

UTC(MIKE) Atomic Bulletin 2019-10

VTT MIKES Metrology monthly Time & Frequency bulletin.

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

Date of publication: 2019-10-11 (58767)

Circular-T issues used for analysis: [379](#), [380](#), [381](#),

First day of analysis interval: 2019-07-05 (58669)

Last day of analysis interval: 2019-09-28 (58754)

ClockData for analysis: [CDMI 19.07](#), [CDMI 19.08](#), [CDMI 19.09](#),

Notes

58305 AHM3 rebooted. Phase step +20.2ns.

58450 CS1 Hotwire supply regulation failure

58494 Change master-clock to AHM2

58617 (2019-05-14) Power-outage and temperature fluctuations in MIKES building.

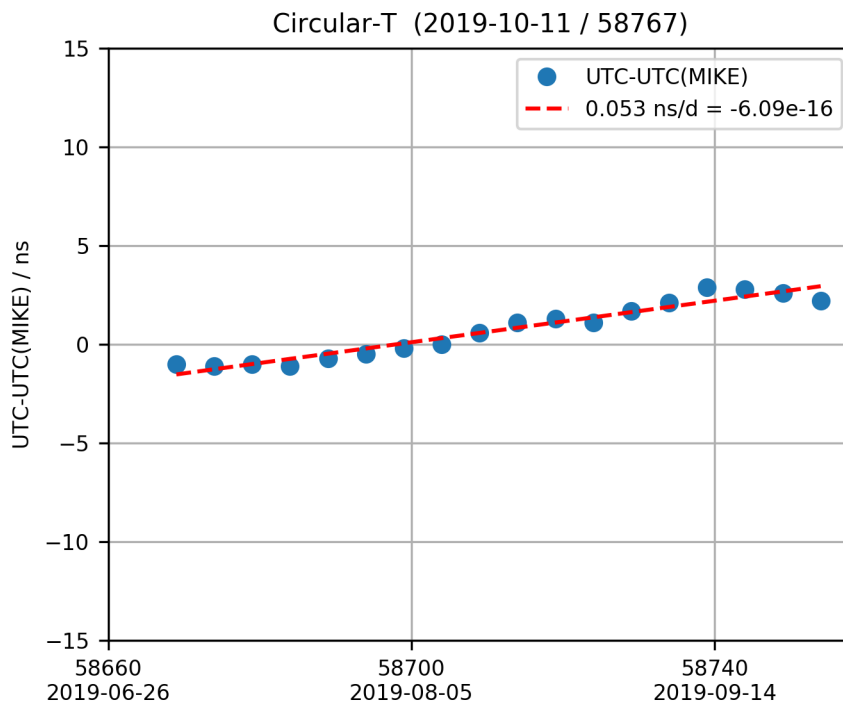
58623, 58624 M3 clock data missing

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

58739 OTA-KAJA link asymmetry change (CS2)

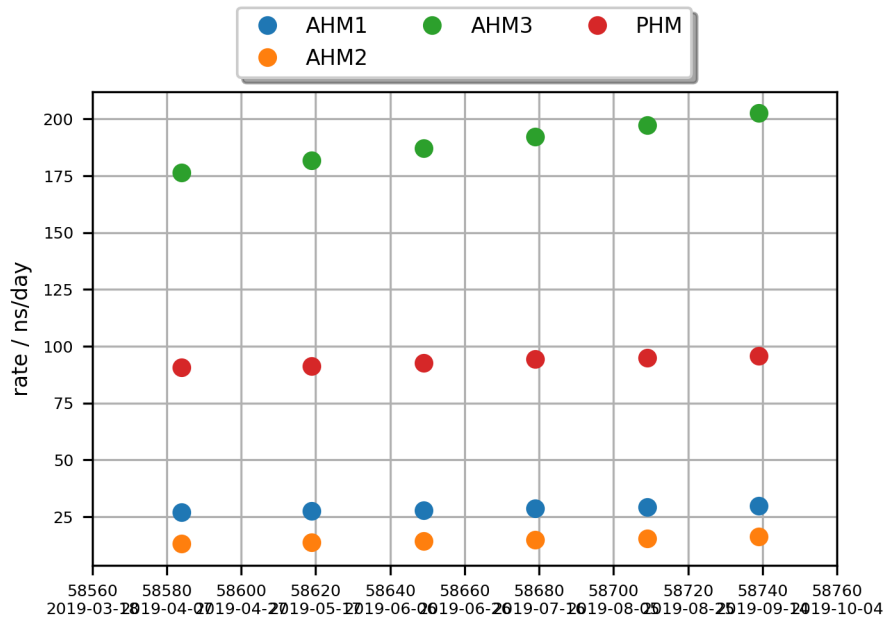
58760 (2019-10-04) AHM4 frequency adjustment. Approximate model is $y = -4.0497e-14 - 1.18953e-15*(mjd-58766)$

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



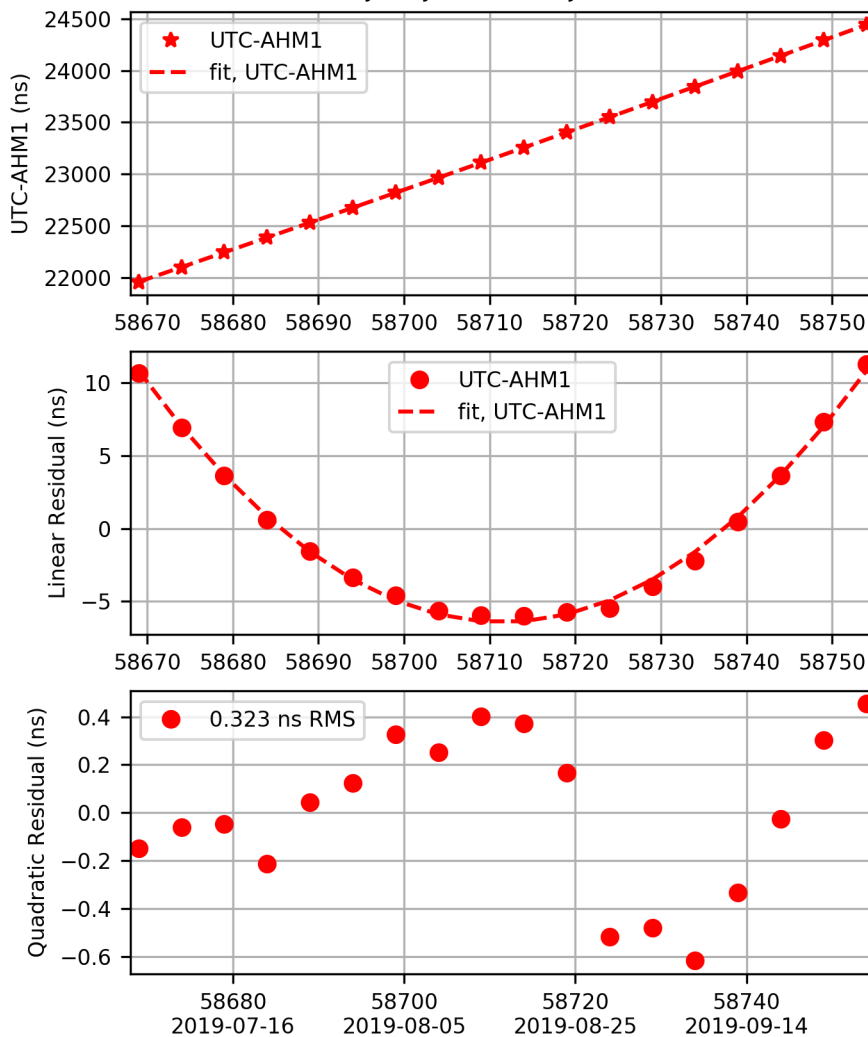
UTC-UTC(MIKE) is available on 5 day intervals on MJD dates ending with 4 or 9. Values are published monthly by the BIPM in Circular-T.

Clock Rates - Summary

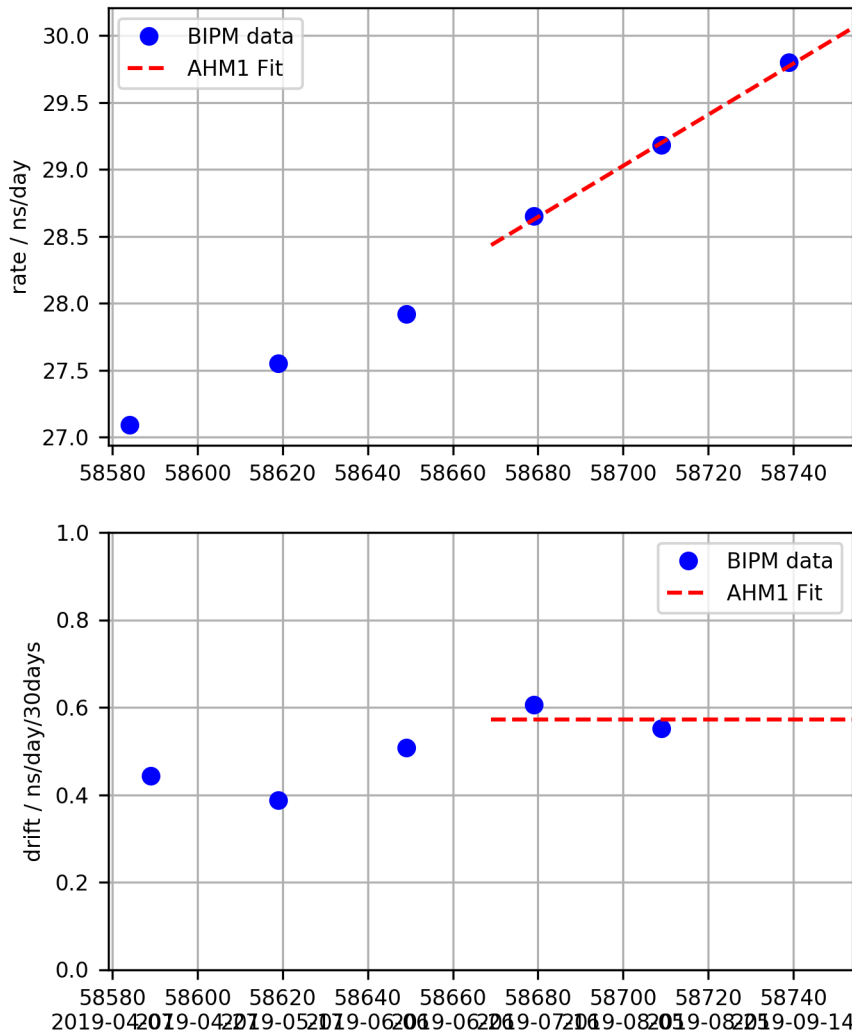


UTC - AHM1 Fit

UTC-AHM1 (2019-10-11 / 58767)
 $x \text{ (ns)} = 24443.445 + 30.057 *d + 0.0095 *d*d$
 $y = -3.47885e-13 + -2.20988e-16 *d$
 $d = (\text{mjd}-\text{mjd0}) \text{ with mjd0} = 58754$

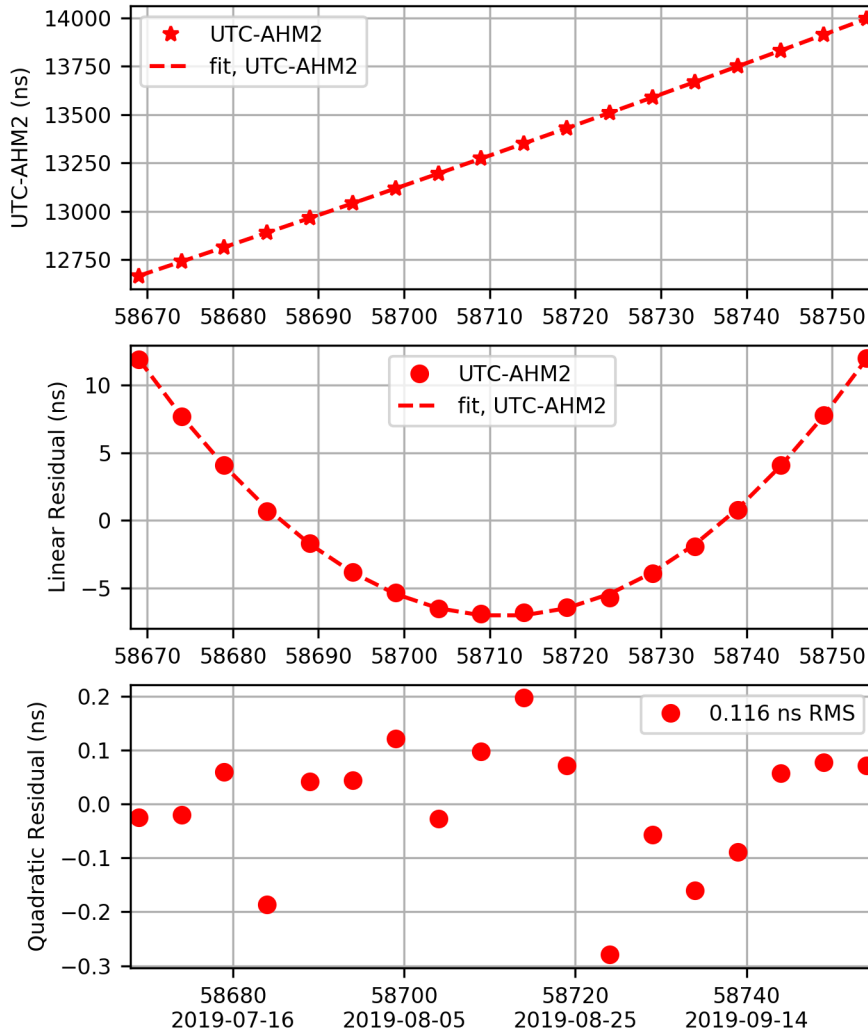


AHM1 Rate and Drift

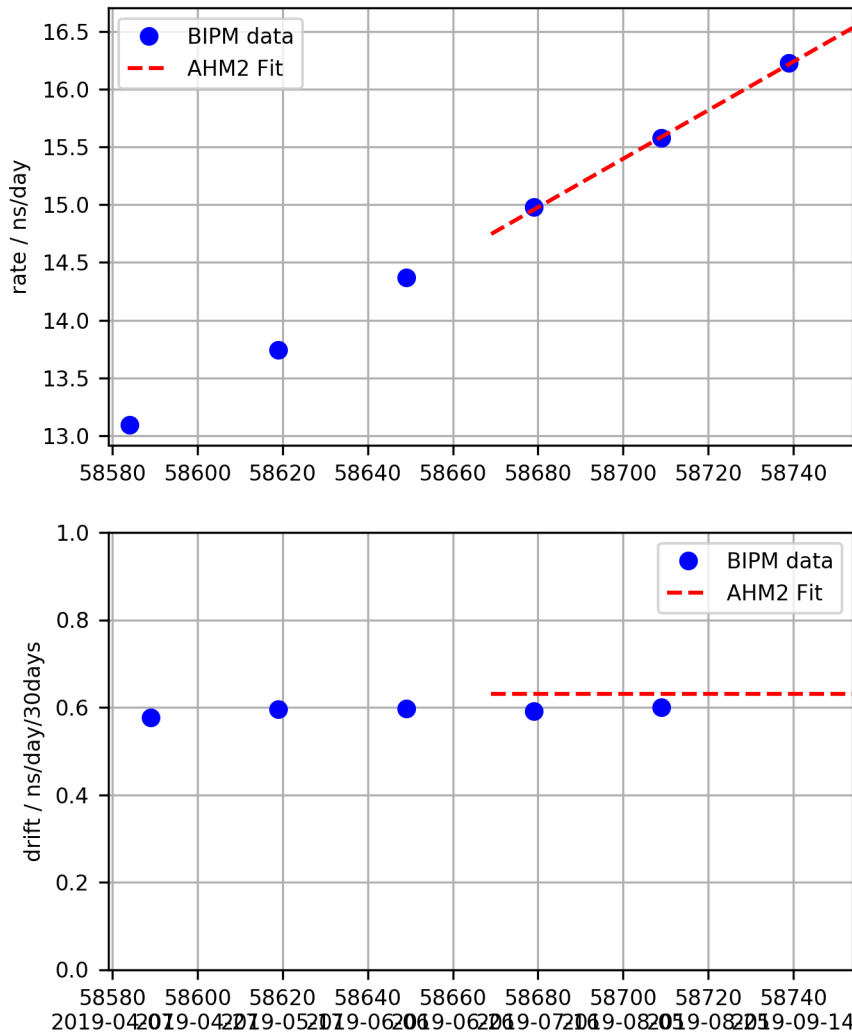


UTC - AHM2 Fit

UTC-AHM2 (2019-10-11 / 58767)
 $x \text{ (ns)} = 13995.328 + 16.534 *d + 0.0105 *d*d$
 $y = -1.91362e-13 + -2.43366e-16 *d$
 $d = (\text{mjd}-\text{mjd0})$ with $\text{mjd0} = 58754$

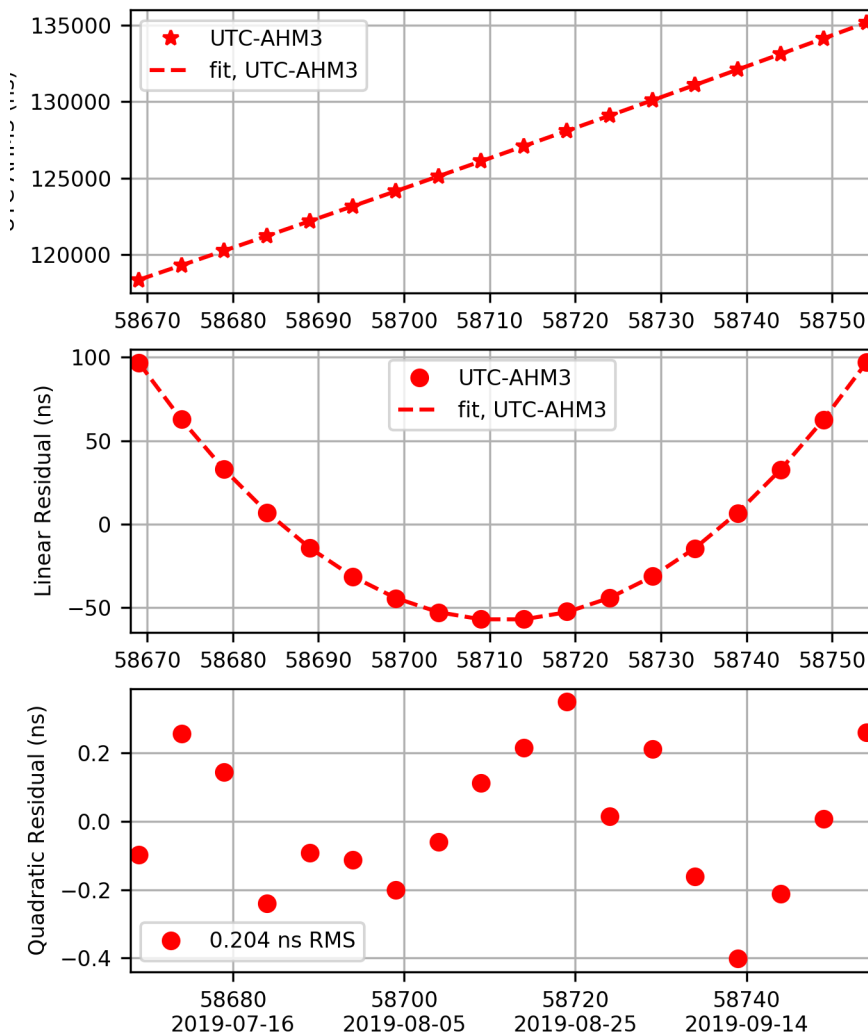


AHM2 Rate and Drift

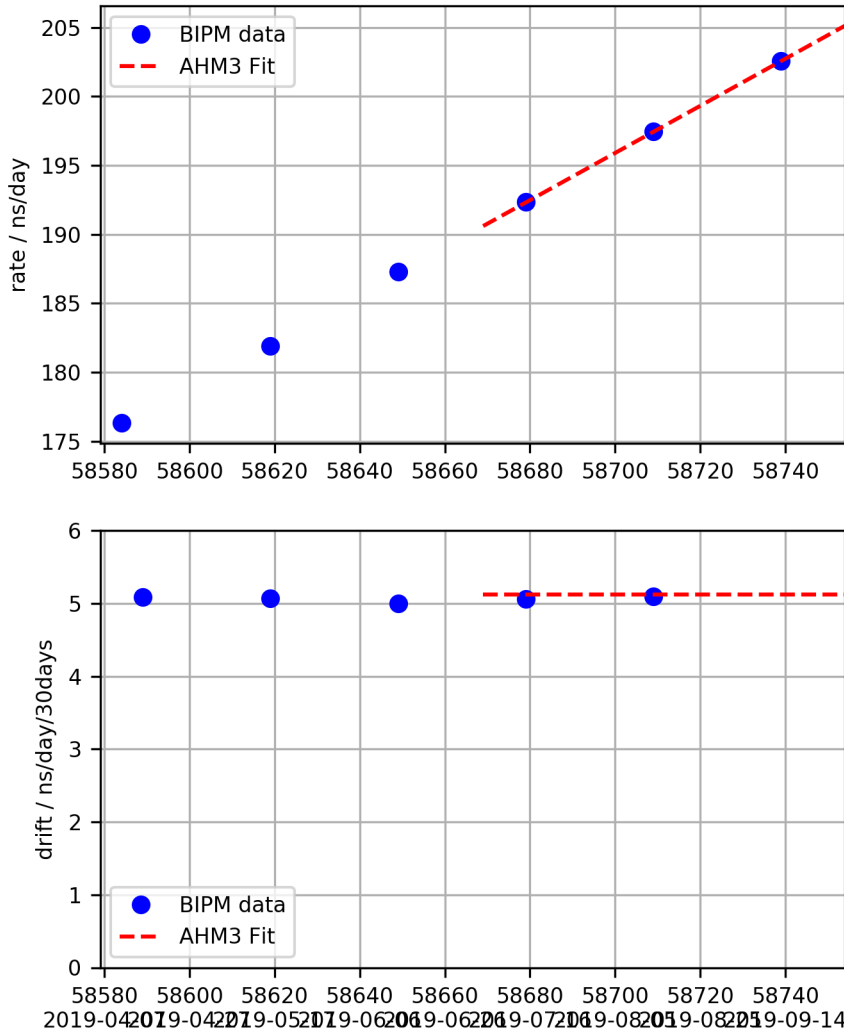


UTC - AHM3 Fit

UTC-AHM3 (2019-10-11 / 58767)
 $x \text{ (ns)} = 135156.040 + 205.117 * d + 0.0854 * d*d$
 $y = -2.37403e-12 + -1.97638e-15 * d$
 $d = (\text{mjd} - \text{mjd0}) \text{ with mjd0} = 58754$

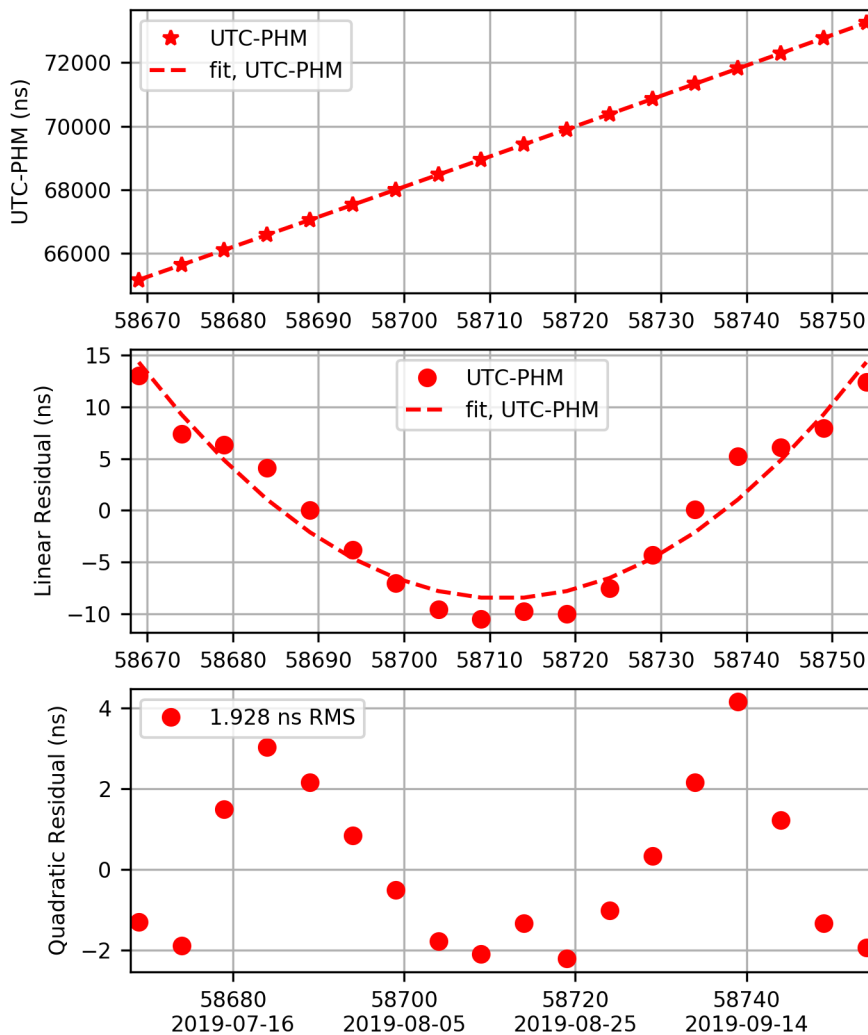


AHM3 Rate and Drift

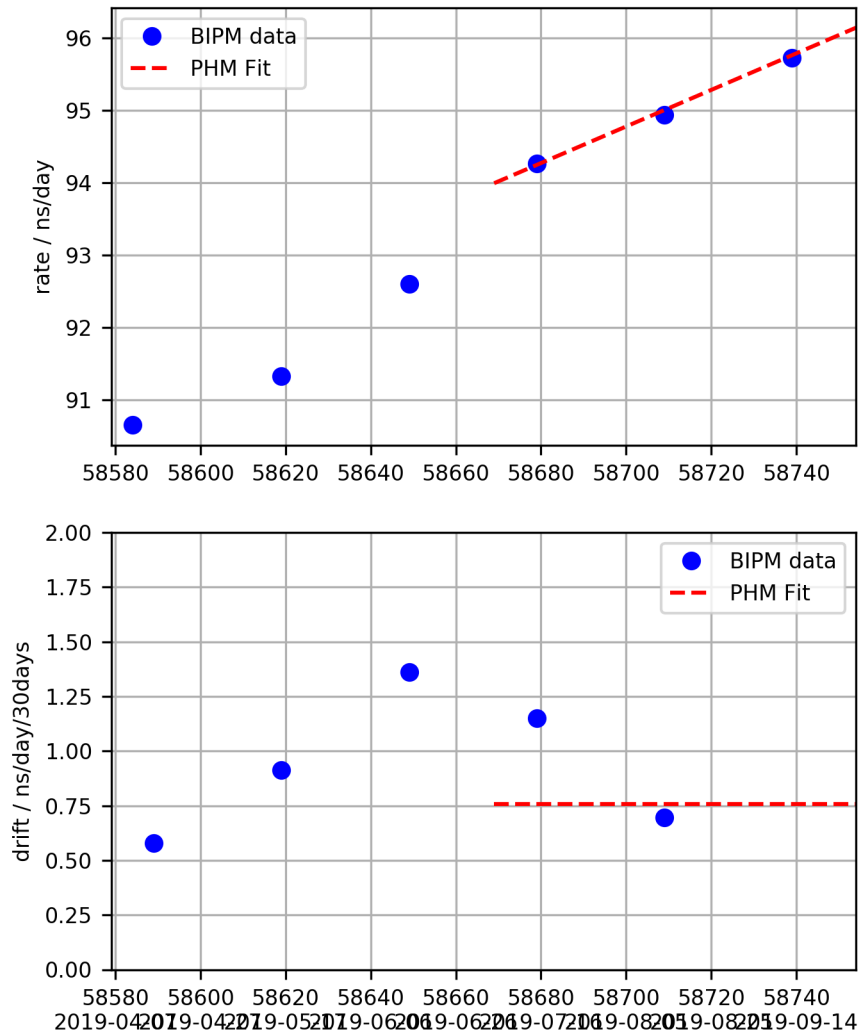


UTC - PHM Fit

UTC-PHM (2019-10-11 / 58767)
 $x \text{ (ns)} = 73251.436 + 96.143 *d + 0.0126 *d*d$
 $y = -1.11277e-12 + -2.92583e-16 *d$
 $d = (\text{mjd}-\text{mjd0}) \text{ with mjd0} = 58754$

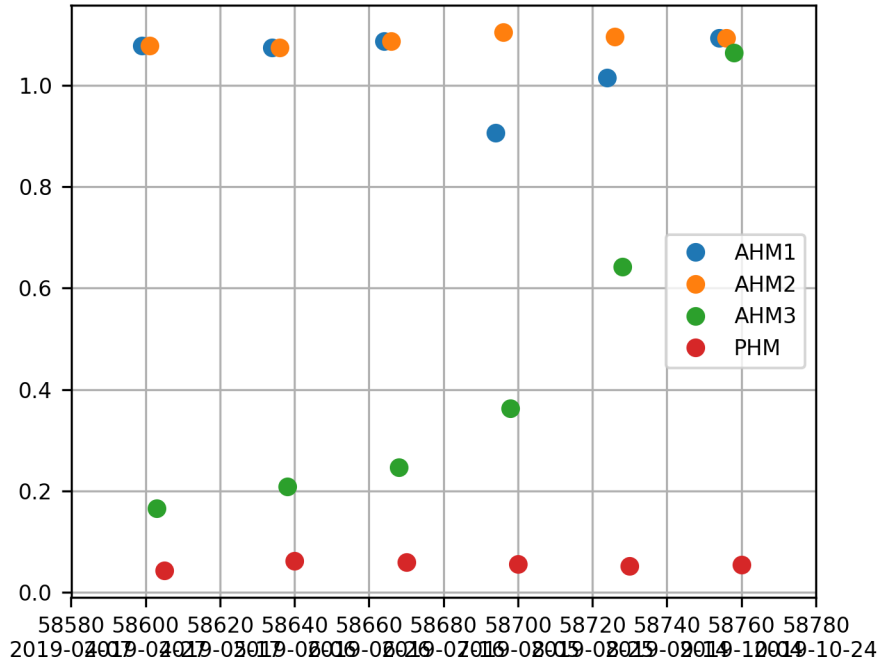


PHM Rate and Drift



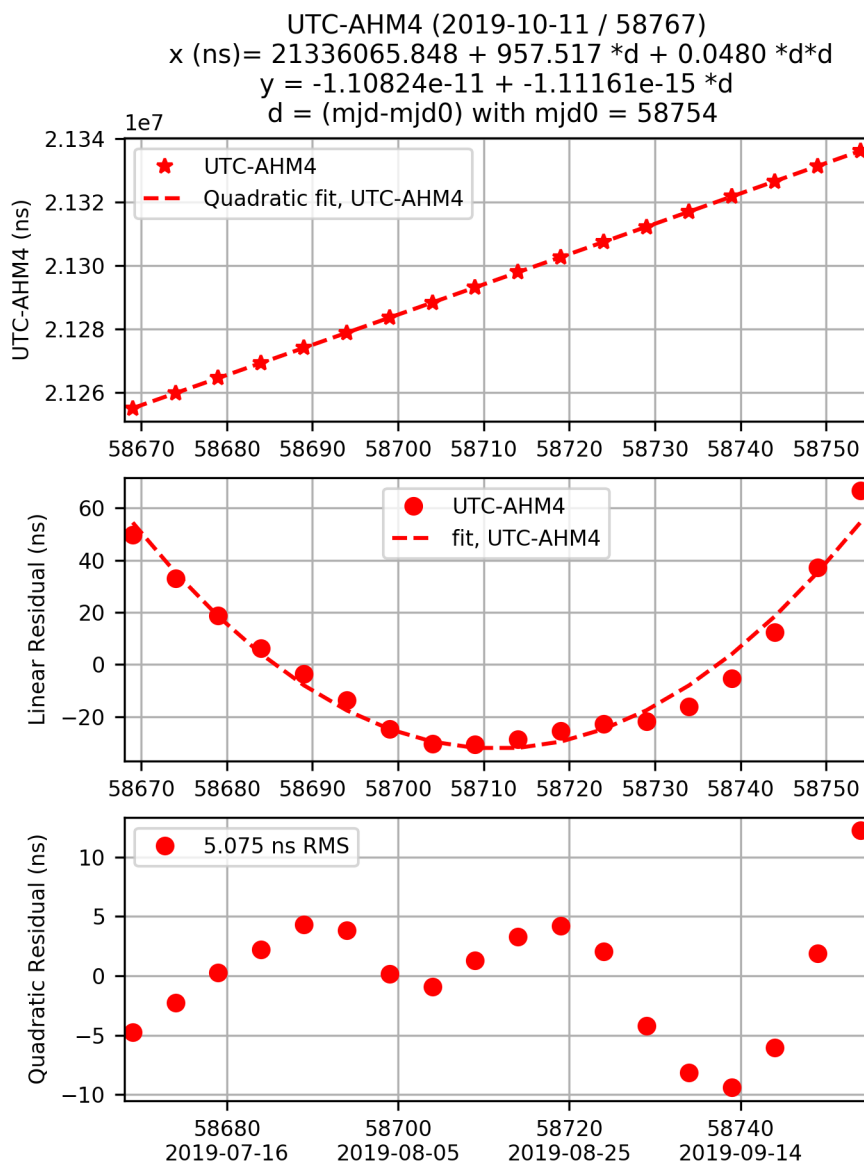
Clock Weights

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



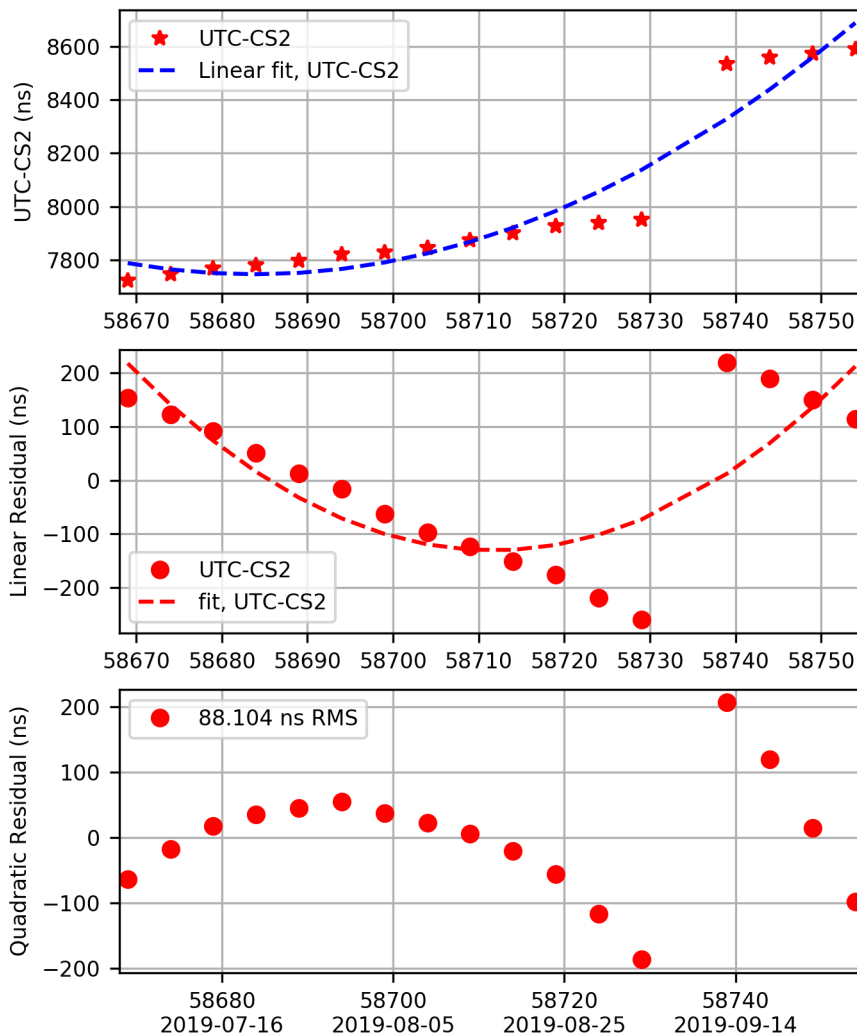
Remote Clocks

Remote Clock: AHM4

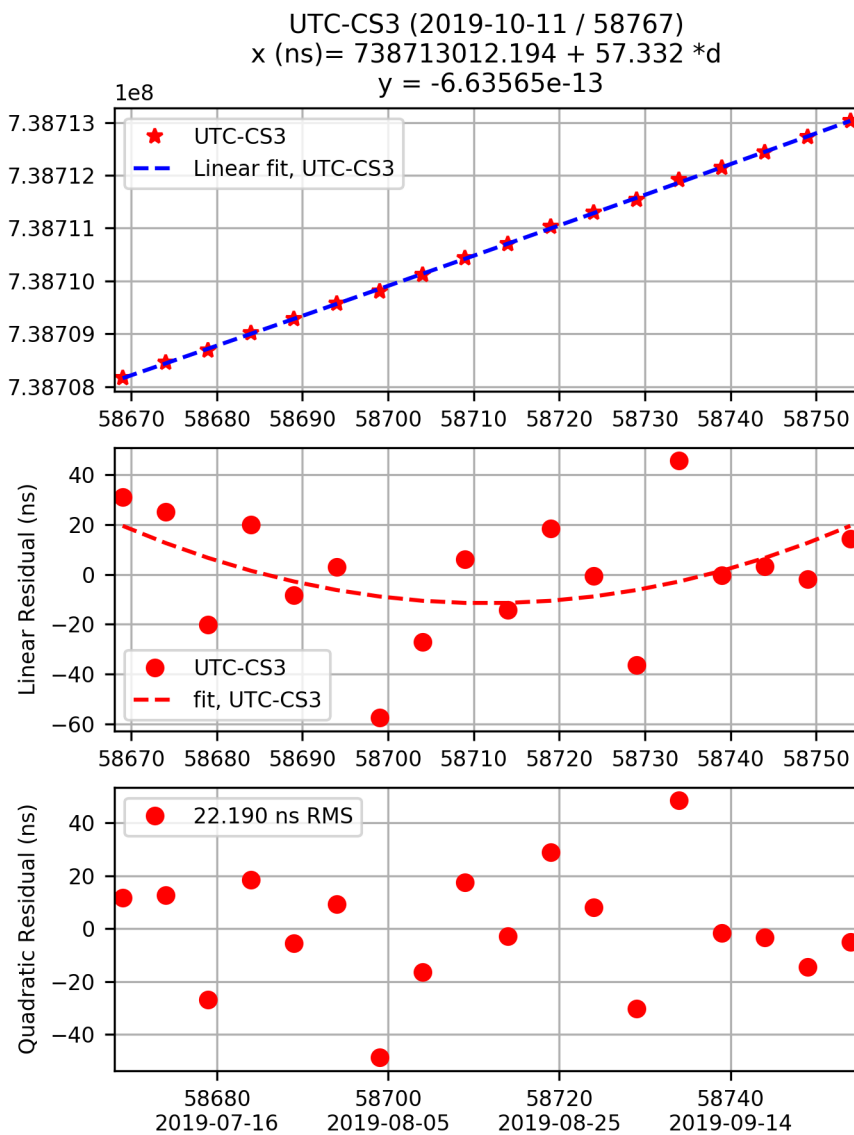


Remote Clock: CS2

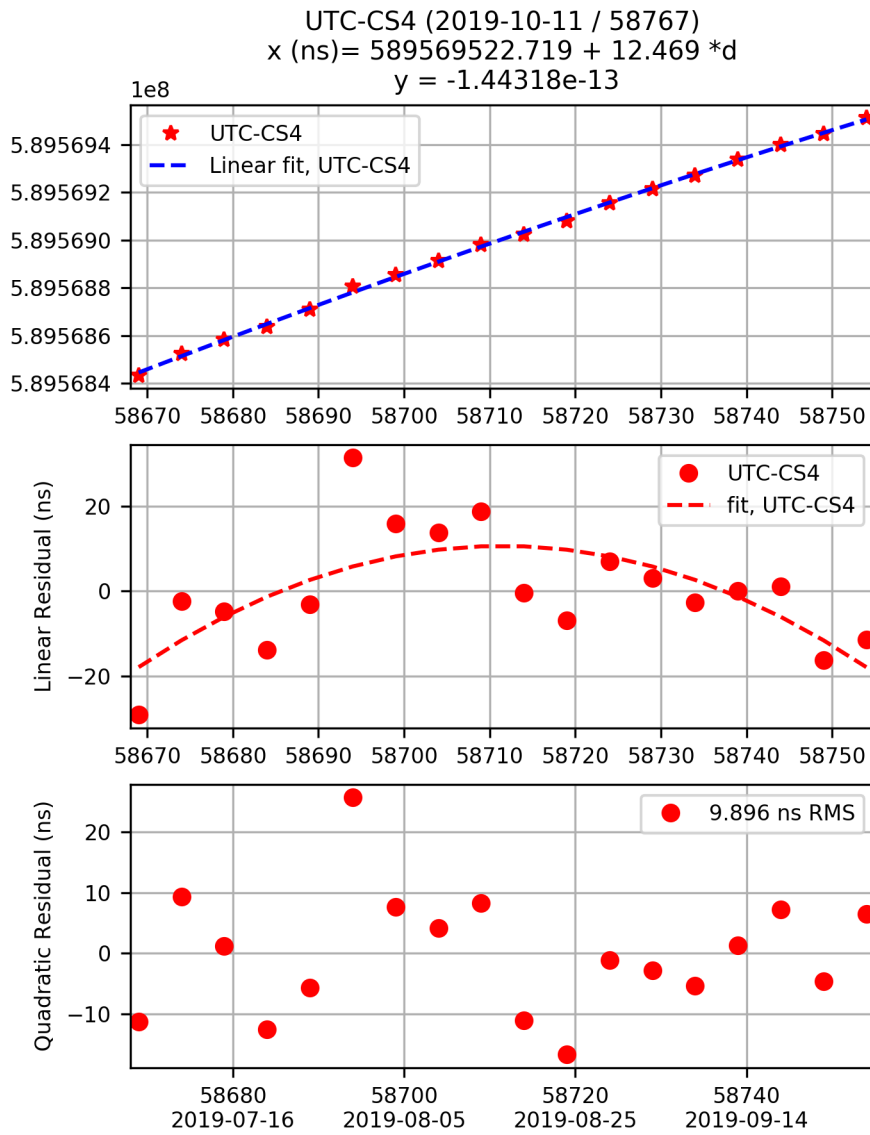
UTC-CS2 (2019-10-11 / 58767)
 $x \text{ (ns)} = 8477.213 + 10.673 * d$
 $y = -1.23533e-13$



Remote Clock: CS3



Remote Clock: CS4



End of Bulletin.