

UTC(MIKE) Atomic Bulletin 2020-04

VTT MIKES Metrology monthly Time & Frequency bulletin.

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

Date of publication: 2020-04-14 (58953)

Circular-T issues used for analysis: [385](#), [386](#), [387](#),

First day of analysis interval: 2020-01-01 (58849)

Last day of analysis interval: 2020-03-31 (58939)

ClockData for analysis: [CDMI 20.01](#), [CDMI 20.02](#), [CDMI 20.03](#),

Notes

58707 (2019-08-12) AHM2 autotuner failure, change MC to AHM1

58739 OTA-KAJA link asymmetry change (CS2)

58760 (2019-10-04) AHM4 frequency adjustment. Approximate model is $y = -4.0497e-14 - 1.18953e-15*(mjd-58766)$

58891 (2020-02-12) Apply steering correction to UTC(MIKE). +5ns over 2 months, $y_{steer} = -5ns/60d = -9.6e-16$

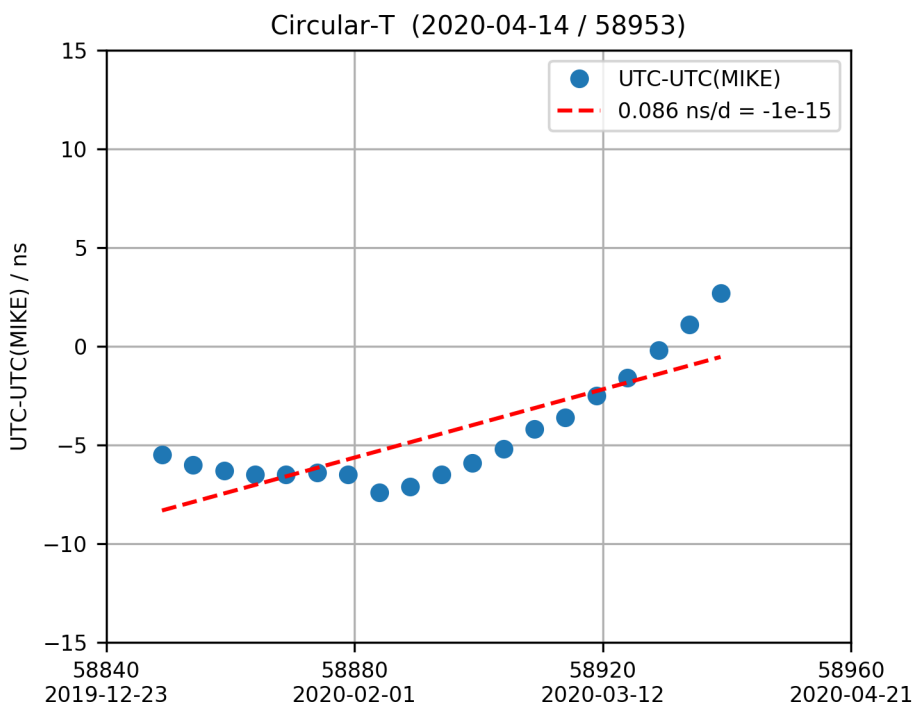
58919 (2020-03-11) AB2020-03 comments: New 1PPS measurement system installed

2020-03-09. KAJA(CS2) WR-node had power-cut ca 2020-02-27.

58919 (2020-03-11) AB2020-03 comments: Following MI04/MI05 calibration with PTBM in Dec19-Jan20 Circular-T uncertainty now record low 2.7 ns. MI04 is used as main receiver for now.

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

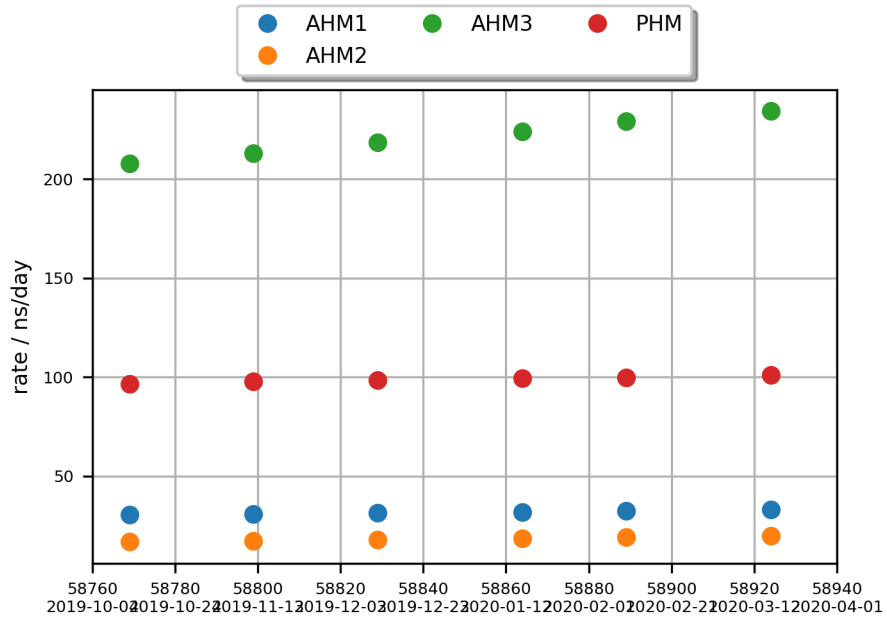
UTC-UTC(MIKE) as reported in Circular-T



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.

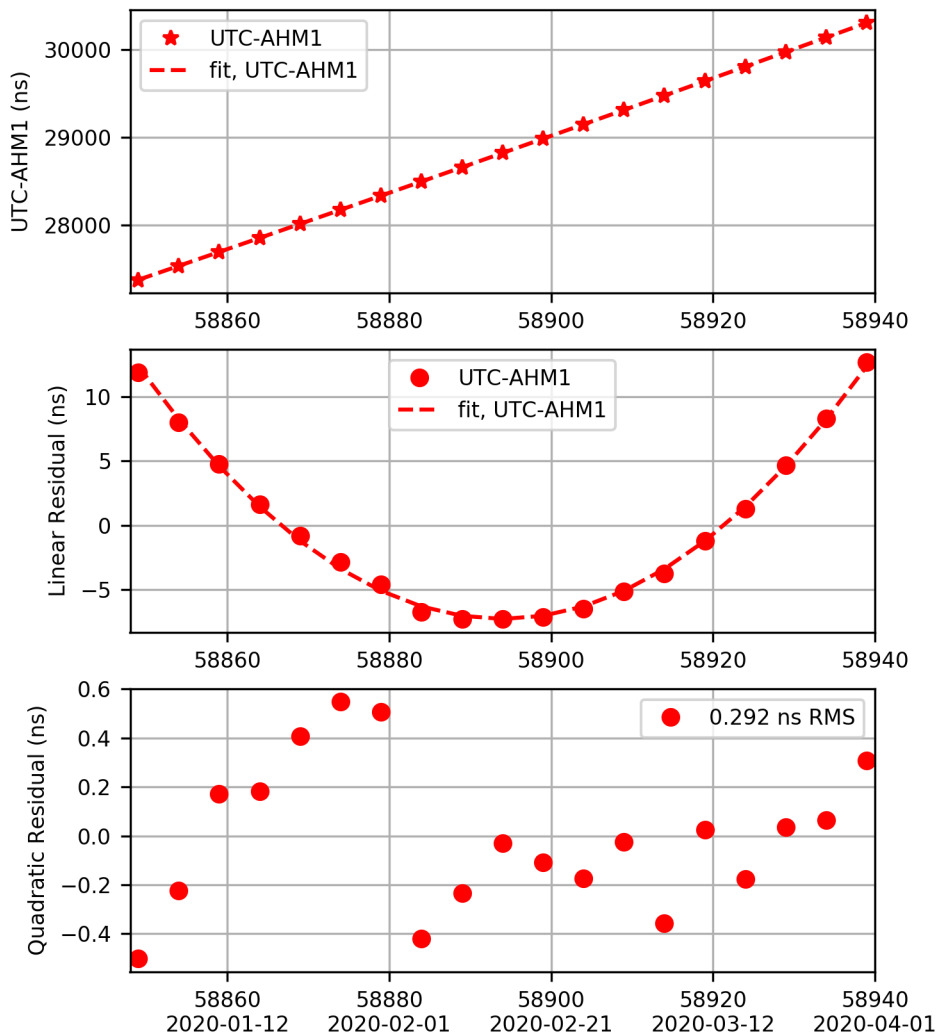
Clock Rates - Summary

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

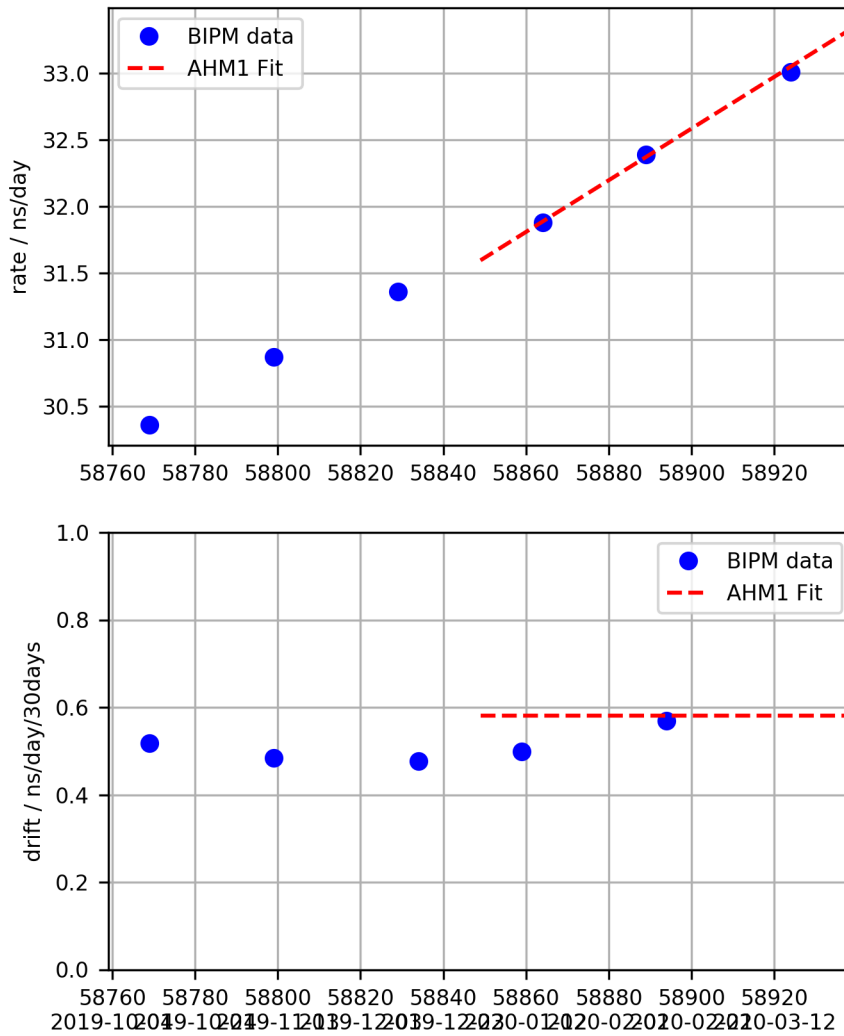


UTC - AHM1 Fit

UTC-AHM1 (2020-04-14 / 58953)
 $x \text{ (ns)} = 30302.391 + 33.340 *d + 0.0097 *d*d$
 $y = -3.85874e-13 + -2.24253e-16 *d$
 $d = (\text{mjd}-\text{mjd0}) \text{ with mjd0} = 58939$

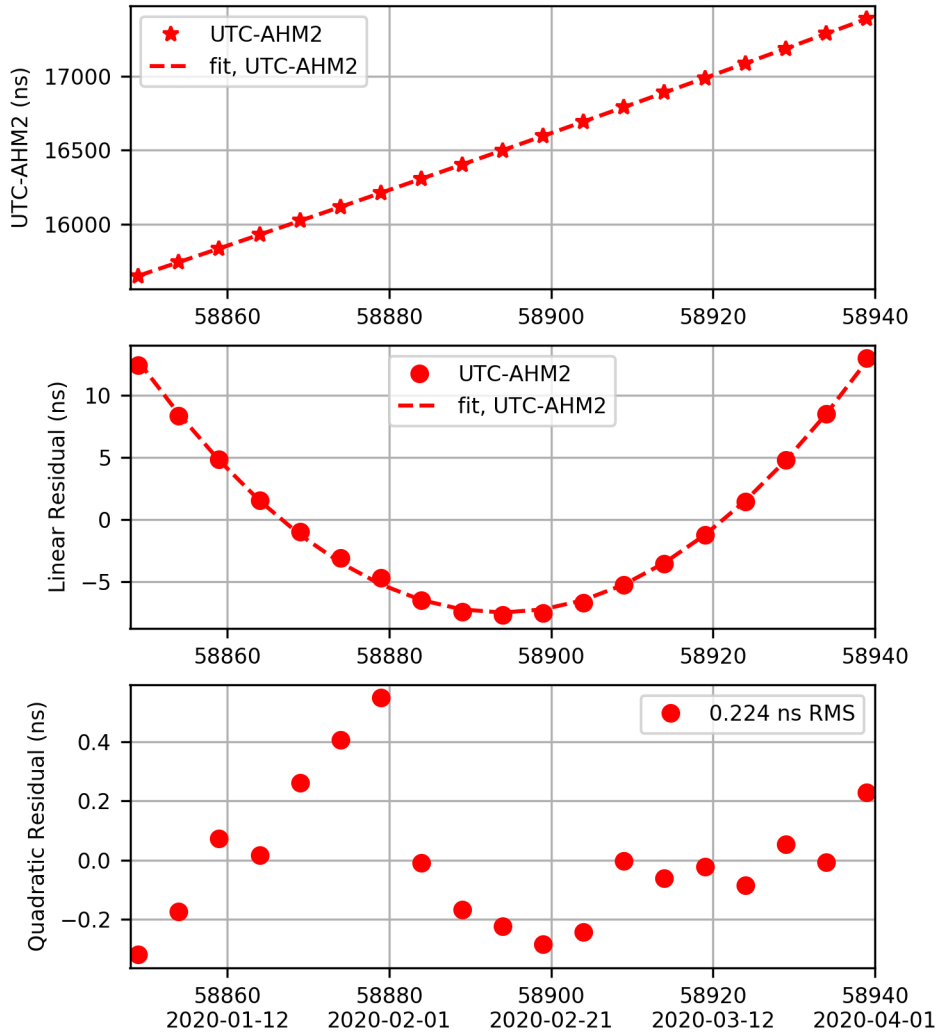


AHM1 Rate and Drift

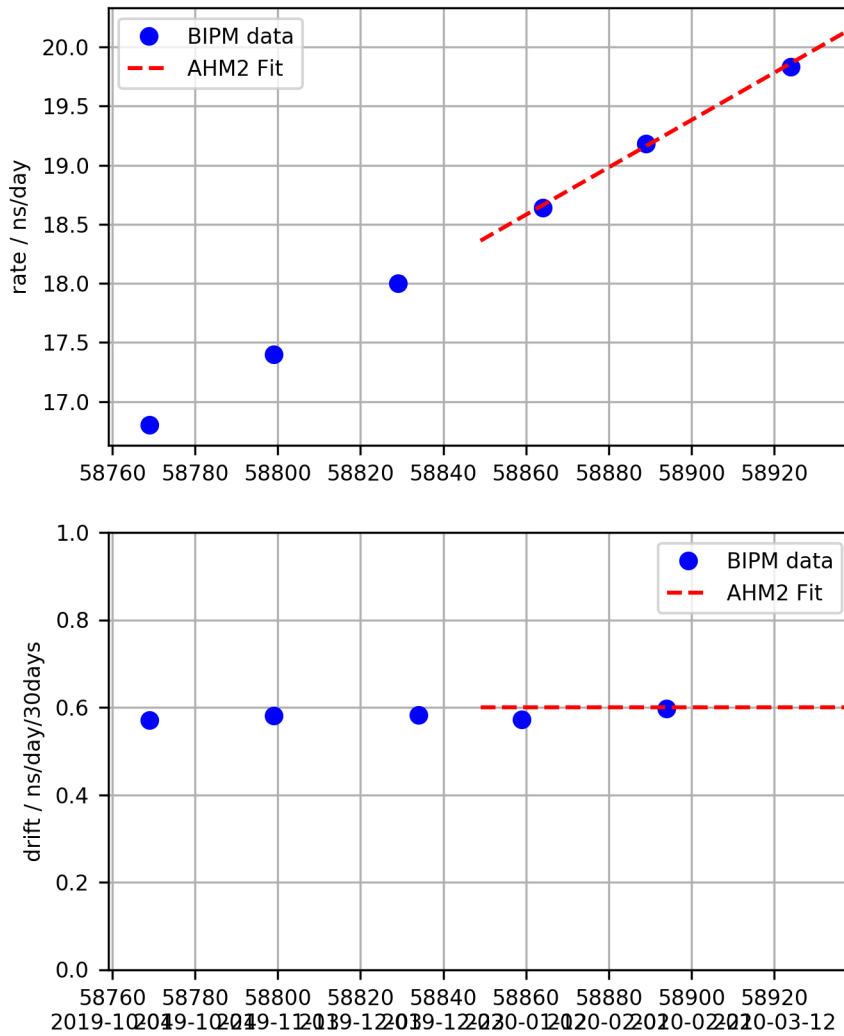


UTC - AHM2 Fit

UTC-AHM2 (2020-04-14 / 58953)
 $x \text{ (ns)} = 17386.971 + 20.163 *d + 0.0100 *d*d$
 $y = -2.33364e-13 + -2.3172e-16 *d$
 $d = (\text{mjd}-\text{mjd0})$ with $\text{mjd0} = 58939$

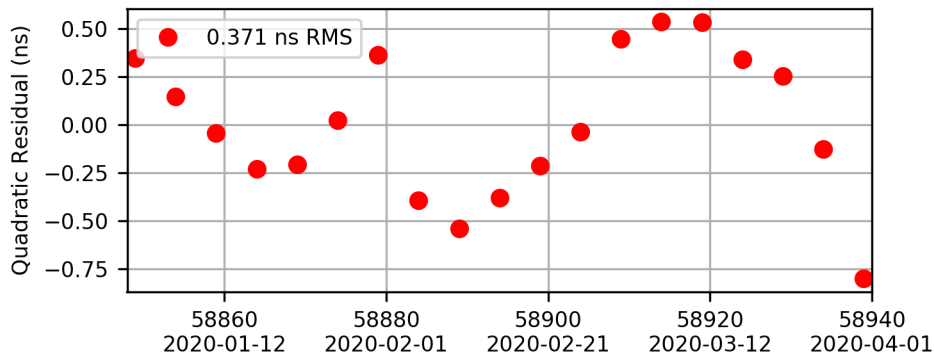
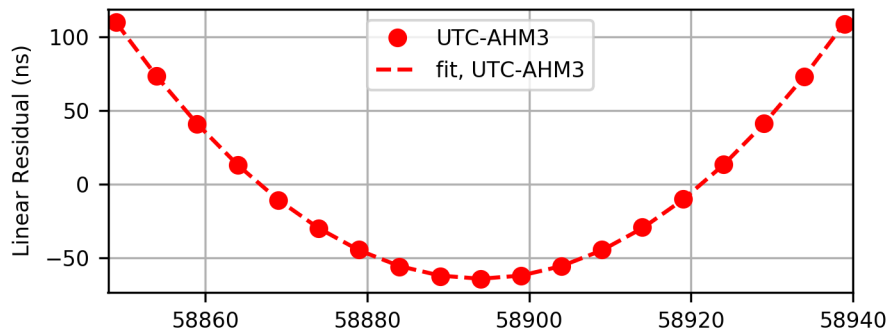
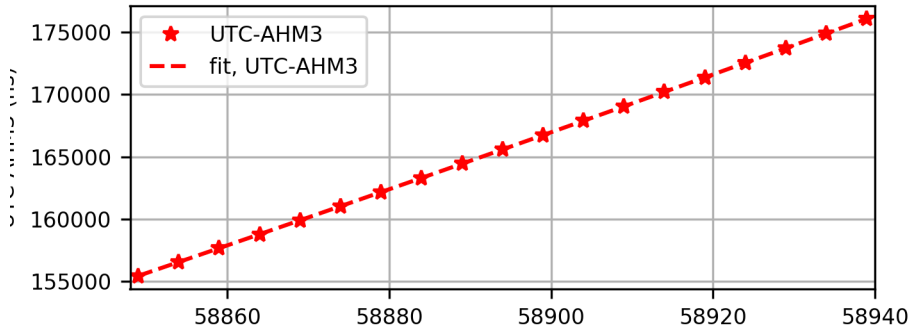


AHM2 Rate and Drift

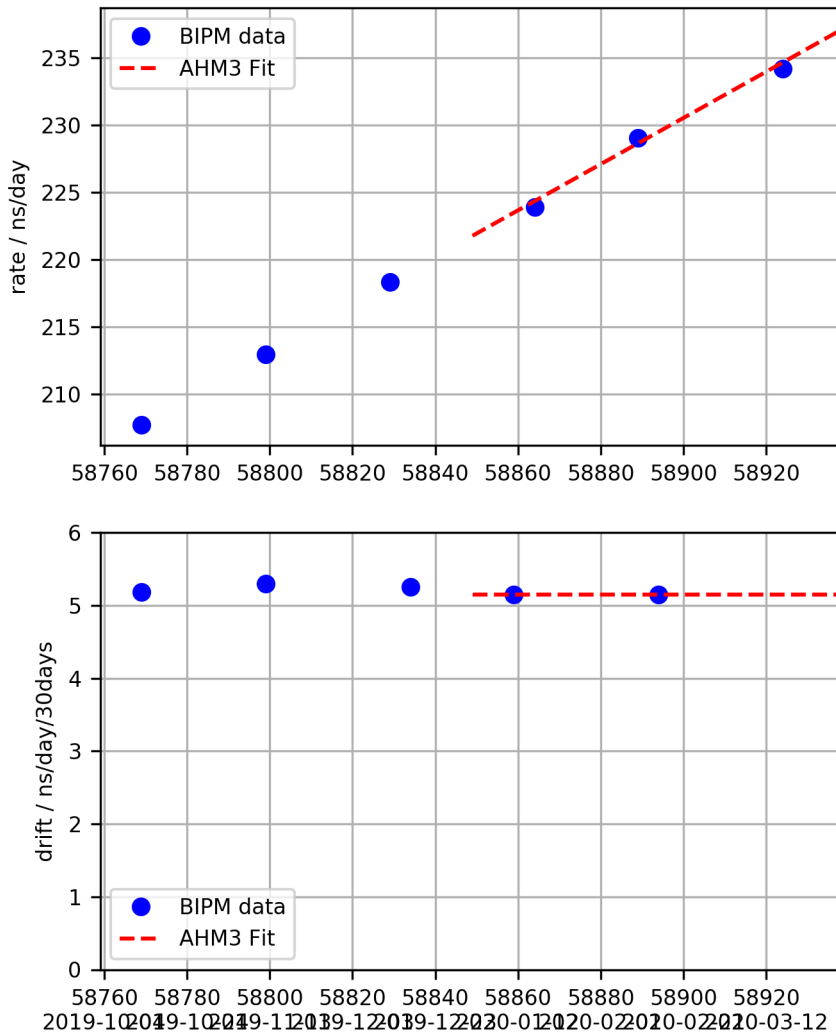


UTC - AHM3 Fit

UTC-AHM3 (2020-04-14 / 58953)
 $x \text{ (ns)} = 176087.002 + 237.224 *d + 0.0859 *d*d$
 $y = -2.74565e-12 + -1.98728e-15 *d$
 $d = (\text{mjd}-\text{mjd0})$ with $\text{mjd0} = 58939$

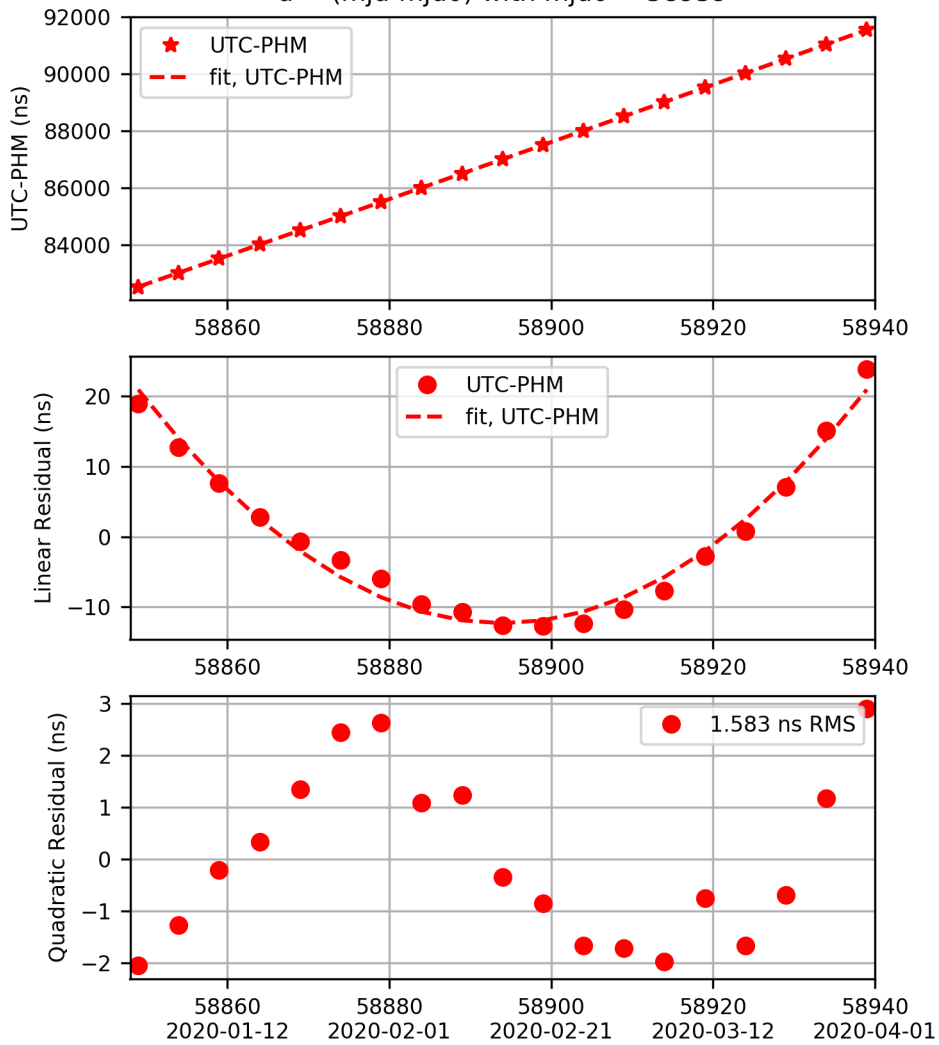


AHM3 Rate and Drift

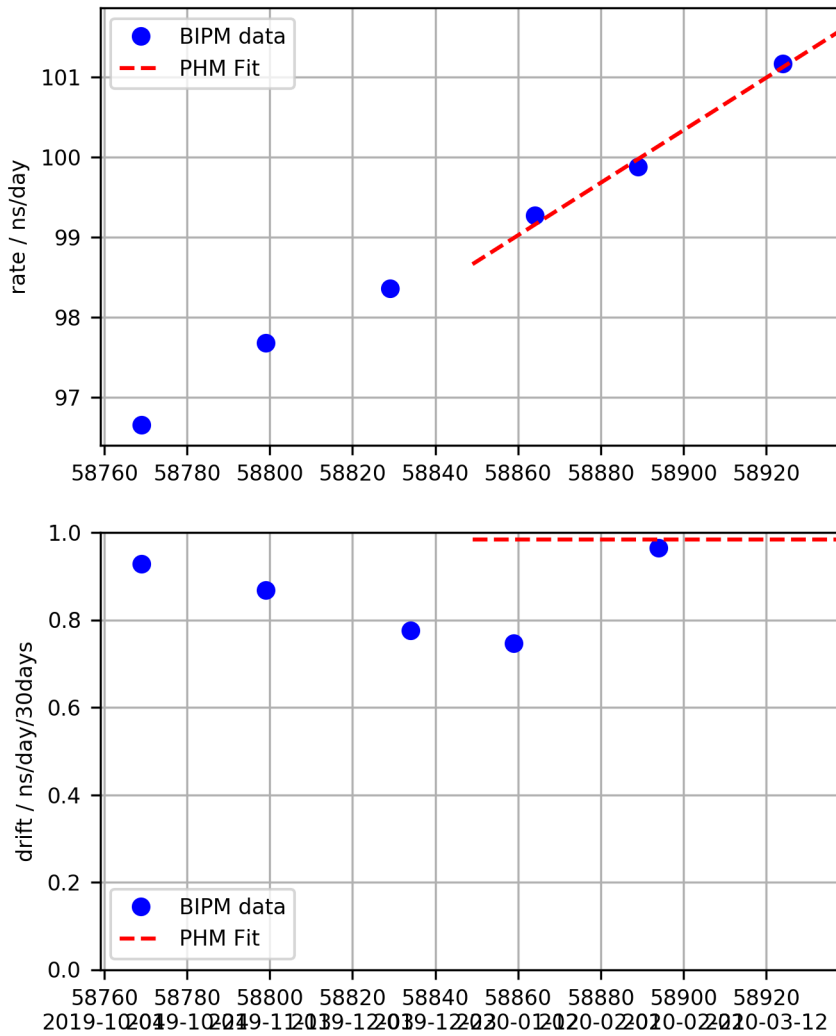


UTC - PHM Fit

UTC-PHM (2020-04-14 / 58953)
 $x \text{ (ns)} = 91539.994 + 101.615 *d + 0.0164 *d*d$
 $y = -1.1761e-12 + -3.79837e-16 *d$
 $d = (\text{mjd}-\text{mjd0}) \text{ with mjd0} = 58939$

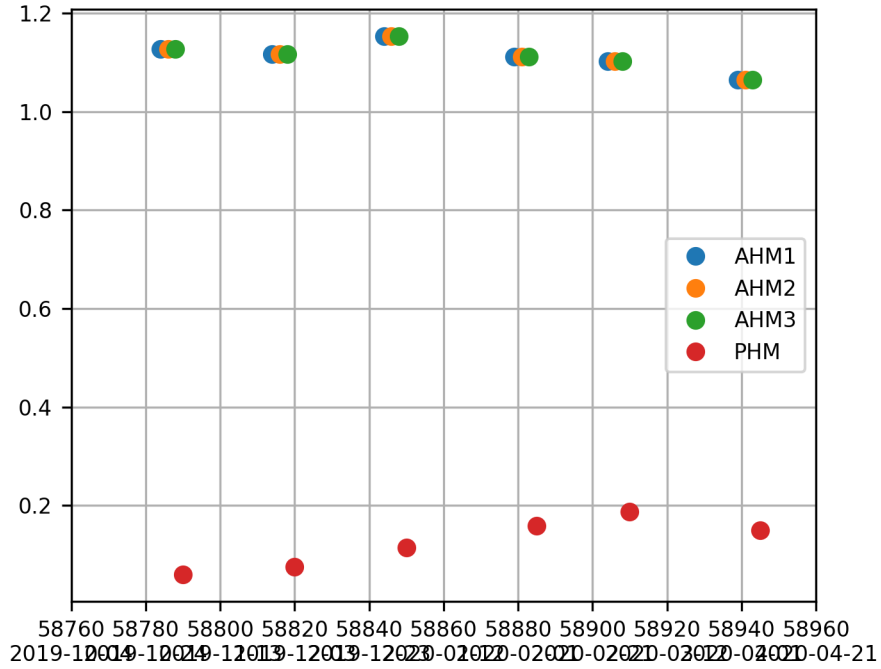


PHM Rate and Drift



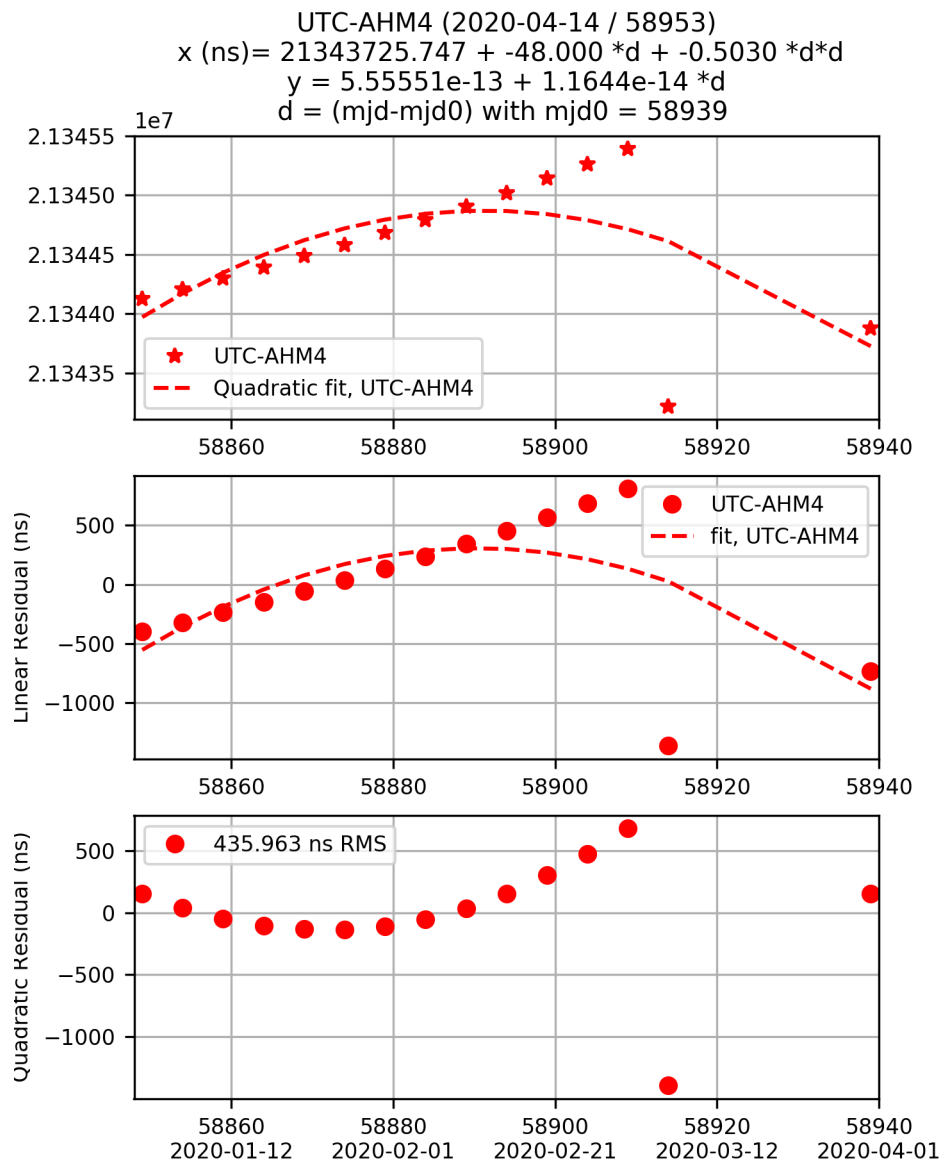
Clock Weights

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



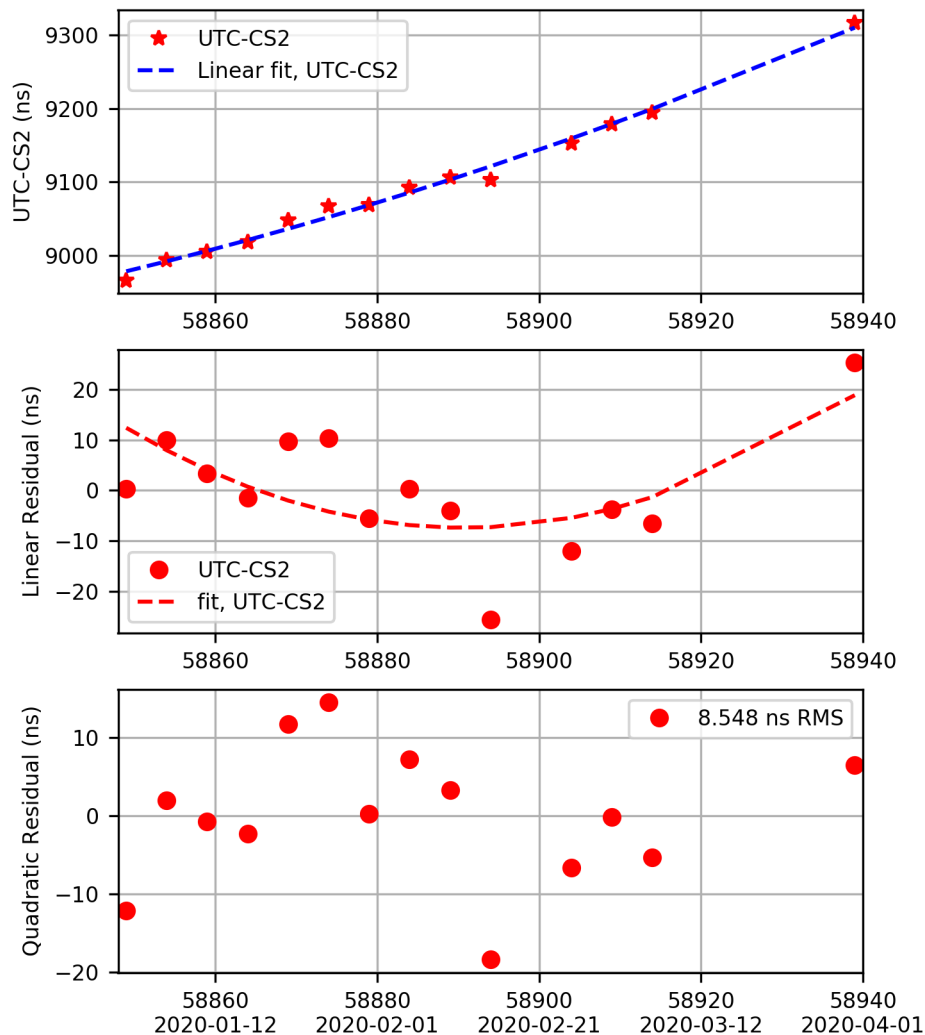
Remote Clocks

Remote Clock: AHM4

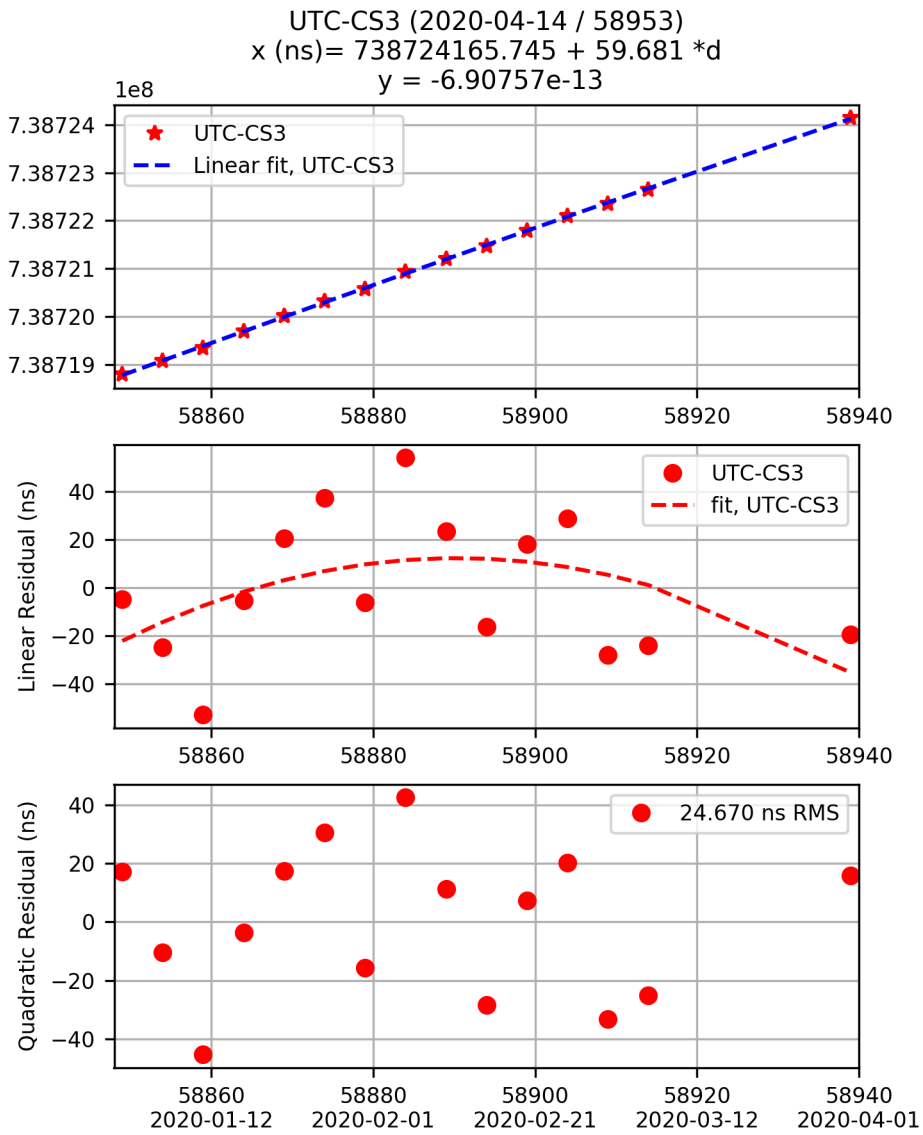


Remote Clock: CS2

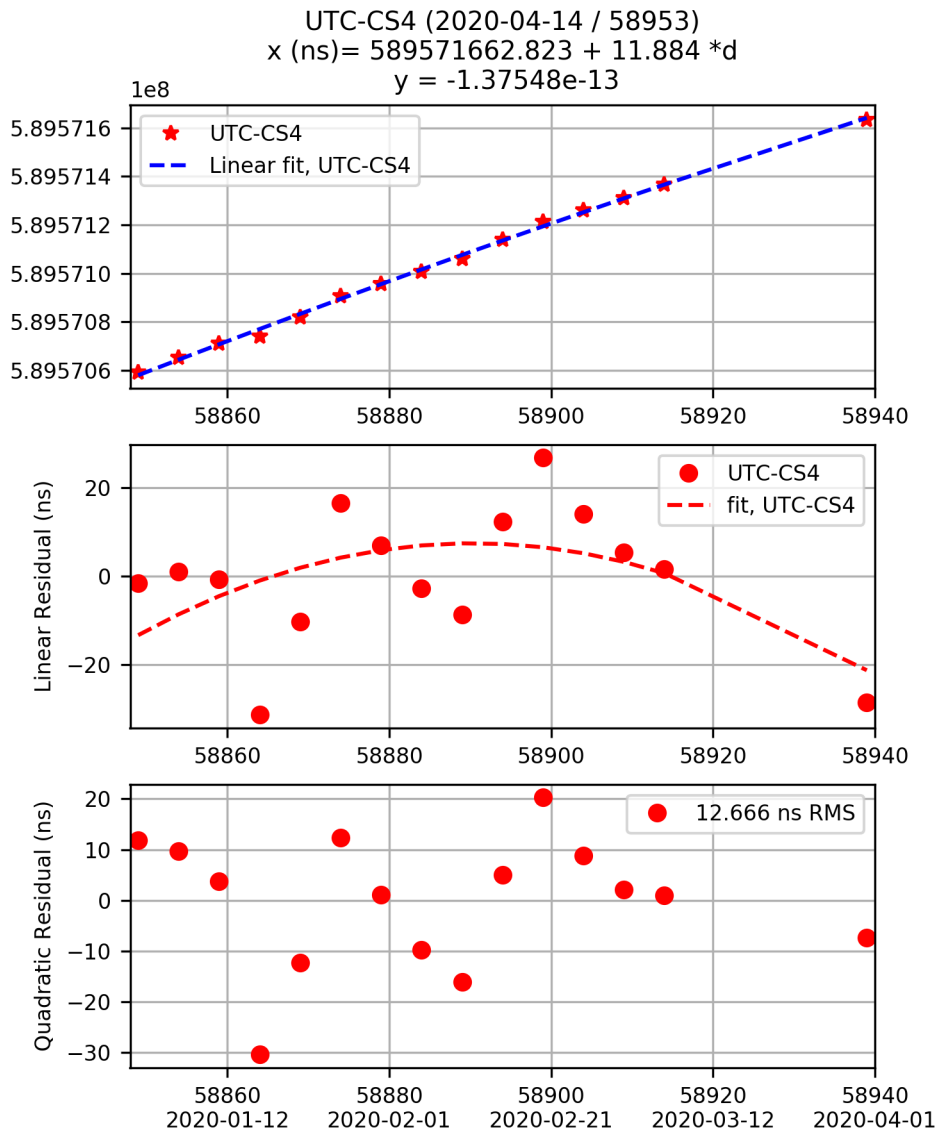
UTC-CS2 (2020-04-14 / 58953)
 $x \text{ (ns)} = 9291.381 + 3.614 * d$
 $y = -4.1832e-14$



Remote Clock: CS3



Remote Clock: CS4



End of Bulletin.