

UTC(MIKE) Atomic Bulletin 2019-01

VTT MIKES Metrology monthly Time & Frequency bulletin.

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

Date of publication: 2019-01-17 (58500)

Circular-T issues used for analysis: [370](#), [371](#), [372](#),

First day of analysis interval: 2018-10-03 (58394)

Last day of analysis interval: 2018-12-27 (58479)

ClockData for analysis: [CDMI 18.10](#), [CDMI 18.11](#), [CDMI 18.12](#),

Notes

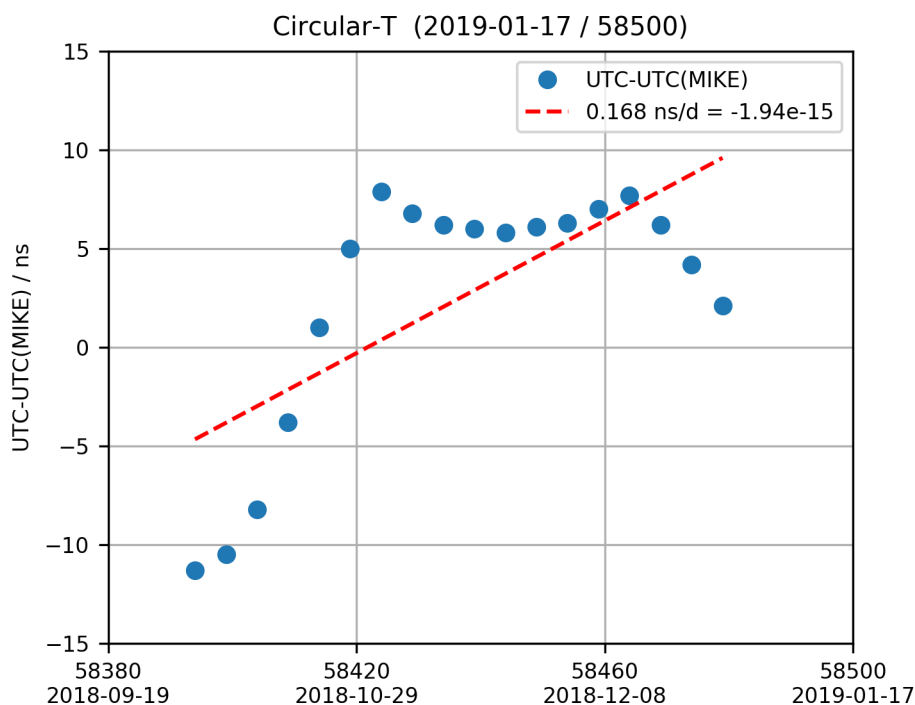
58299 Apparent time step of UTC(MIKE) of +8.2 ns between MJD 58299 and MJD 58304 due to antenna coordinates correction. ClockData before 58299.5 is corrected by -8.2 ns for analysis.

58305 AHM3 rebooted. Phase step +20.2ns.

58450 CS1 Hotwire supply regulation failure

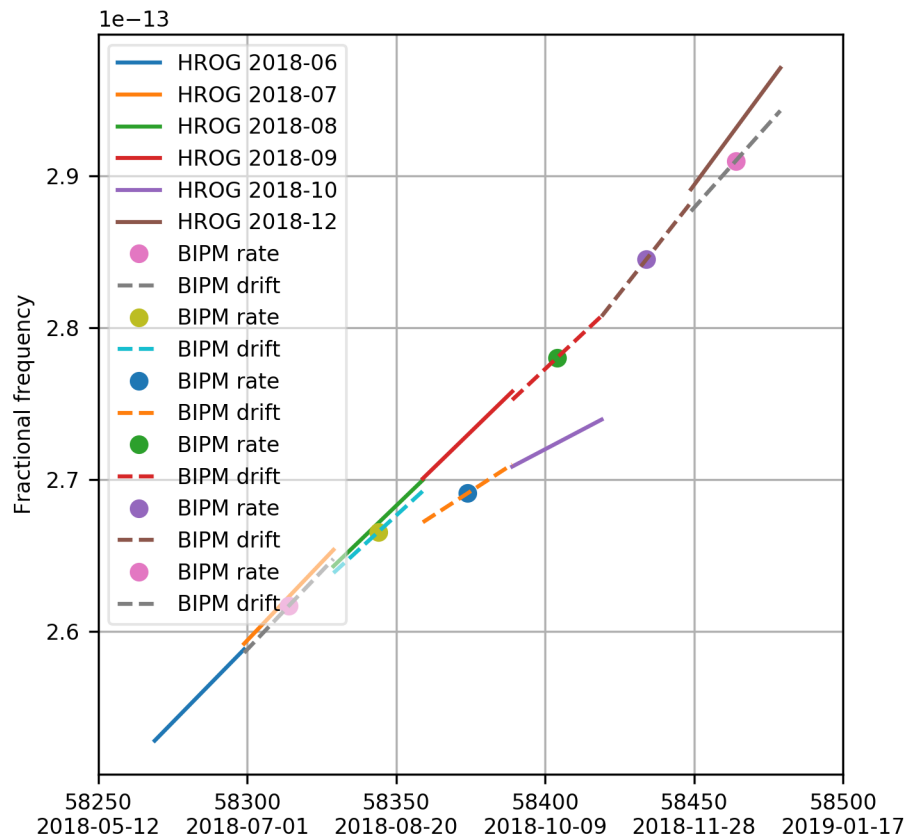
58494 Change master-clock to AHM2

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.

UTC(MIKE) frequency steering parameters



UTC(MIKE) Master Clock is AHM1 since 2017-07-15.

Solid lines indicate UTC(MIKE) steering parameters derived from UTC-ClockData fits.

Symbols and dashed lines indicate MasterClock rates and drifts as published by BIPM.

The latest steering parameters are:

$$y = 2.89111e-13 + 2.66102e-16 * d + y_steer$$

with $d = (mjd - mjd0)$ and $mjd0 = 58479$

$y_steer = -4ns/30 \text{ days} = -2e-15$ from 58372

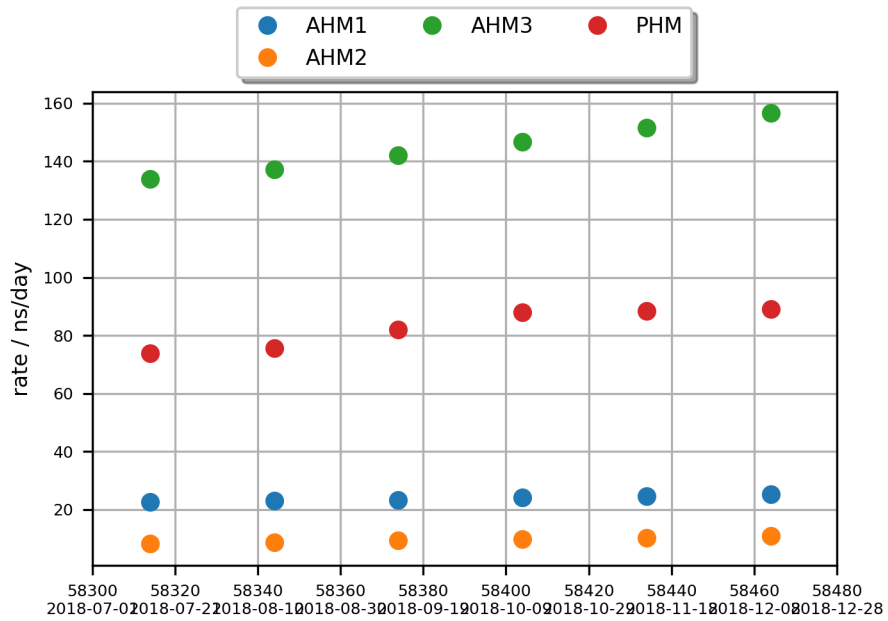
$y_steer = -10ns/30 \text{ days} = -4e-15$ from 58401

$y_steer = 0$ from 58416

$y_steer = 1e-14$ from 58423

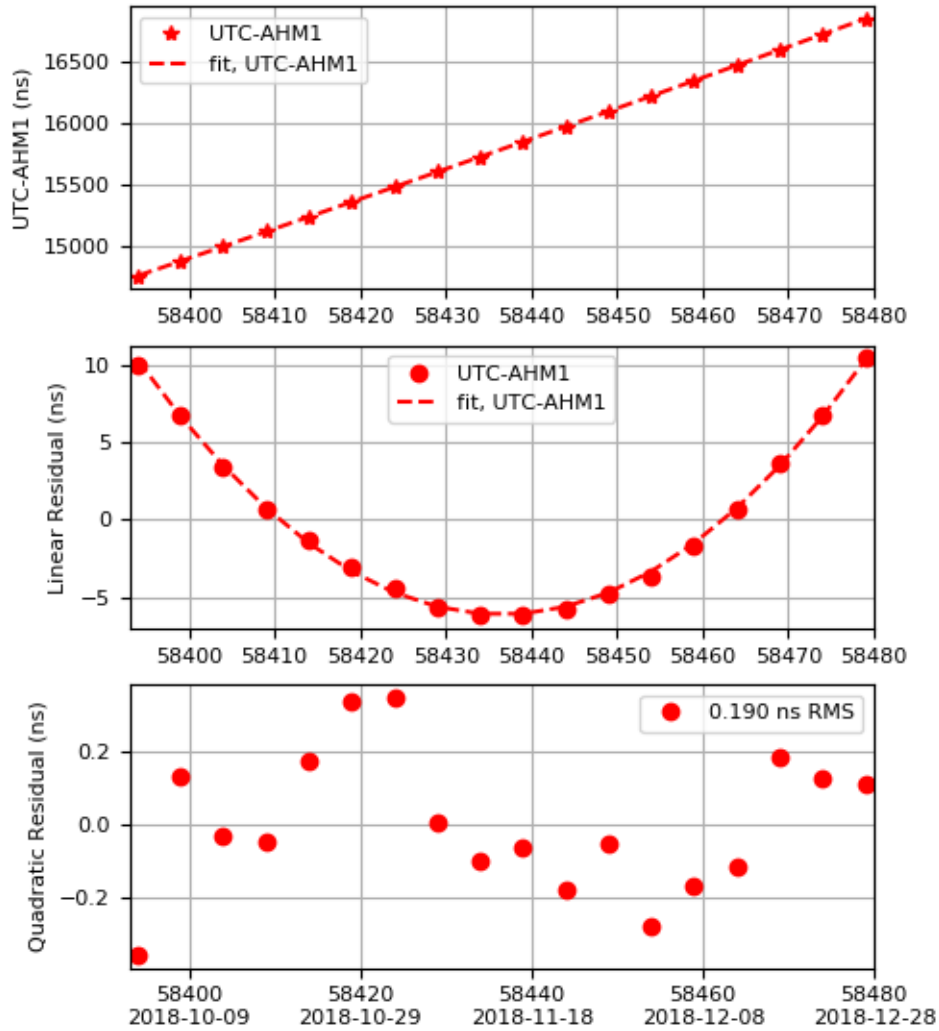
$y_steer = 2e-15$ from 58463

Clock Rates - Summary

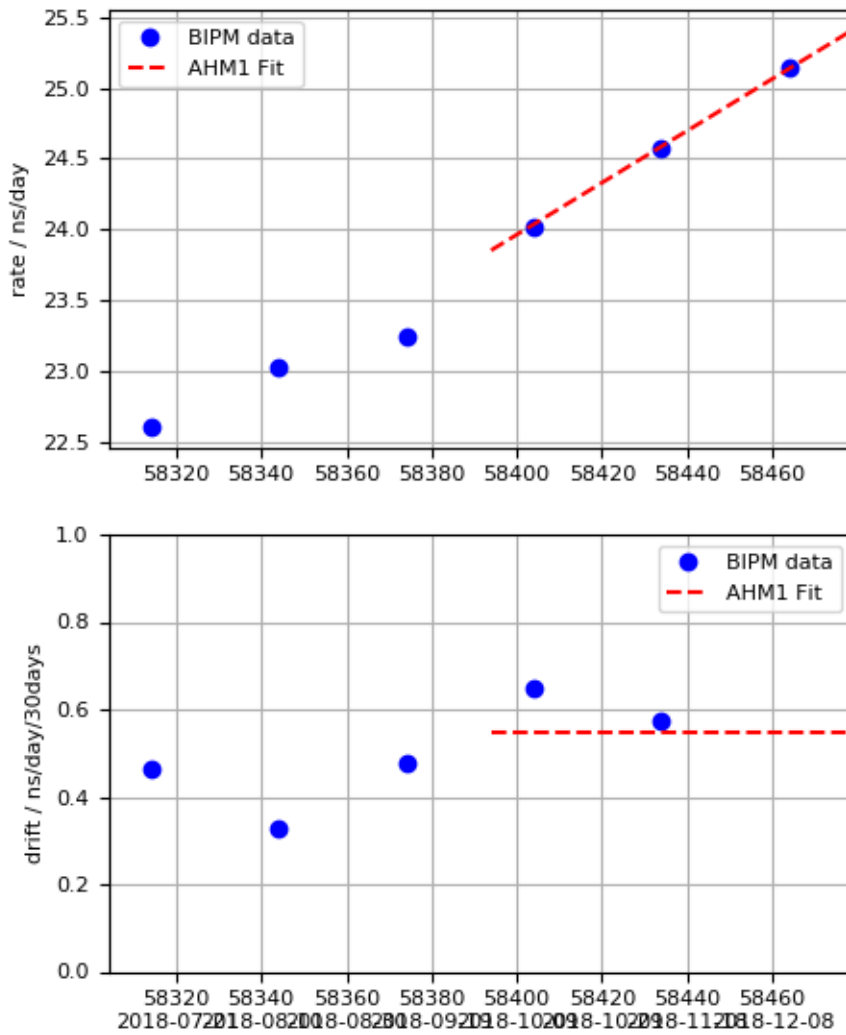


UTC - AHM1 Fit

UTC-AHM1 (2019-01-17 / 58500)
 $x \text{ (ns)} = 16848.589 + 25.409 *d + 0.0091 *d*d$
 $y = -2.9408e-13 + -2.11445e-16 *d$
 $d = (\text{mjd}-\text{mjd0}) \text{ with mjd0} = 58479$

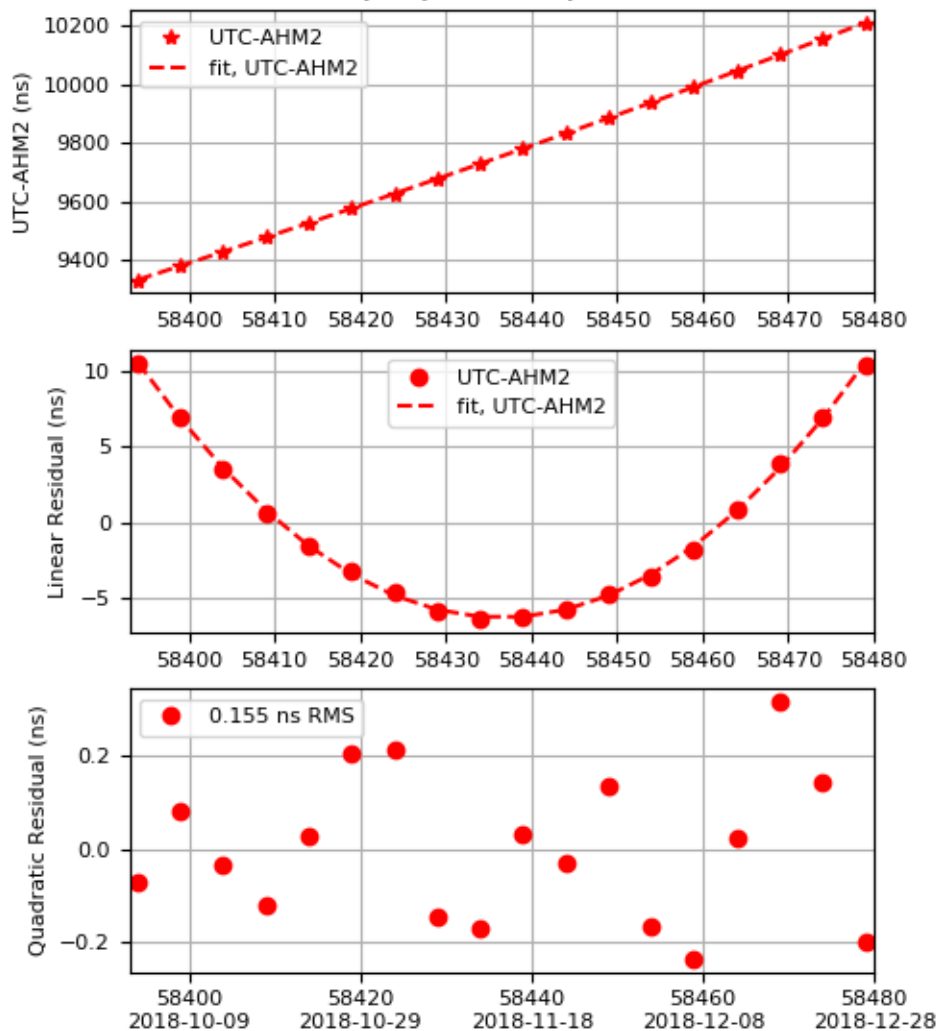


AHM1 Rate and Drift

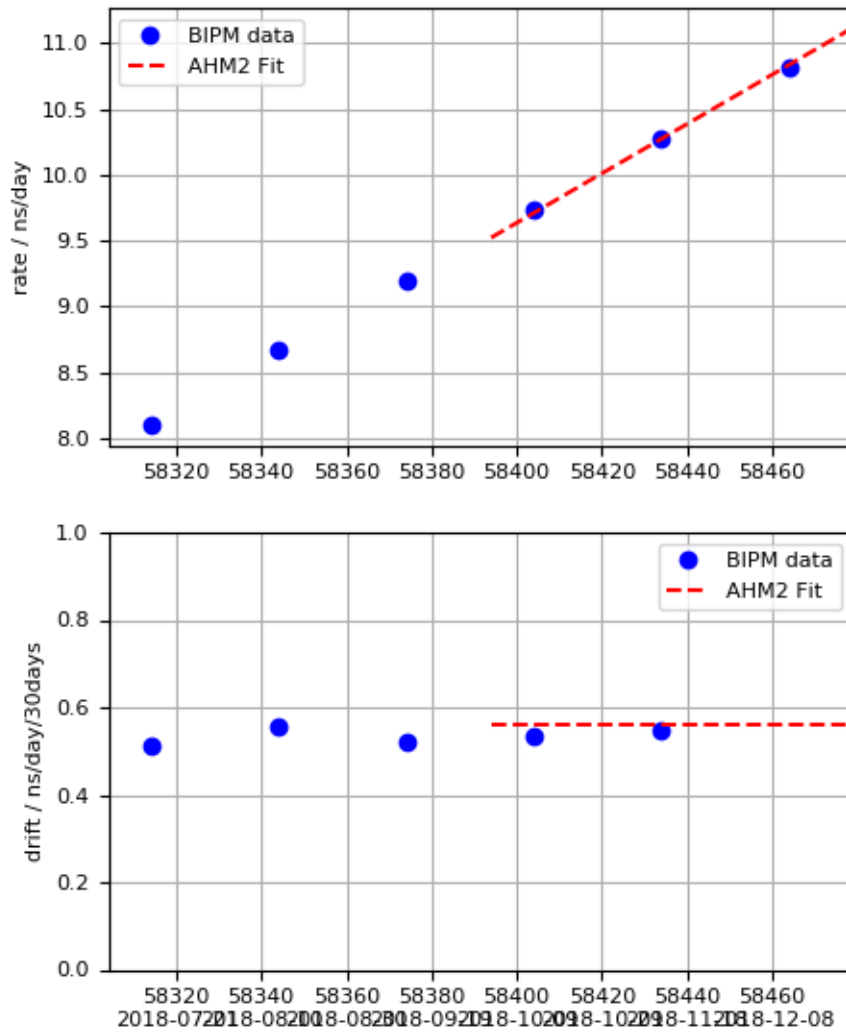


UTC - AHM2 Fit

UTC-AHM2 (2019-01-17 / 58500)
 $x \text{ (ns)} = 10209.802 + 11.116 *d + 0.0094 *d*d$
 $y = -1.28653e-13 + -2.16897e-16 *d$
 $d = (\text{mjd}-\text{mjd0})$ with $\text{mjd0} = 58479$

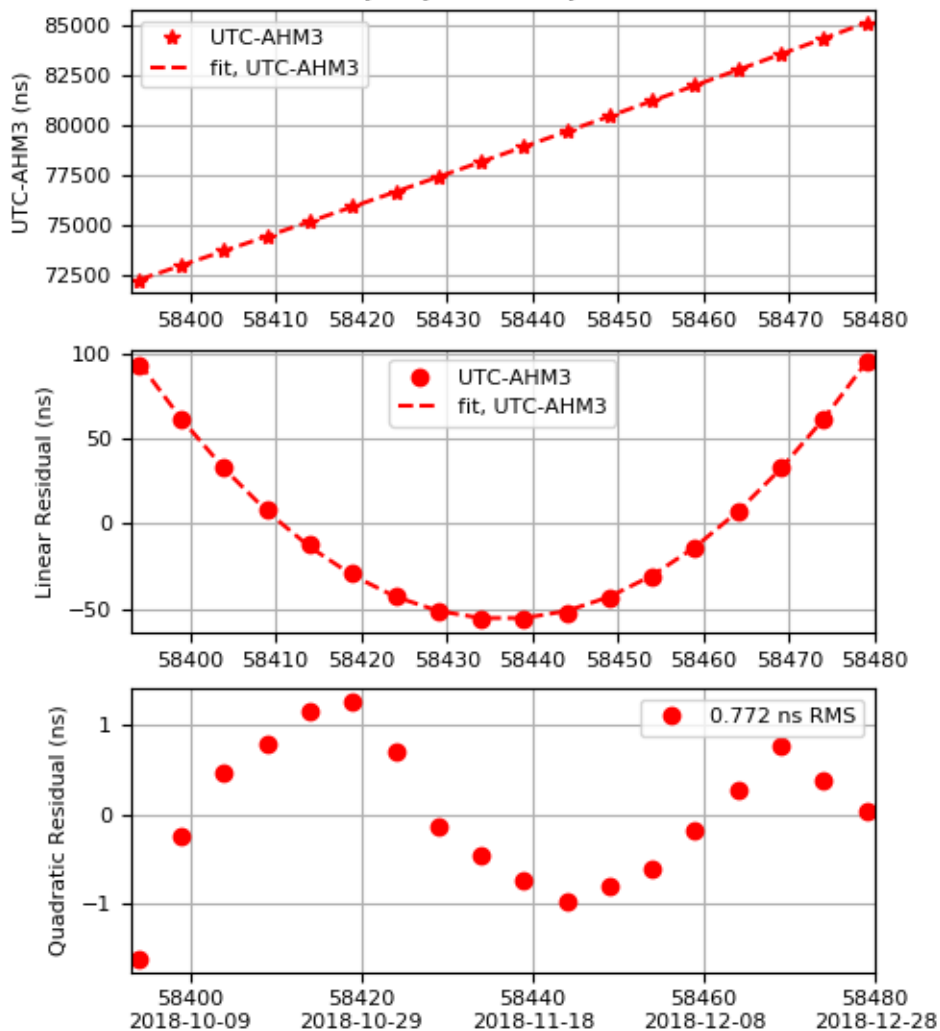


AHM2 Rate and Drift

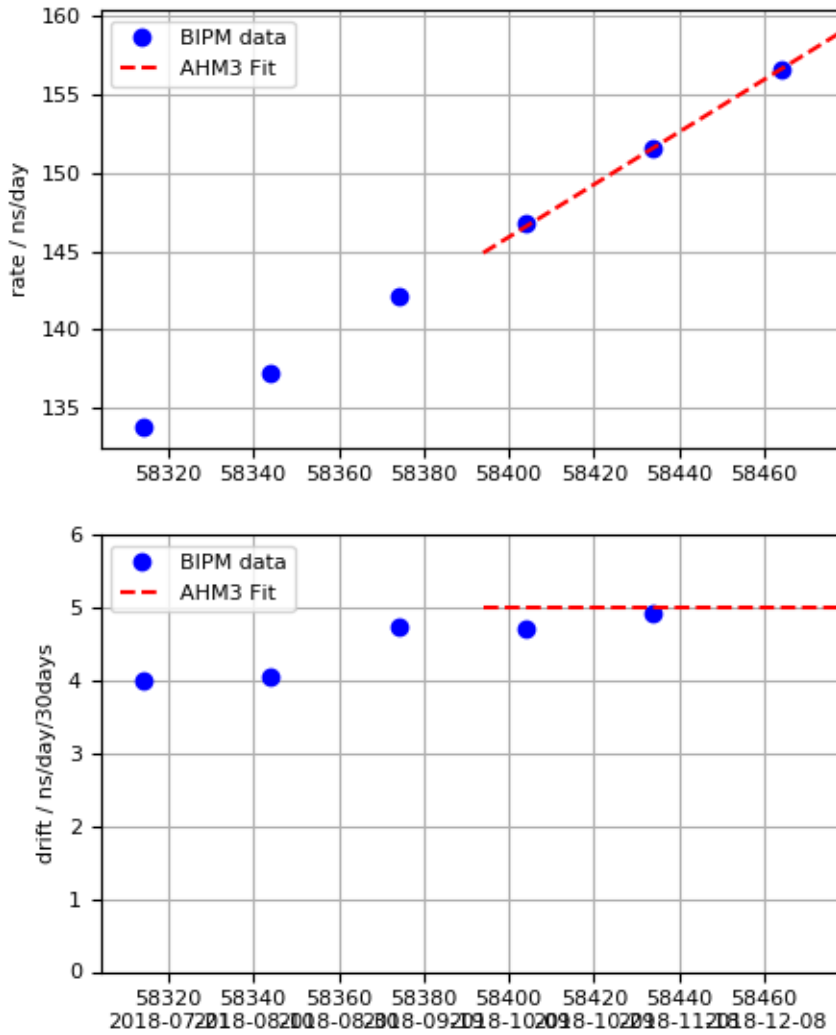


UTC - AHM3 Fit

UTC-AHM3 (2019-01-17 / 58500)
 $x \text{ (ns)} = 85133.169 + 159.067 * d + 0.0834 * d * d$
 $y = -1.84106e-12 + -1.93098e-15 * d$
 $d = (\text{mjd} - \text{mjd0}) \text{ with mjd0} = 58479$

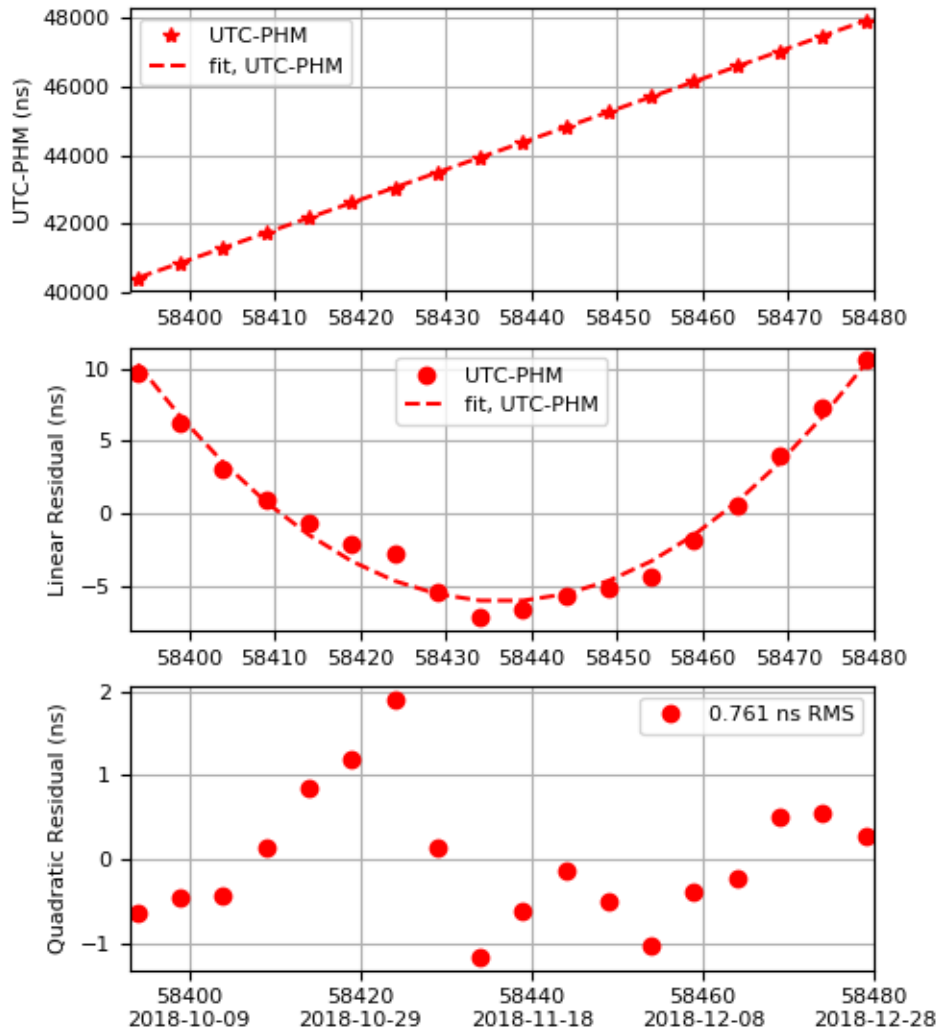


AHM3 Rate and Drift

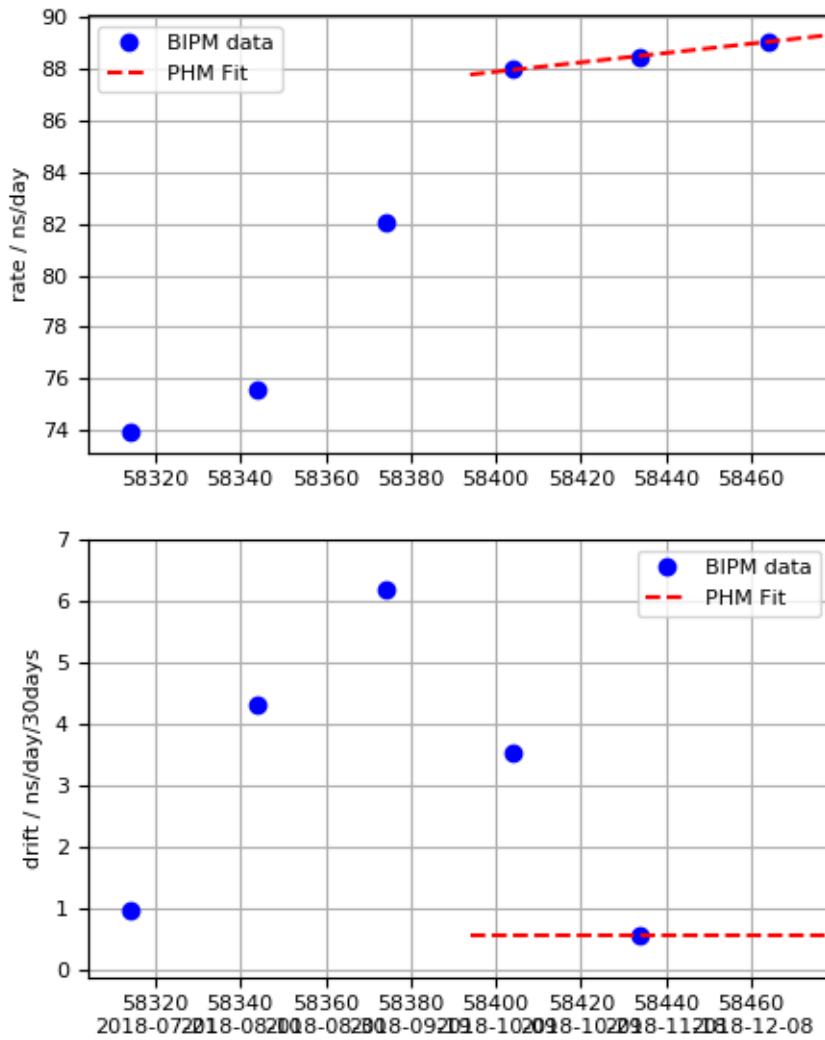


UTC - PHM Fit

UTC-PHM (2019-01-17 / 58500)
 $x \text{ (ns)} = 47928.828 + 89.323 *d + 0.0091 *d*d$
 $y = -1.03384e-12 + -2.10137e-16 *d$
 $d = (\text{mjd}-\text{mjd0})$ with $\text{mjd0} = 58479$

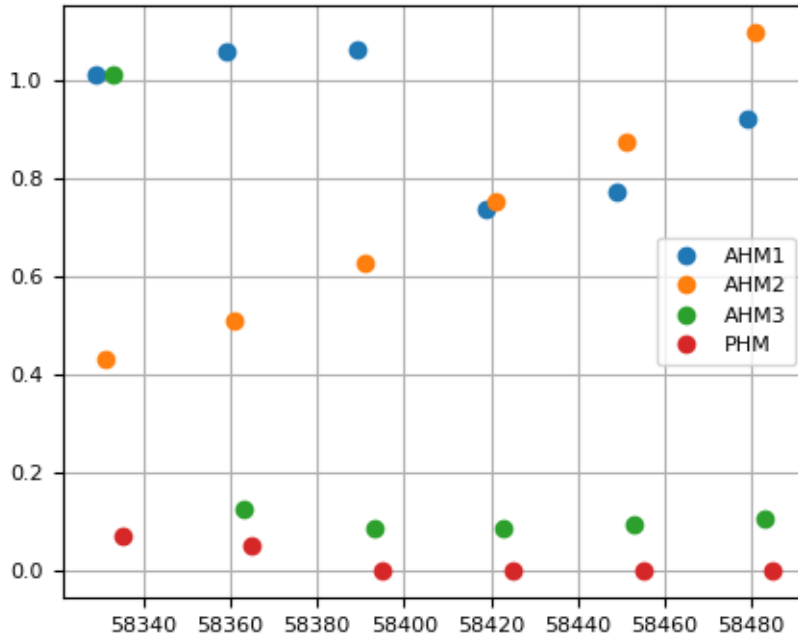


PHM Rate and Drift



Clock Weights

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



End of Bulletin.