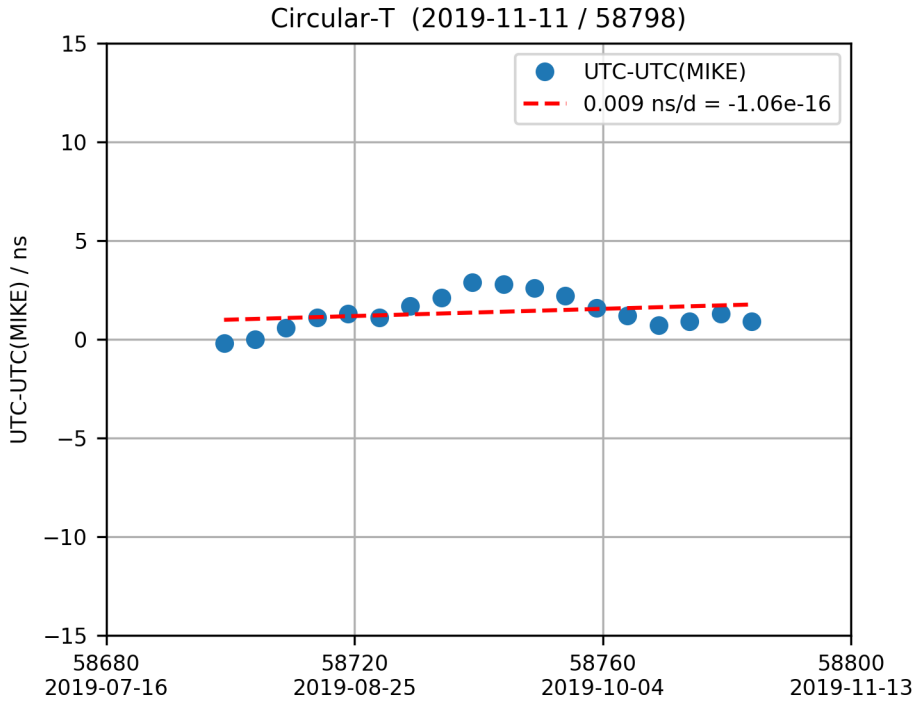
UTC(MIKE) Atomic Bulletin 2019-11

VTT MIKES Metrology monthly Time & Frequency bulletin.
Comments and questions to: time "at" vtt.fi
Date of publication: 2019-11-11 (58798)
Circular-T issues used for analysis: 380, 381, 382,
First day of analysis interval: 2019-08-04 (58699)
Last day of analysis interval: 2019-10-28 (58784)
ClockData for analysis: CDMI__19.08_, CDMI__19.09_, CDMI__19.10_,

Notes

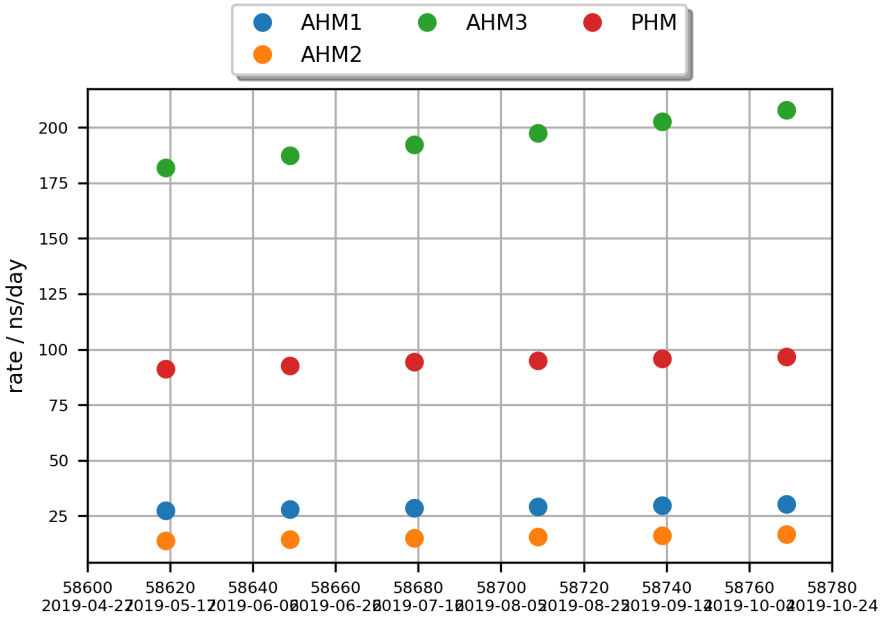
58305 AHM3 rebooted. Phase step +20.2ns.
58450 CS1 Hotwire supply regulation failure
58494 Change master-clock to AHM2
58617 (2019-05-14) Power-outage and temperature fluctuations in MIKES building.
58623, 58624 M3 clock data missing
58707 (2019-08-12) AHM2 autotuner failure, change MC to AHM1
58739 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

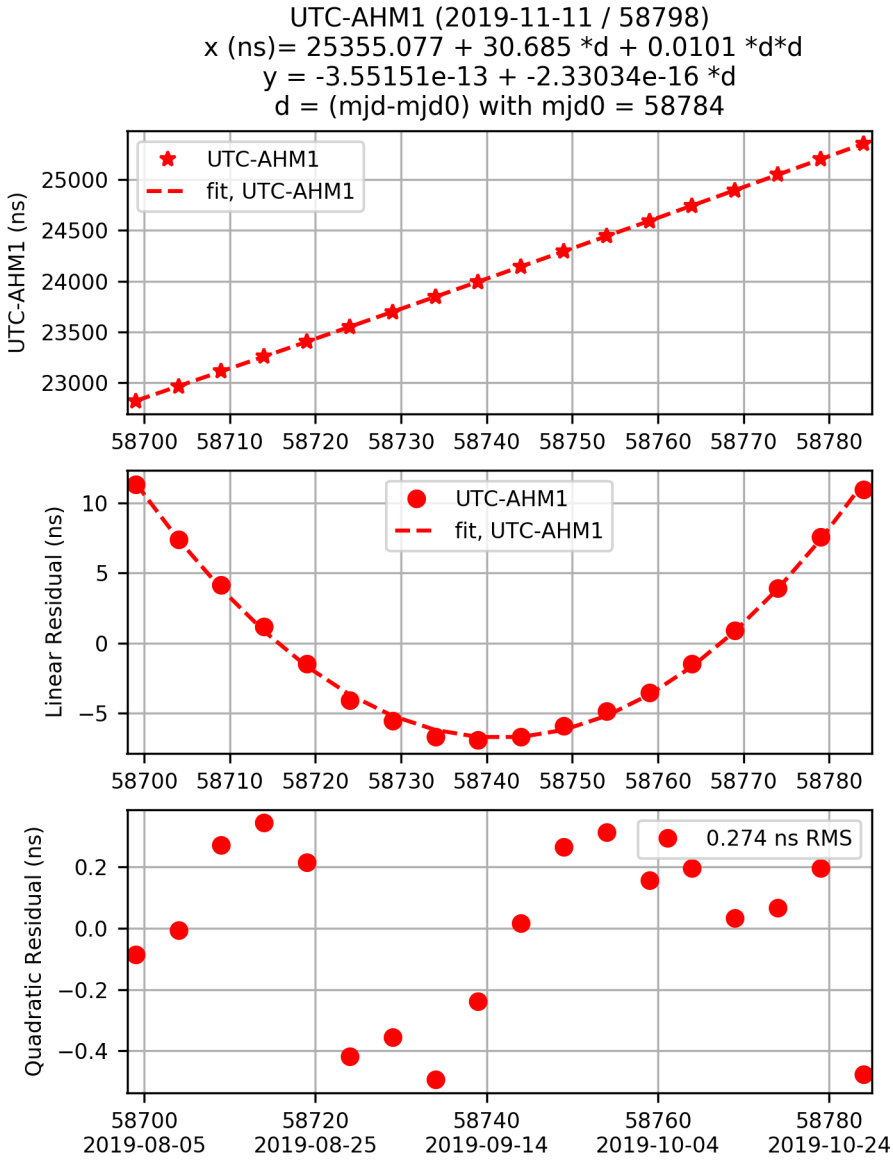


UTC-UTC(MIKE) is available on 5 day intervals on MJD dates ending with 4 or 9. Values are published monthly by the BIPM in Circular-T.

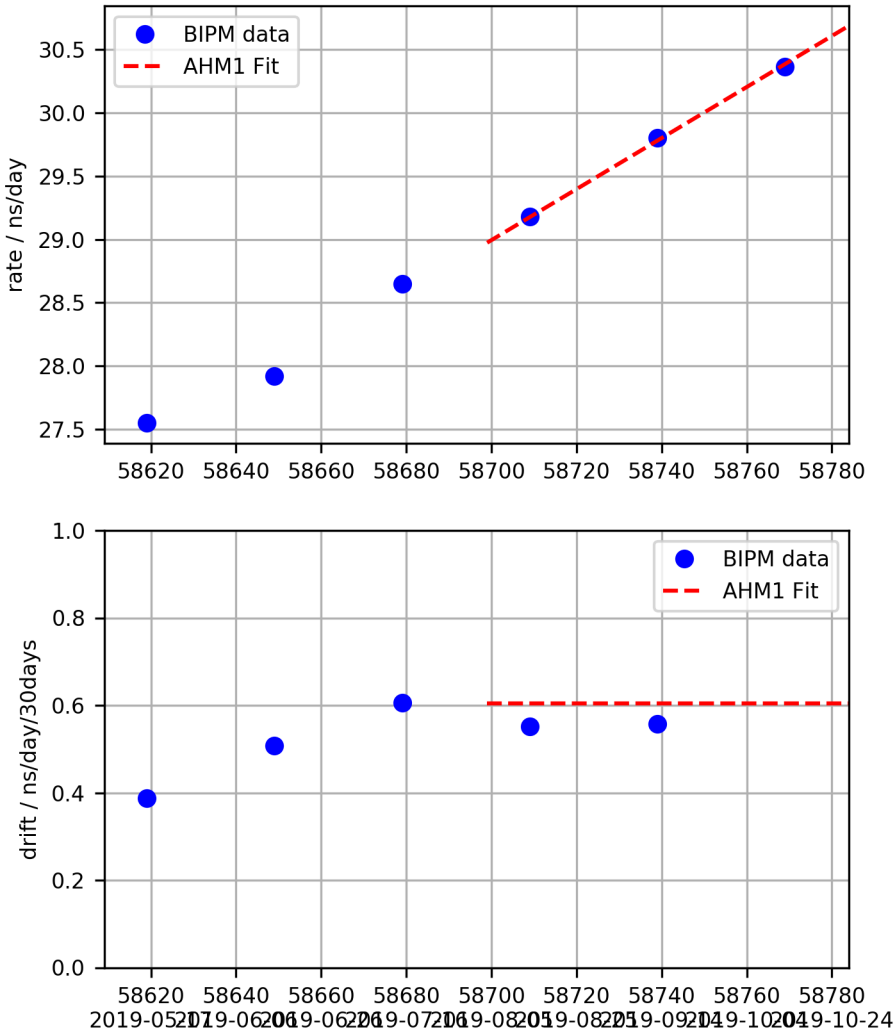
Clock Rates - Summary



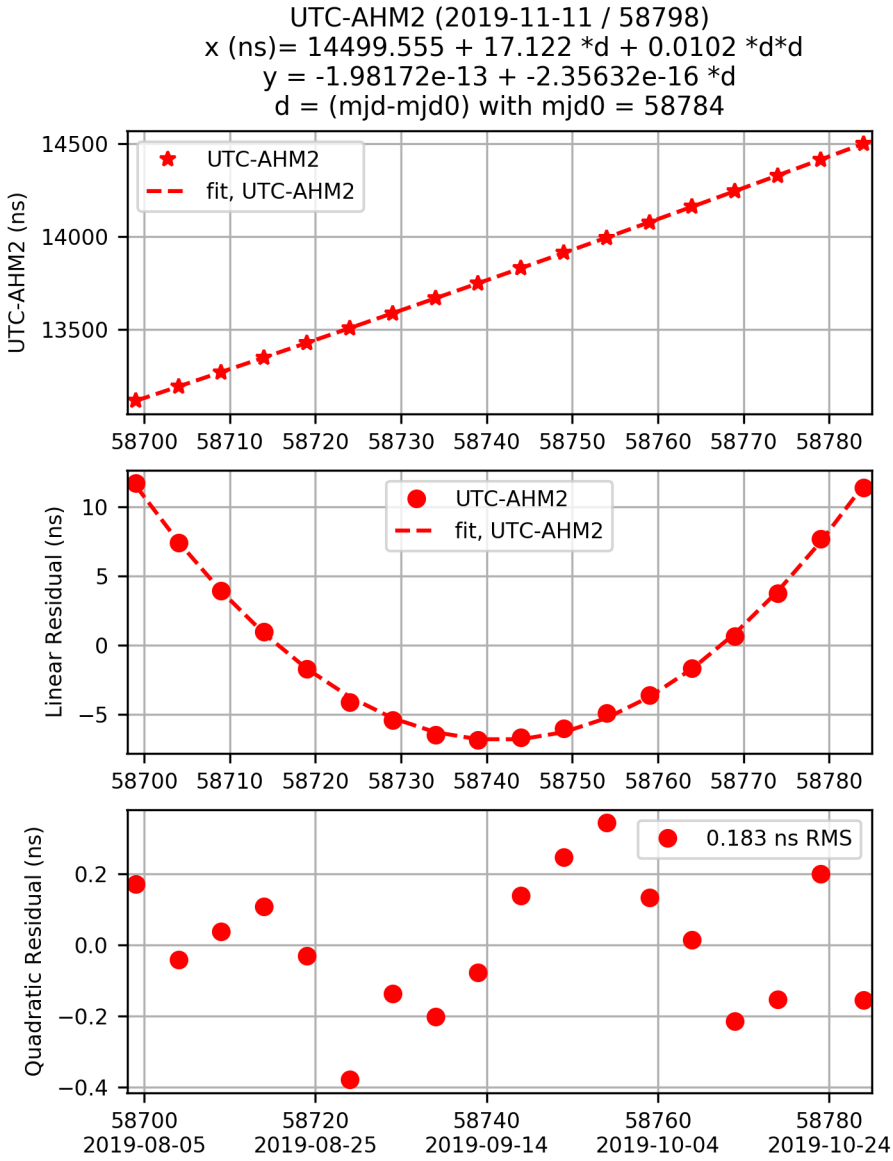
UTC - AHM1 Fit


UTC-AHM1 (2019-11-11 / 58798)
x (ns)= 25355.077 + 30.685 *d + 0.0101 *d*d
y = -3.55151e-13 + -2.33034e-16 *d
d = (mjd-mjd0) with mjd0 = 58784
UTC-AHM1
fit, UTC-AHM1
UTC-AHM1 (ns)
25000
24500
24000
23500
23000
58700
58710
58720
58730
58740
58750
58760
58770
58780
Linear Residual (ns)
10
5
0
−5
Quadratic Residual (ns)
0.274 ns RMS
0.2
0.0
−0.2
−0.4
2019-08-05
2019-08-25
2019-09-14
2019-10-04
2019-10-24

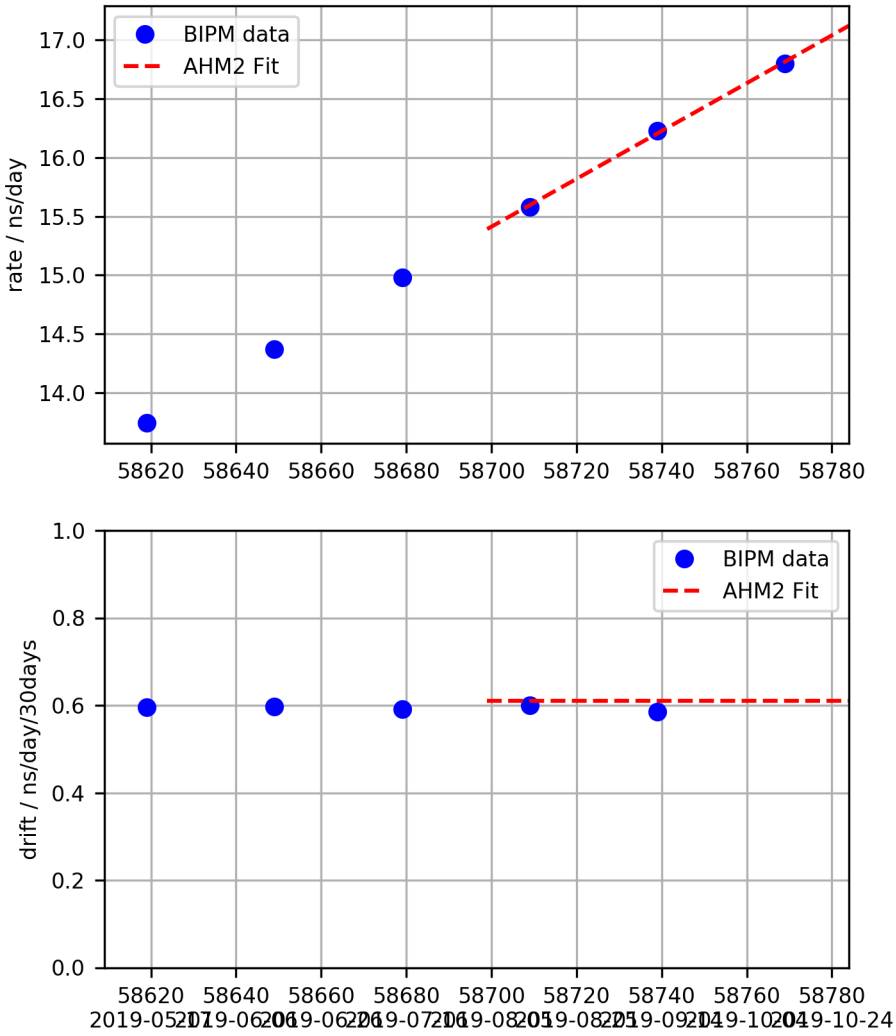
AHM1 Rate and Drift



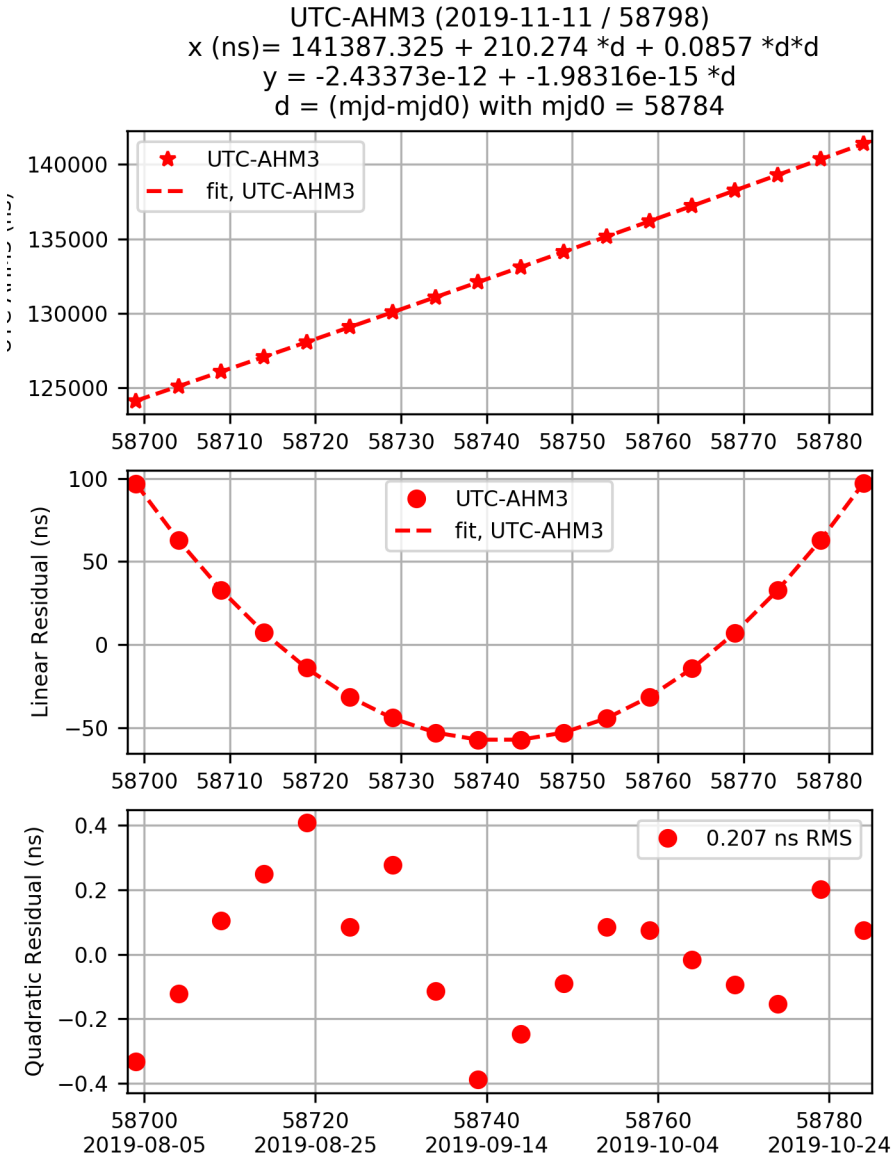
UTC - AHM2 Fit


UTC-AHM2 (2019-11-11 / 58798)
x (ns)= 14499.555 + 17.122 *d + 0.0102 *d*d
y = -1.98172e-13 + -2.35632e-16 *d
d = (mjd-mjd0) with mjd0 = 58784
UTC-AHM2 (ns)
UTC-AHM2
fit, UTC-AHM2
Linear Residual (ns)
Quadratic Residual (ns)
0.183 ns RMS
58700
2019-08-05
58720
2019-08-25
58740
2019-09-14
58760
2019-10-04
58780
2019-10-24

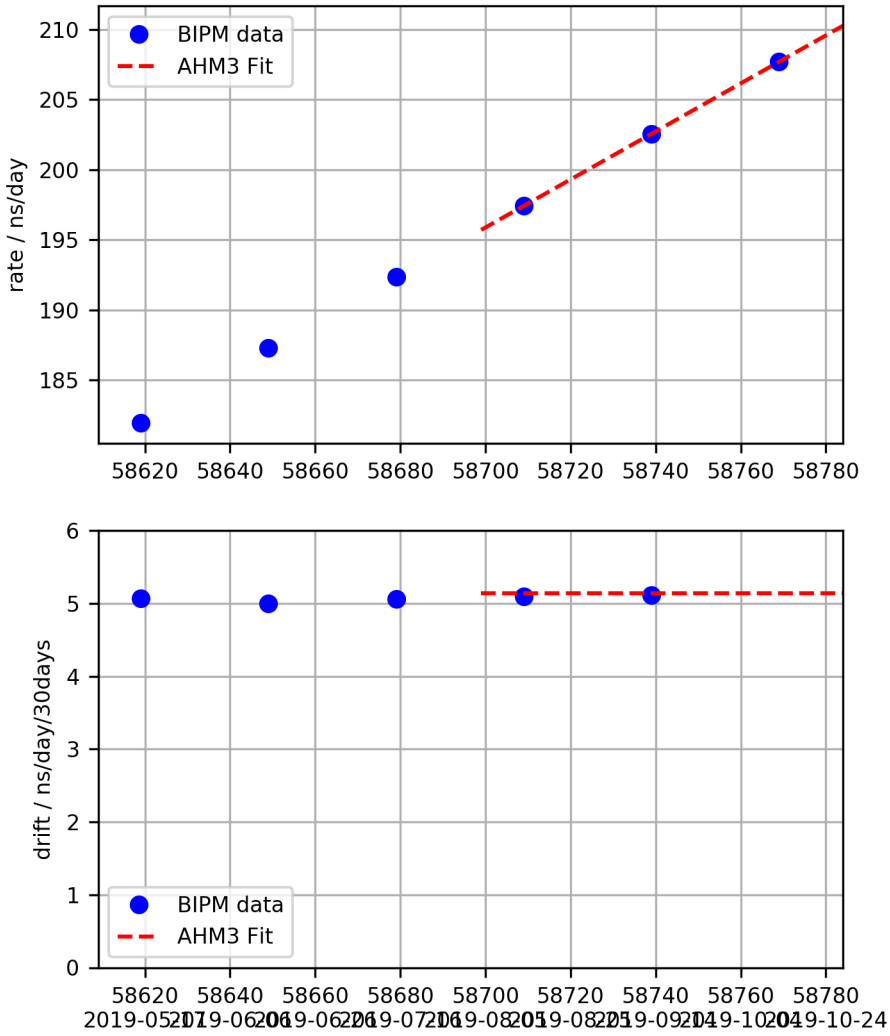
AHM2 Rate and Drift



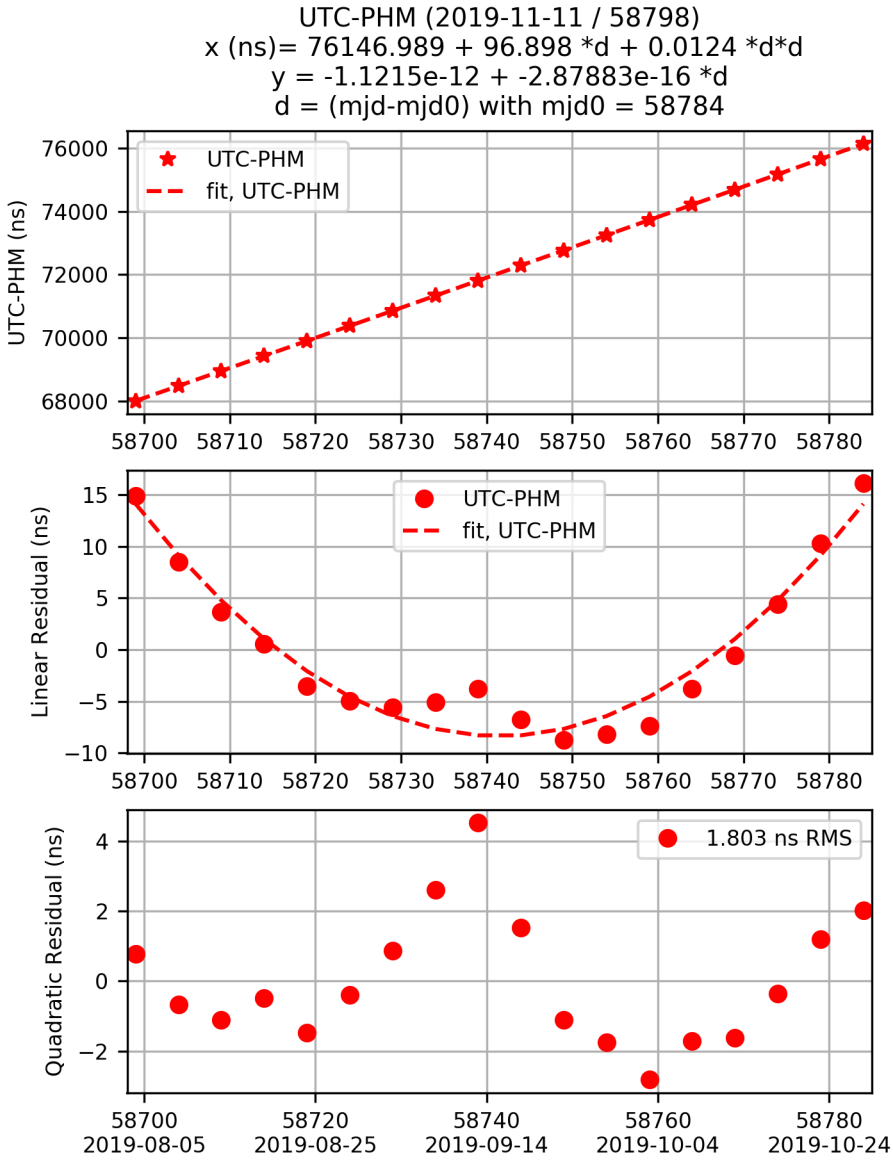
UTC - AHM3 Fit


UTC-AHM3 (2019-11-11 / 58798)
x (ns)= 141387.325 + 210.274 *d + 0.0857 *d*d
y = -2.43373e-12 + -1.98316e-15 *d
d = (mjd-mjd0) with mjd0 = 58784
UTC-AHM3
fit, UTC-AHM3
140000
135000
130000
125000
58700 58710 58720 58730 58740 58750 58760 58770 58780
Linear Residual (ns)
100
50
0
−50
0.207 ns RMS
Quadratic Residual (ns)
0.4
0.2
0.0
−0.2
−0.4
58700
2019-08-05
58720
2019-08-25
58740
2019-09-14
58760
2019-10-04
58780
2019-10-24

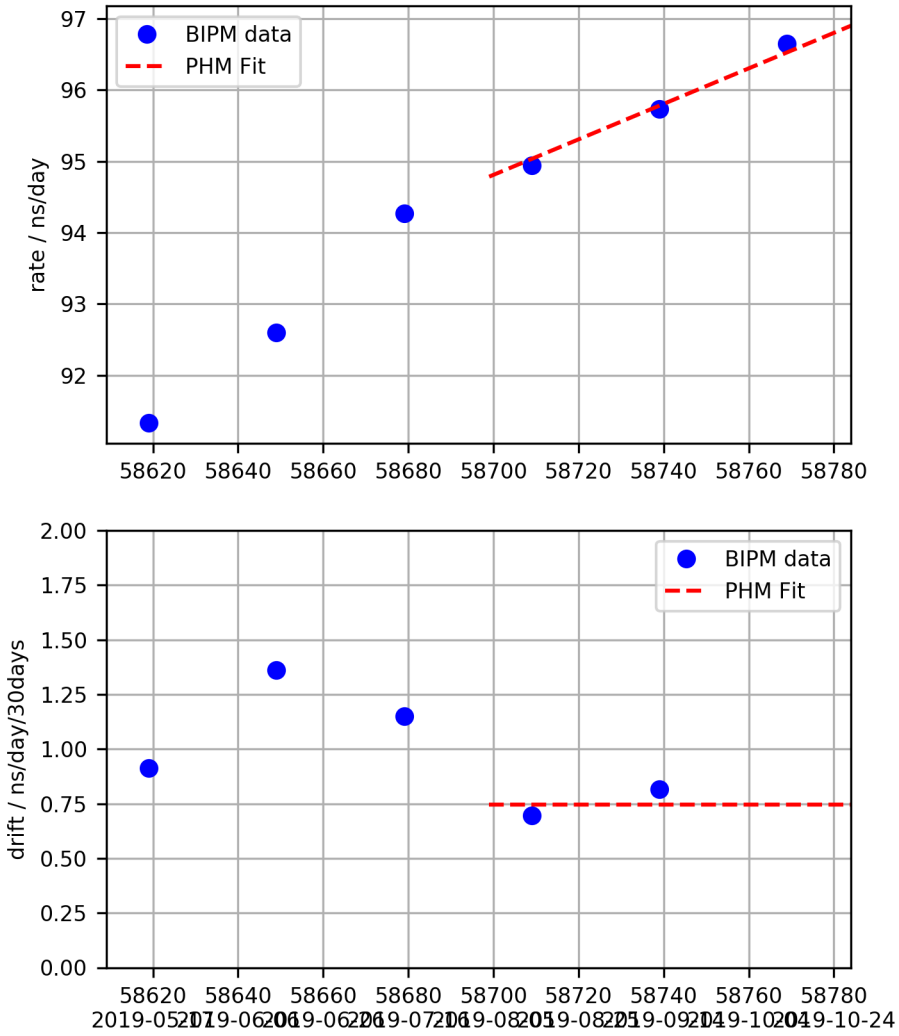
AHM3 Rate and Drift



UTC - PHM Fit

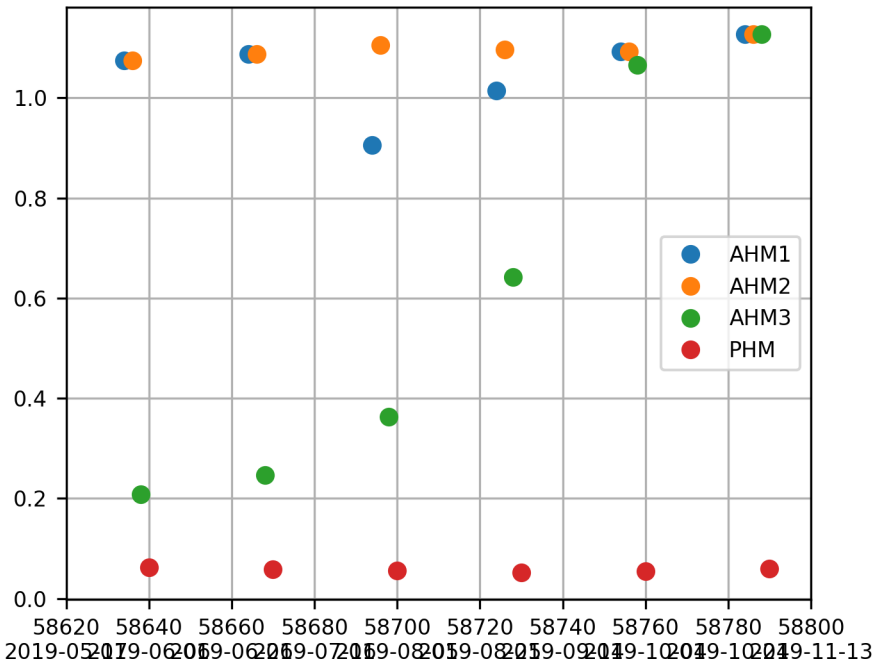

UTC-PHM (2019-11-11 / 58798)
x (ns)= 76146.989 + 96.898 *d + 0.0124 *d*d
y = -1.1215e-12 + -2.87883e-16 *d
d = (mjd-mjd0) with mjd0 = 58784
UTC-PHM (ns)
UTC-PHM
fit, UTC-PHM
Linear Residual (ns)
Quadratic Residual (ns)
1.803 ns RMS
2019-08-05
2019-08-25
2019-09-14
2019-10-04
2019-10-24

PHM Rate and Drift



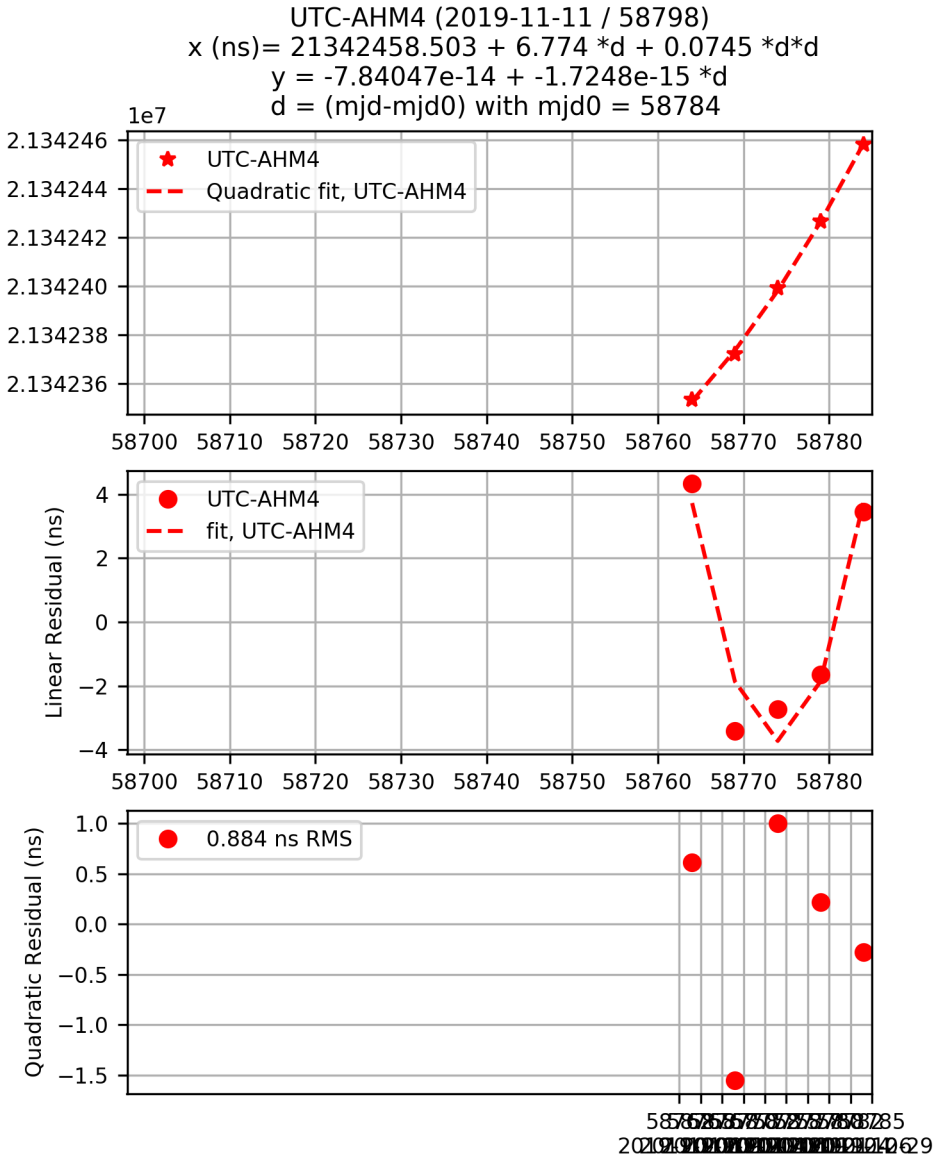
Clock Weights

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

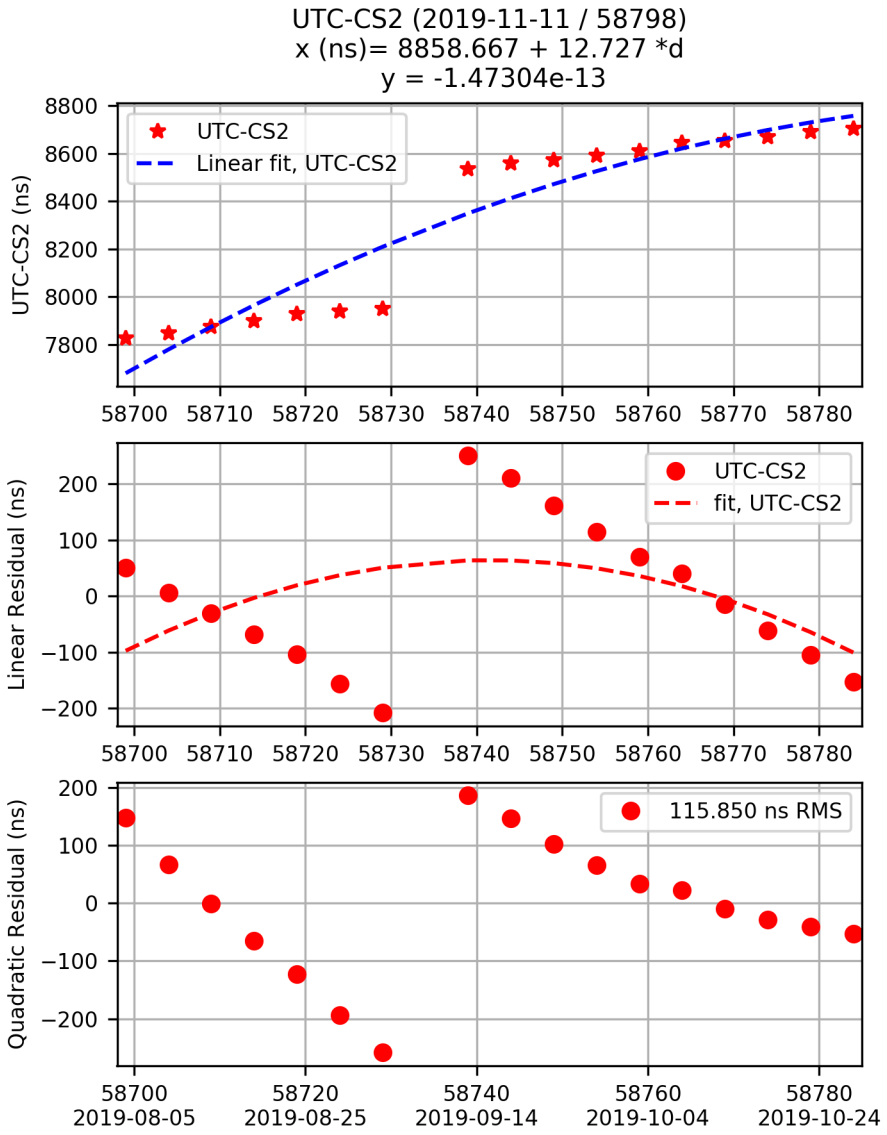


Remote Clocks

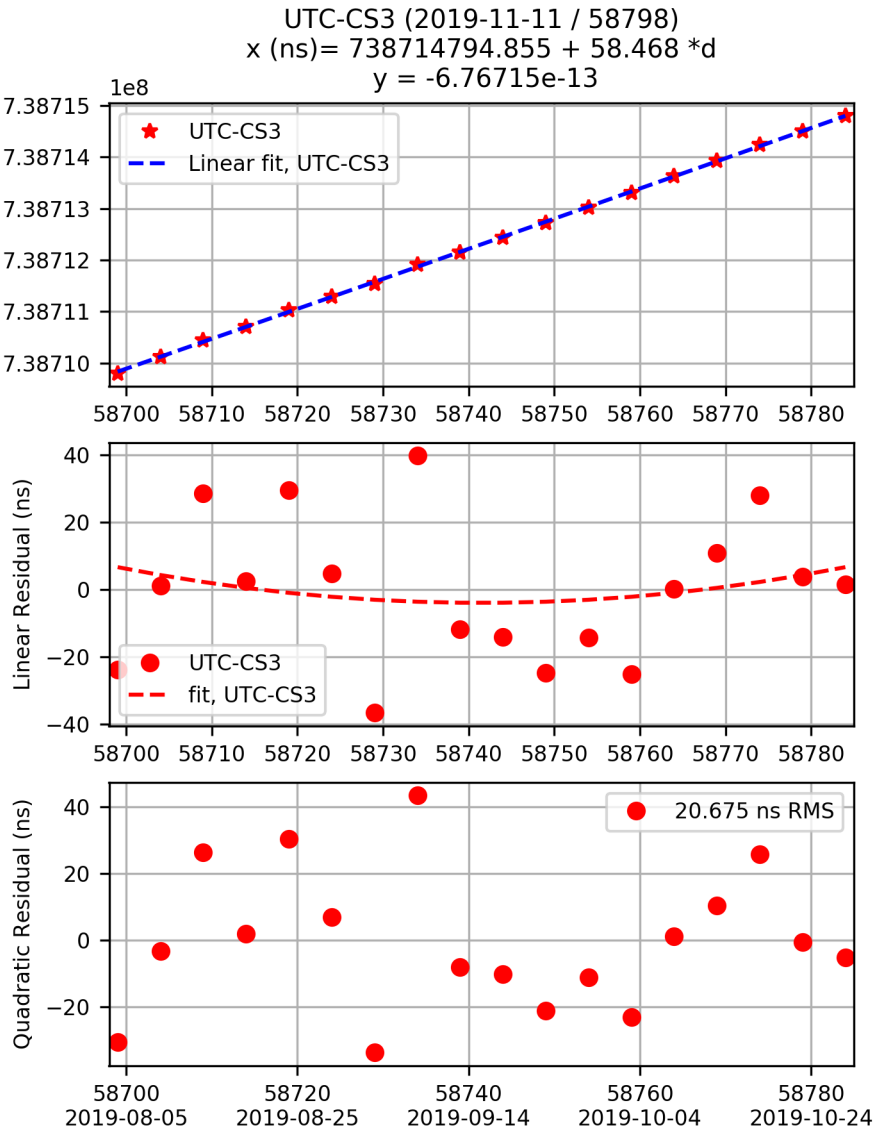
Remote Clock: AHM4



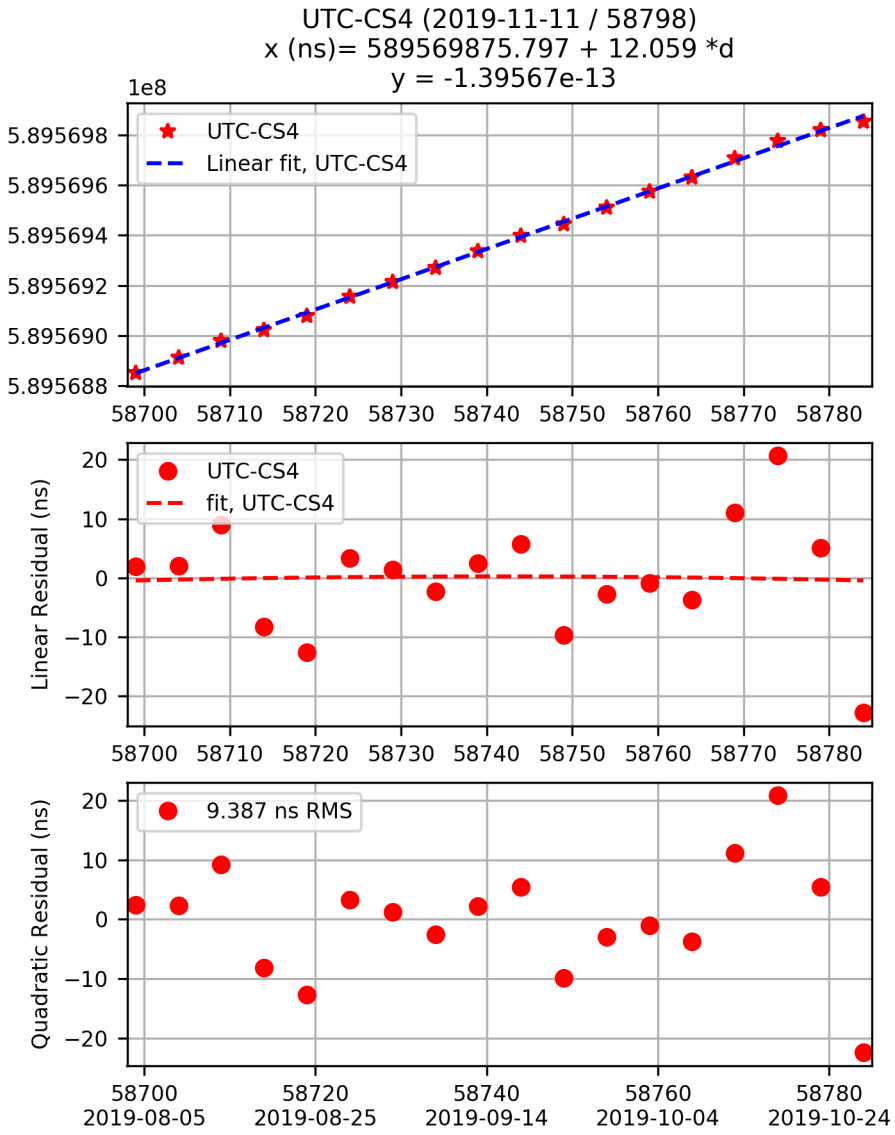
Remote Clock: CS2



Remote Clock: CS3



Remote Clock: CS4



End of Bulletin.