

UTC(MIKE) Atomic Bulletin 2018-10

VTT MIKES Metrology monthly Time & Frequency bulletin.

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

Date of publication: 2018-10-10 (58401)

Circular-T issues used for analysis: [367](#), [368](#), [369](#),

First day of analysis interval: 2018-07-05 (58304)

Last day of analysis interval: 2018-09-28 (58389)

ClockData for analysis: [CDMI 18.07](#), [CDMI 18.08](#), [CDMI 18.09](#),

Notes

58204 AHM2 TAI-weight non-zero

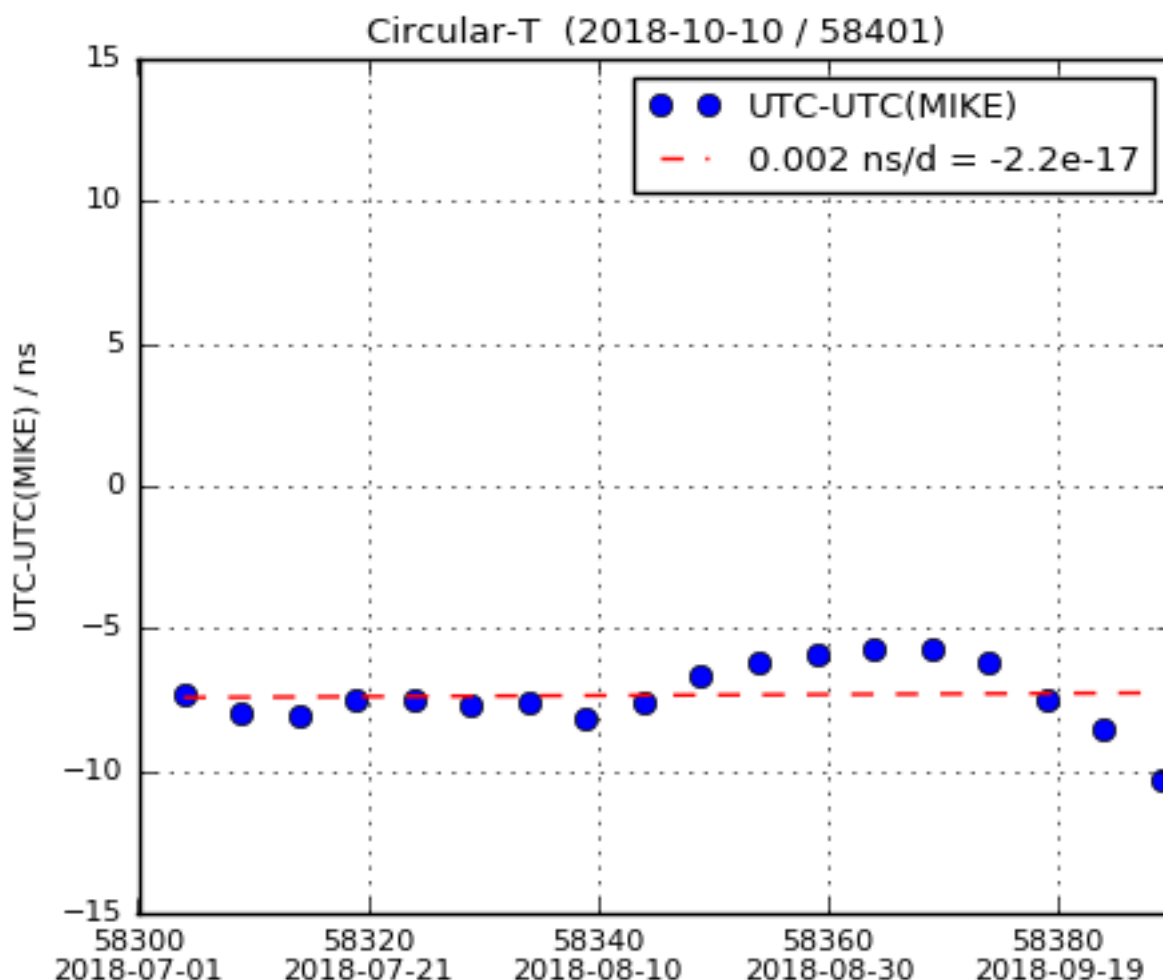
58299 Apparent time step of UTC(MIKE) of +8.2 ns between MJD 58299 and MJD 58304 due to antenna coordinates correction. ClockData before 58299.5 is corrected by -8.2 ns for analysis.

58305 AHM3 rebooted. Phase step +20.2ns.

58340 Steering correction of -7.5ns/30d = -2.89e-15 applied.

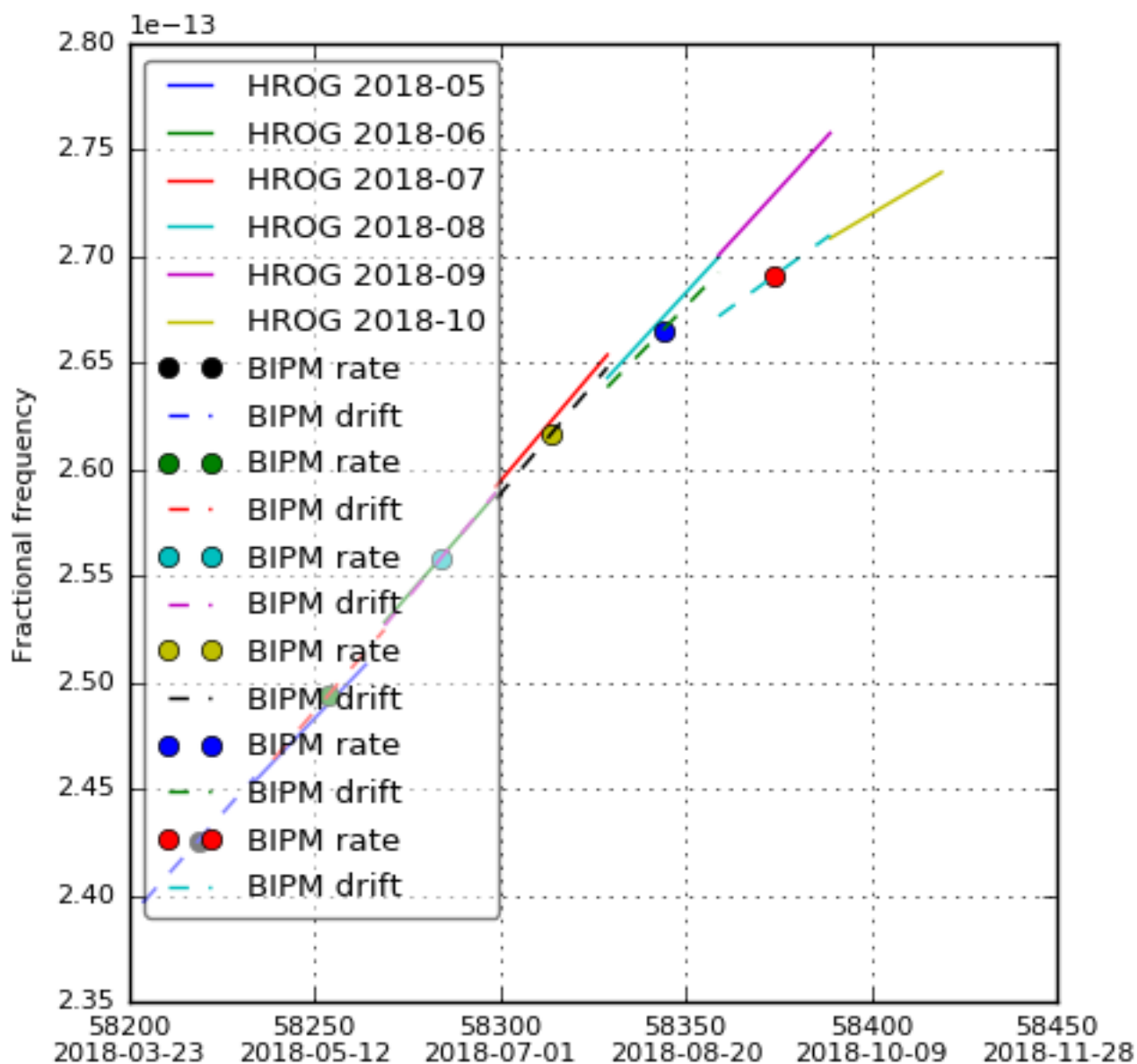
58372 Steering correction of -4ns/30d = -1.5e-15 applied.

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:

$$y = 2.70857e-13 + 1.03122e-16 * d + y_steer$$

with $d = (mjd - mjd0)$ and $mjd0 = 58389$

$$y_steer = -1.5ns/30 \text{ days} = -5.79e-16 \text{ from } 58071$$

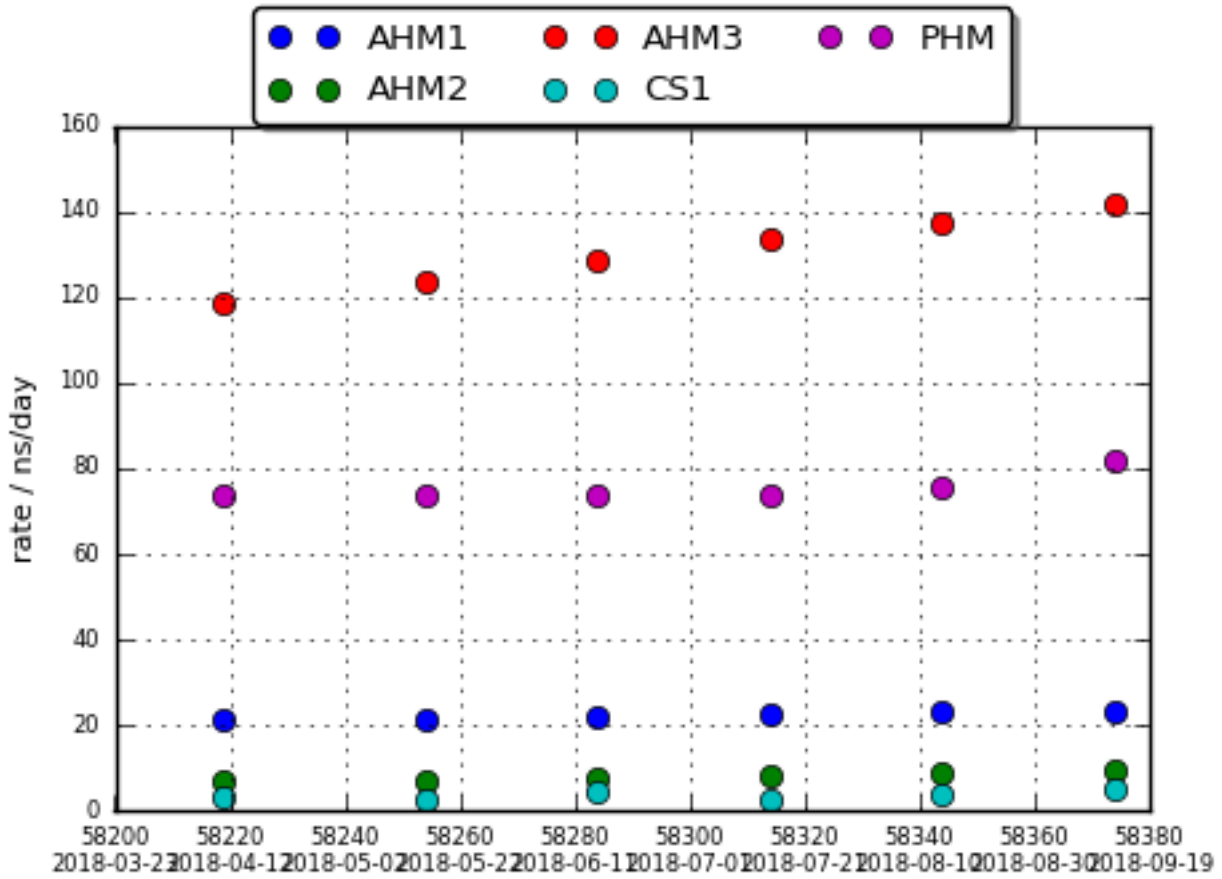
$$y_steer = 0 \text{ from } 58150$$

$$y_steer = -7.5ns/30 \text{ days} = -2.89e-15 \text{ from } 58340$$

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

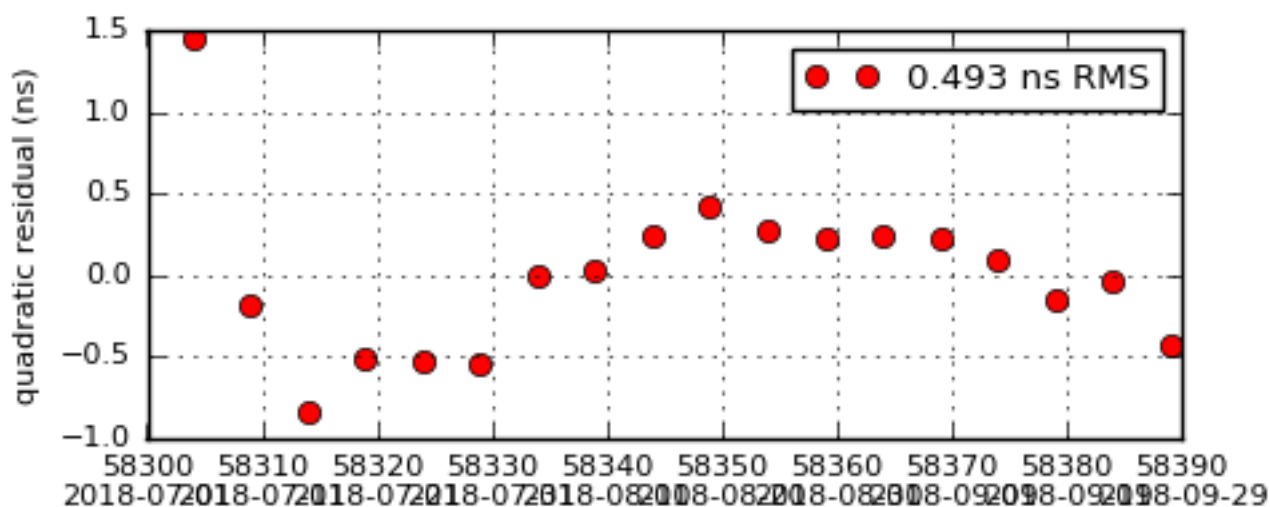
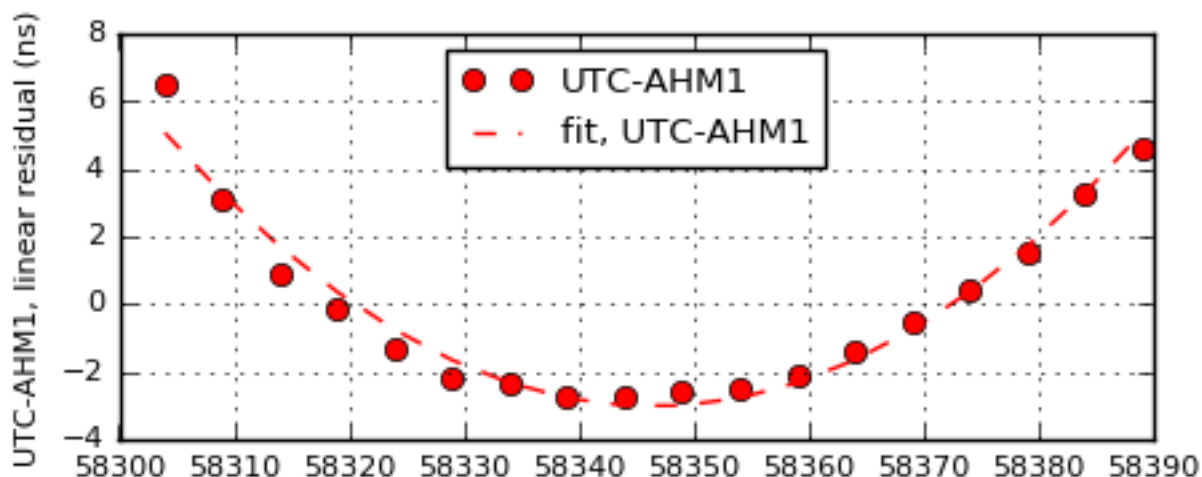
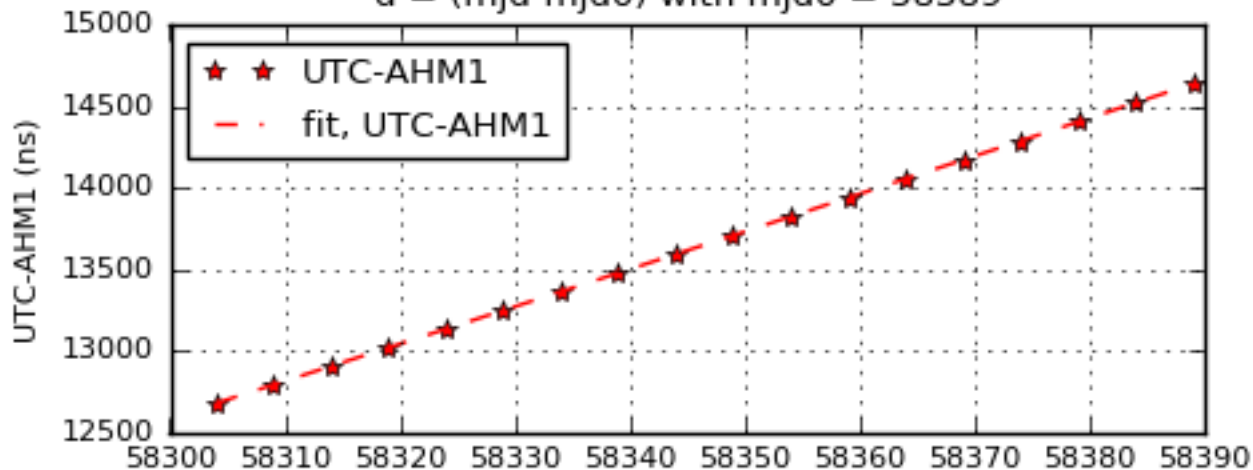
$$y_steer = -10ns/30 \text{ days} = -4e-15 \text{ from } 58401$$

Clock Rates - Summary

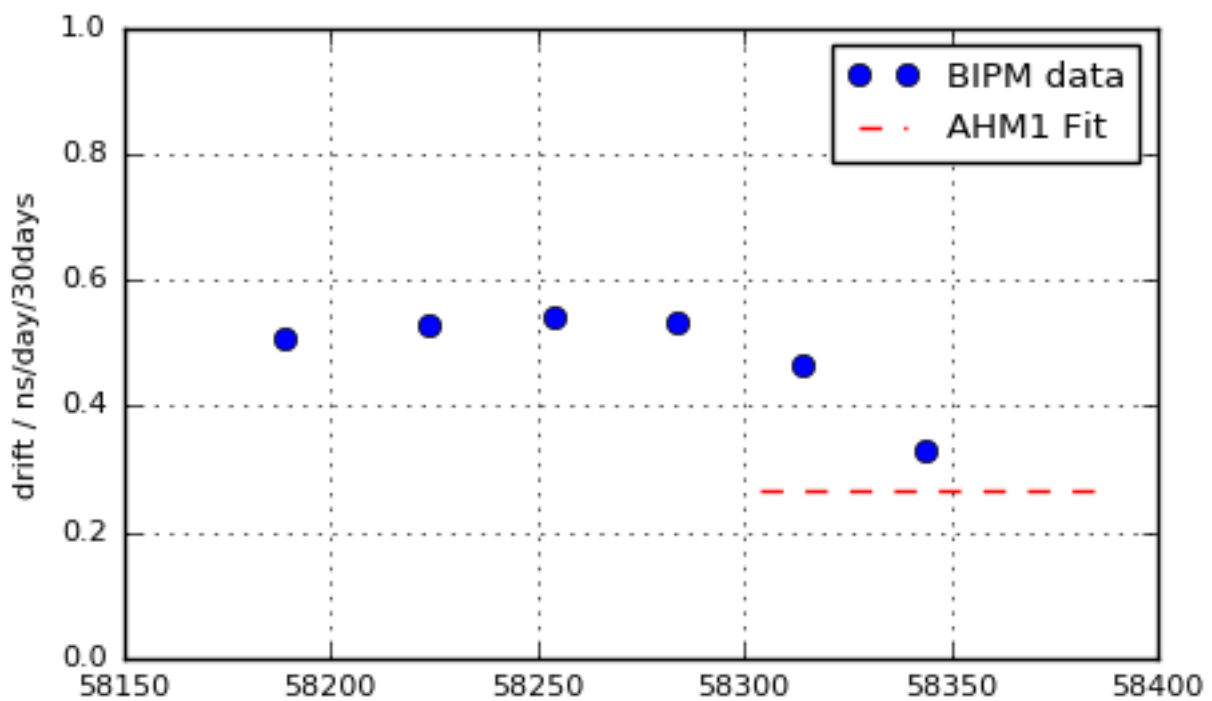
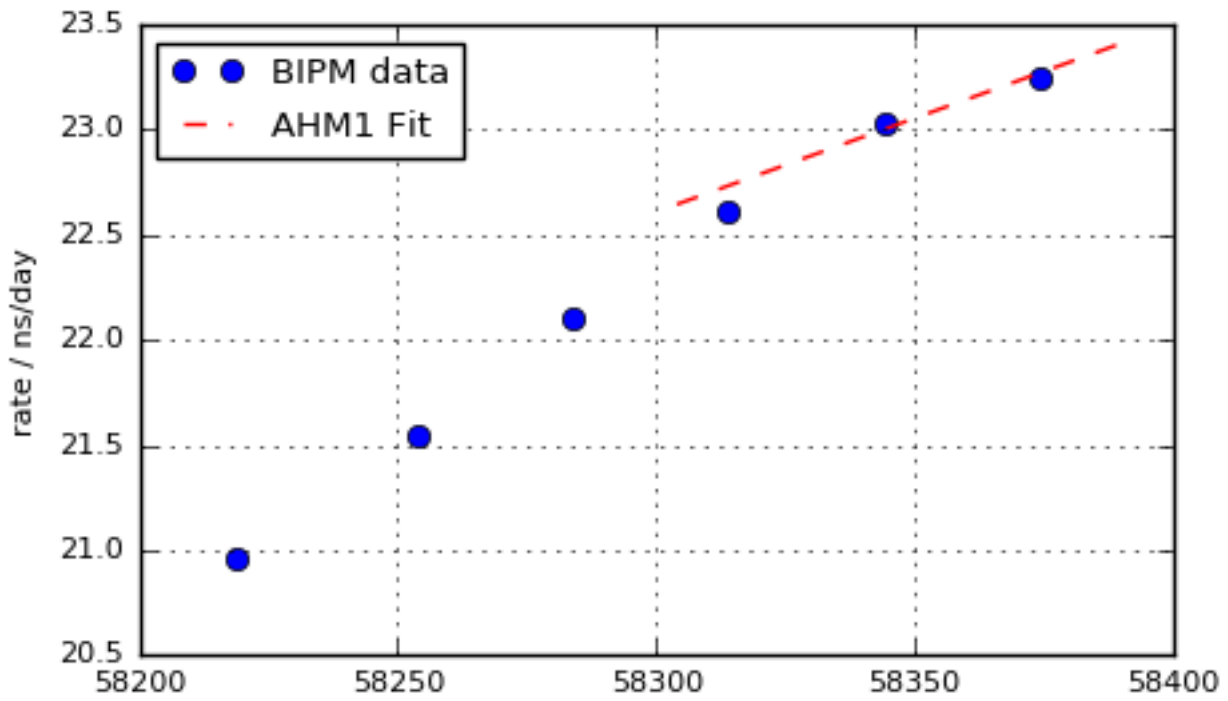


UTC - AHM1 Fit

UTC-AHM1 (2018-10-10 / 58401)
 $x \text{ (ns)} = 14637.231 + 23.402 * d + 0.0045 * d * d$
 $y = -2.70857e-13 + -1.03122e-16 * d$
 $d = (\text{mjd} - \text{mjd0}) \text{ with mjd0} = 58389$

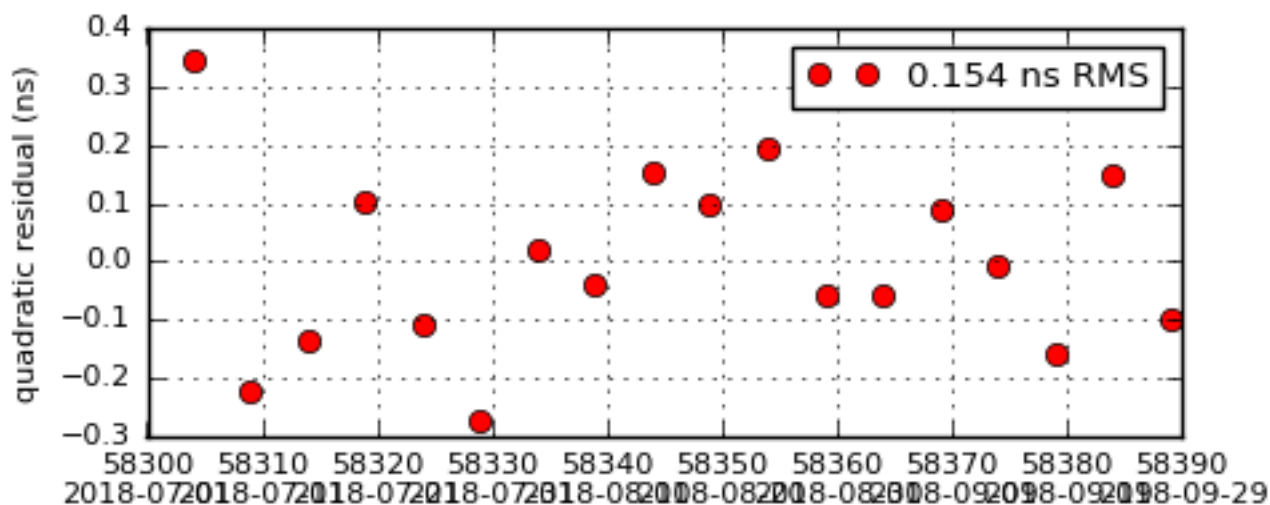
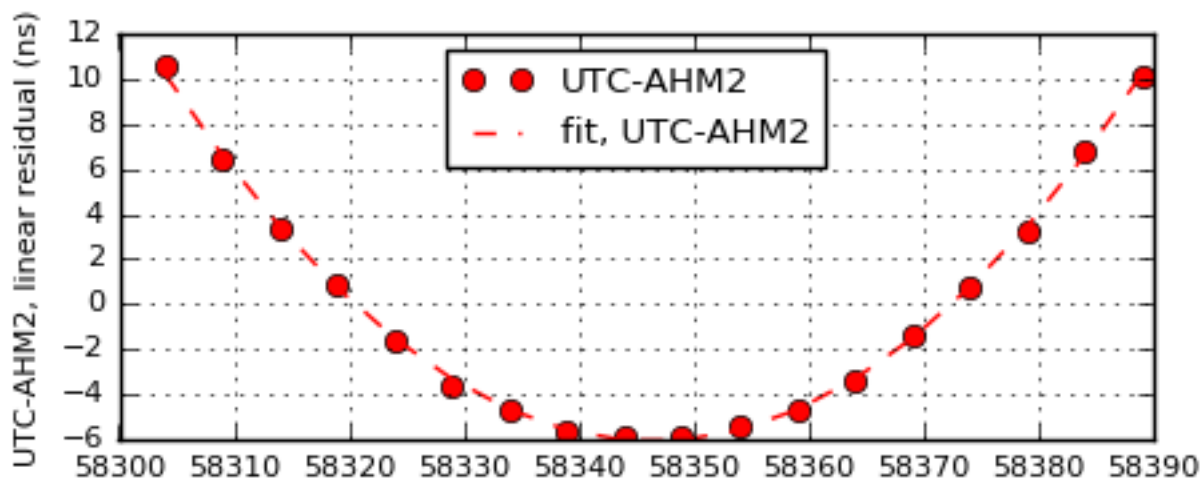
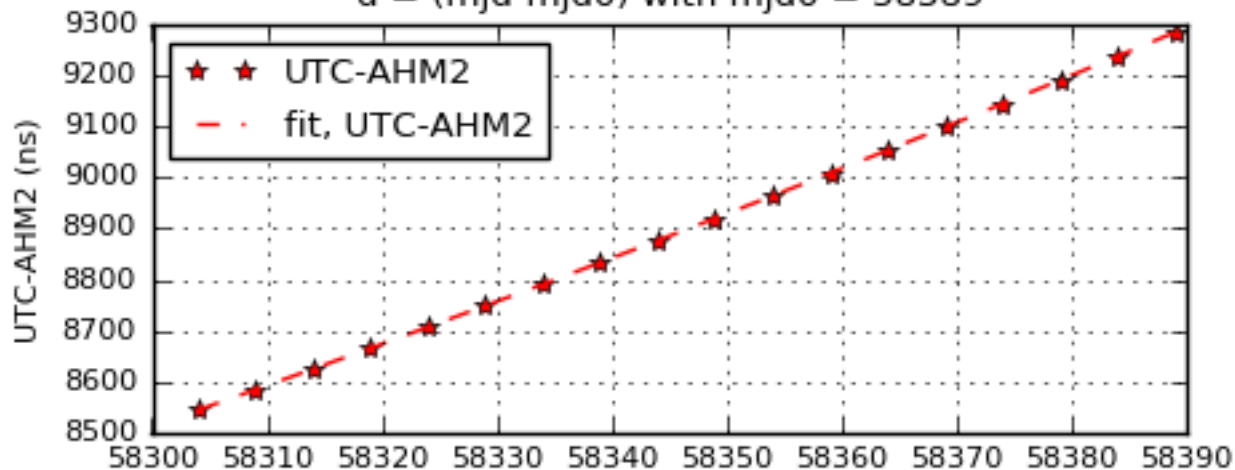


AHM1 Rate and Drift

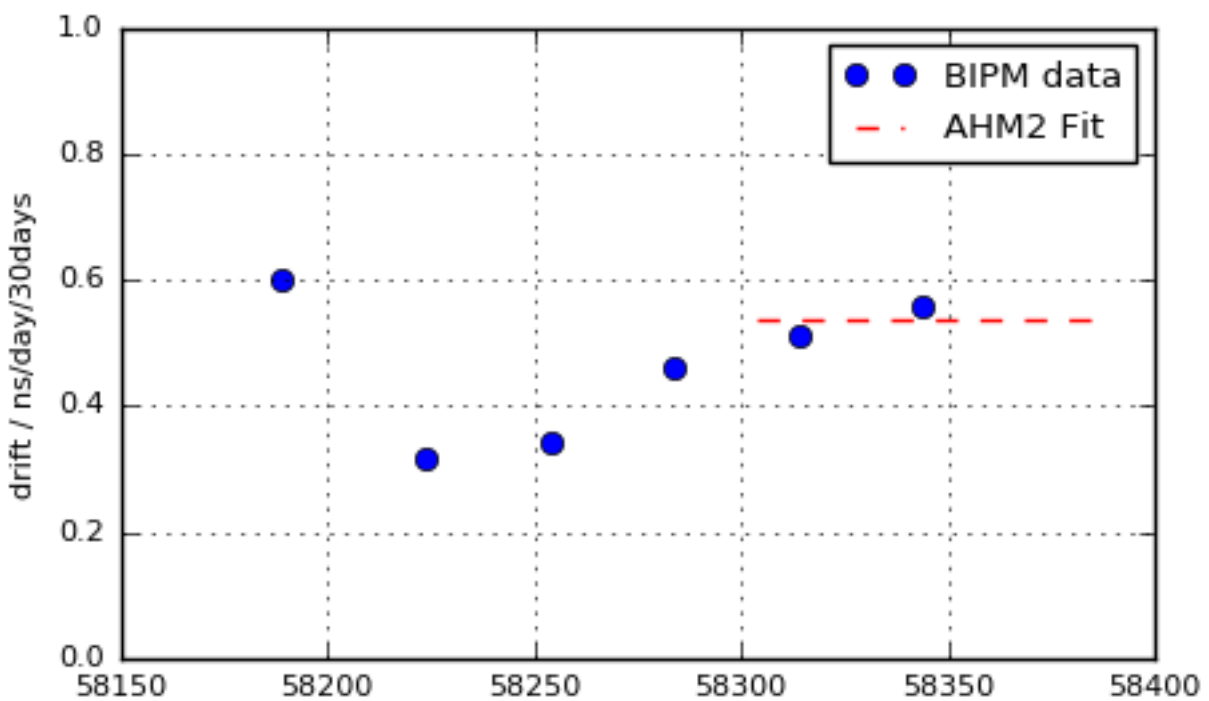
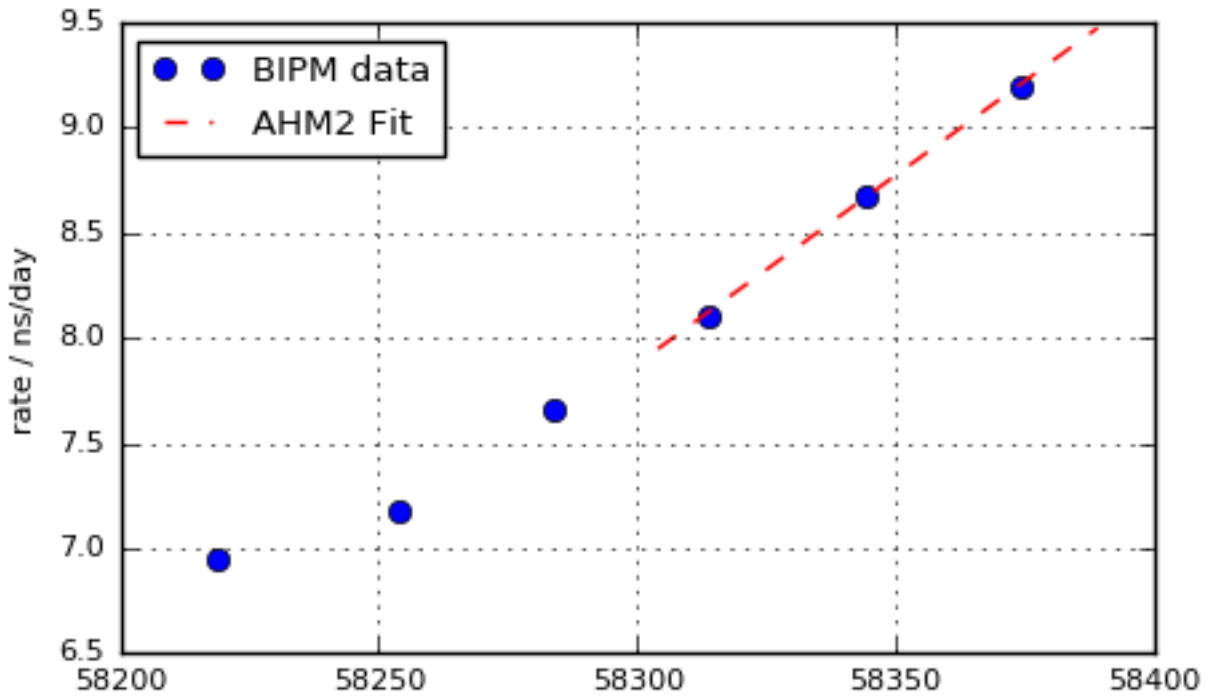


UTC - AHM2 Fit

UTC-AHM2 (2018-10-10 / 58401)
 $x \text{ (ns)} = 9284.798 + 9.474 *d + 0.0090 *d*d$
 $y = -1.09652e-13 + -2.07736e-16 *d$
 $d = (\text{mjd}-\text{mjd0}) \text{ with mjd0} = 58389$

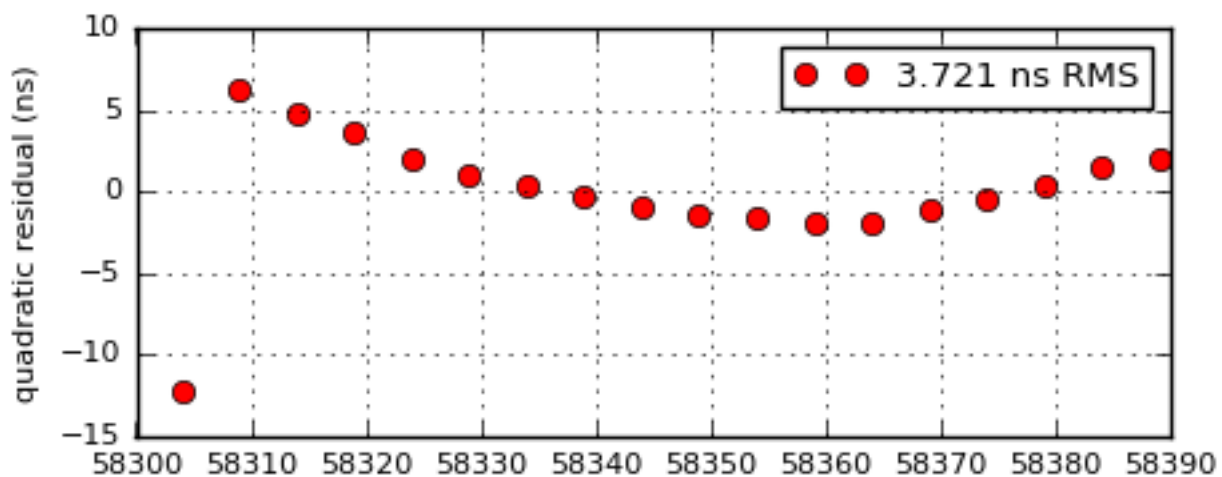
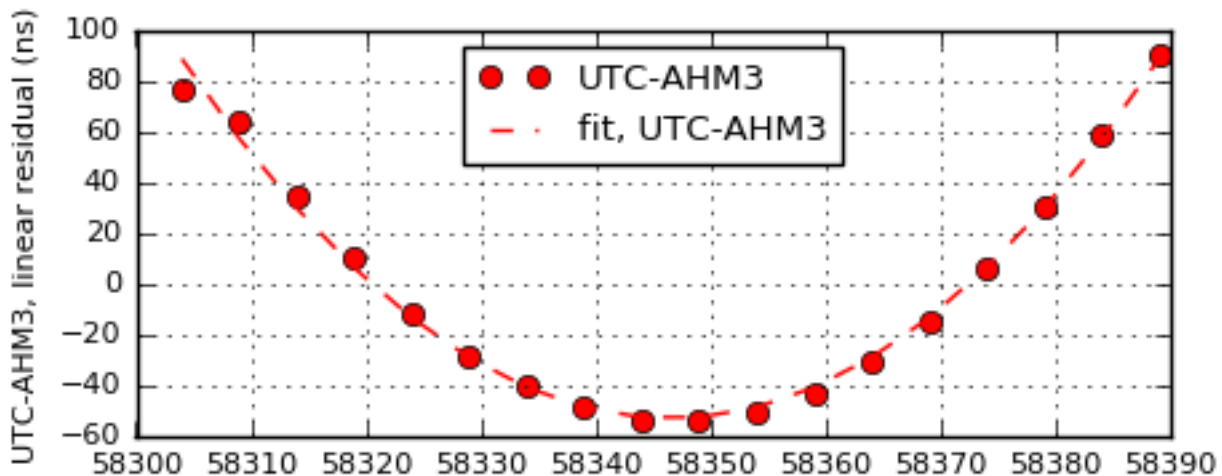
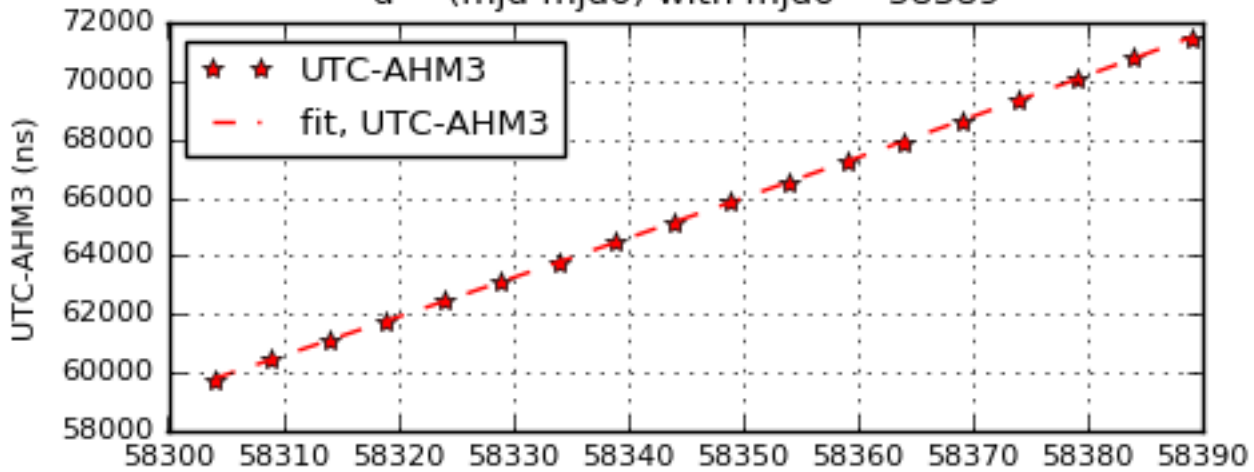


AHM2 Rate and Drift



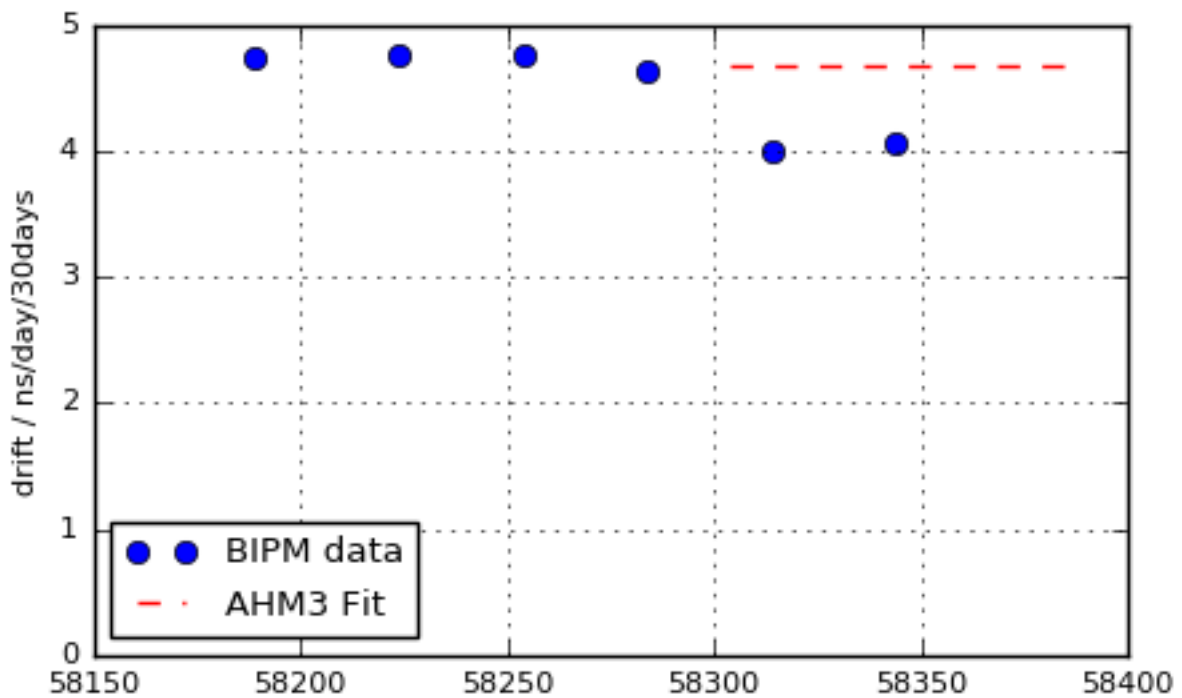
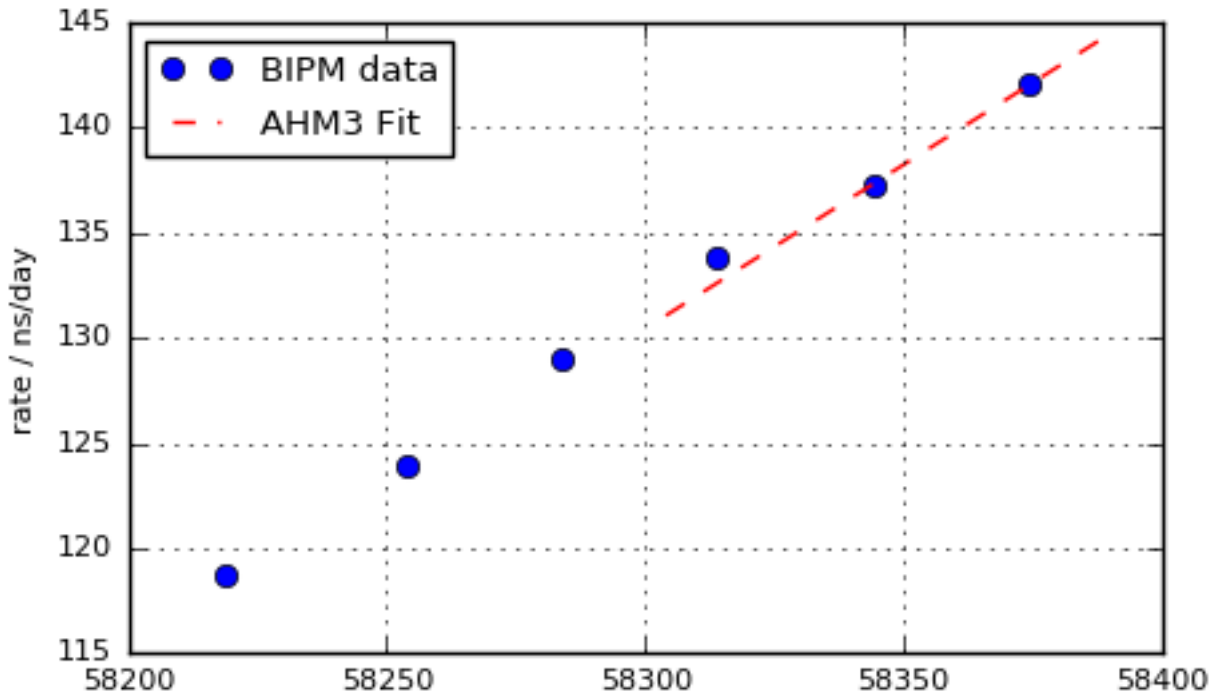
UTC - AHM3 Fit

UTC-AHM3 (2018-10-10 / 58401)
 $x \text{ (ns)} = 71486.967 + 144.336 * d + 0.0781 * d * d$
 $y = -1.67056e-12 + -1.80689e-15 * d$
 $d = (\text{mjd} - \text{mjd0}) \text{ with mjd0} = 58389$



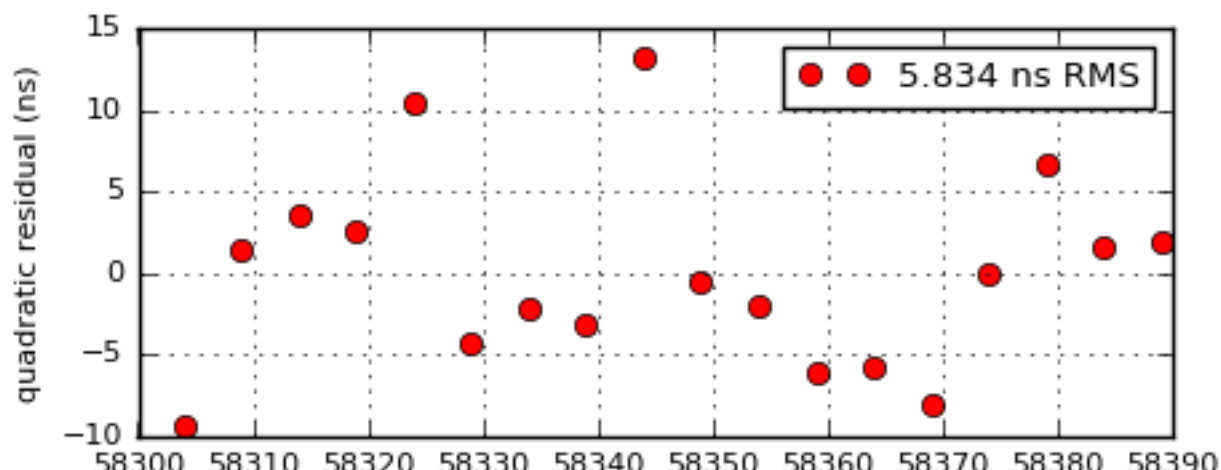
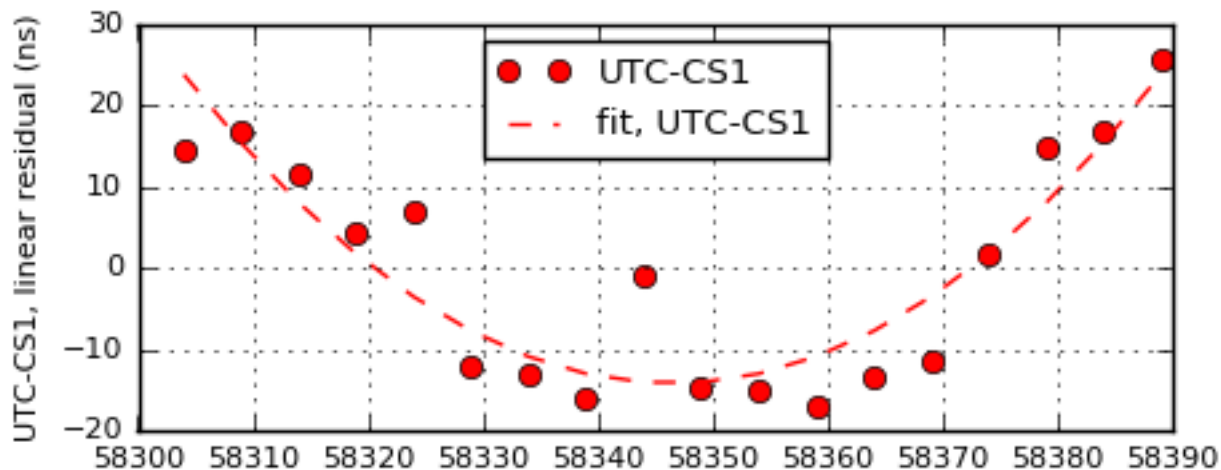
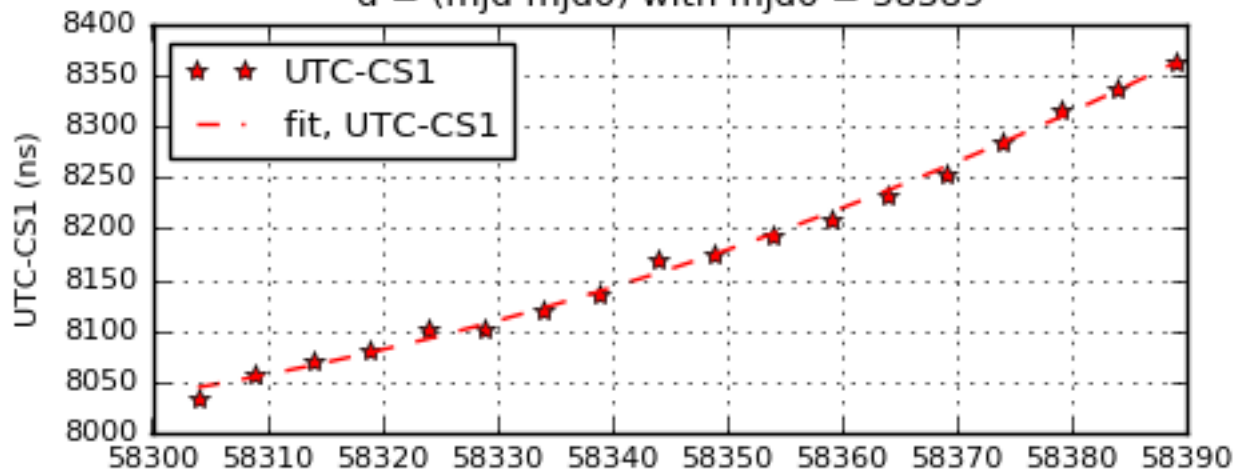
2018-07-20 2018-07-20 2018-07-20 2018-07-20 2018-08-20 2018-08-20 2018-08-20 2018-09-20 2018-09-20 2018-09-29

AHM3 Rate and Drift



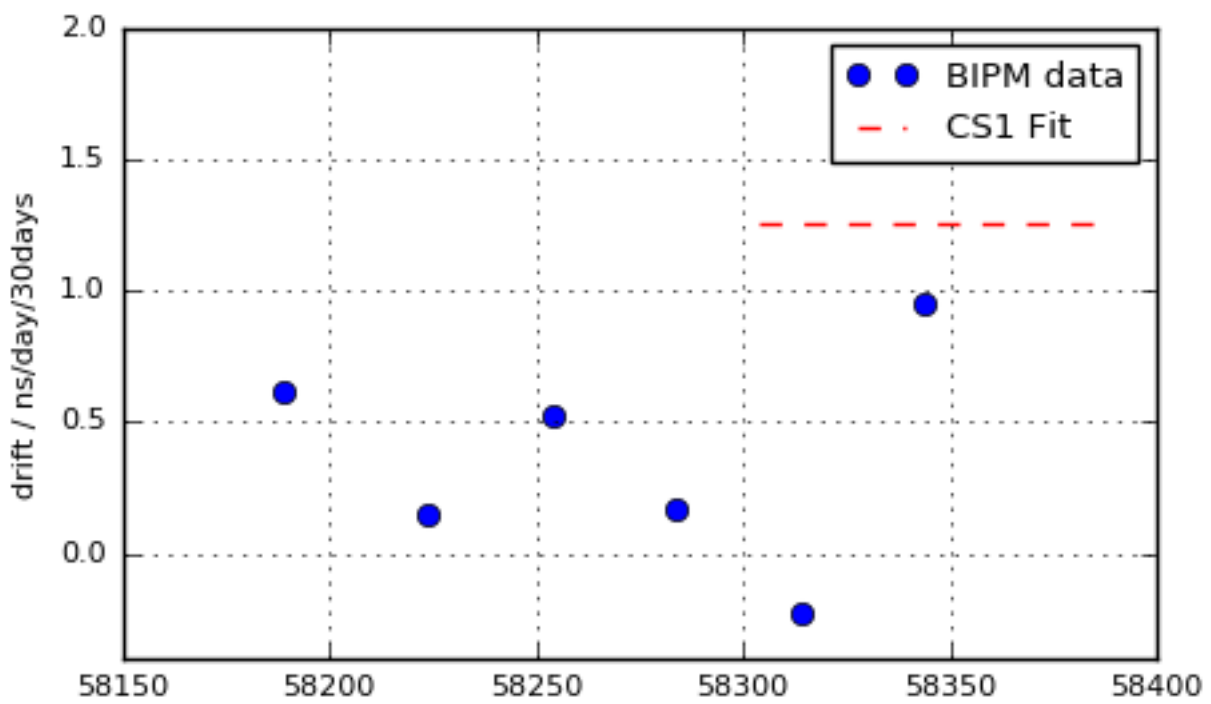
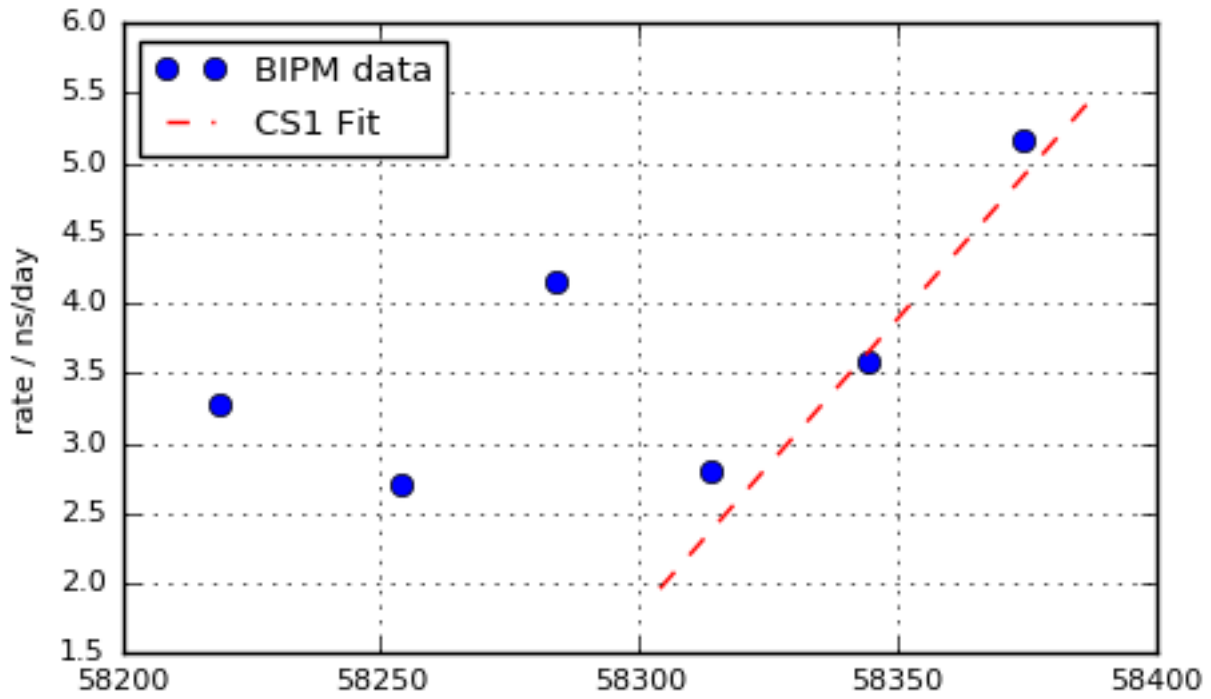
UTC - CS1 Fit

UTC-CS1 (2018-10-10 / 58401)
 $x \text{ (ns)} = 8362.439 + 5.522 *d + 0.0209 *d*d$
 $y = -6.39074e-14 + -4.84714e-16 *d$
 $d = (\text{mjd}-\text{mjd0}) \text{ with mjd0} = 58389$



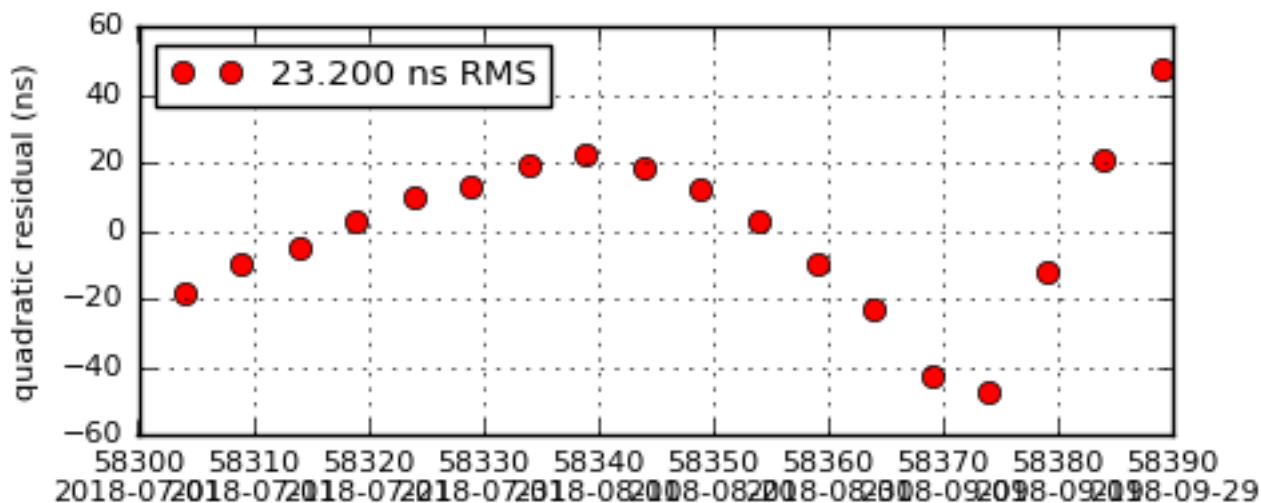
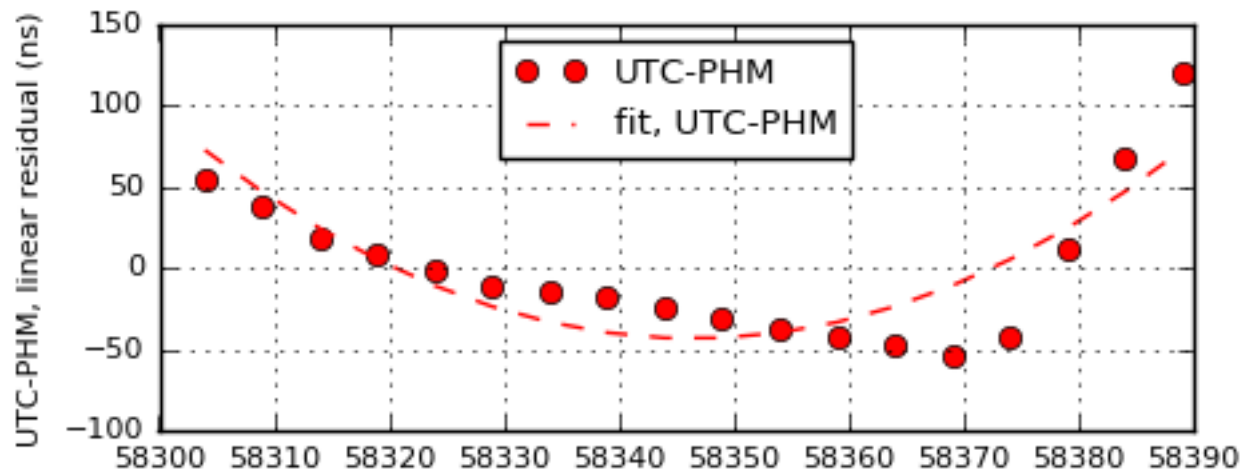
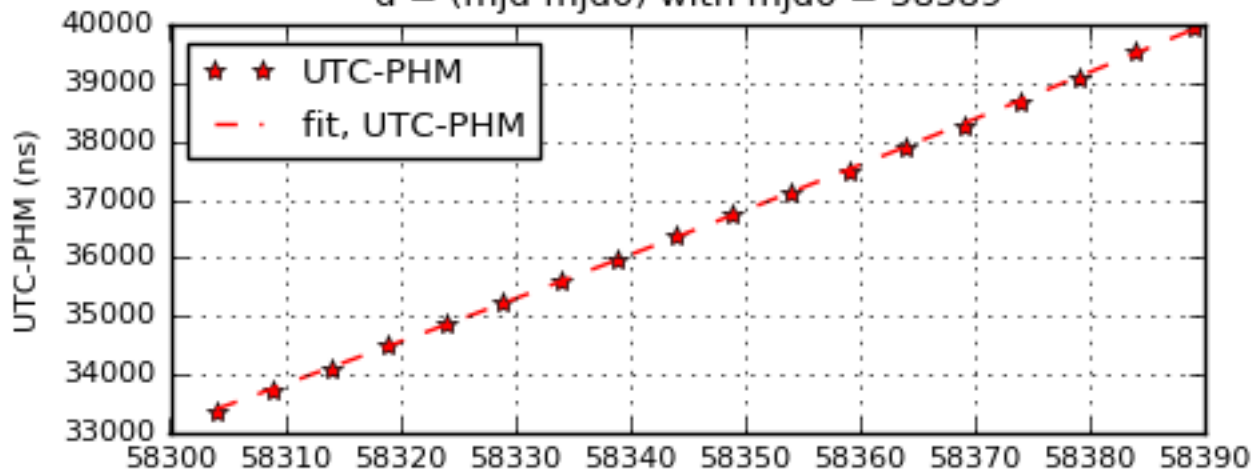
2018-07-20 2018-07-20 2018-07-20 2018-07-20 2018-08-20 2018-08-20 2018-08-20 2018-09-20 2018-09-29

CS1 Rate and Drift

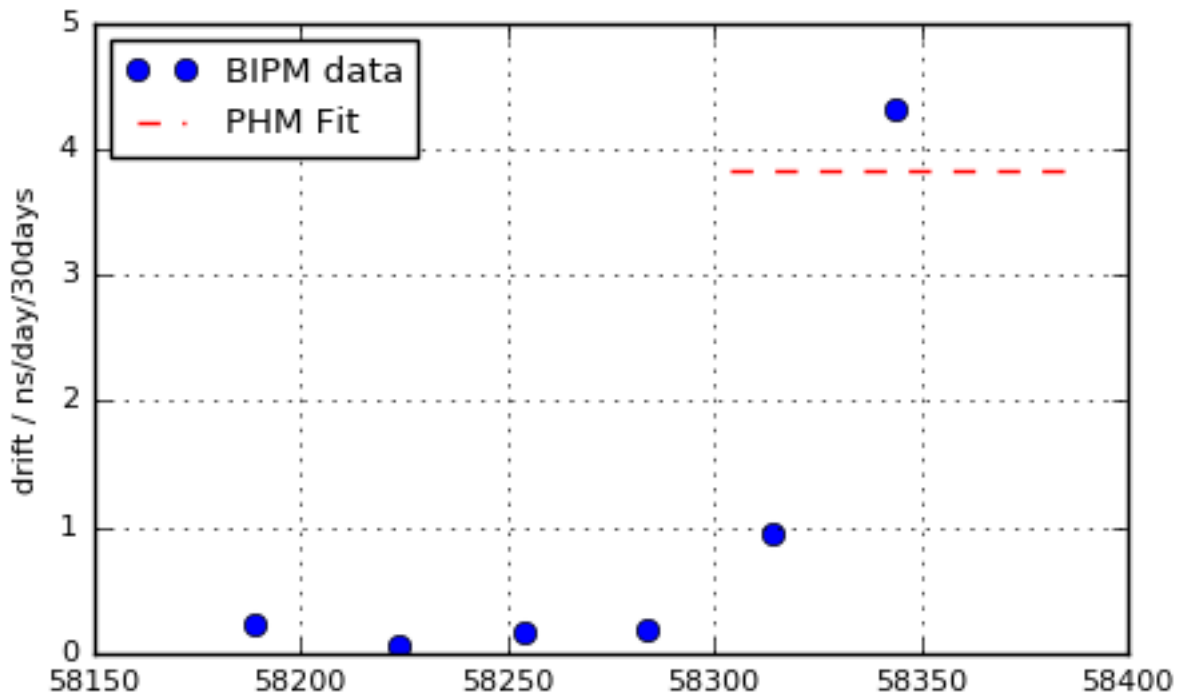
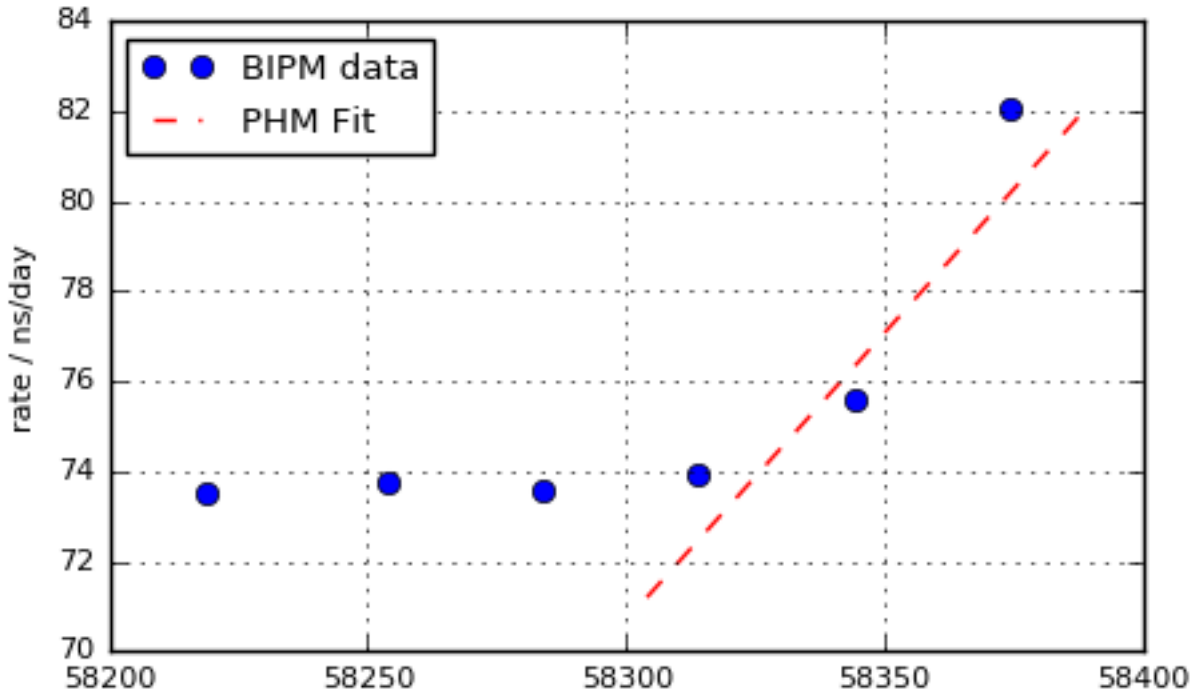


UTC - PHM Fit

UTC-PHM (2018-10-10 / 58401)
 $x \text{ (ns)} = 39915.029 + 82.060 * d + 0.0639 * d*d$
 $y = -9.49764e-13 + -1.47898e-15 * d$
 $d = (\text{mjd} - \text{mjd0}) \text{ with mjd0} = 58389$

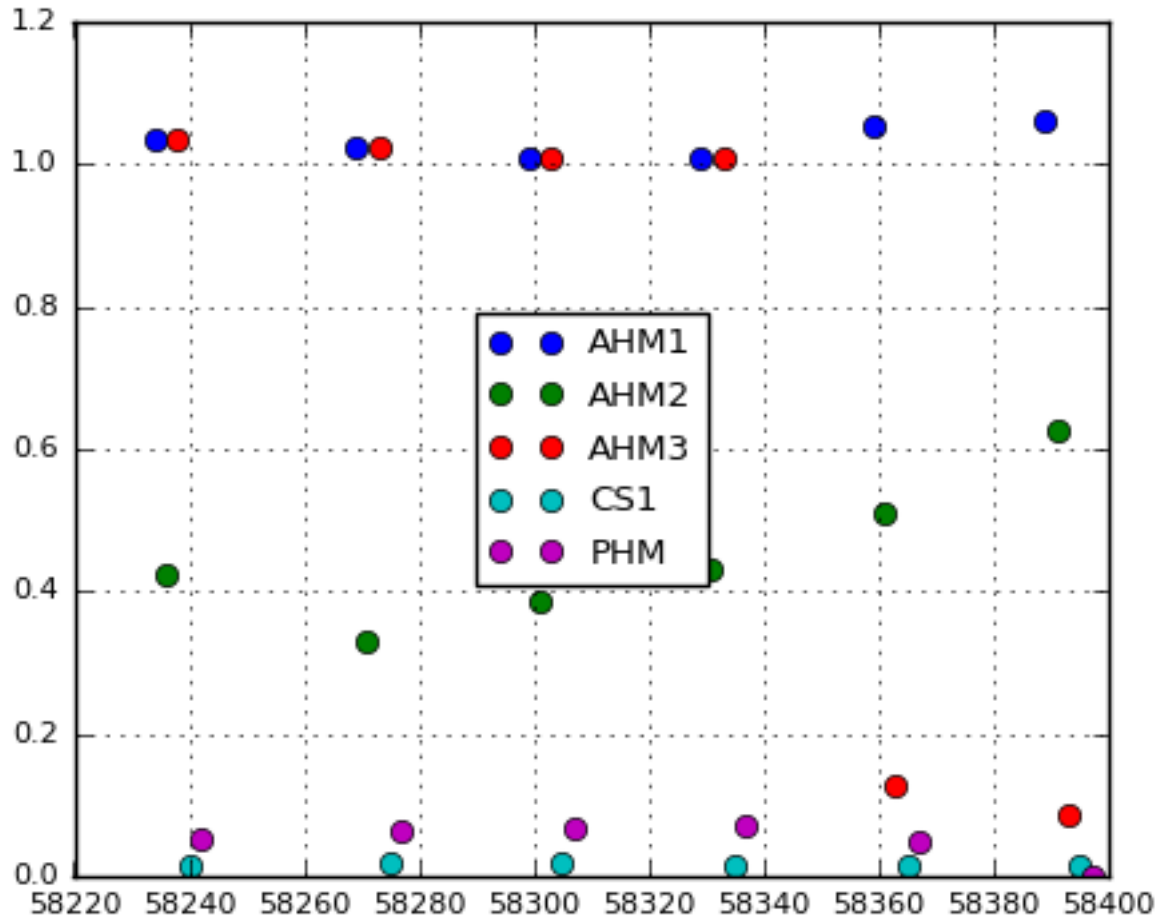


PHM Rate and Drift



Clock Weights

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



End of Bulletin.