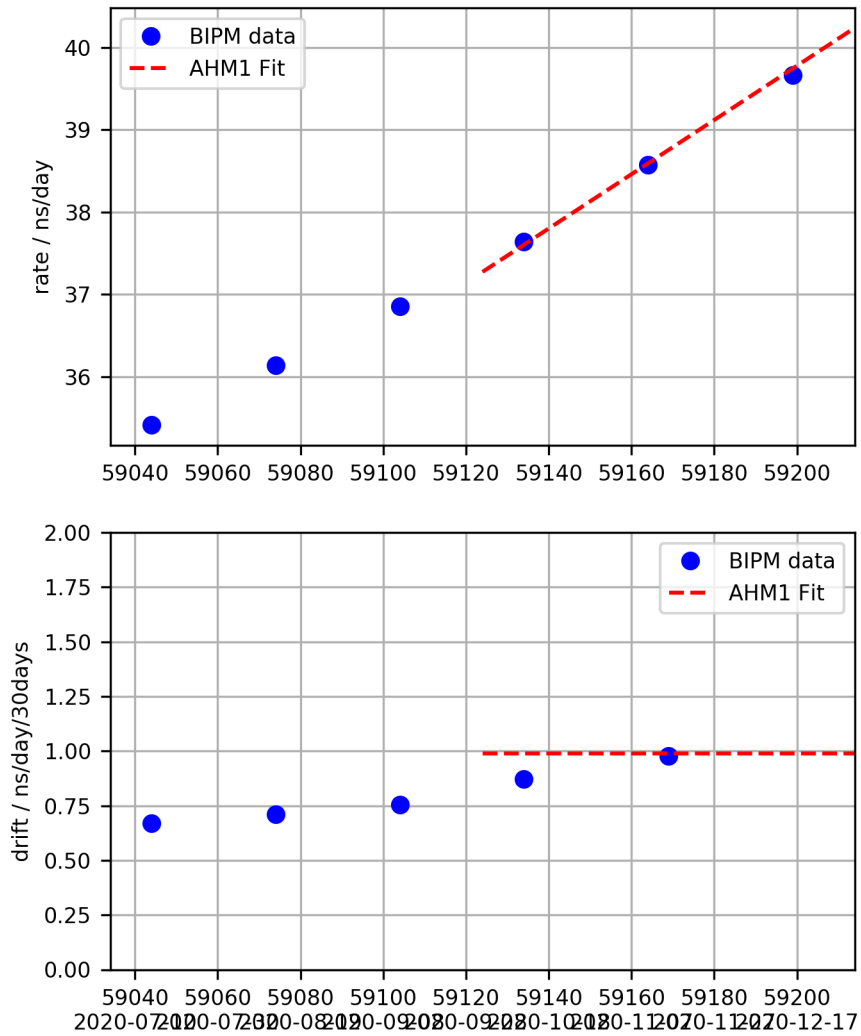


UTC - AHM1 Fit

UTC-AHM1 (2021-01-11 / 59225)
 $x \text{ (ns)} = 40303.476 + 40.239 *d + 0.0165 *d*d$
 $y = -4.65726e-13 + -3.81496e-16 *d$
 $d = (\text{mjd}-\text{mjd0}) \text{ with } \text{mjd0} = 59214$

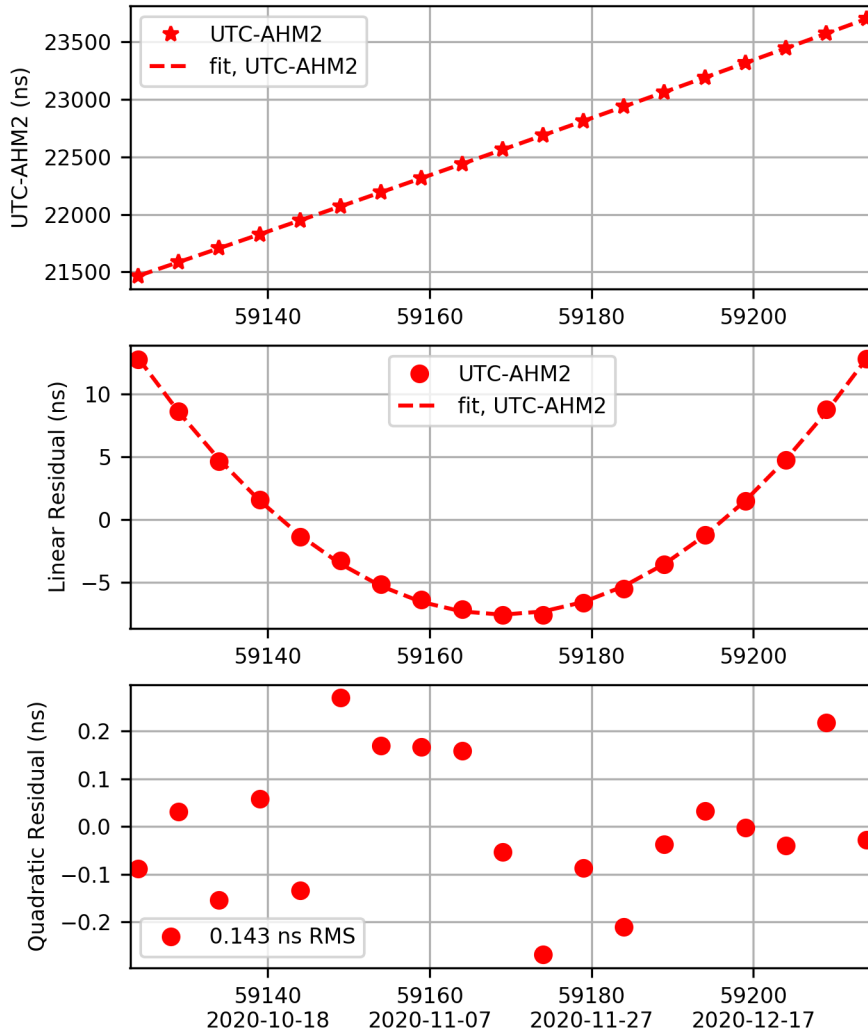


AHM1 Rate and Drift

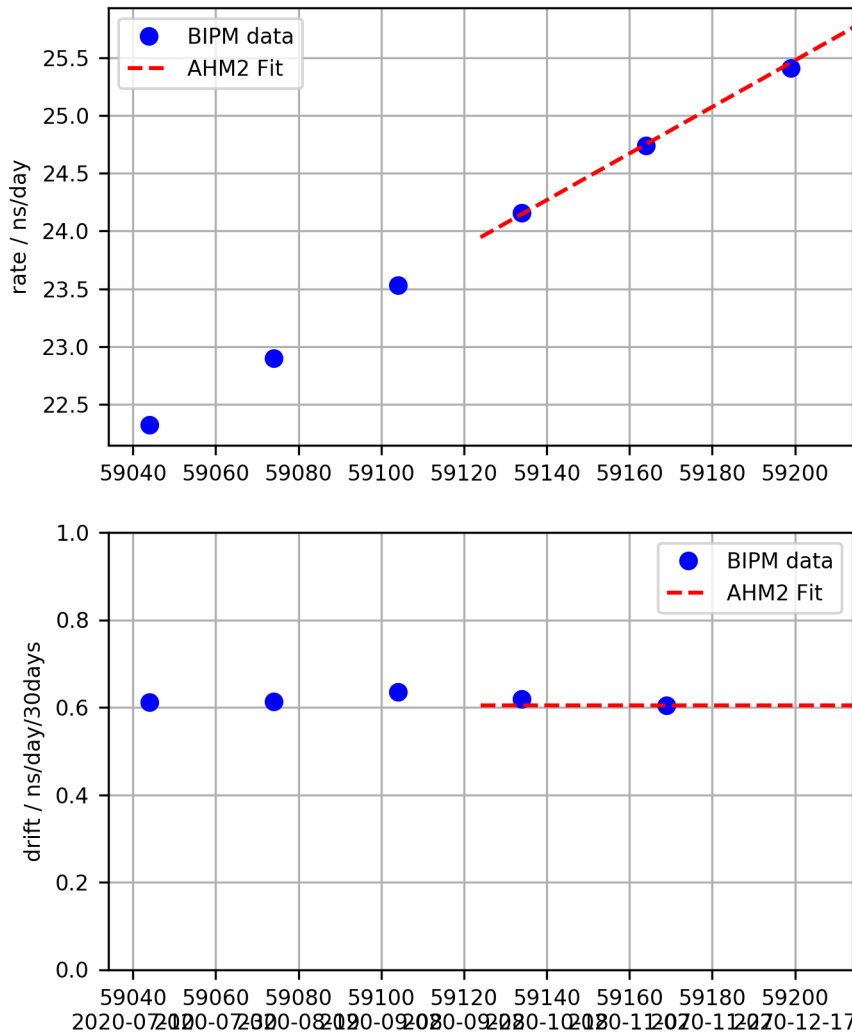


UTC - AHM2 Fit

UTC-AHM2 (2021-01-11 / 59225)
 $x \text{ (ns)} = 23702.728 + 25.760 *d + 0.0101 *d*d$
 $y = -2.98143e-13 + -2.33256e-16 *d$
 $d = (\text{mjd}-\text{mjd0}) \text{ with mjd0} = 59214$

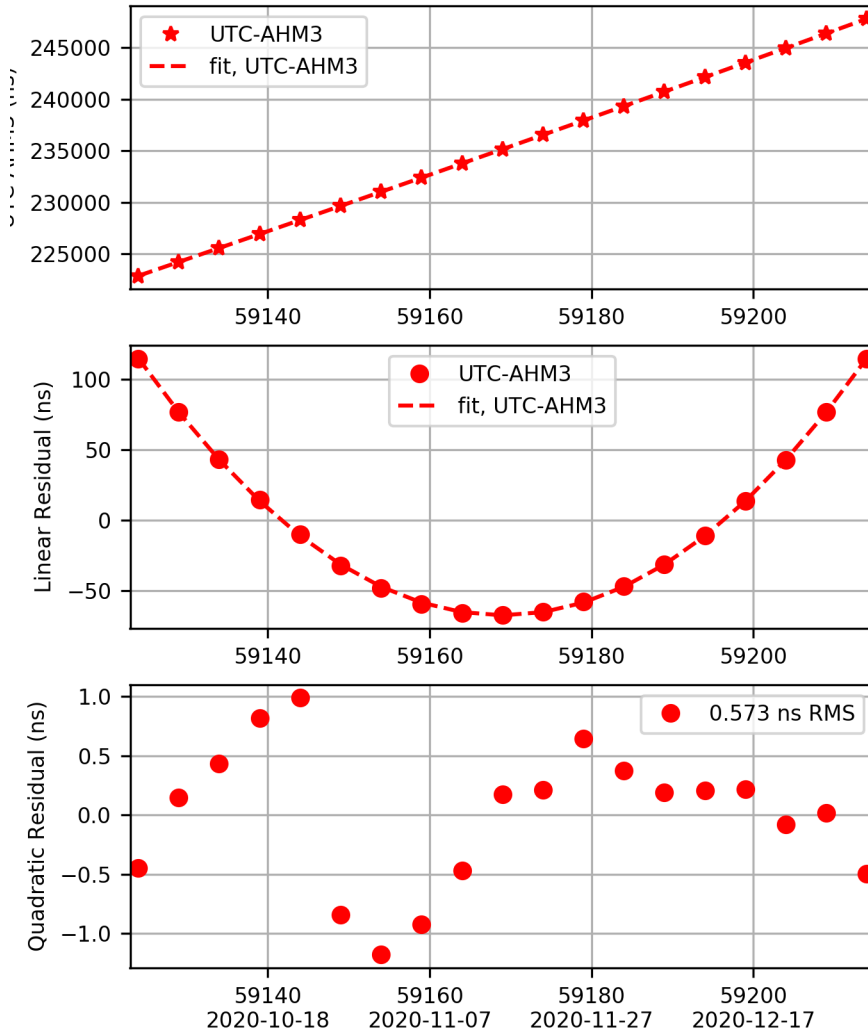


AHM2 Rate and Drift

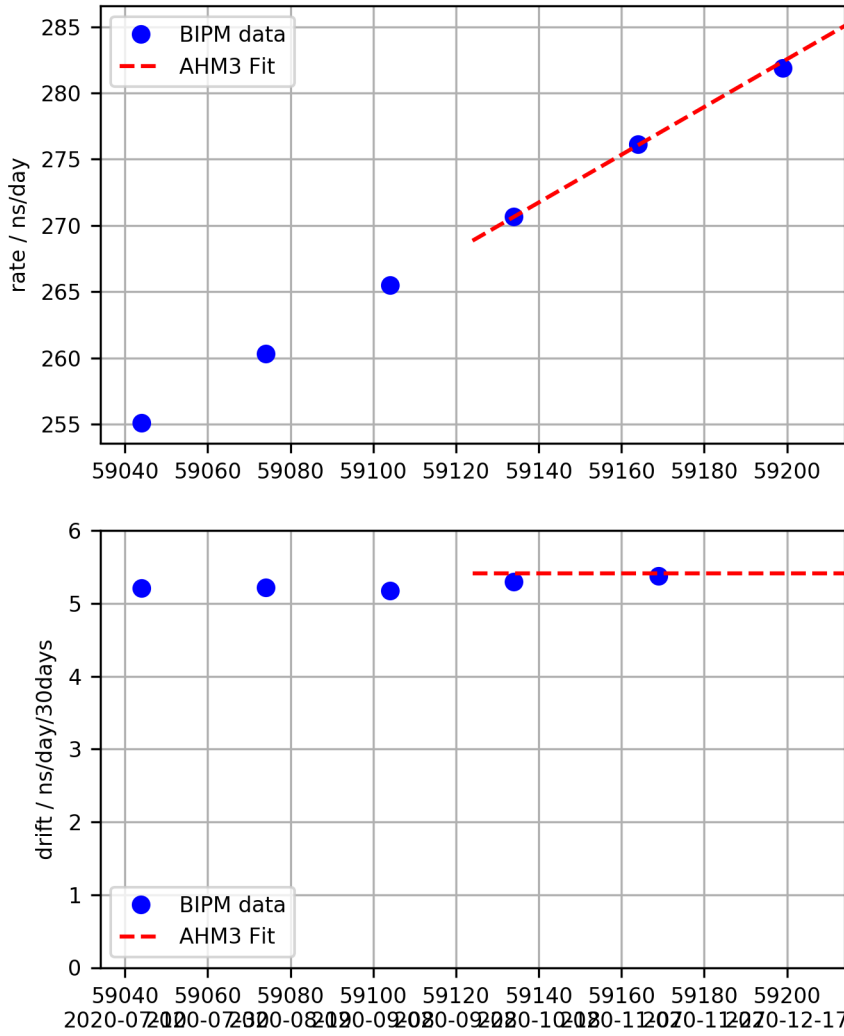


UTC - AHM3 Fit

UTC-AHM3 (2021-01-11 / 59225)
 $x \text{ (ns)} = 247807.093 + 285.072 *d + 0.0901 *d*d$
 $y = -3.29945e-12 + -2.08612e-15 *d$
 $d = (\text{mjd}-\text{mjd0}) \text{ with mjd0} = 59214$

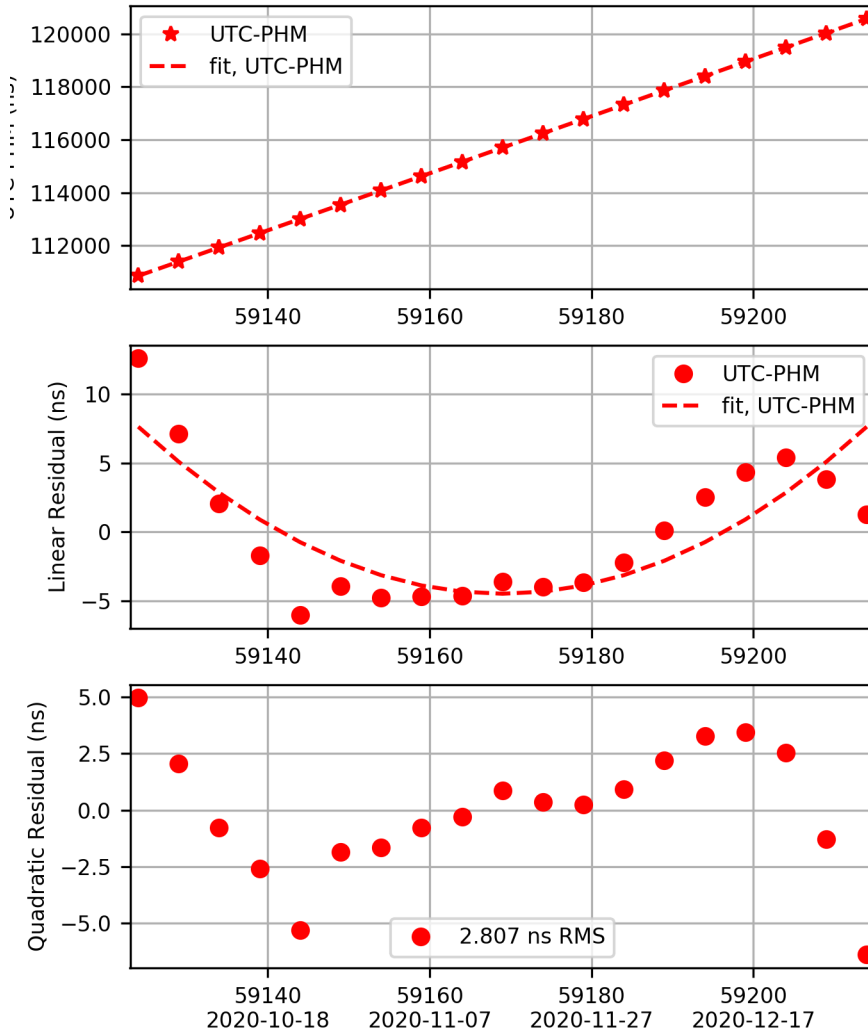


AHM3 Rate and Drift

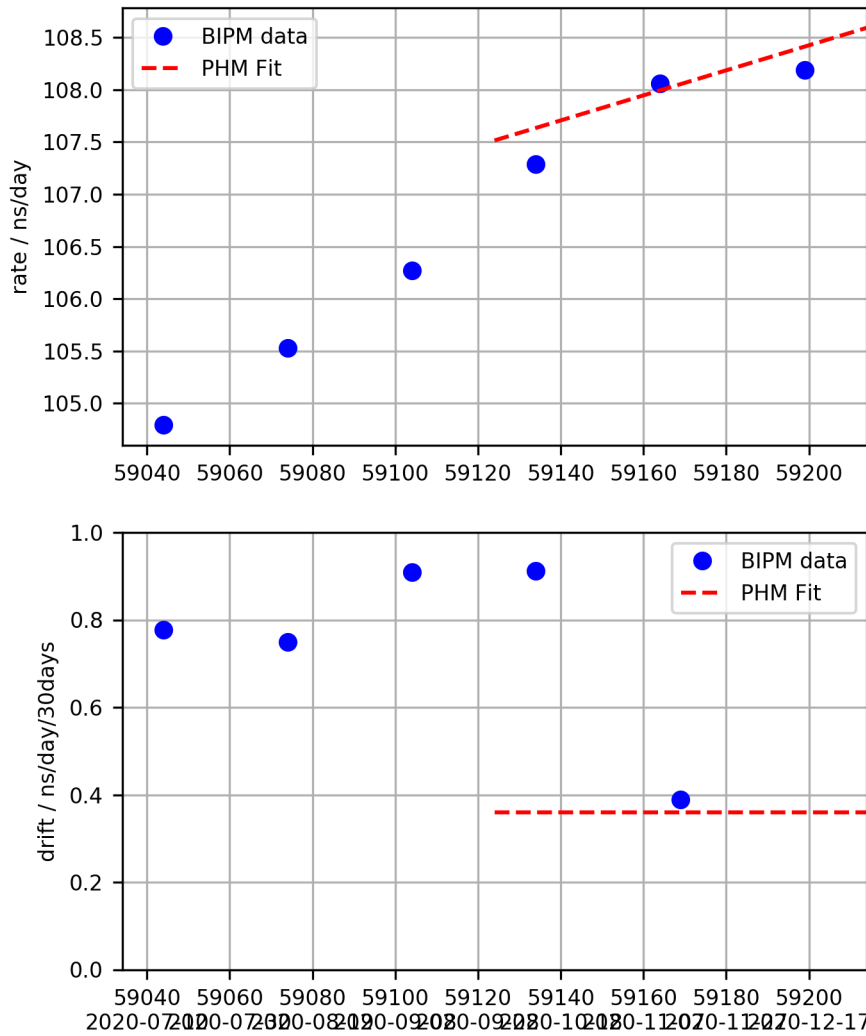


UTC - PHM Fit

UTC-PHM (2021-01-11 / 59225)
 $x \text{ (ns)} = 120577.493 + 108.594 *d + 0.0060 *d*d$
 $y = -1.25687e-12 + -1.38725e-16 *d$
 $d = (\text{mjd}-\text{mjd0}) \text{ with } \text{mjd0} = 59214$

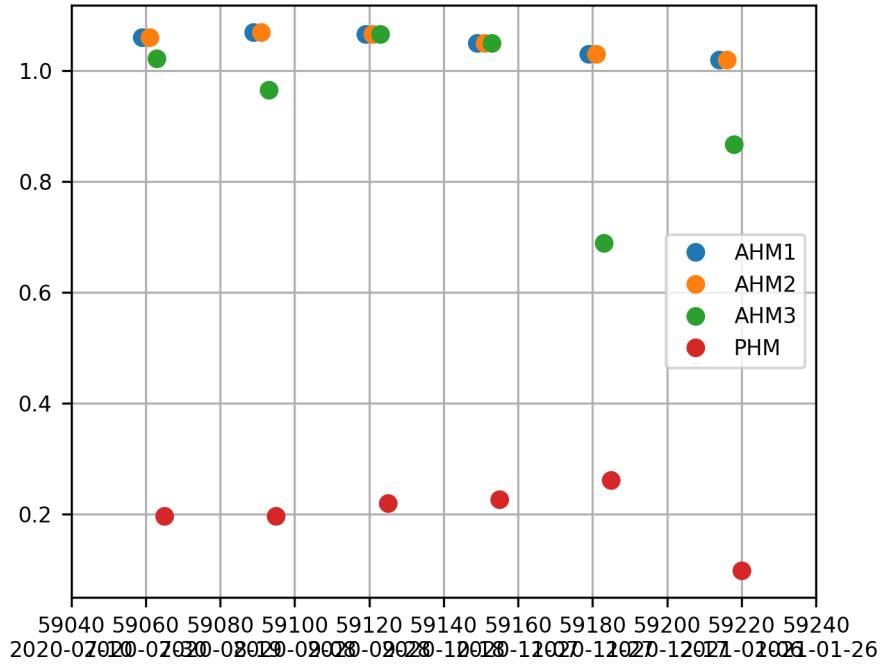


PHM Rate and Drift

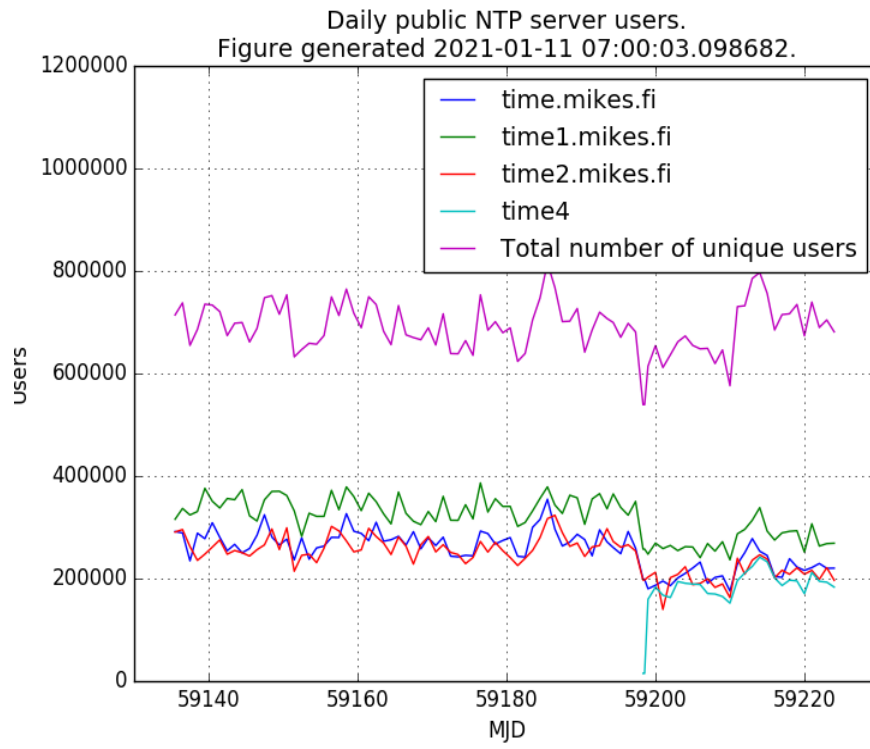


Clock Weights

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

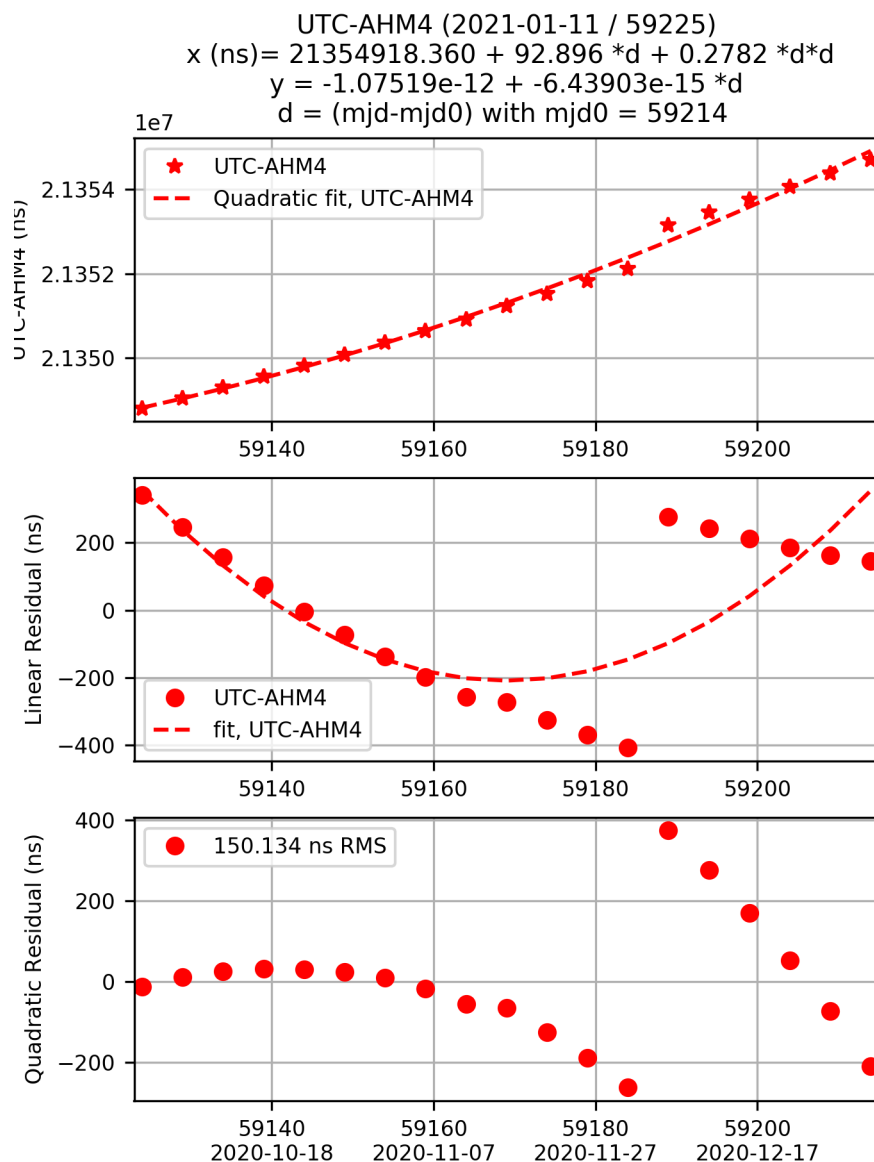


NTP Usage Statistics



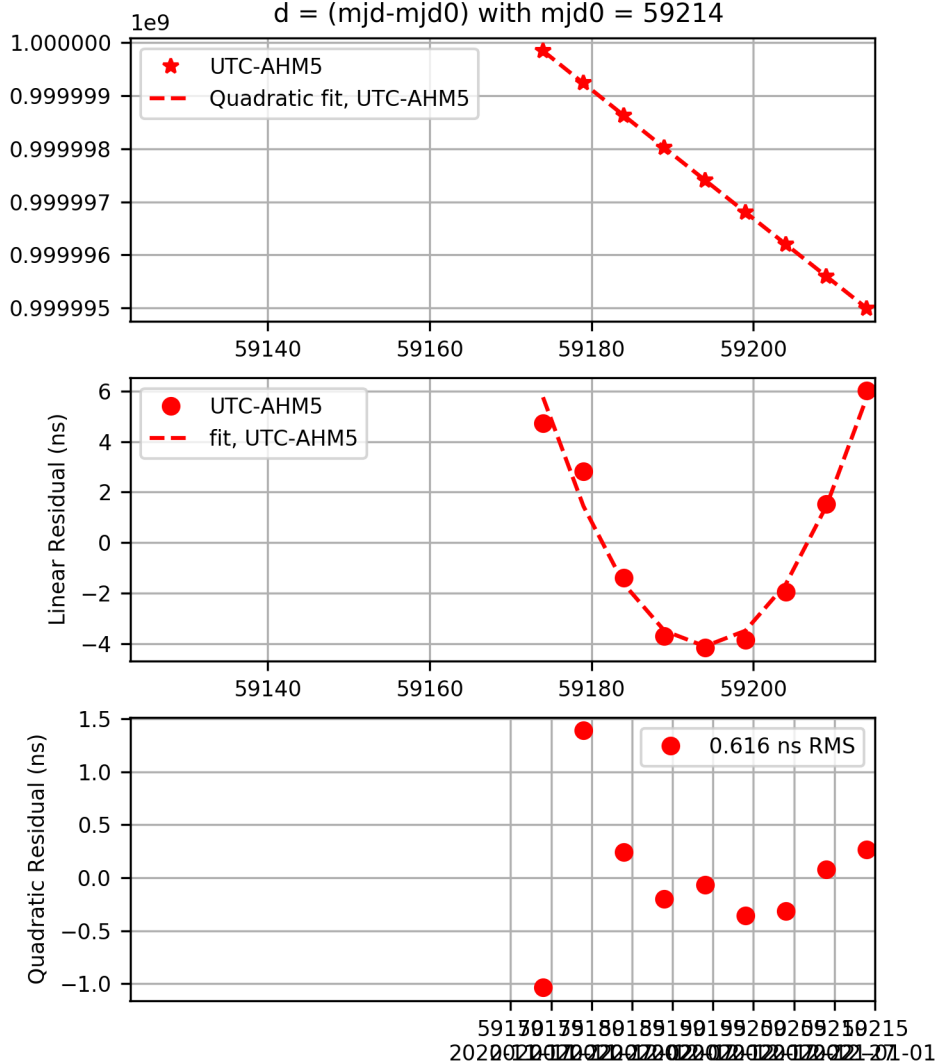
Remote Clocks

Remote Clock: AHM4



Remote Clock: AHM5

UTC-AHM5 (2021-01-11 / 59225)
 $x \text{ (ns)} = 999994996.594 + -120.195 * d + 0.0247 * d * d$
 $y = 1.39114e-12 + -5.70886e-16 * d$
 $d = (\text{mjd} - \text{mjd0})$ with $\text{mjd0} = 59214$

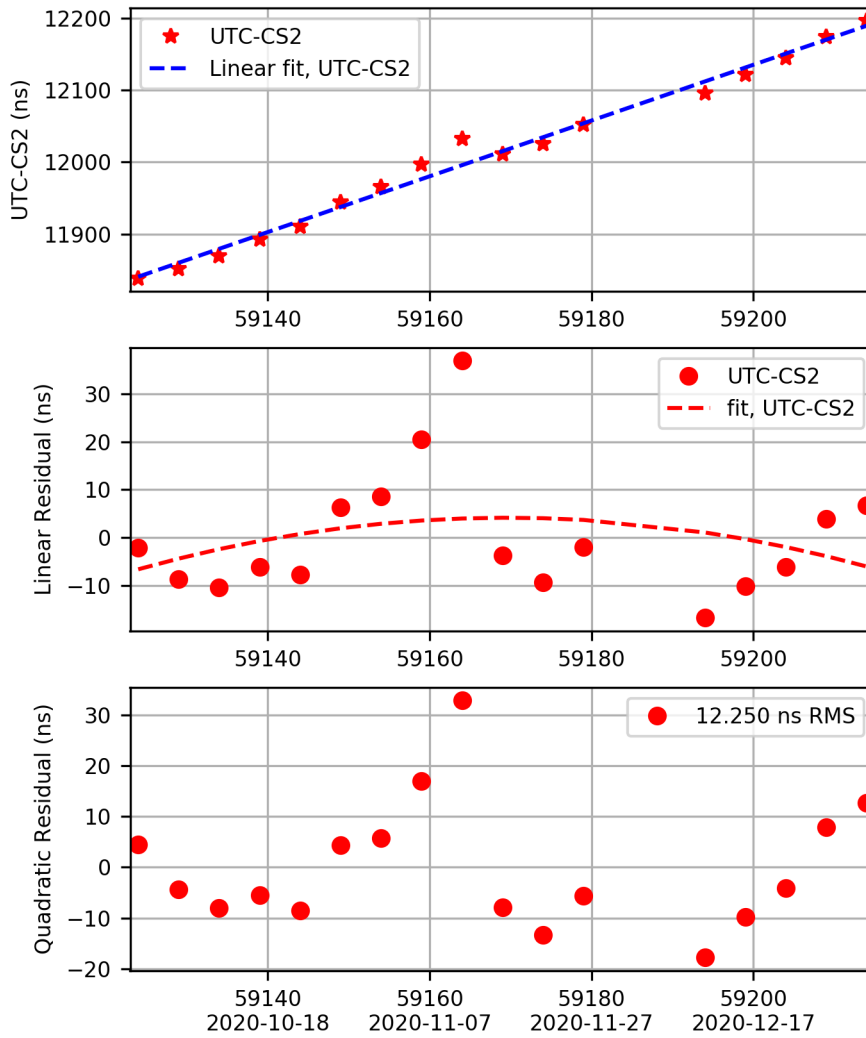


Remote Clock: CS2

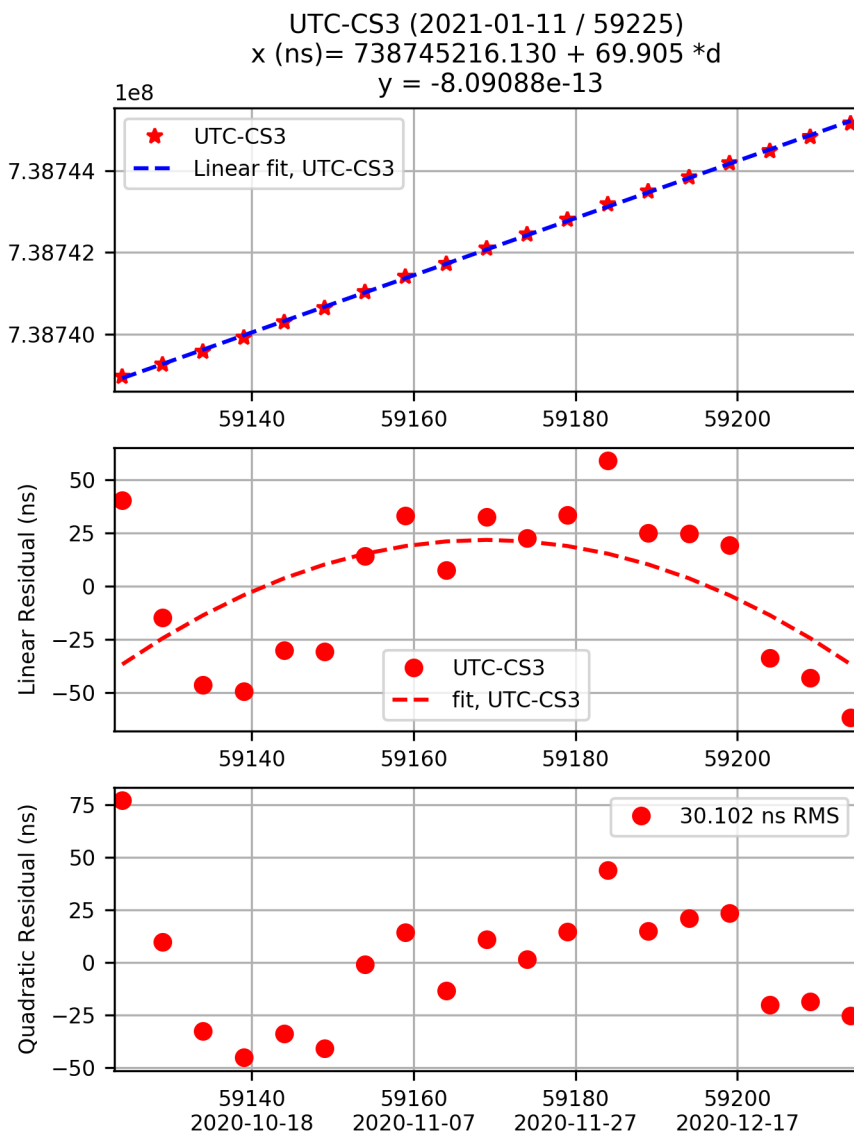
UTC-CS2 (2021-01-11 / 59225)

$$x \text{ (ns)} = 12189.462 + 3.874 * d$$

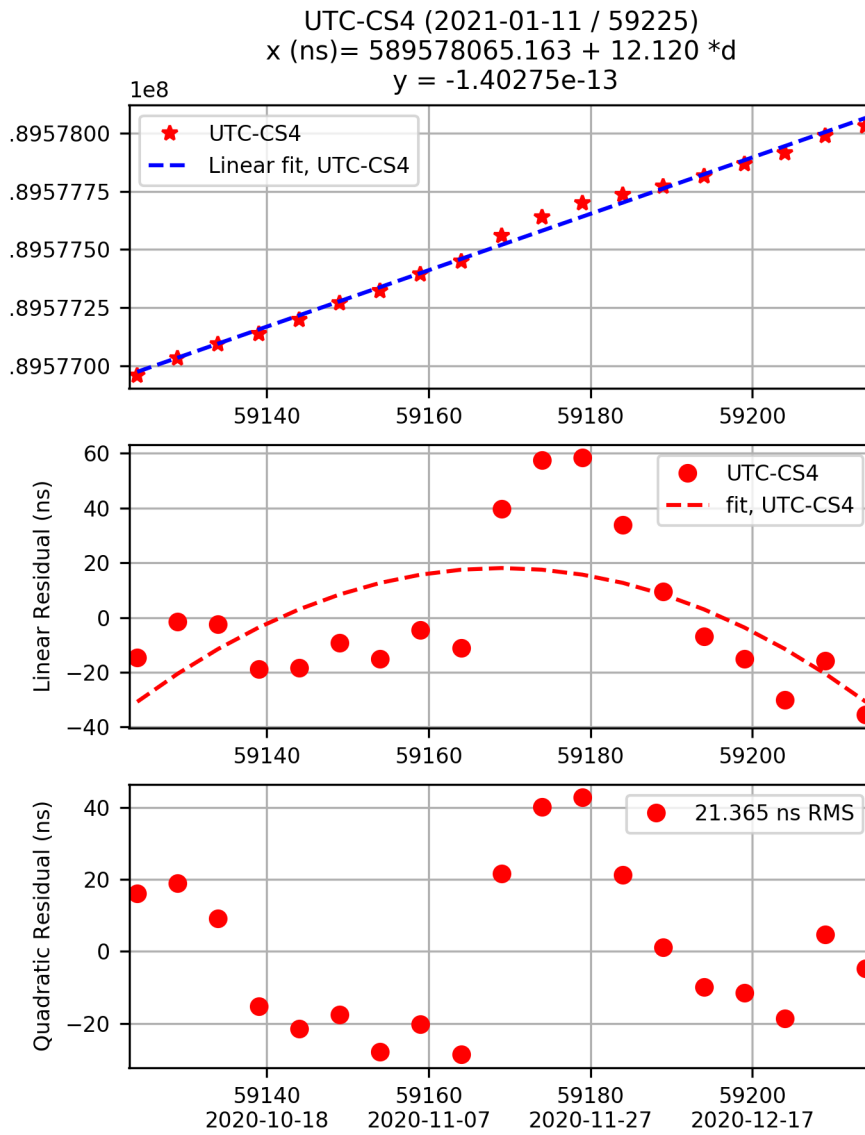
$$y = -4.48405e-14$$



Remote Clock: CS3



Remote Clock: CS4



End of Bulletin.