UTC(MIKE) Atomic Bulletin 2018-09

VTT MIKES Metrology monthly Time & Frequency bulletin.
Comments and questions to: time "at" vtt.fi
Date of publication: 2018-09-11 (58372)
Circular-T issues used for analysis: 366, 367, 368,
First day of analysis interval: 2018-06-05 (58274)
Last day of analysis interval: 2018-08-29 (58359)
ClockData for analysis: CDMI__18.06_, CDMI__18.07_, CDMI__18.08_,
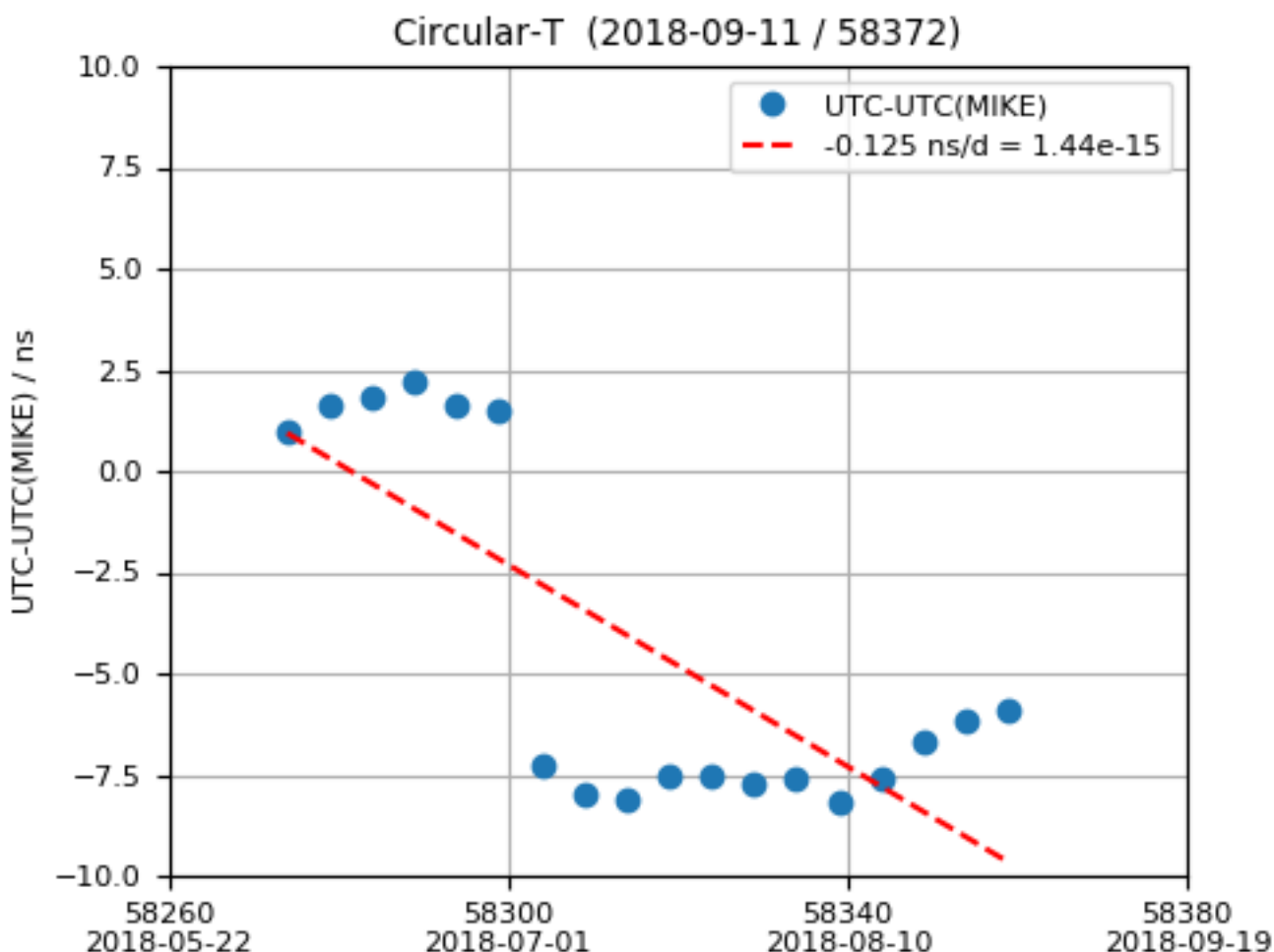
Notes

58204 AHM2 TAI-weight non-zero
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.
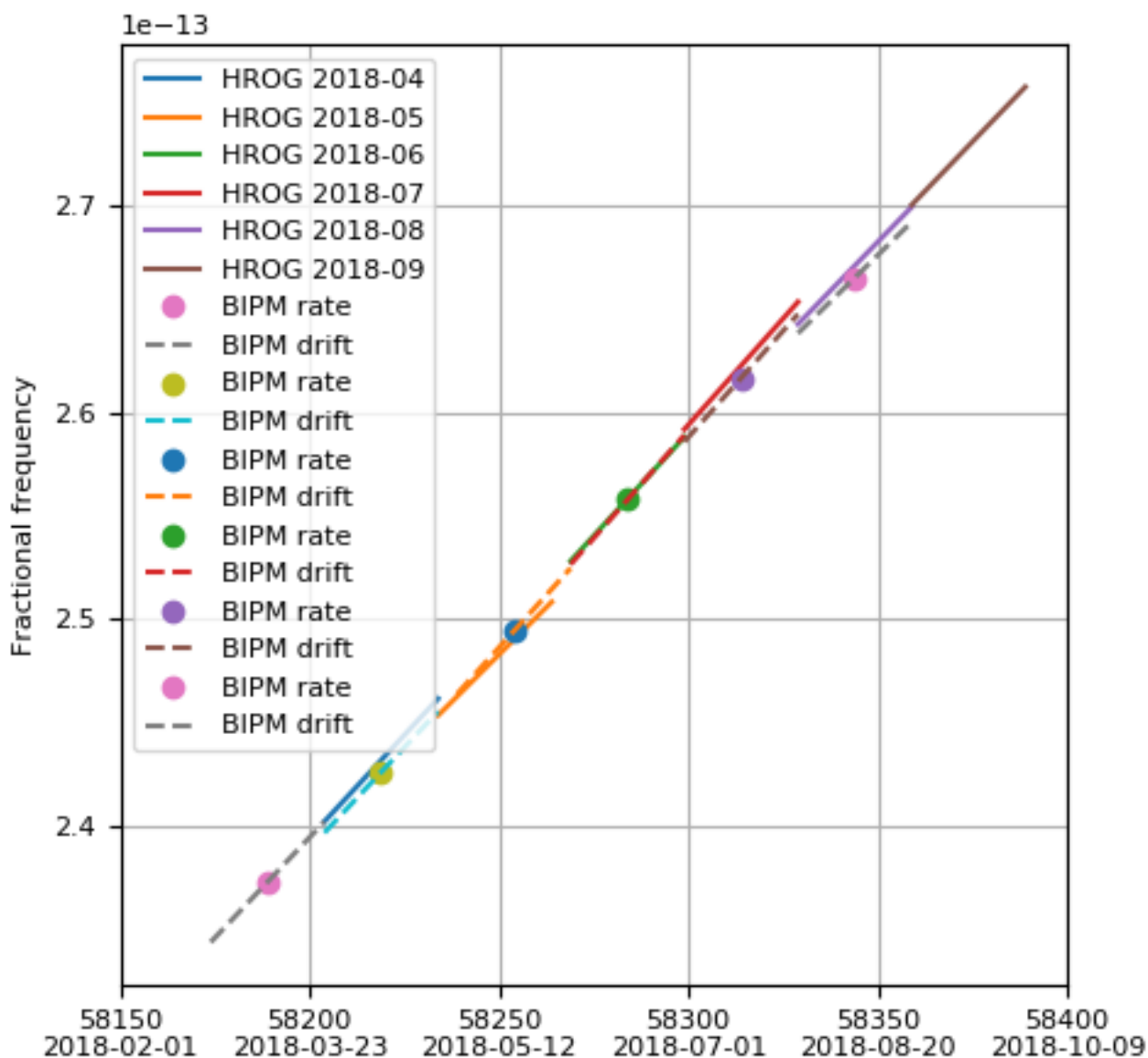58340 Steering correction of -7.5ns/30d = -2.89e-15 applied.
58372 Steering correction of -4ns/30d = -1.5e-15 applied.

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 = 2.7007e-13 + 1.90793e-16 *d + y_steer
with d = (mjd-mjd0) and mjd0 = 58359
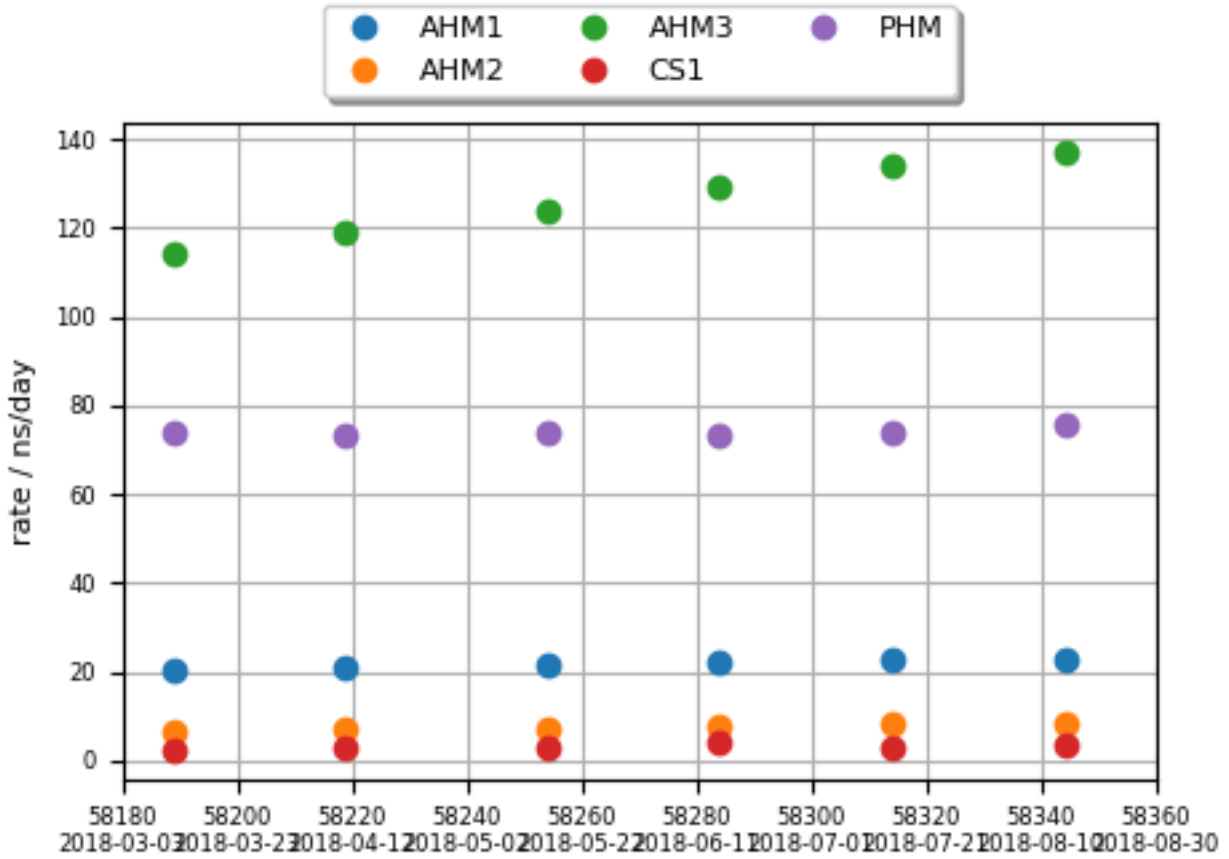y_steer = -1.5ns/30 days = -5.79e-16 from 58071
y_steer = 0 from 58150
y_steer = -7.5ns/30 days = -2.89e-15 from 58340
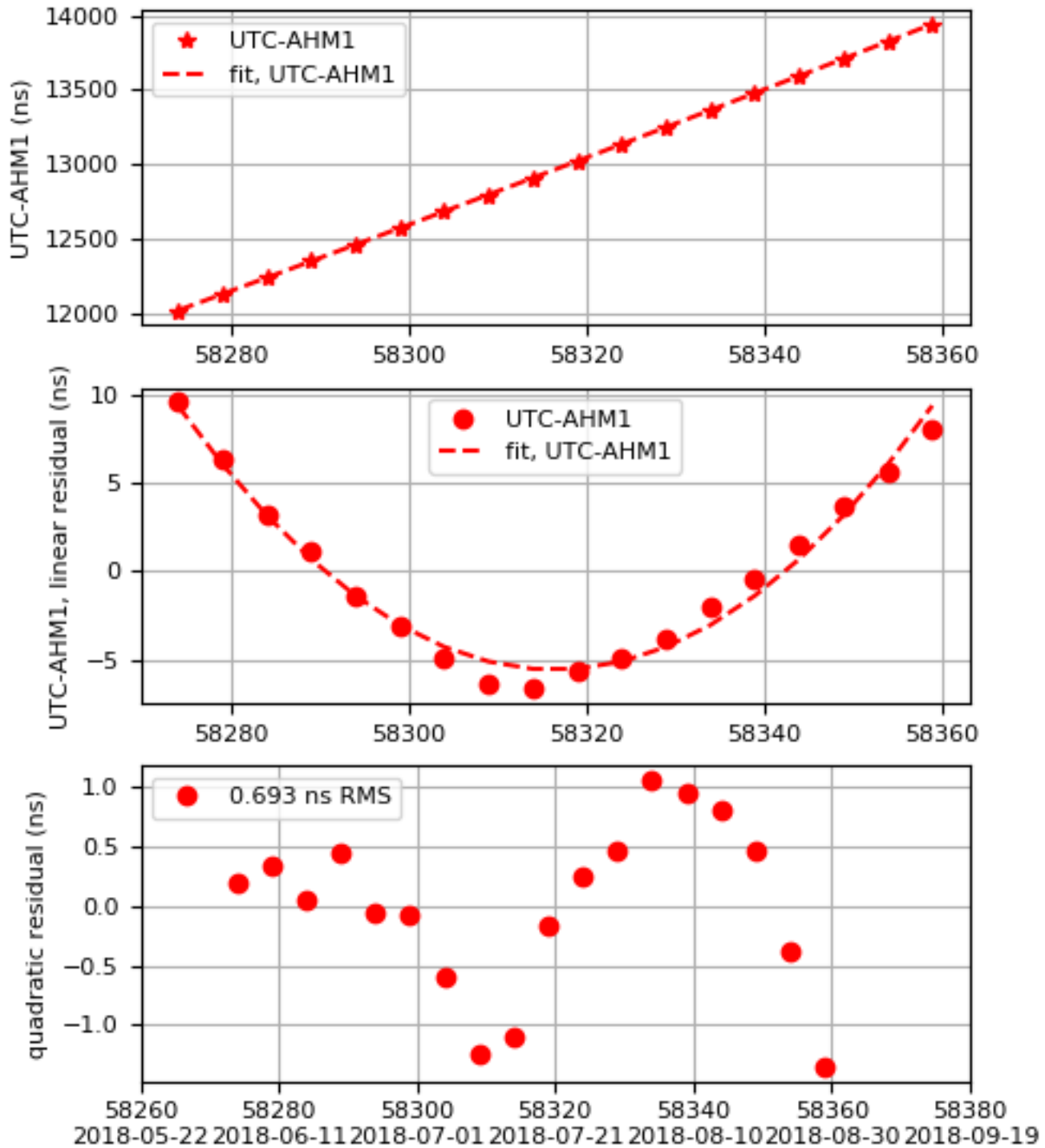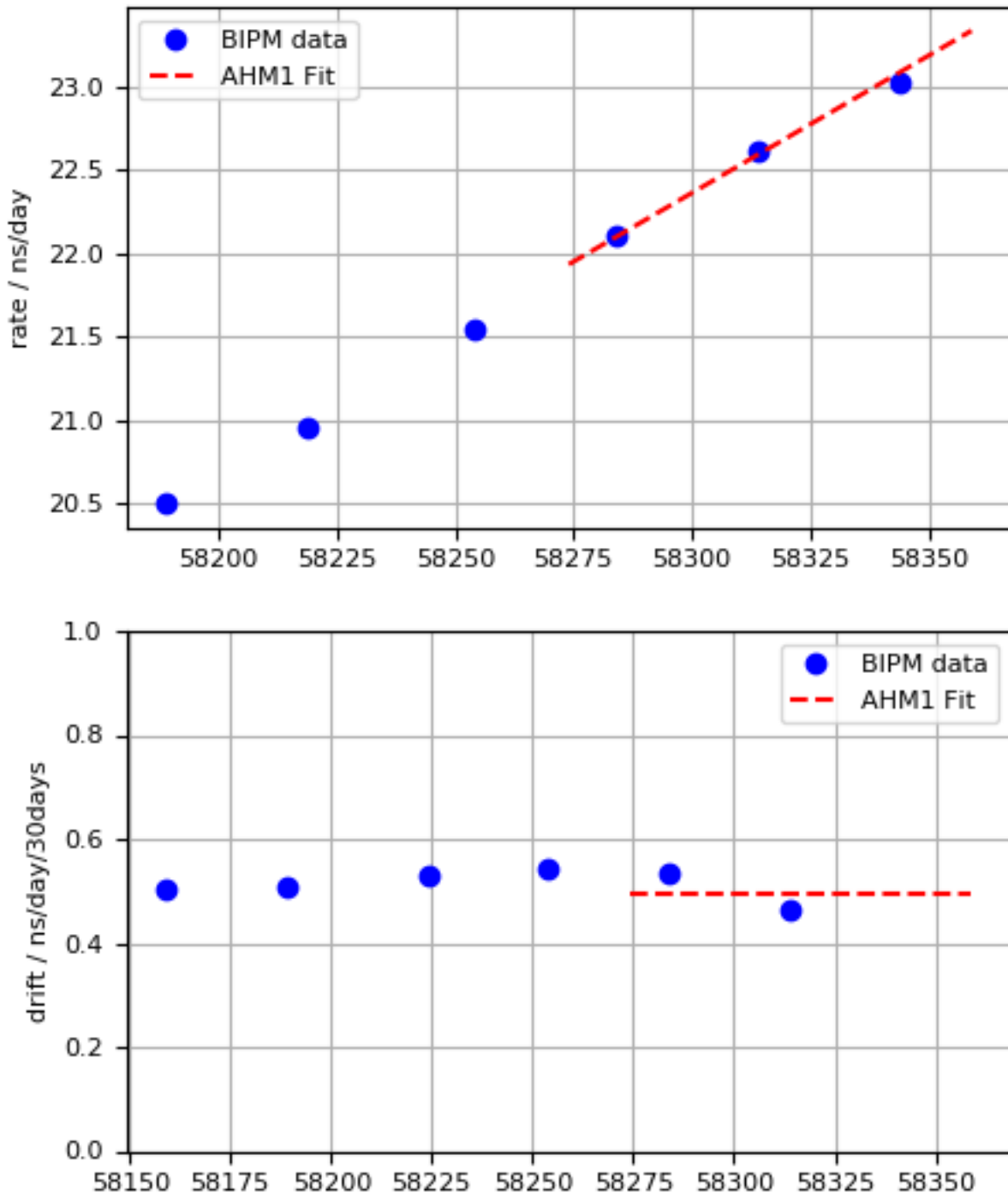y_steer = -4ns/30 days = -2e-15 from 58372

Clock Rates - Summary

UTC - AHM1 Fit

UTC-AHM1 (2018-09-11 / 58372)
$x \text{ (ns)} = 13940.748 + 23.334 *d + 0.0082 *d*d$
$y = -2.7007e{-}13 + -1.90793e{-}16 *d$
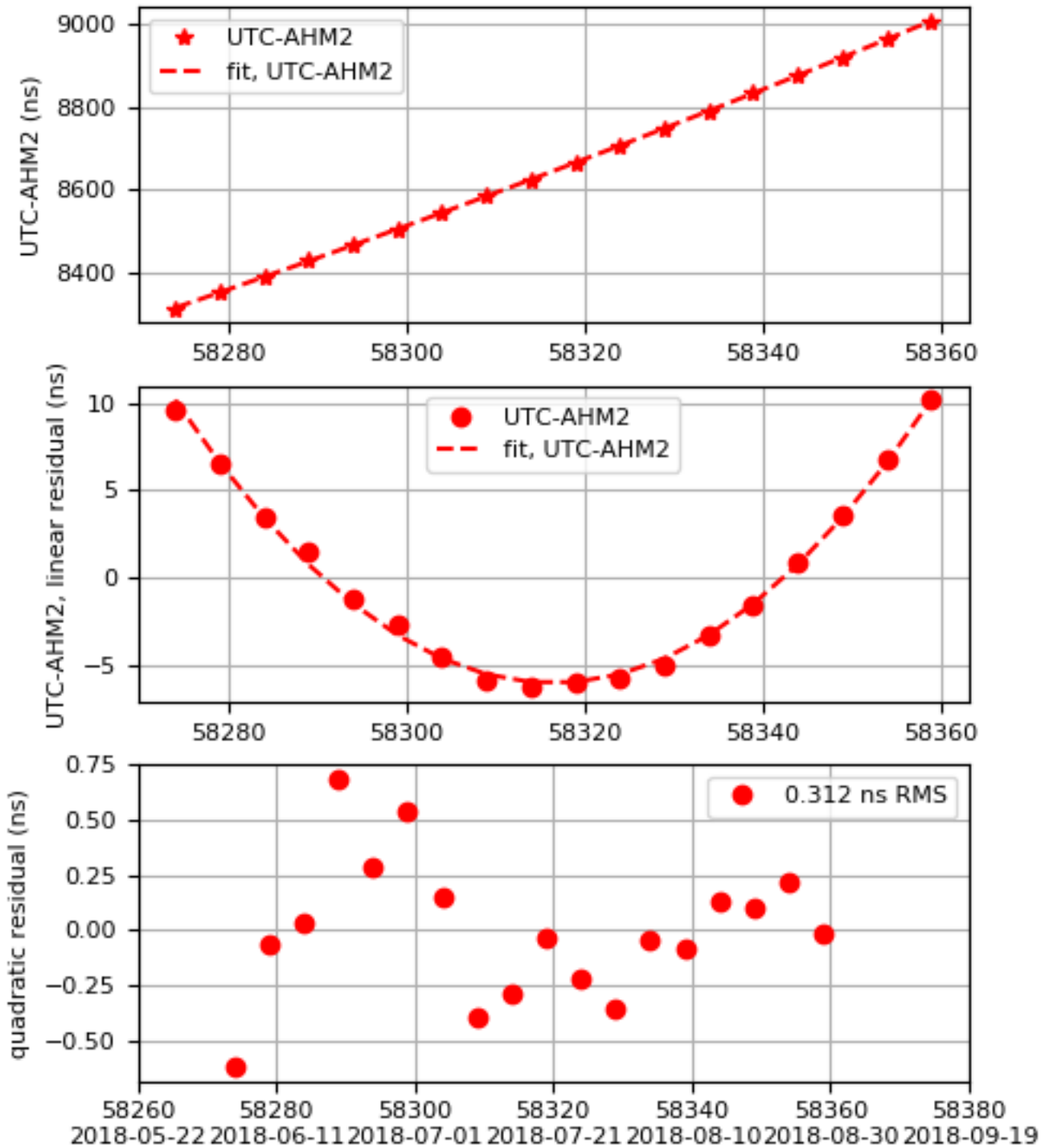$d = (mjd{-}mjd0) \text{ with } mjd0 = 58359$
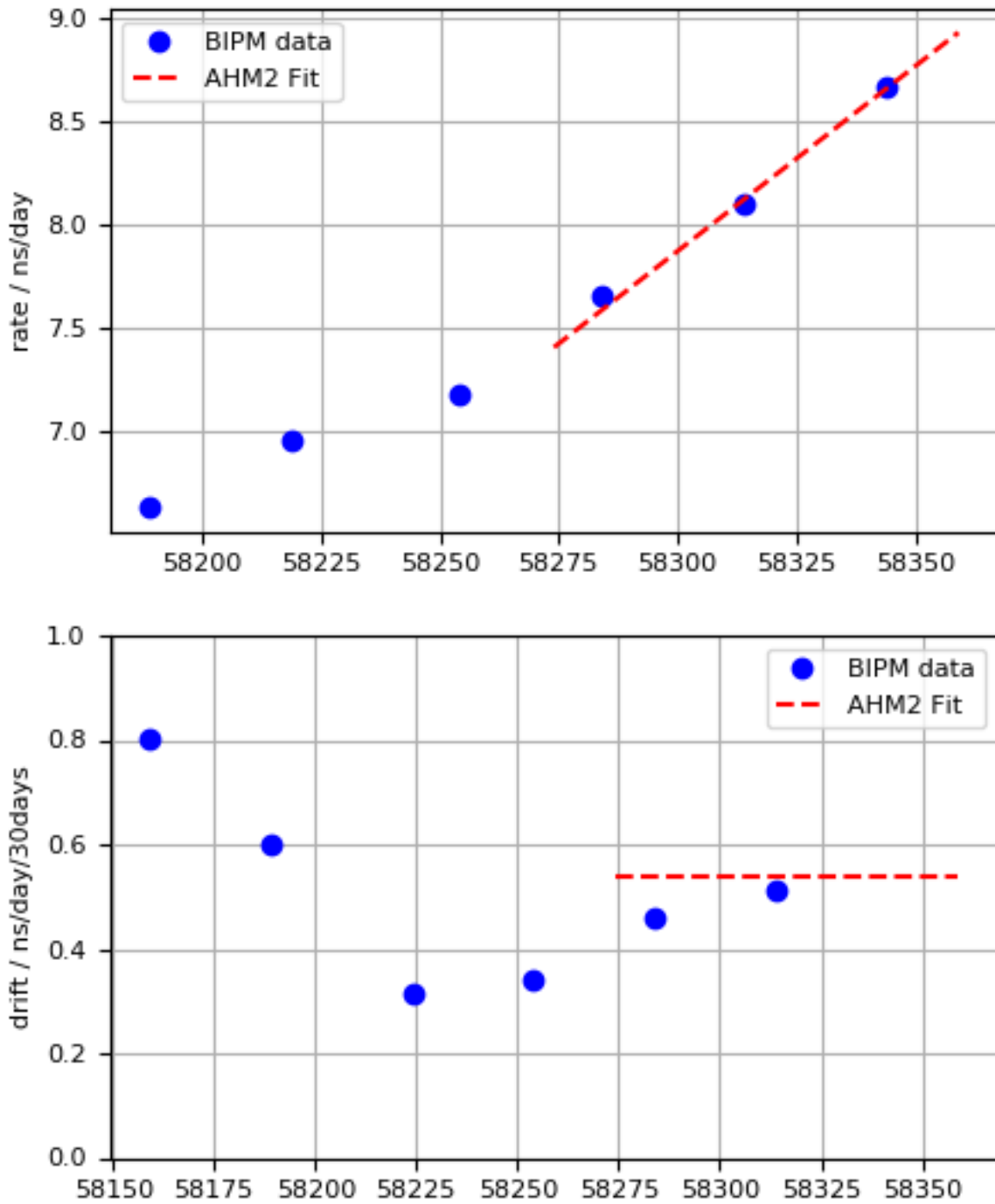
AHM1 Rate and Drift

UTC - AHM2 Fit

UTC-AHM2 (2018-09-11 / 58372)
$$x \text{ (ns)} = 9008.617 + 8.931 *d + 0.0090 *d*d$$
$$y = -1.0337e{-13} + -2.07766e{-16} *d$$
$$d = (mjd-mjd0) \text{ with } mjd0 = 58359$$

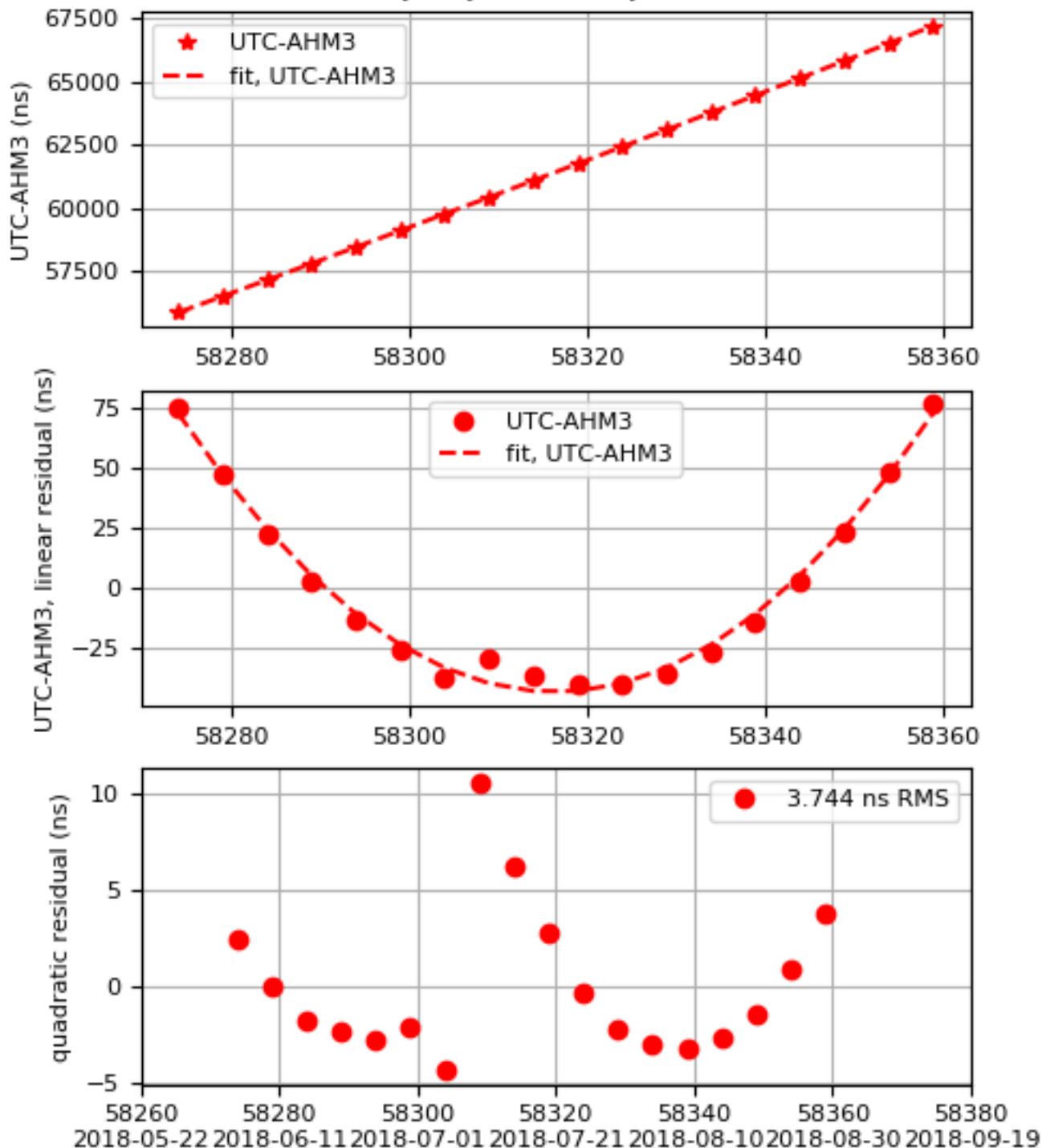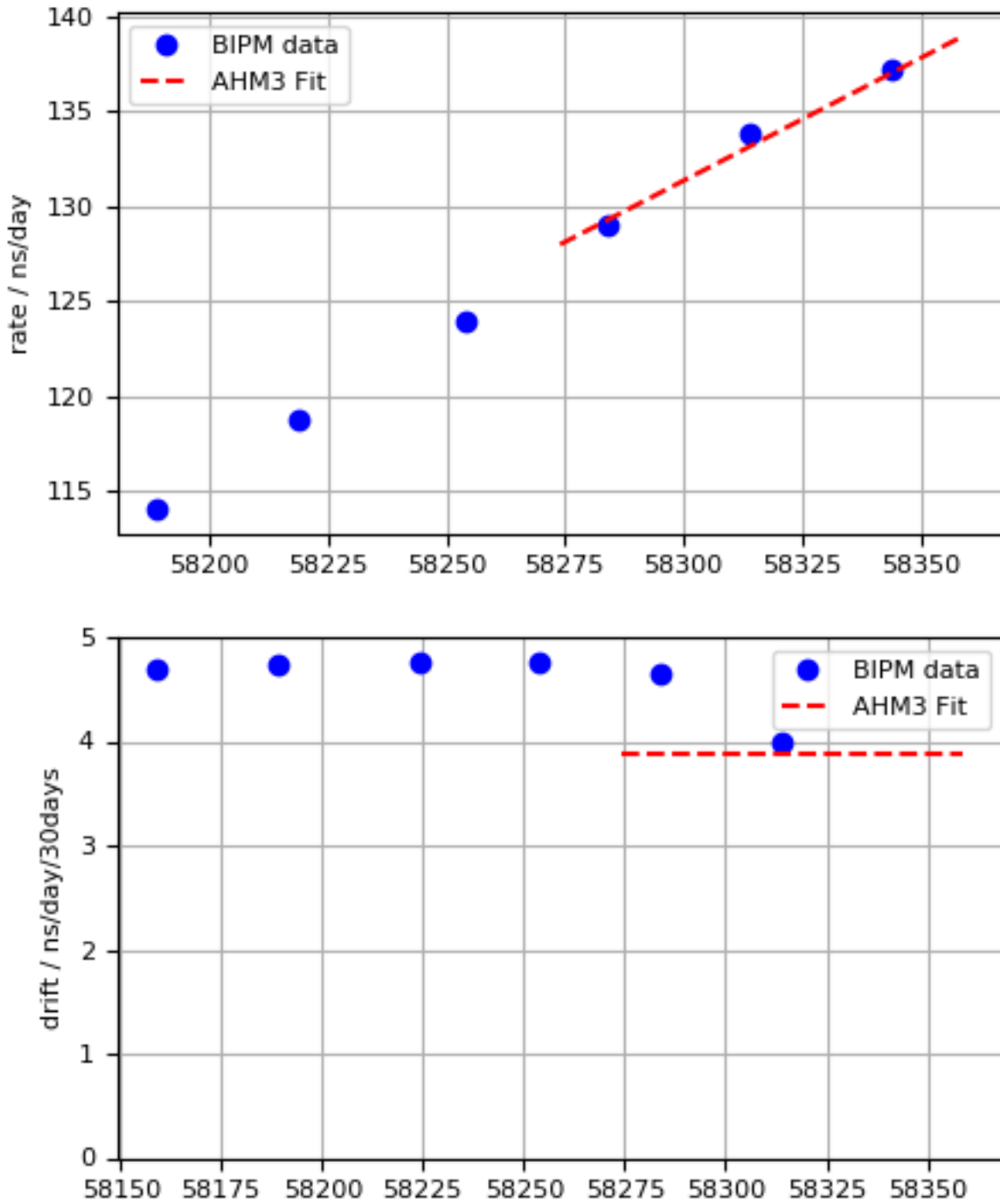## AHM2 Rate and Drift

UTC - AHM3 Fit

UTC-AHM3 (2018-09-11 / 58372)
$$x \text{ (ns)} = 67221.457 + 138.950 *d + 0.0646 *d*d$$
$$y = -1.60821e\text{-}12 + -1.49453e\text{-}15 *d$$
$$d = (mjd-mjd0) \text{ with } mjd0 = 58359$$

AHM3 Rate and Drift

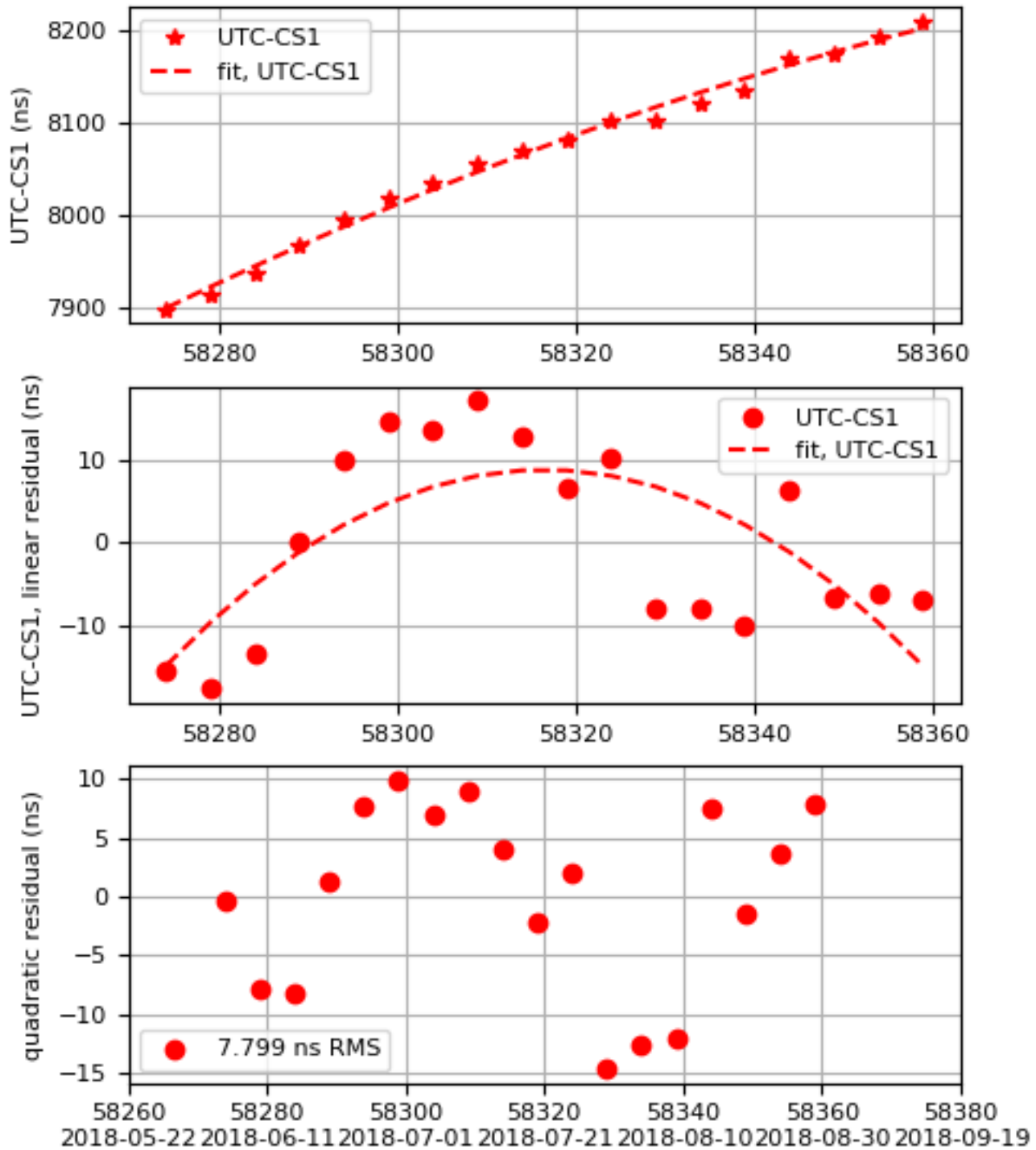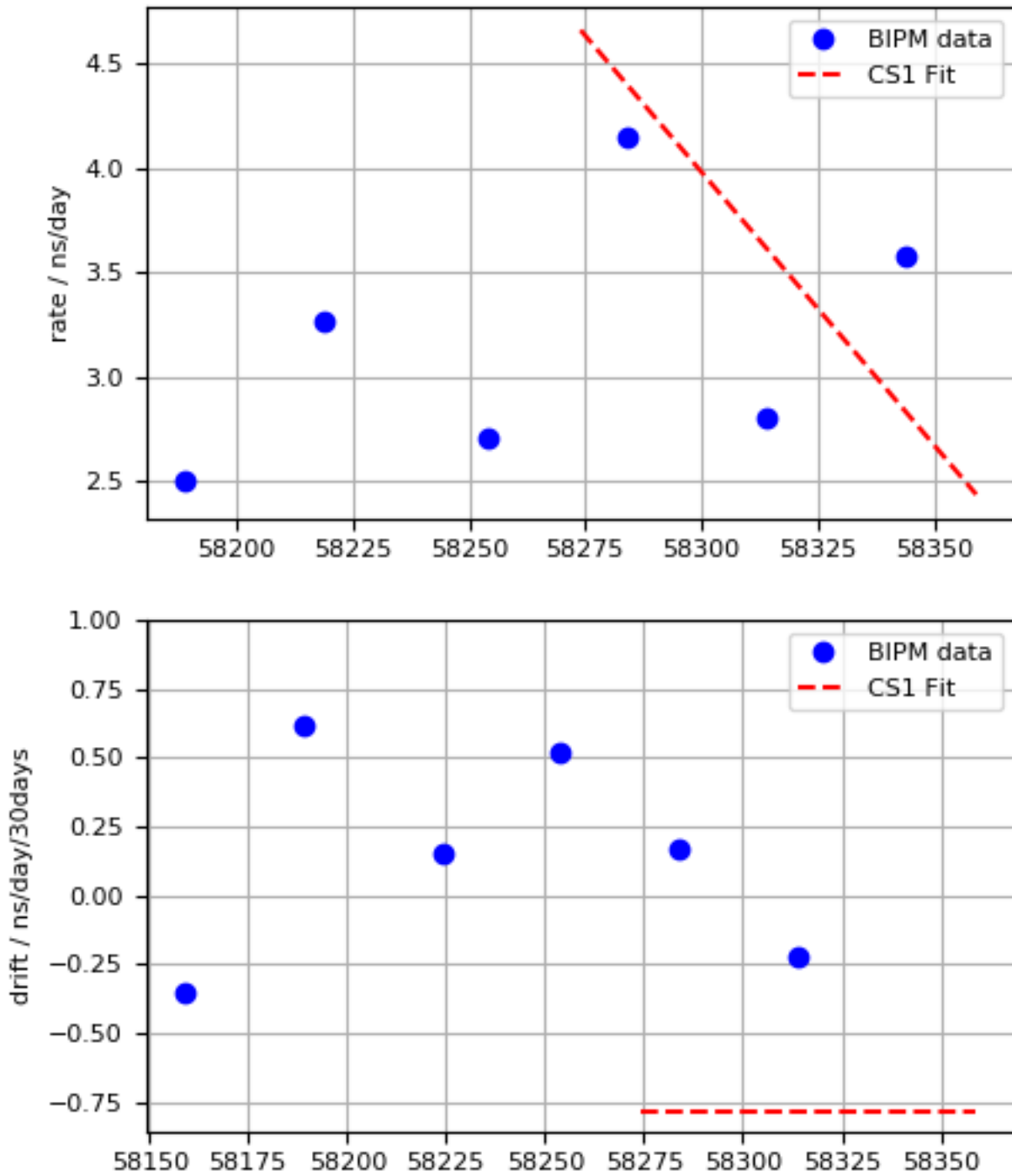## UTC - CS1 Fit

UTC-CS1 (2018-09-11 / 58372)
x (ns)= 8201.693 + 2.437 *d + -0.0131 *d*d
y = -2.82084e-14 + 3.02371e-16 *d
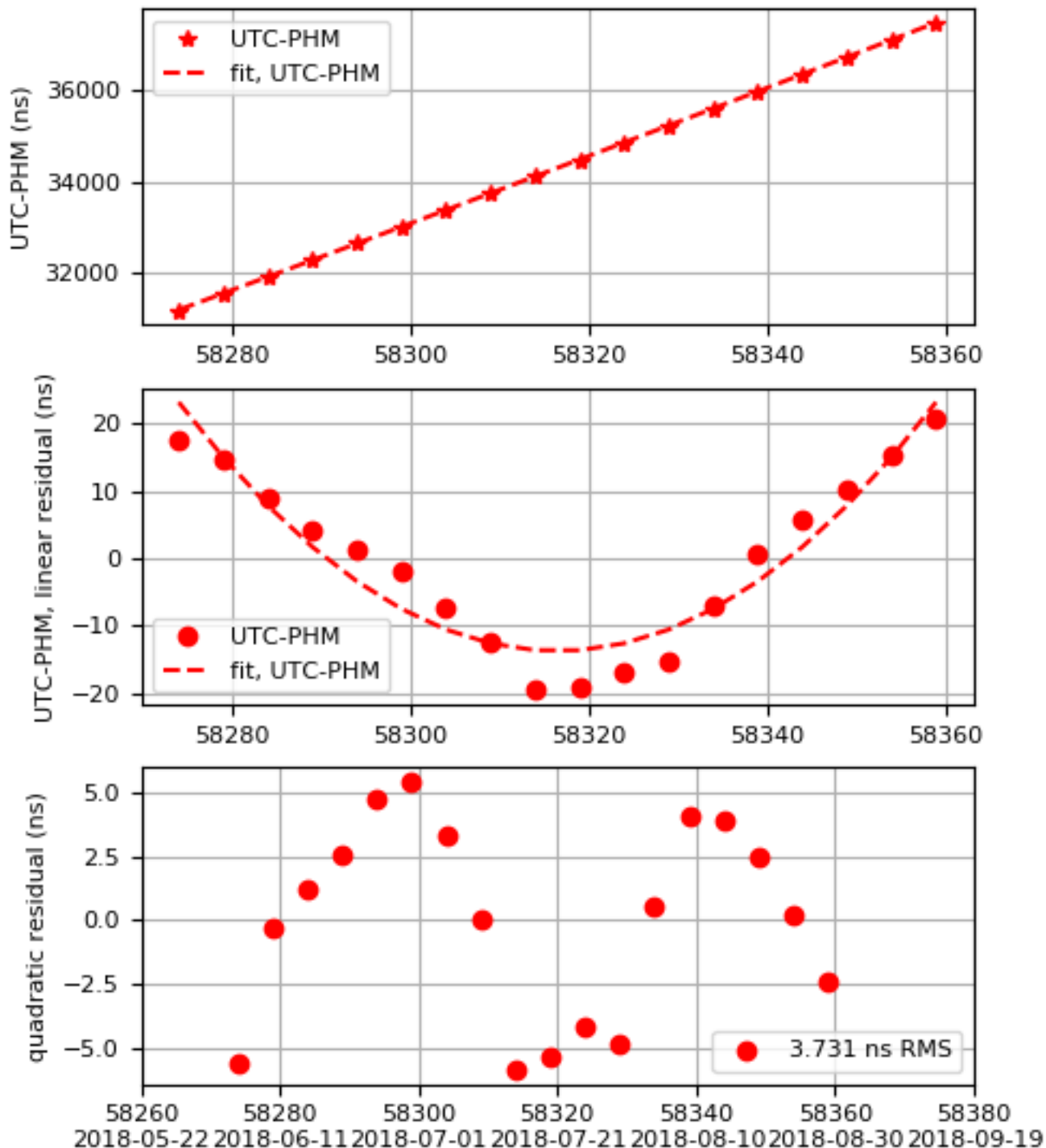d = (mjd-mjd0) with mjd0 = 58359

CS1 Rate and Drift
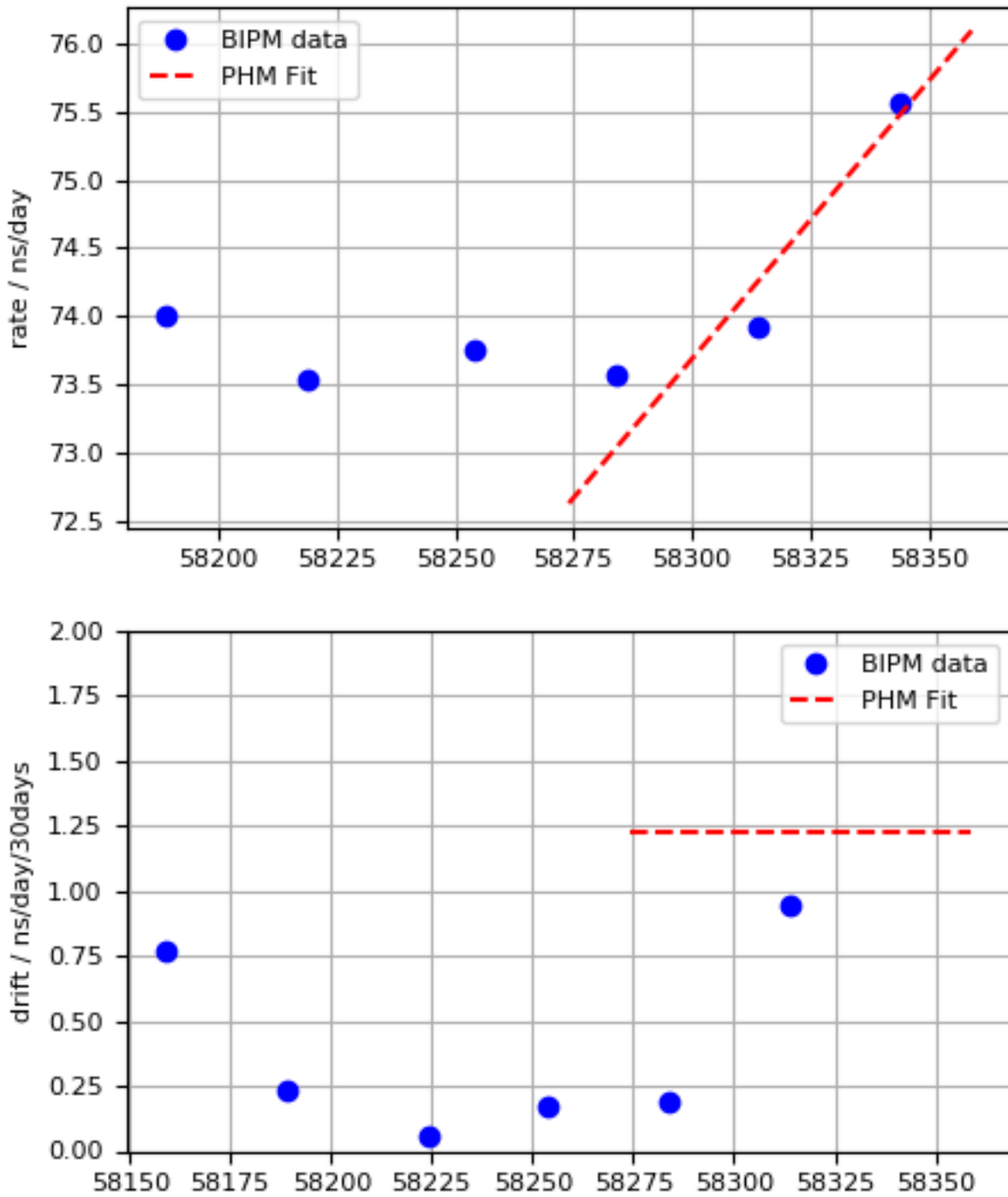
UTC - PHM Fit

UTC-PHM (2018-09-11 / 58372)
$x \text{ (ns)} = 37503.435 + 76.096 *d + 0.0204 *d*d$
$y = -8.80742e{-13} + -4.72602e{-16} *d$
$d = (mjd-mjd0) \text{ with } mjd0 = 58359$

PHM Rate and Drift

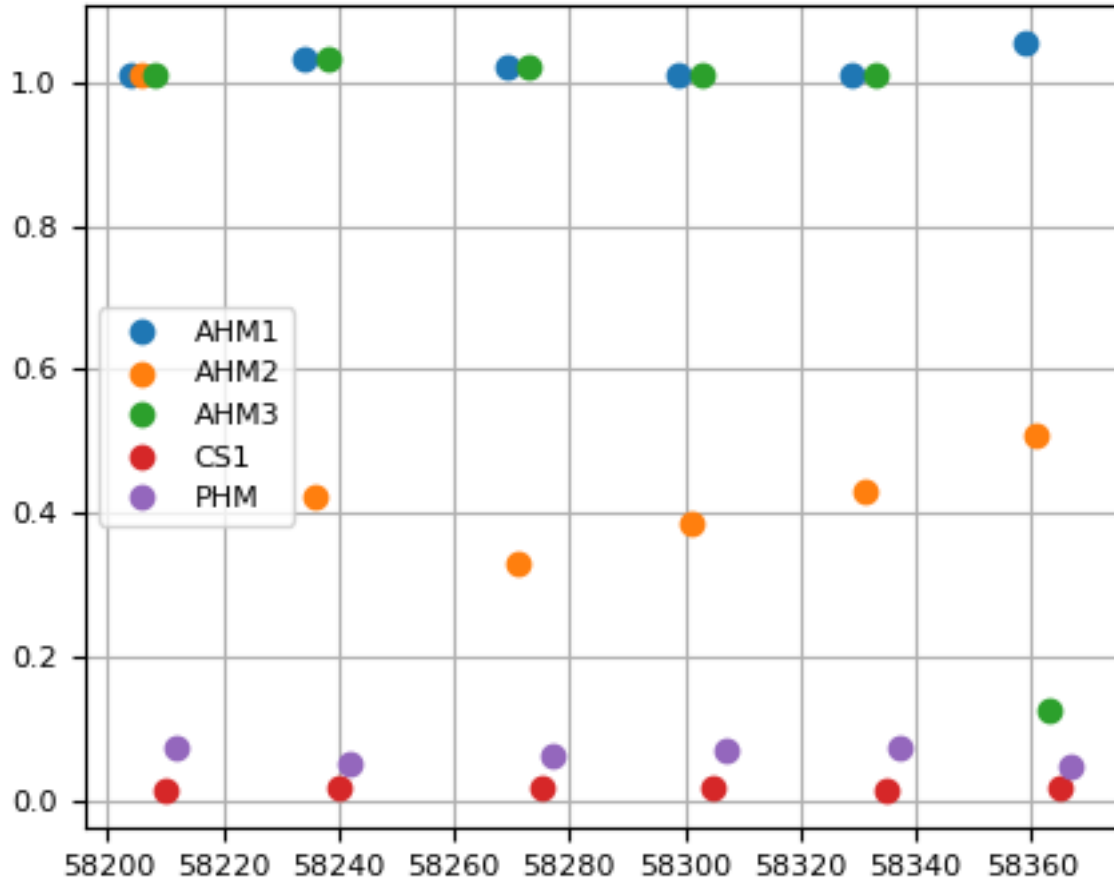## Clock Weights

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

End of Bulletin.