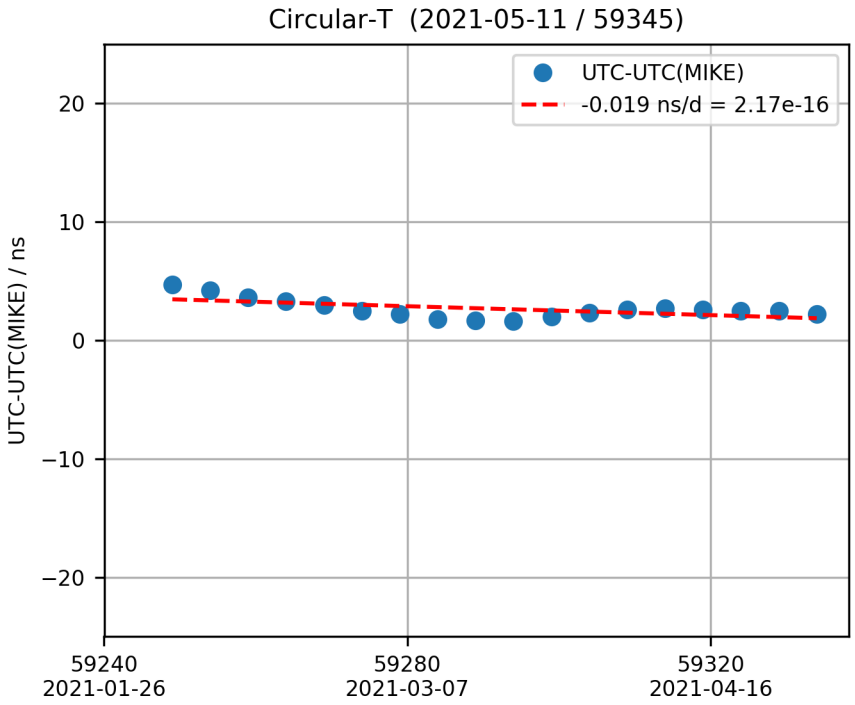
UTC(MIKE) Atomic Bulletin 2021-05

VTT MIKES Metrology monthly Time & Frequency bulletin.
Comments and questions to: time "at" vtt.fi
Date of publication: 2021-05-11 (59345)
Circular-T issues used for analysis: 398, 399, 400,
First day of analysis interval: 2021-02-04 (59249)
Last day of analysis interval: 2021-04-30 (59334)
ClockData for analysis: CDMI__21.02_, CDMI__21.03_, CDMI__21.04_,
The Atomic Bulletin is archived at: ftp://monitor.mikes.fi/time-scale/

Notes

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
59285 (2021-03-12) AB2021-03, Set steering correction to zero.

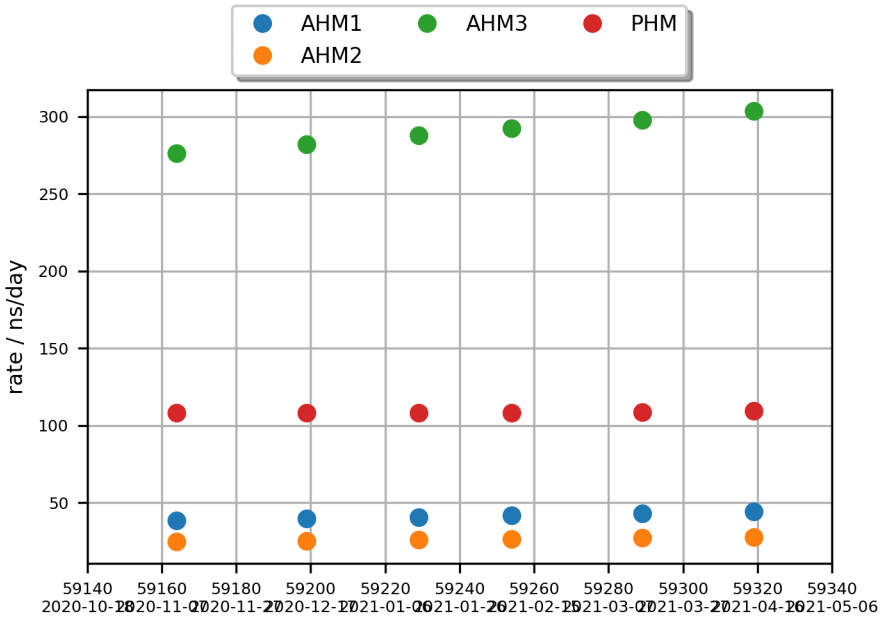
UTC-UTC(MIKE) as reported in Circular-T



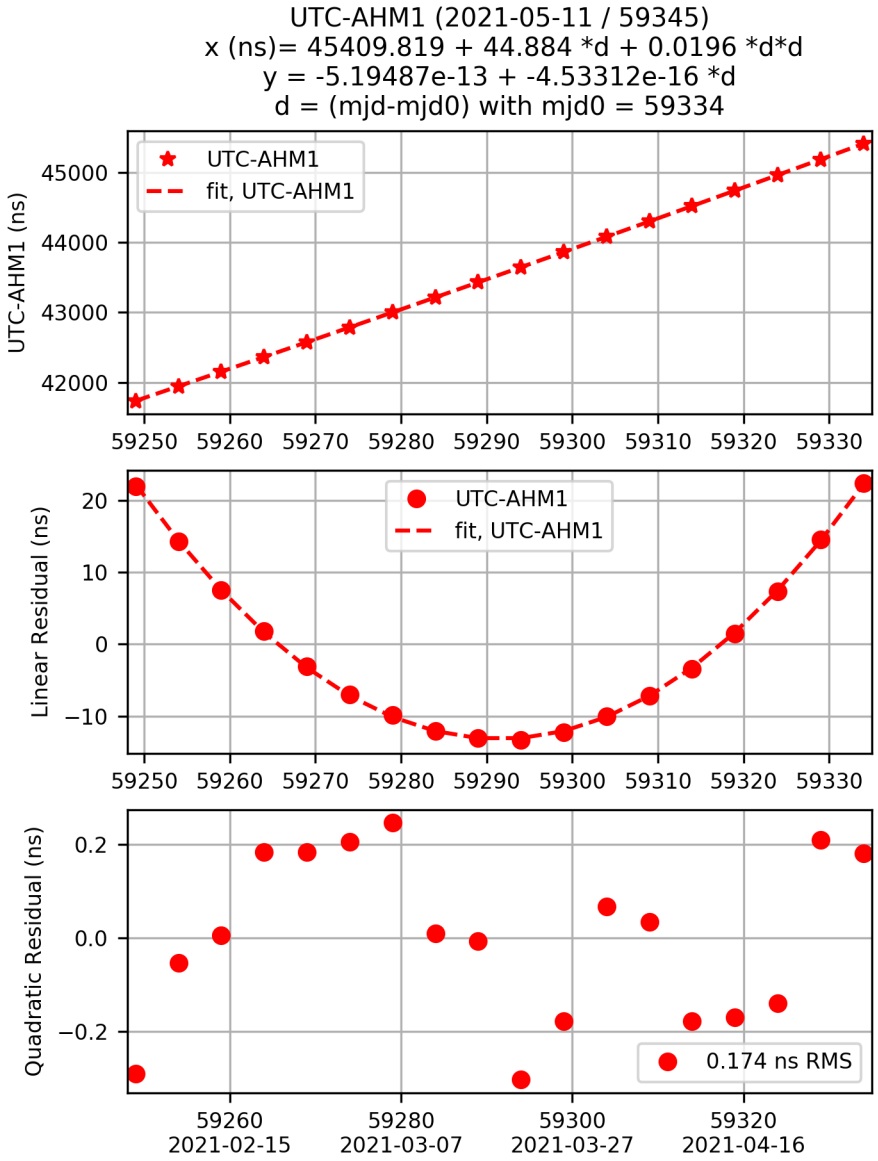
UTC-UTC(MIKE) is available on 5 day intervals on MJD dates ending with 4 or 9. Values are published monthly by the BIPM in Circular-T.

Clock Rates - Summary

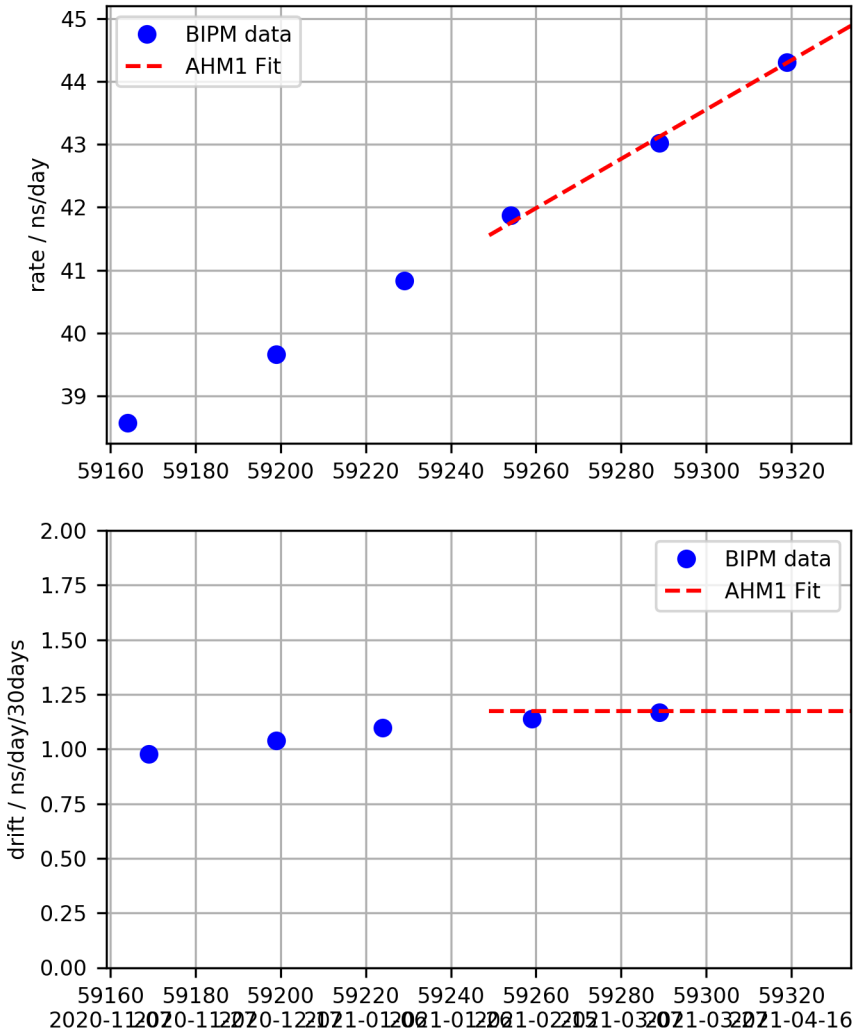
Clock rates as reported by the BIPM in the monthly r-report.



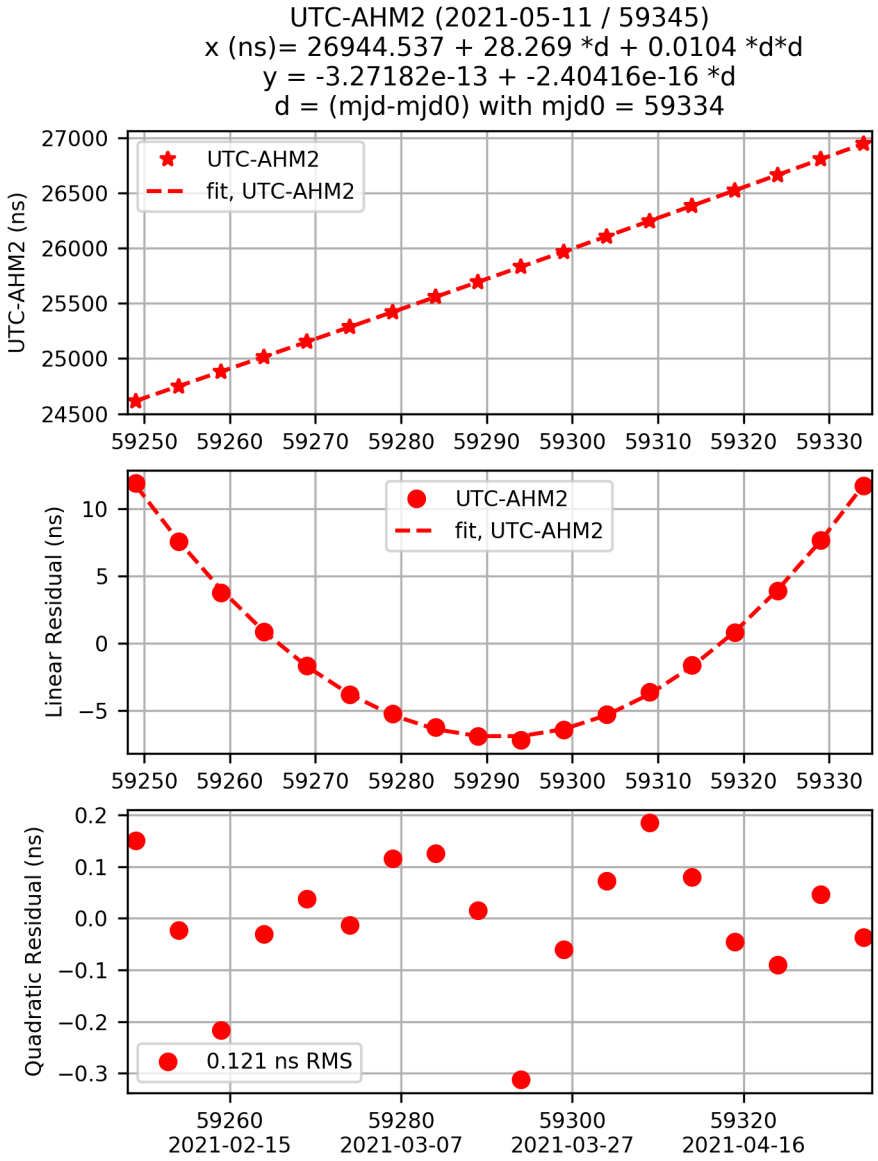
UTC - AHM1 Fit


UTC-AHM1 (2021-05-11 / 59345)
x (ns)= 45409.819 + 44.884 *d + 0.0196 *d*d
y = -5.19487e-13 + -4.53312e-16 *d
d = (mjd-mjd0) with mjd0 = 59334
UTC-AHM1
fit, UTC-AHM1
UTC-AHM1 (ns)
45000
44000
43000
42000
59250 59260 59270 59280 59290 59300 59310 59320 59330
UTC-AHM1
fit, UTC-AHM1
Linear Residual (ns)
20
10
0
−10
59250 59260 59270 59280 59290 59300 59310 59320 59330
Quadratic Residual (ns)
0.2
0.0
−0.2
0.174 ns RMS
59260
2021-02-15
59280
2021-03-07
59300
2021-03-27
59320
2021-04-16

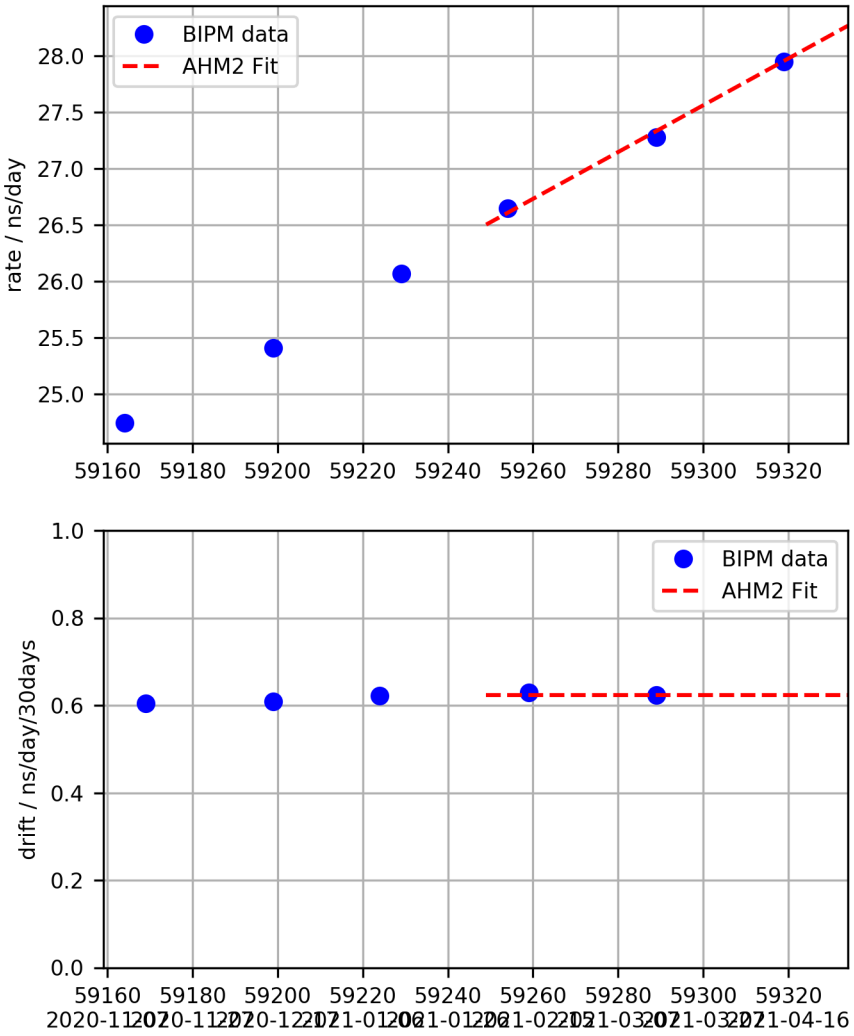
AHM1 Rate and Drift



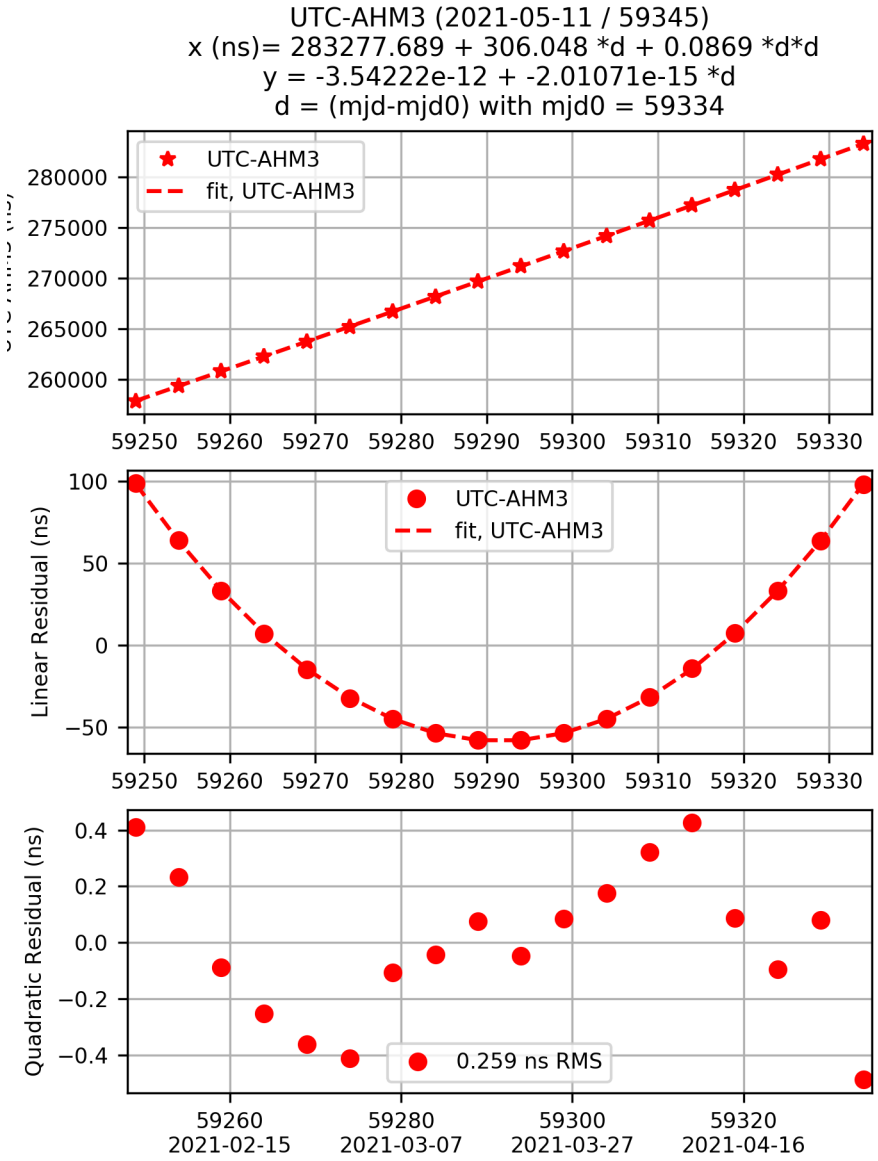
UTC - AHM2 Fit


UTC-AHM2 (2021-05-11 / 59345)
x (ns)= 26944.537 + 28.269 *d + 0.0104 *d*d
y = -3.27182e-13 + -2.40416e-16 *d
d = (mjd-mjd0) with mjd0 = 59334
UTC-AHM2 (ns)
UTC-AHM2
fit, UTC-AHM2
Linear Residual (ns)
Quadratic Residual (ns)
0.121 ns RMS
2021-02-15
2021-03-07
2021-03-27
2021-04-16

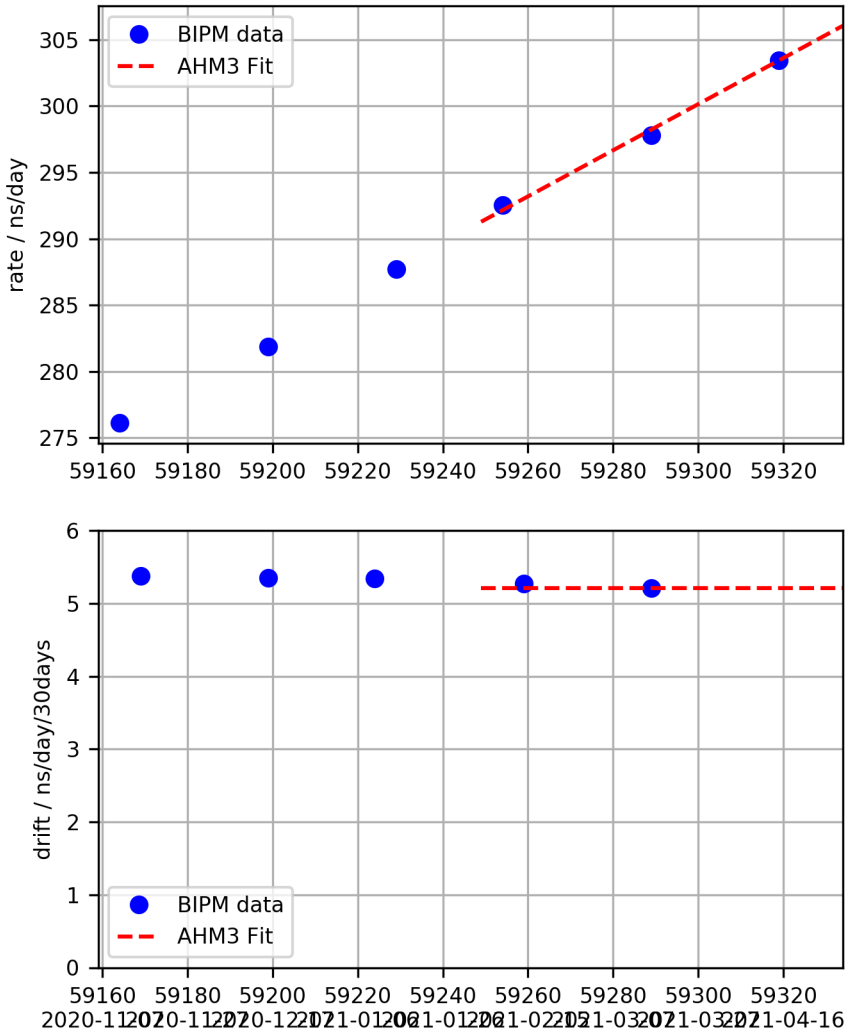
AHM2 Rate and Drift



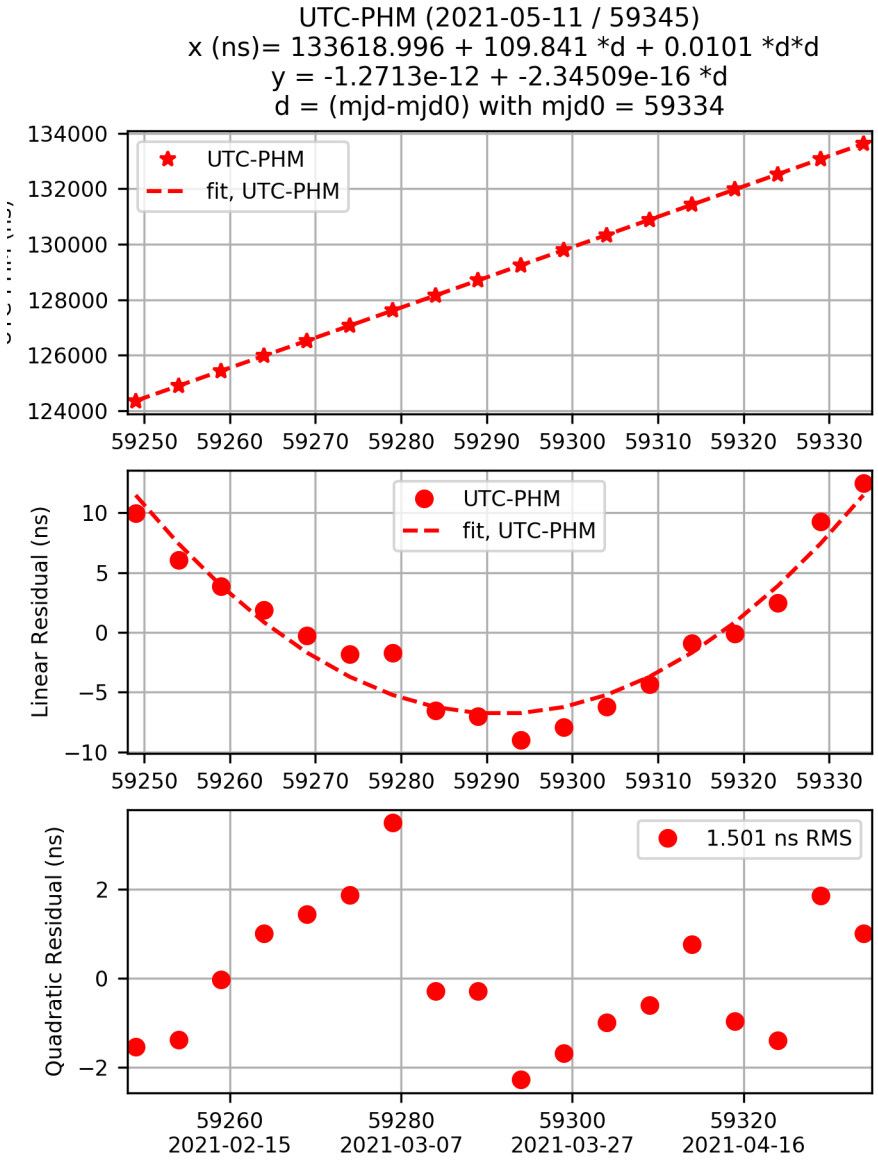
UTC - AHM3 Fit


UTC-AHM3 (2021-05-11 / 59345)
x (ns)= 283277.689 + 306.048 *d + 0.0869 *d*d
y = -3.54222e-12 + -2.01071e-15 *d
d = (mjd-mjd0) with mjd0 = 59334
UTC-AHM3
fit, UTC-AHM3
280000
275000
270000
265000
260000
59250 59260 59270 59280 59290 59300 59310 59320 59330
Linear Residual (ns)
100
50
0
−50
Quadratic Residual (ns)
0.4
0.2
0.0
−0.2
−0.4
0.259 ns RMS
59260
2021-02-15
59280
2021-03-07
59300
2021-03-27
59320
2021-04-16

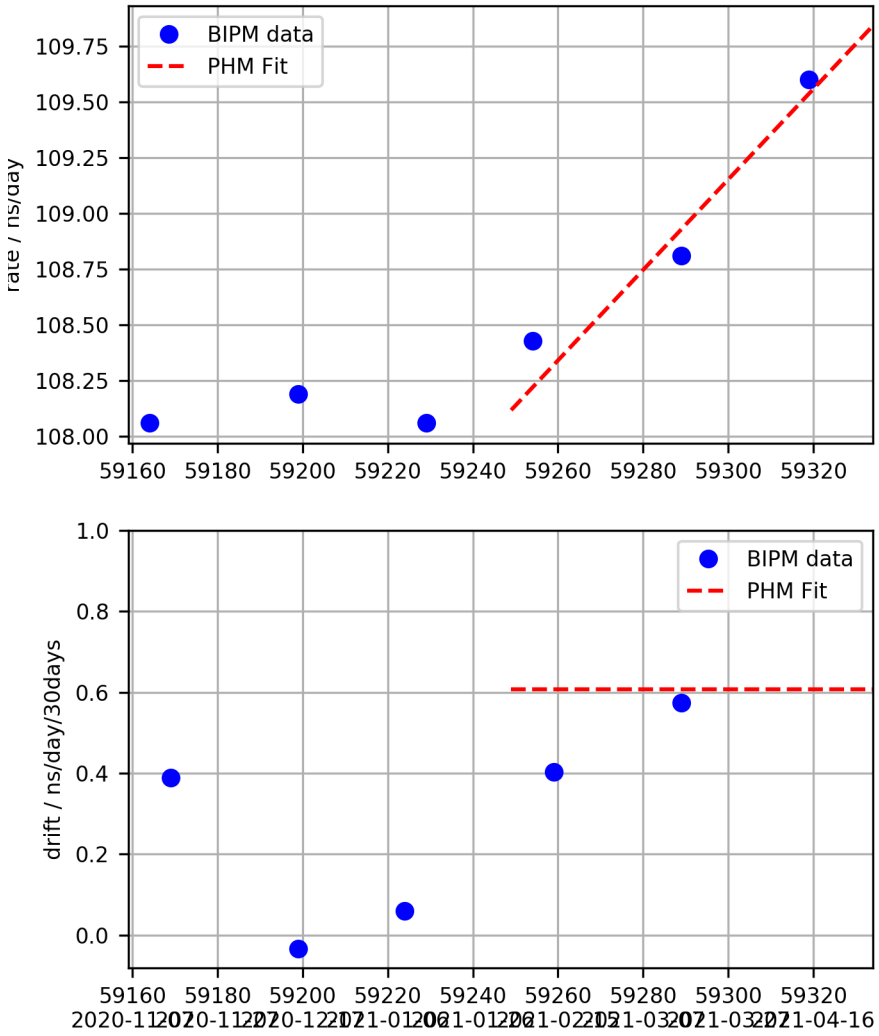
AHM3 Rate and Drift



UTC - PHM Fit

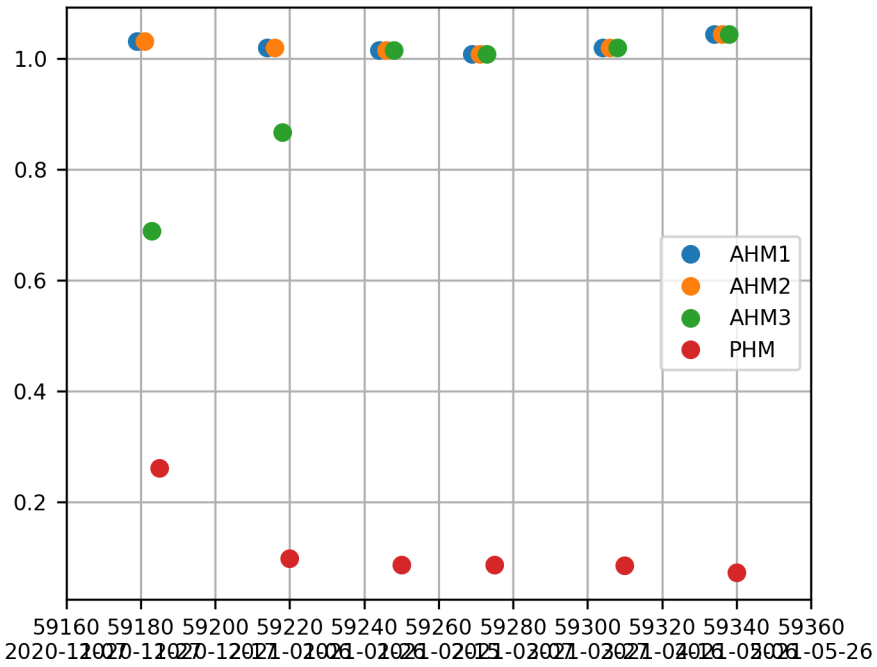

UTC-PHM (2021-05-11 / 59345)
x (ns)= 133618.996 + 109.841 *d + 0.0101 *d*d
y = -1.2713e-12 + -2.34509e-16 *d
d = (mjd-mjd0) with mjd0 = 59334
UTC-PHM
fit, UTC-PHM
Linear Residual (ns)
Quadratic Residual (ns)
1.501 ns RMS
59250 59260 59270 59280 59290 59300 59310 59320 59330
59260
2021-02-15
59280
2021-03-07
59300
2021-03-27
59320
2021-04-16

PHM Rate and Drift



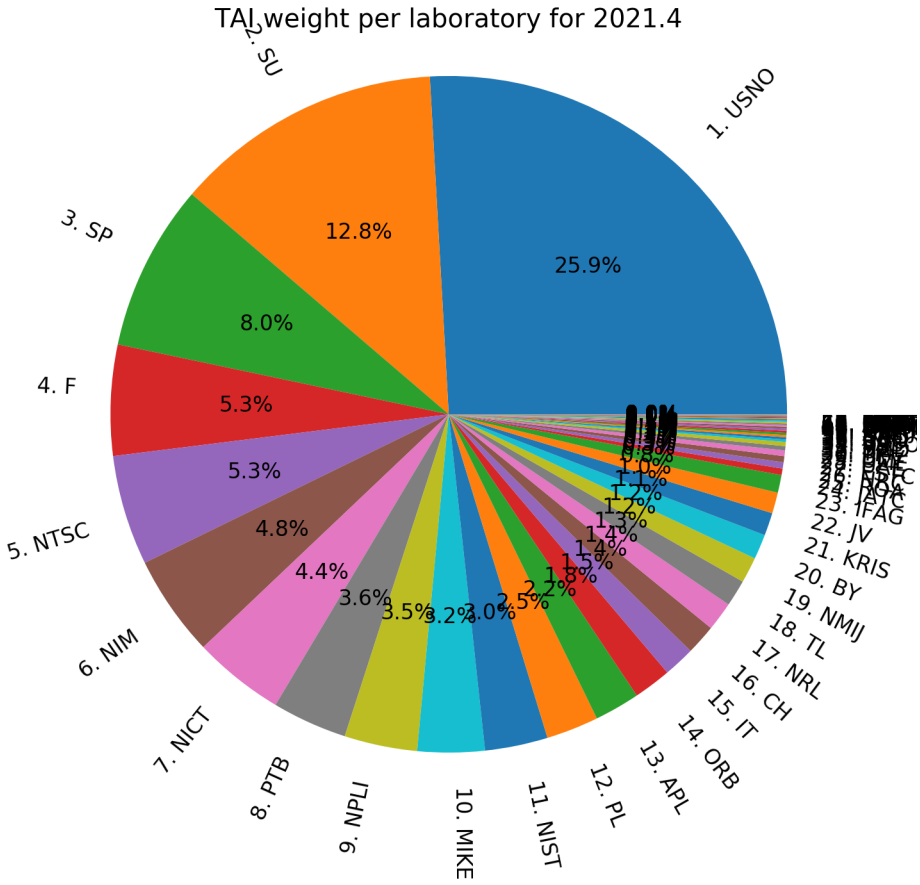
VTT MIKES Clock Weights

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



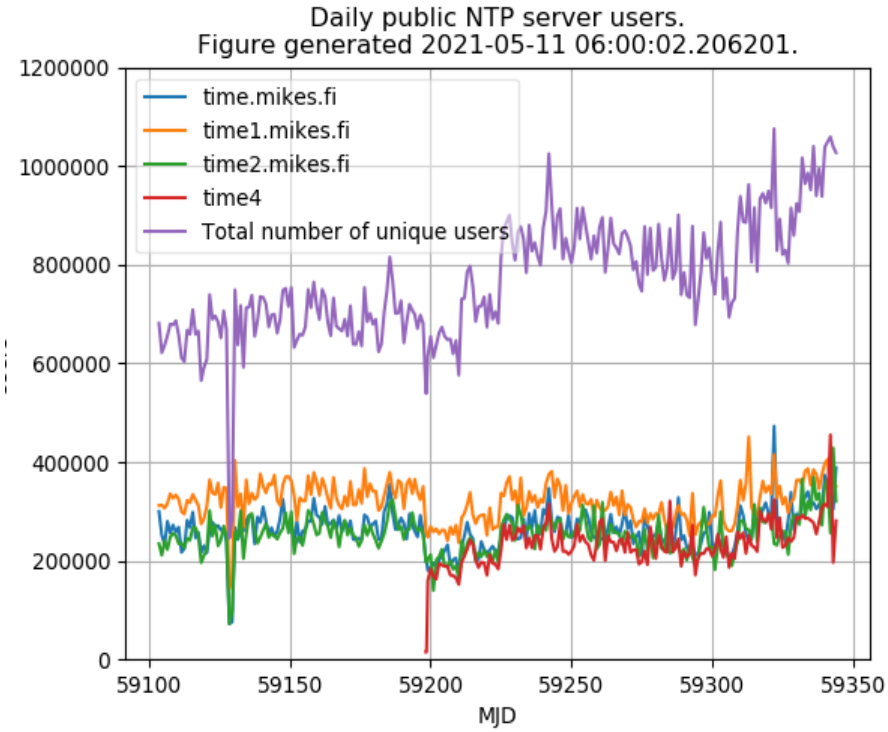
Clock Weights per Laboratory

Relative TAI Weight per laboratory



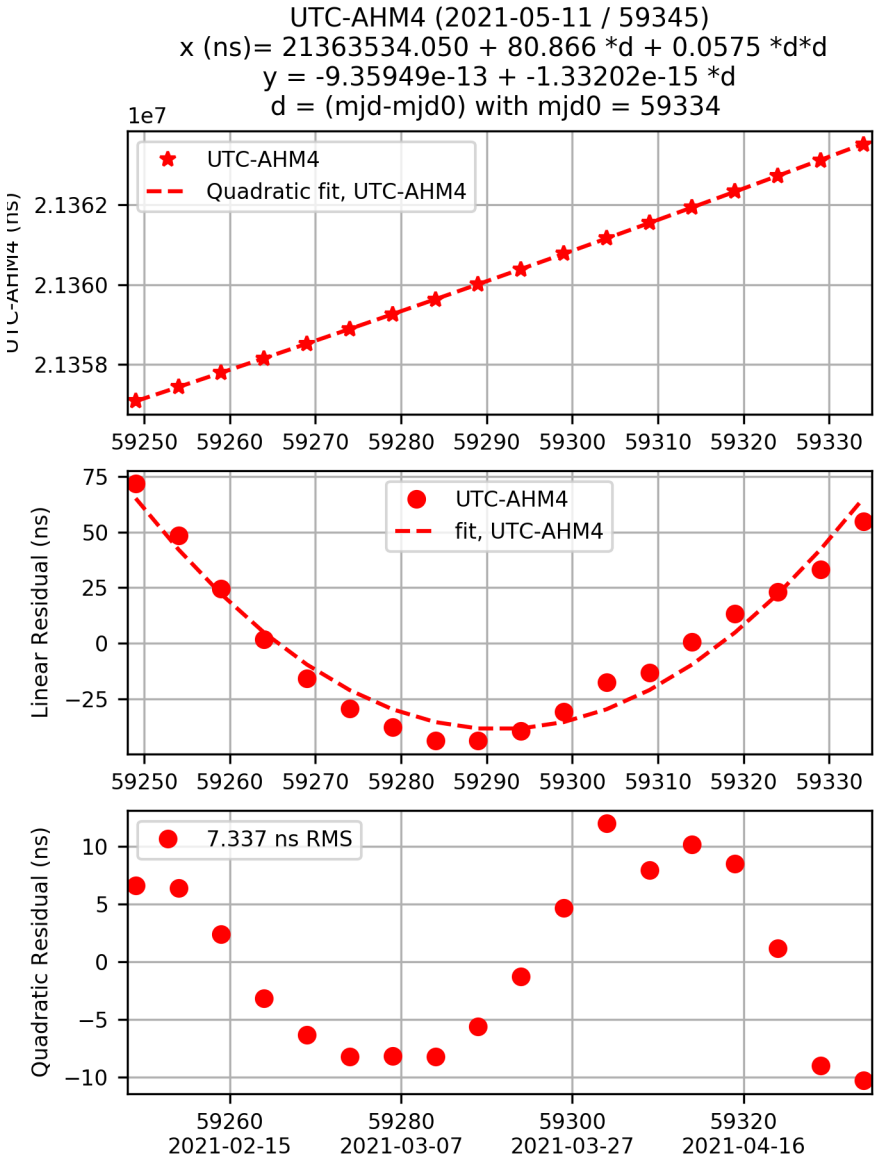
NTP Usage Statistics

Number of unique IPv4 addresses using our public NTP-servers.

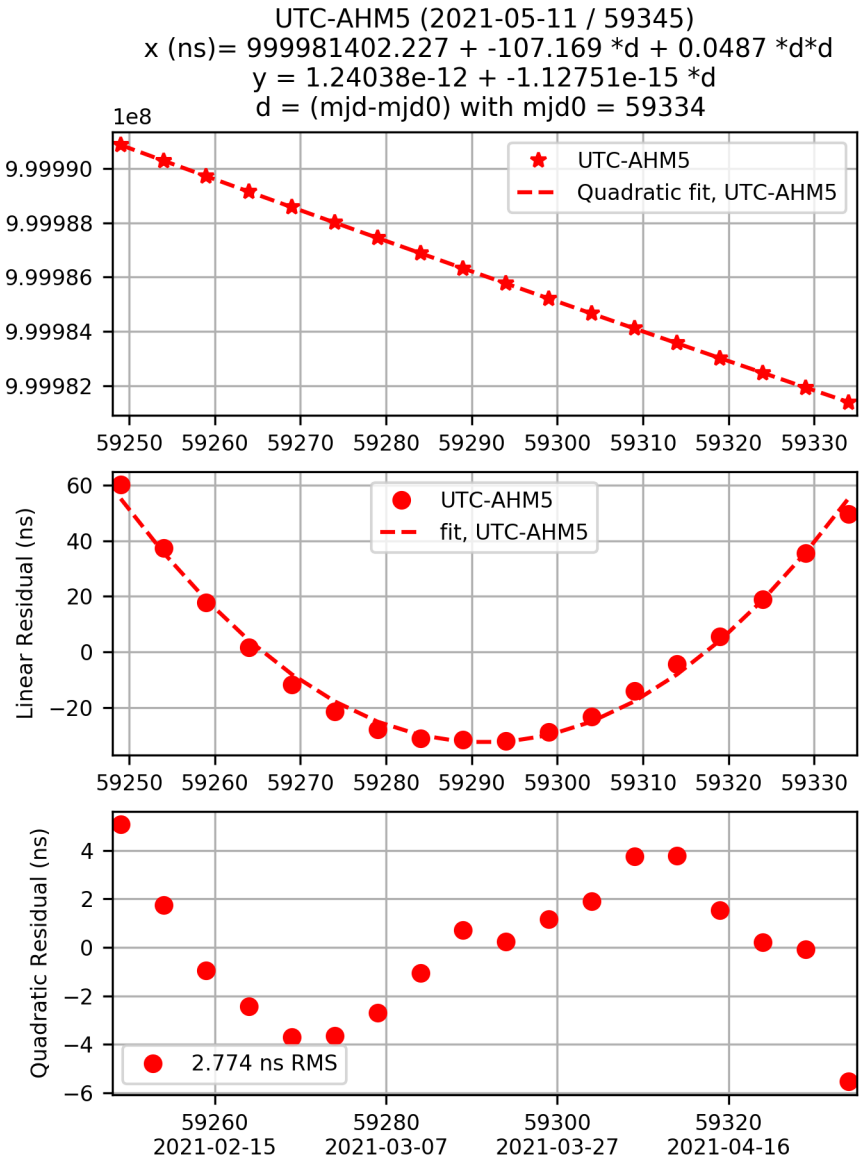


Remote Clocks

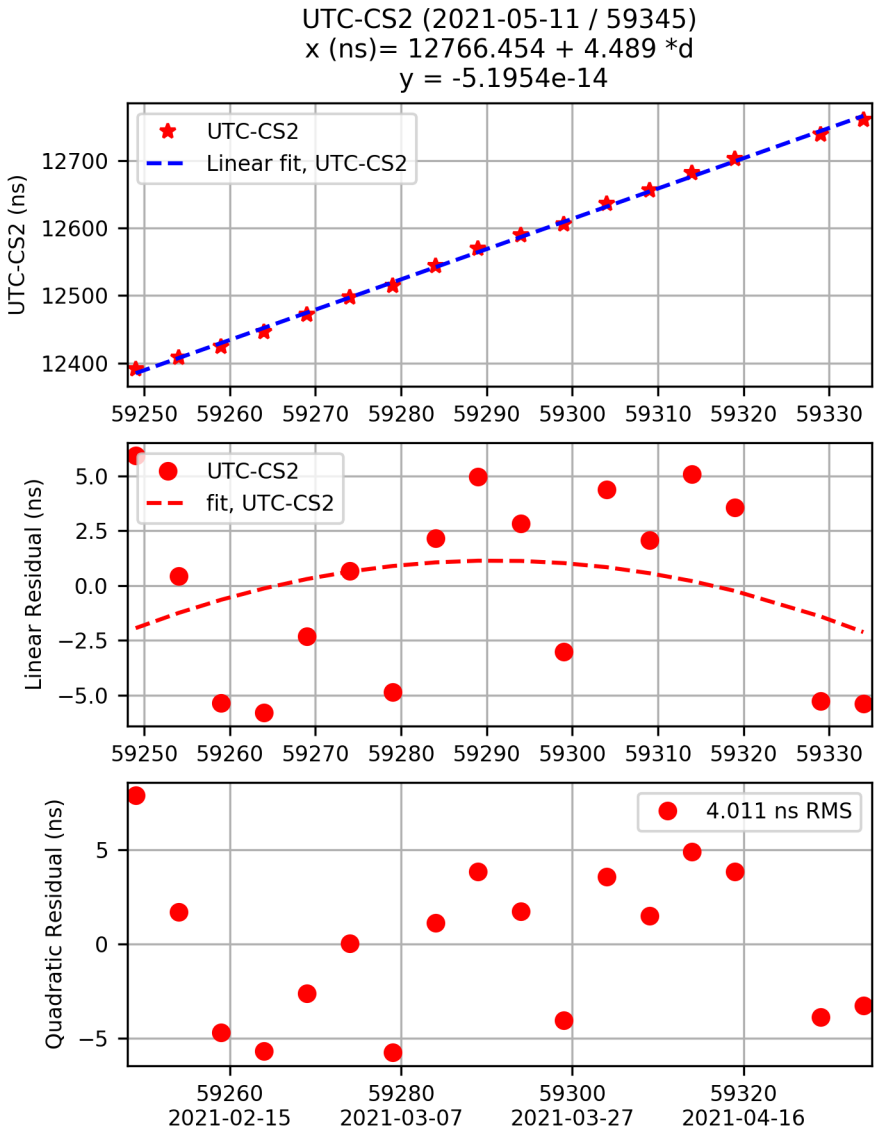
Remote Clock: AHM4



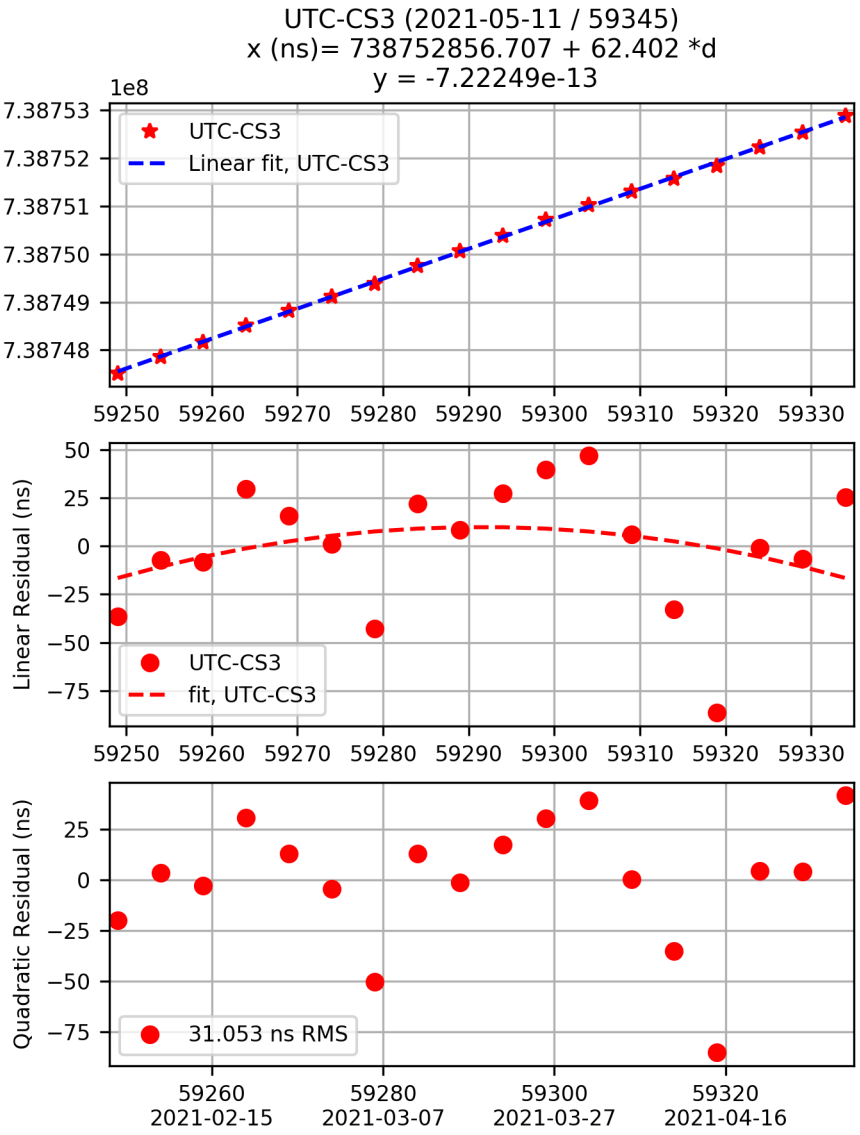
Remote Clock: AHM5



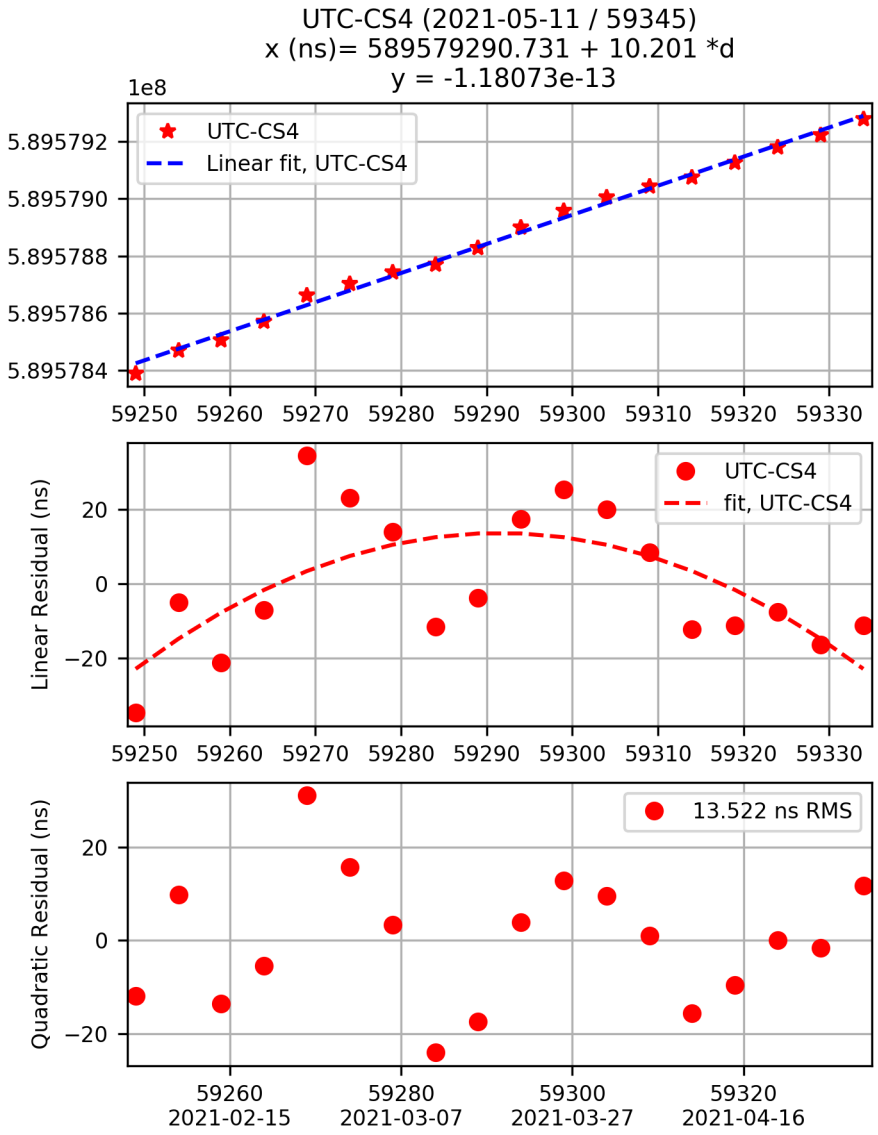
Remote Clock: CS2



Remote Clock: CS3



Remote Clock: CS4



End of Bulletin.