

# UTC(MIKE) Atomic Bulletin 2018-05

VTT MIKES Metrology monthly Time & Frequency bulletin.

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

Date of publication: 2018-05-14

Circular-T issues used for analysis: [362](#), [363](#), [364](#),

First day of analysis interval: 2018-02-05 (58154)

Last day of analysis interval: 2018-04-26 (58234)

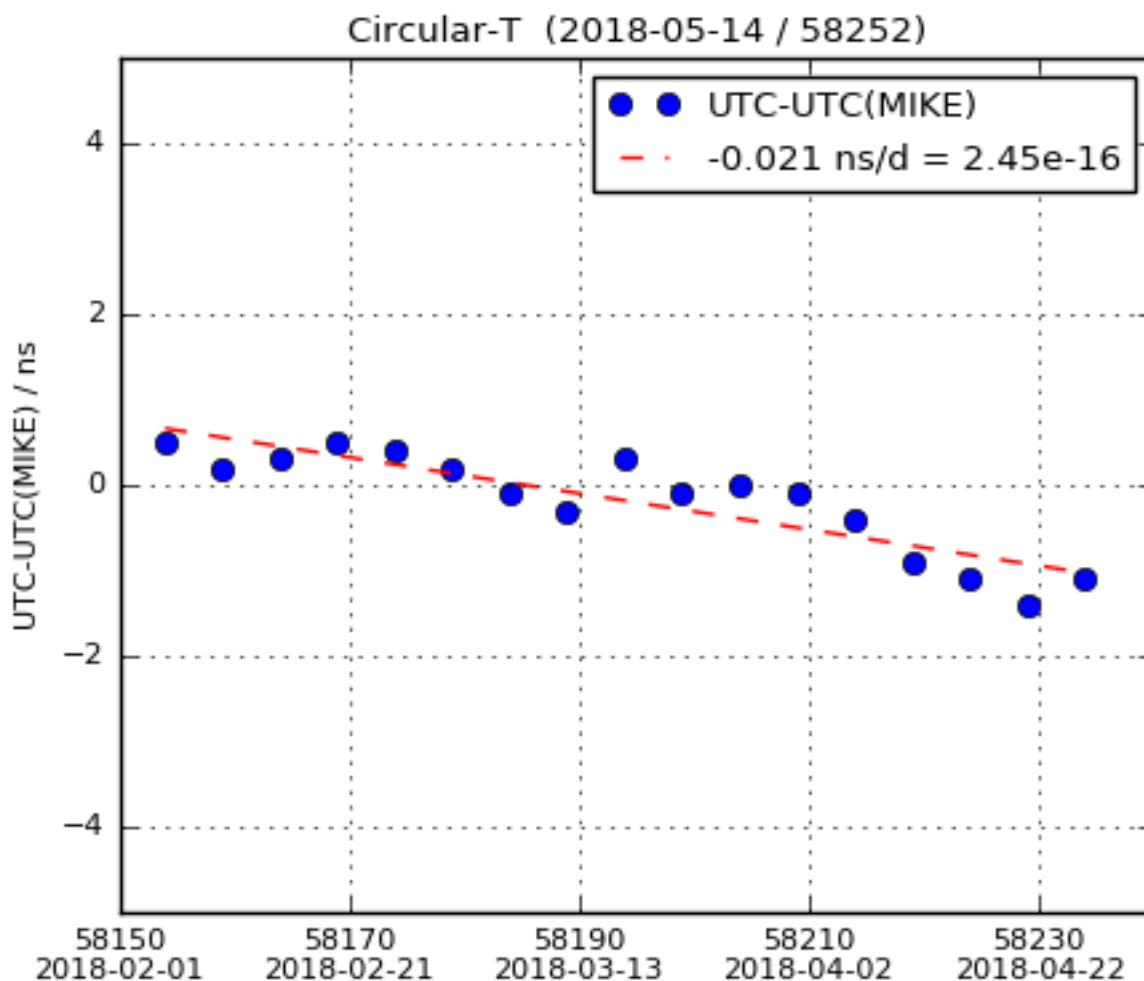
ClockData for analysis: [CDMI 18.02](#), [CDMI 18.03](#), [CDMI 18.04](#),

## Notes

58189 AHM2 H-source heater turned ON

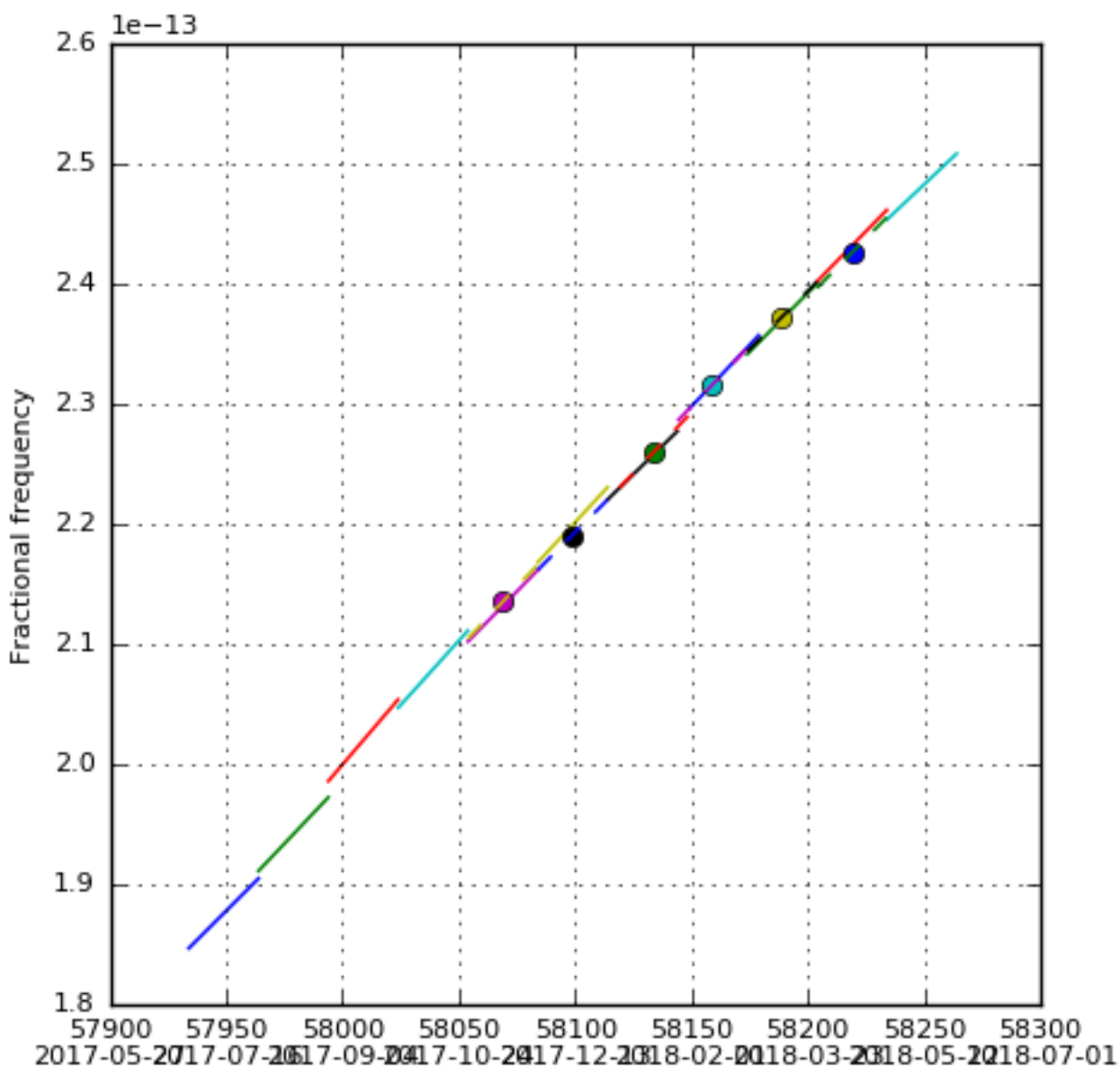
58204 AHM2 TAI-weight non-zero

## 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.

### 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.

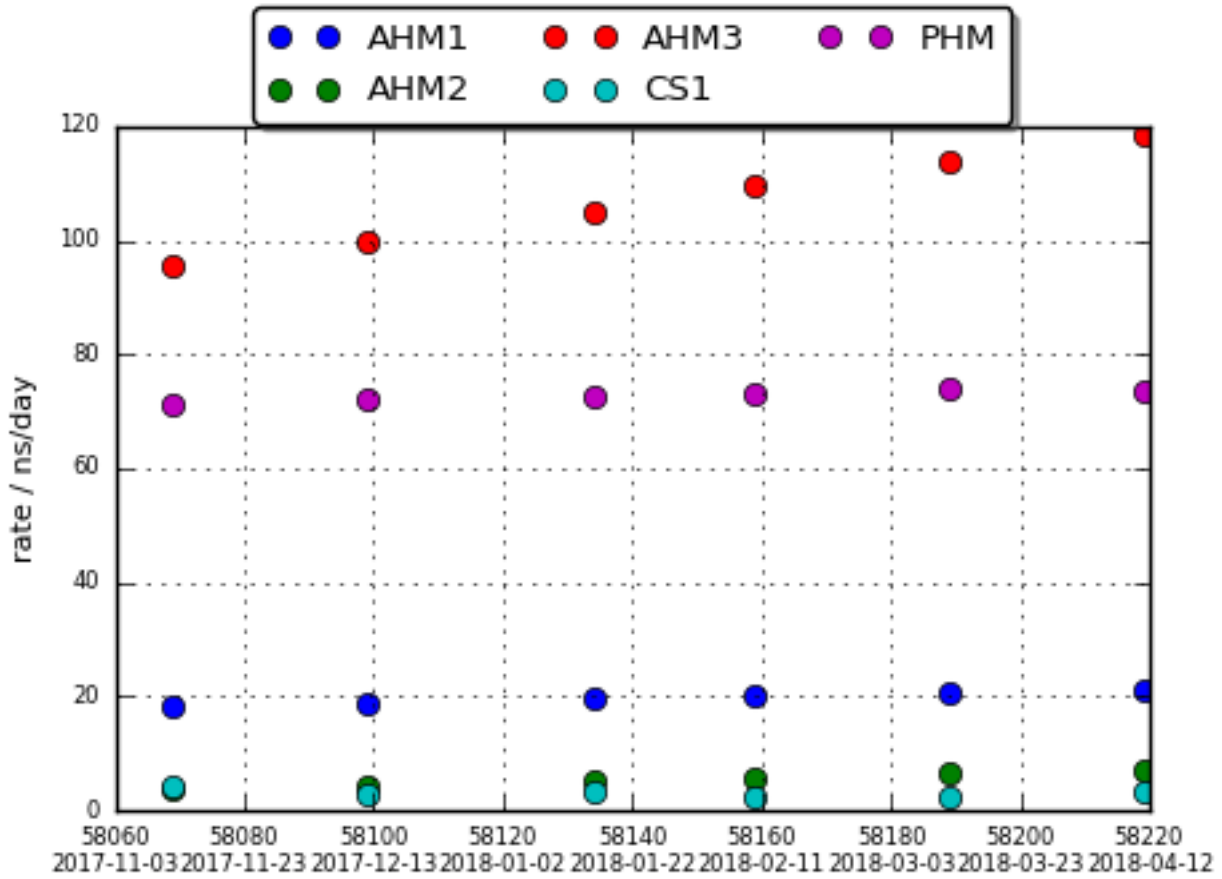
The latest steering parameters are:

$$y = 2.45335e-13 + 1.83358e-16 * d + y\_steer$$

with  $d = (mjd - mjd_0)$  and  $mjd_0 = 58234$

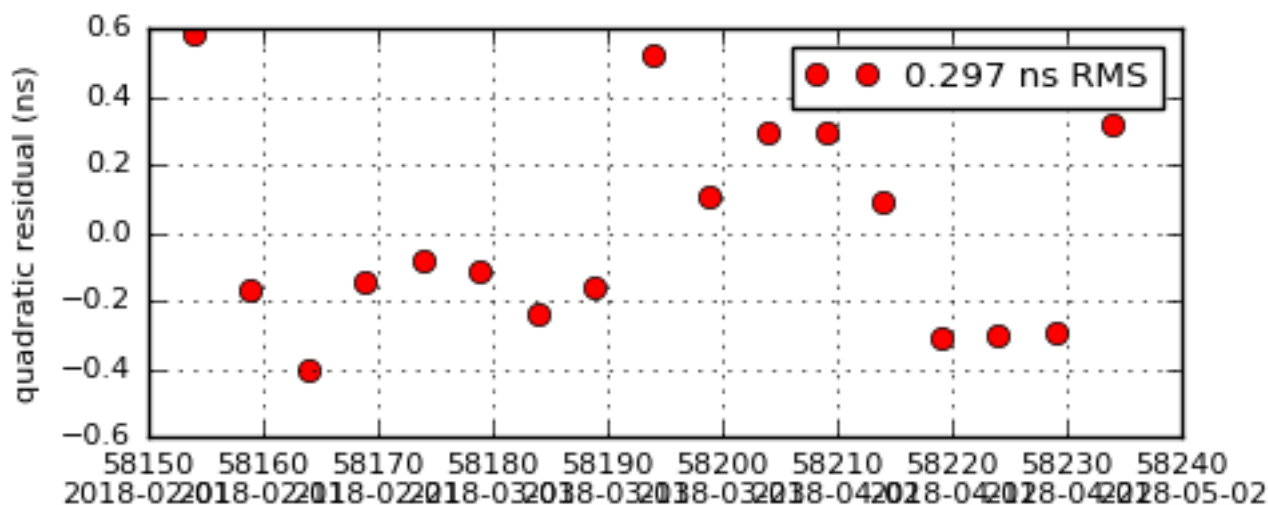
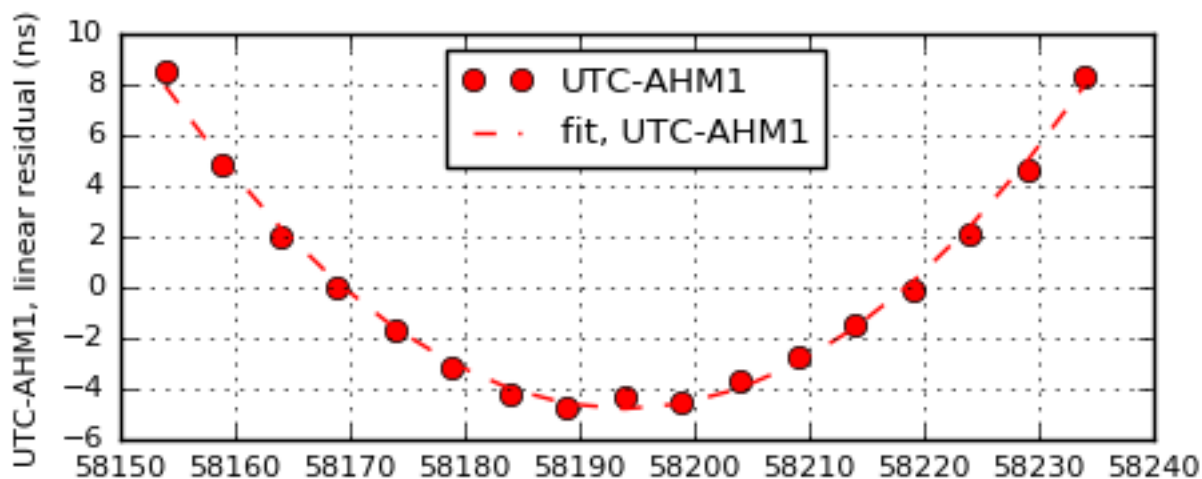
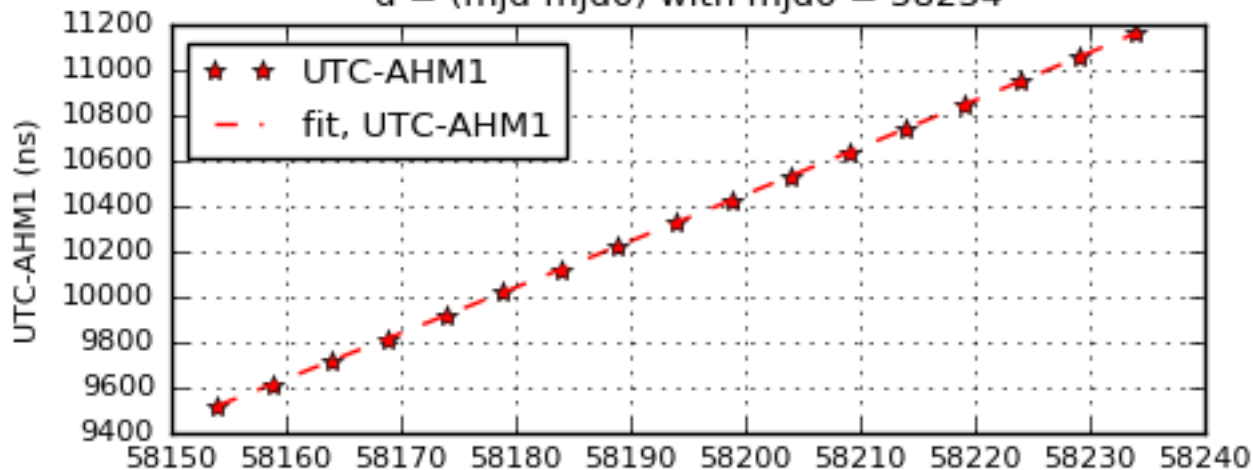
$y\_steer = 0$  since 58150

### Clock Rates - Summary

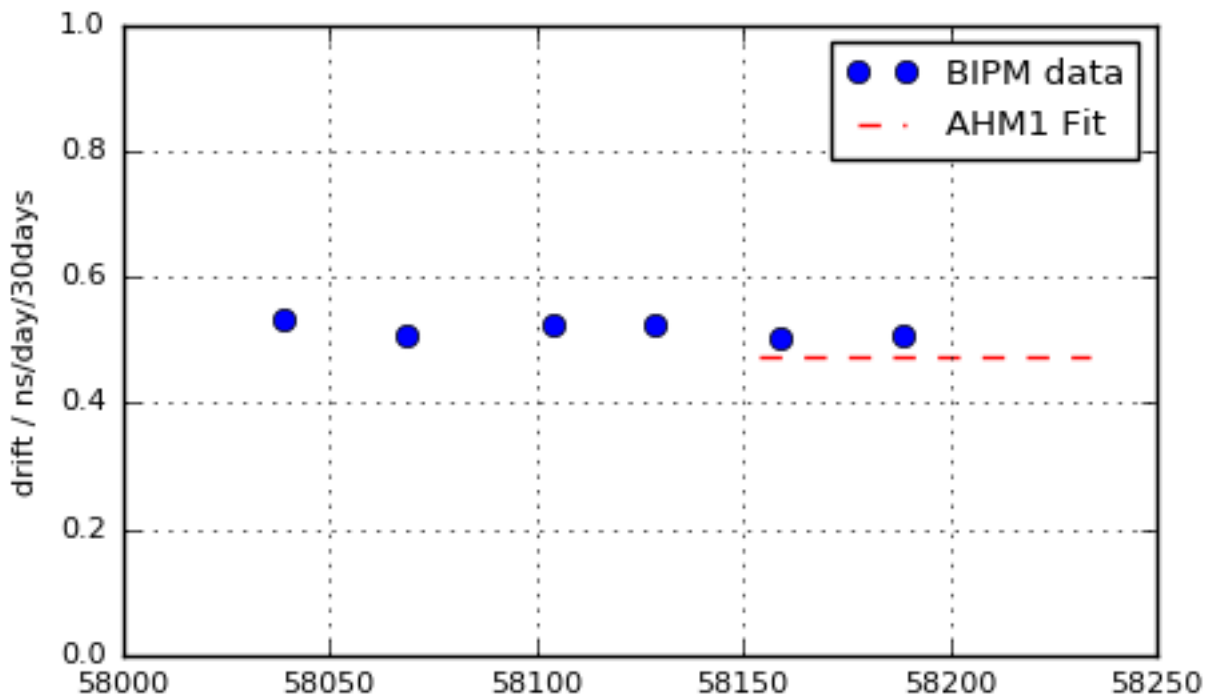
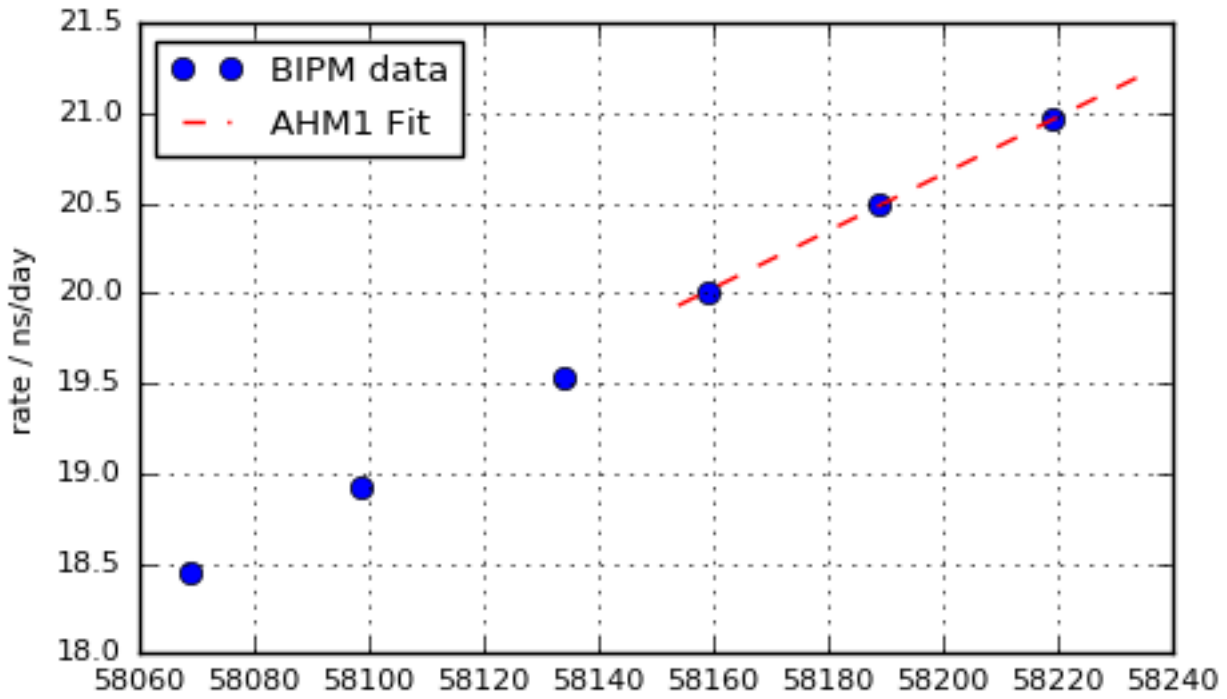


### UTC - AHM1 Fit

UTC-AHM1 (2018-05-14 / 58252)  
 $x \text{ (ns)} = 11160.782 + 21.197 * d + 0.0079 * d * d$   
 $y = -2.45335e-13 + -1.83358e-16 * d$   
 $d = (\text{mjd} - \text{mjd0}) \text{ with mjd0} = 58234$

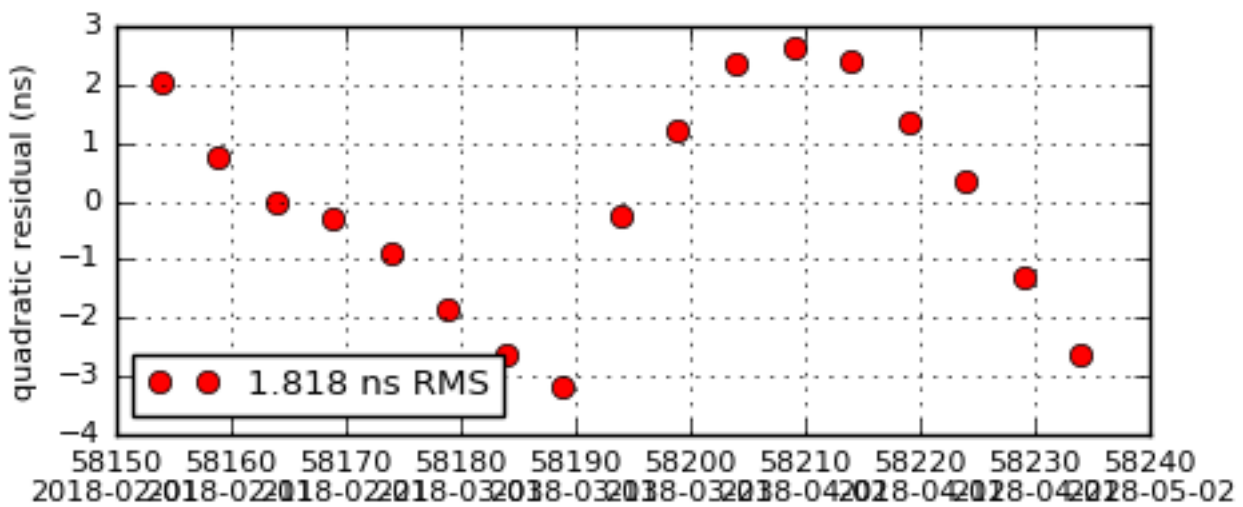
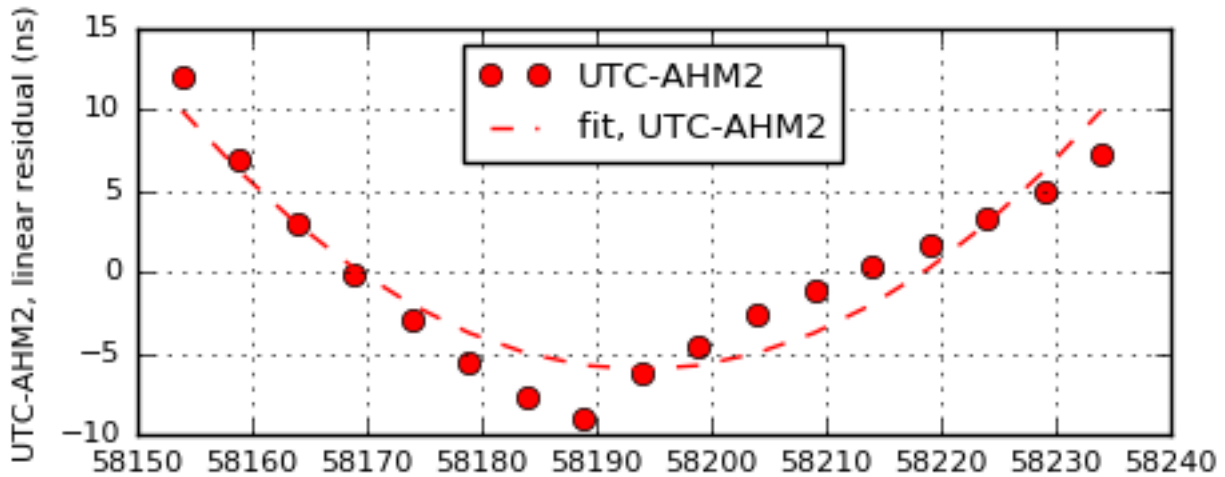
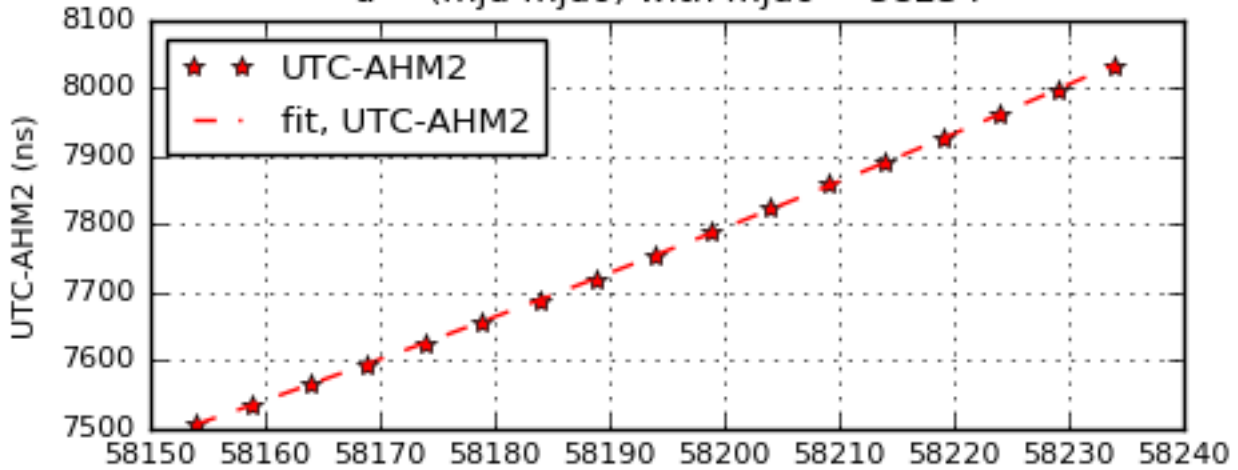


### AHM1 Rate and Drift

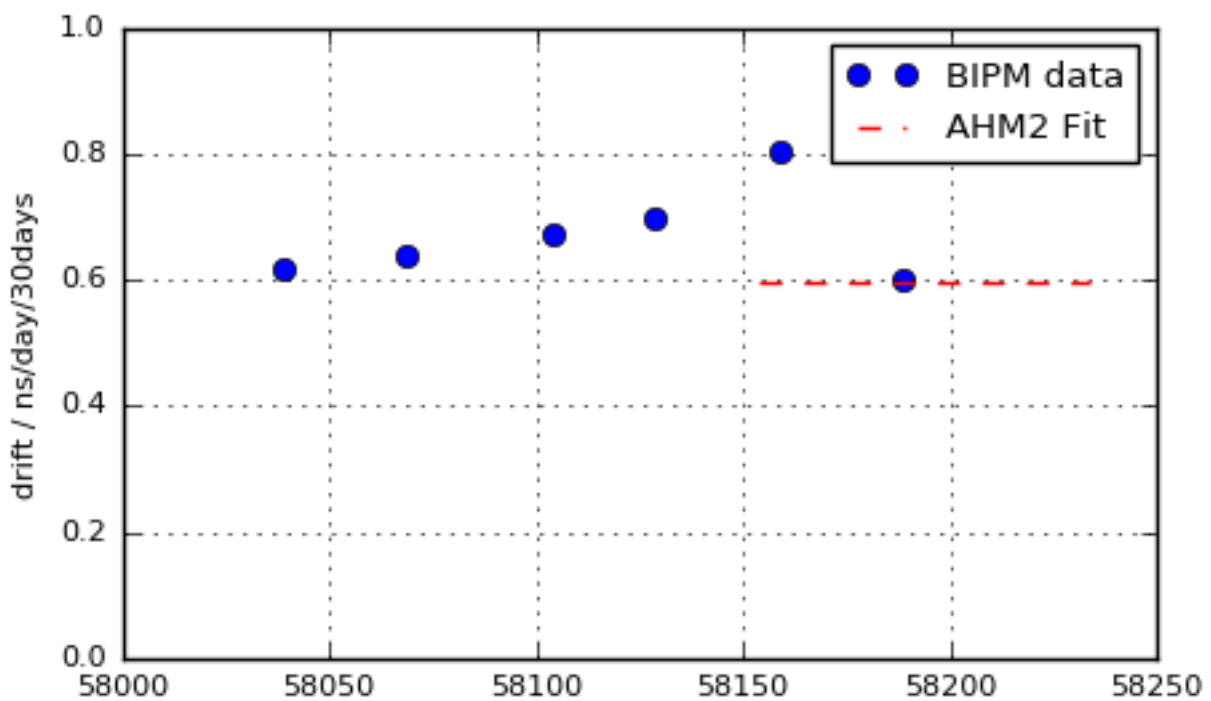
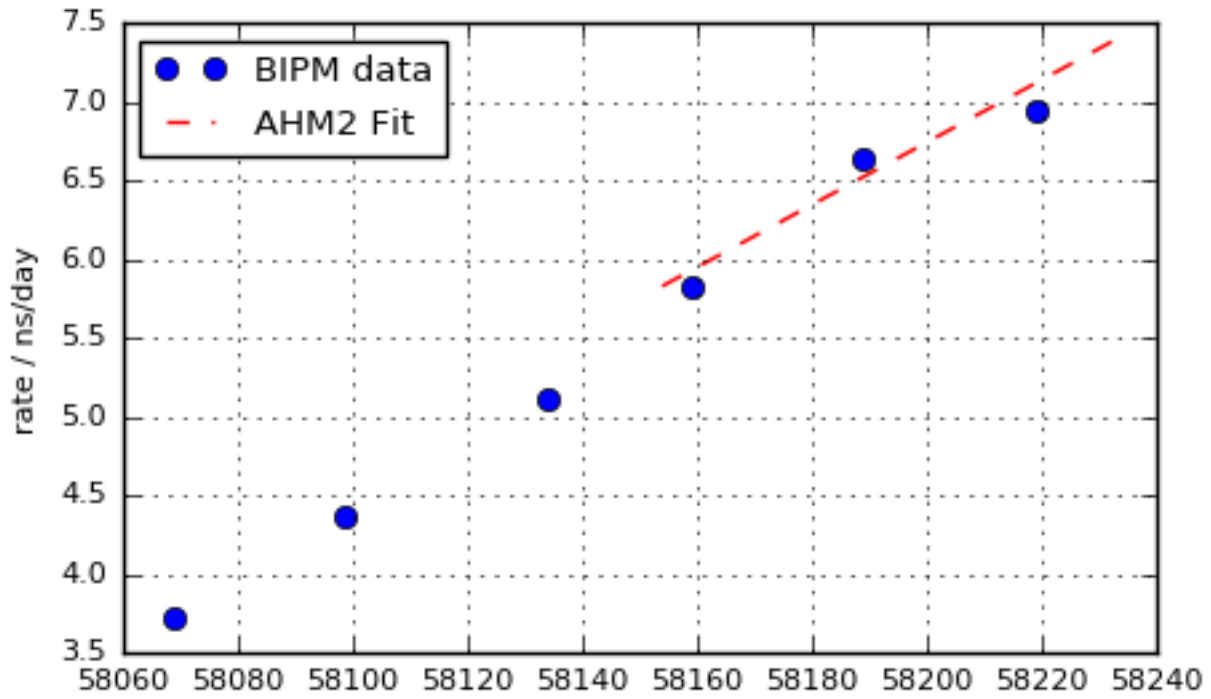


### UTC - AHM2 Fit

UTC-AHM2 (2018-05-14 / 58252)  
 $x \text{ (ns)} = 8035.315 + 7.413 * d + 0.0099 * d*d$   
 $y = -8.58023e-14 + -2.29379e-16 * d$   
 $d = (\text{mjd} - \text{mjd0}) \text{ with mjd0} = 58234$

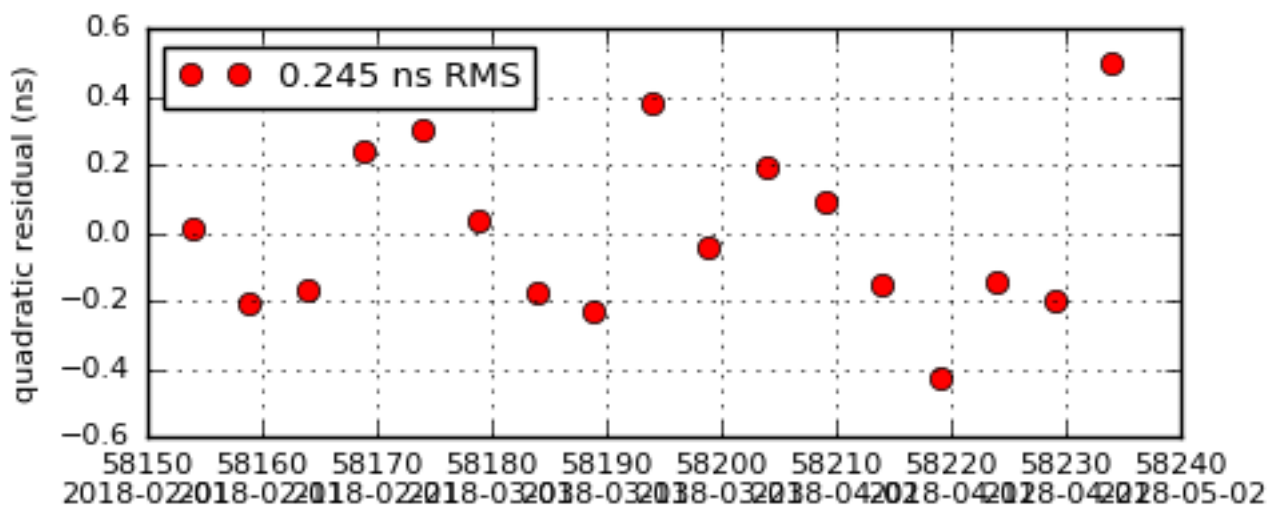
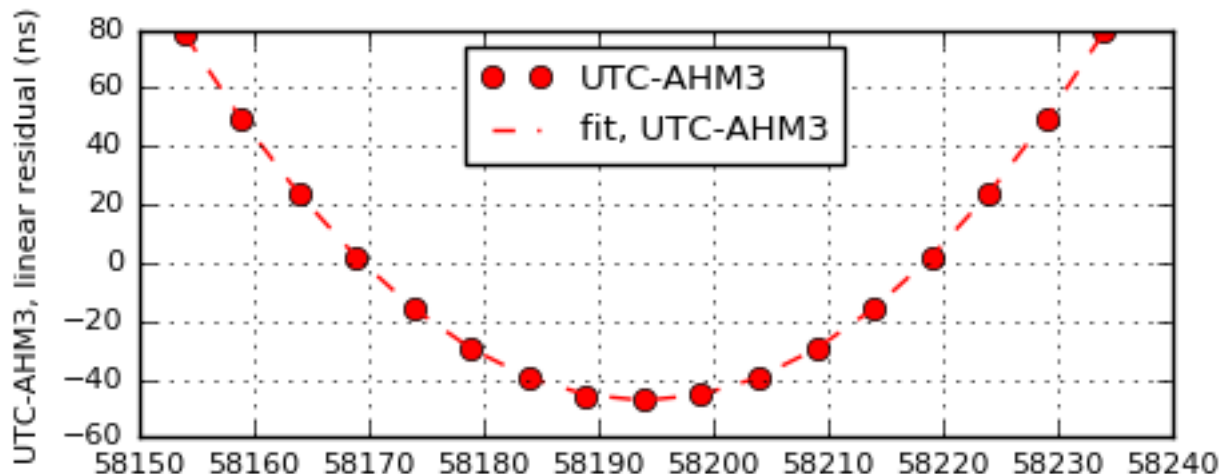
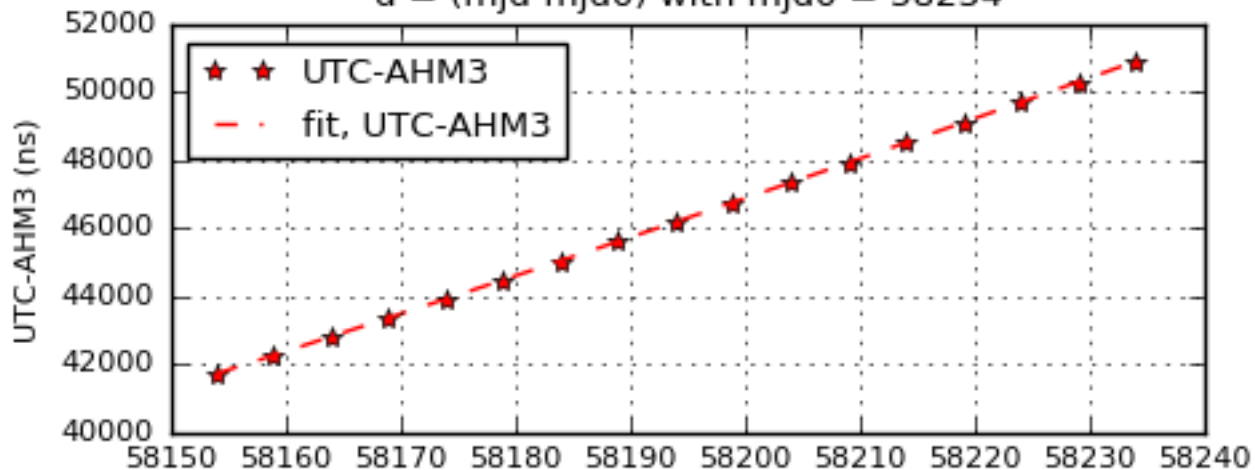


### AHM2 Rate and Drift



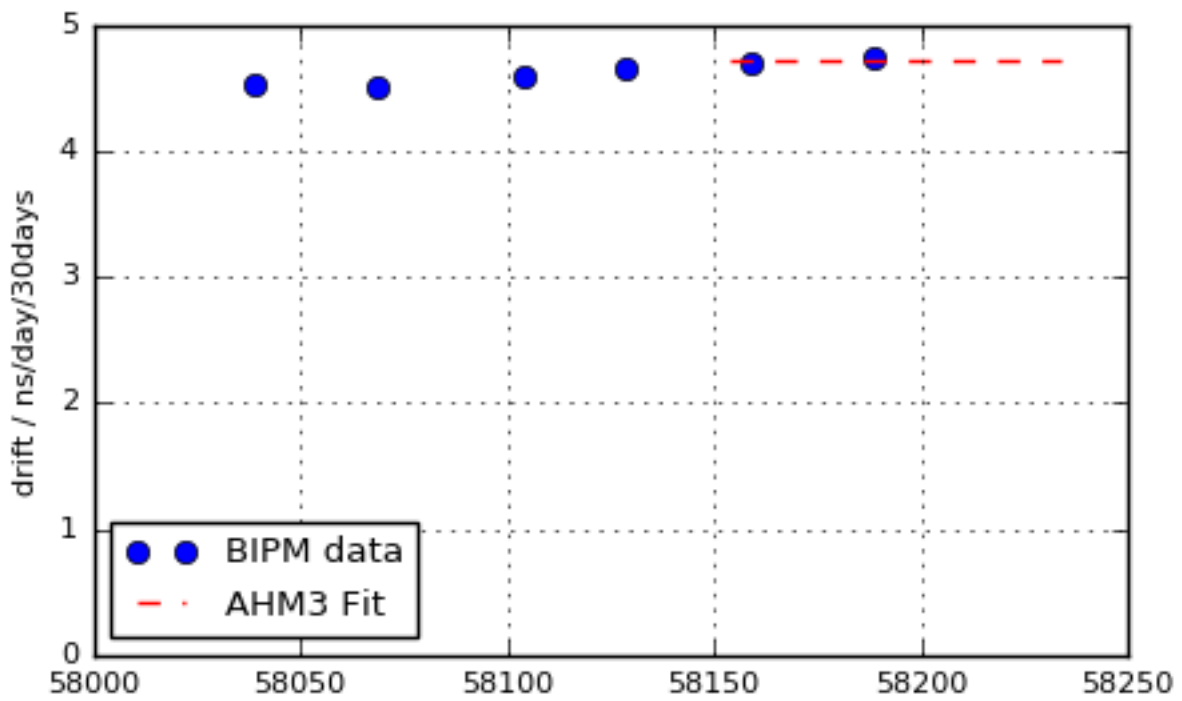
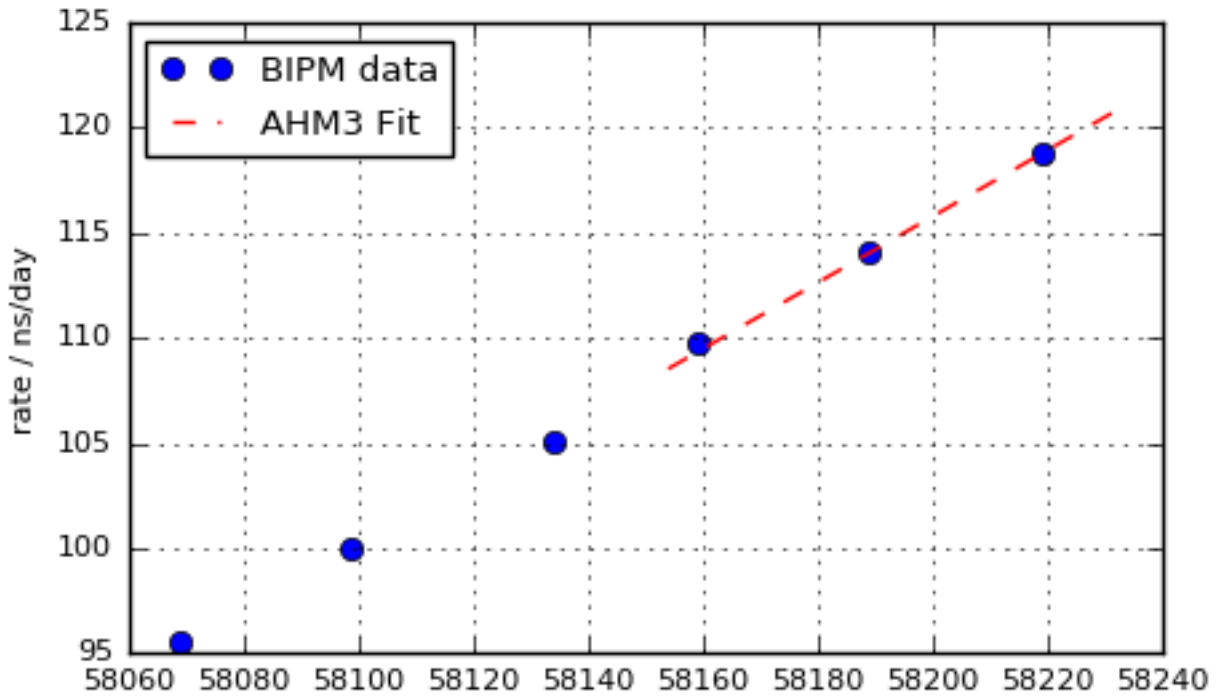
### UTC - AHM3 Fit

UTC-AHM3 (2018-05-14 / 58252)  
 $x \text{ (ns)} = 50915.798 + 121.133 * d + 0.0788 * d * d$   
 $y = -1.402e-12 + -1.8233e-15 * d$   
 $d = (\text{mjd} - \text{mjd0}) \text{ with mjd0} = 58234$



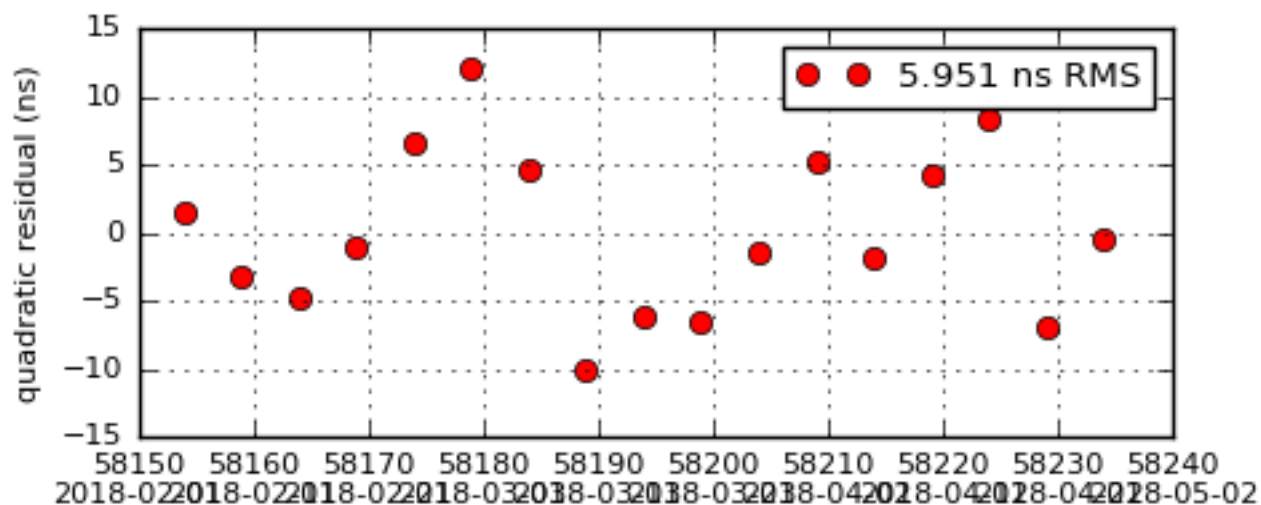
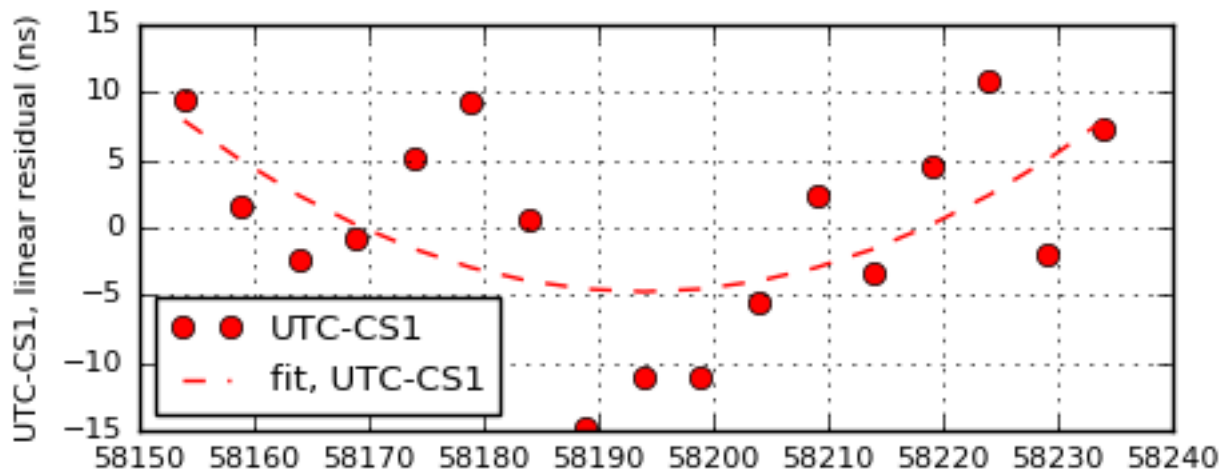
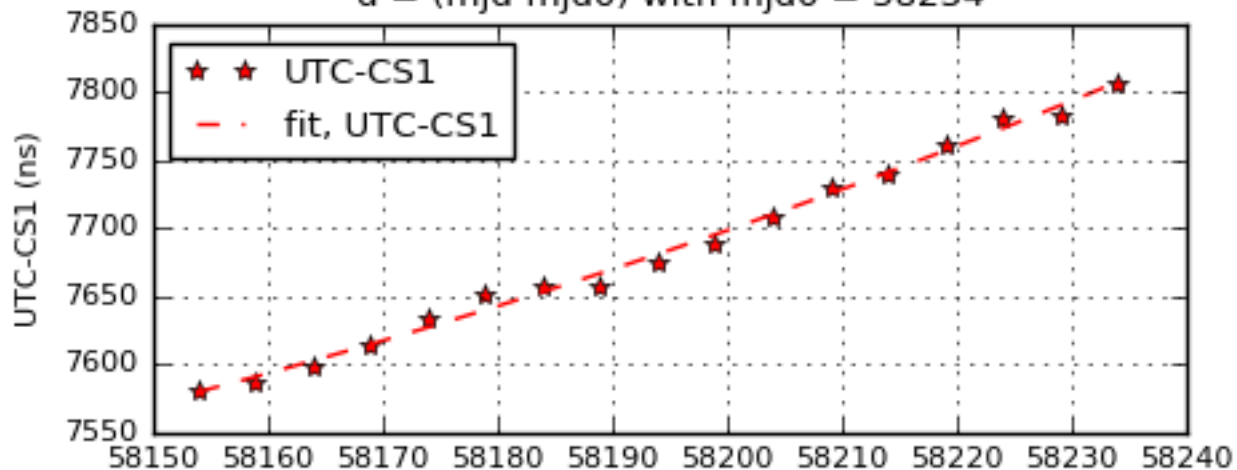


### AHM3 Rate and Drift

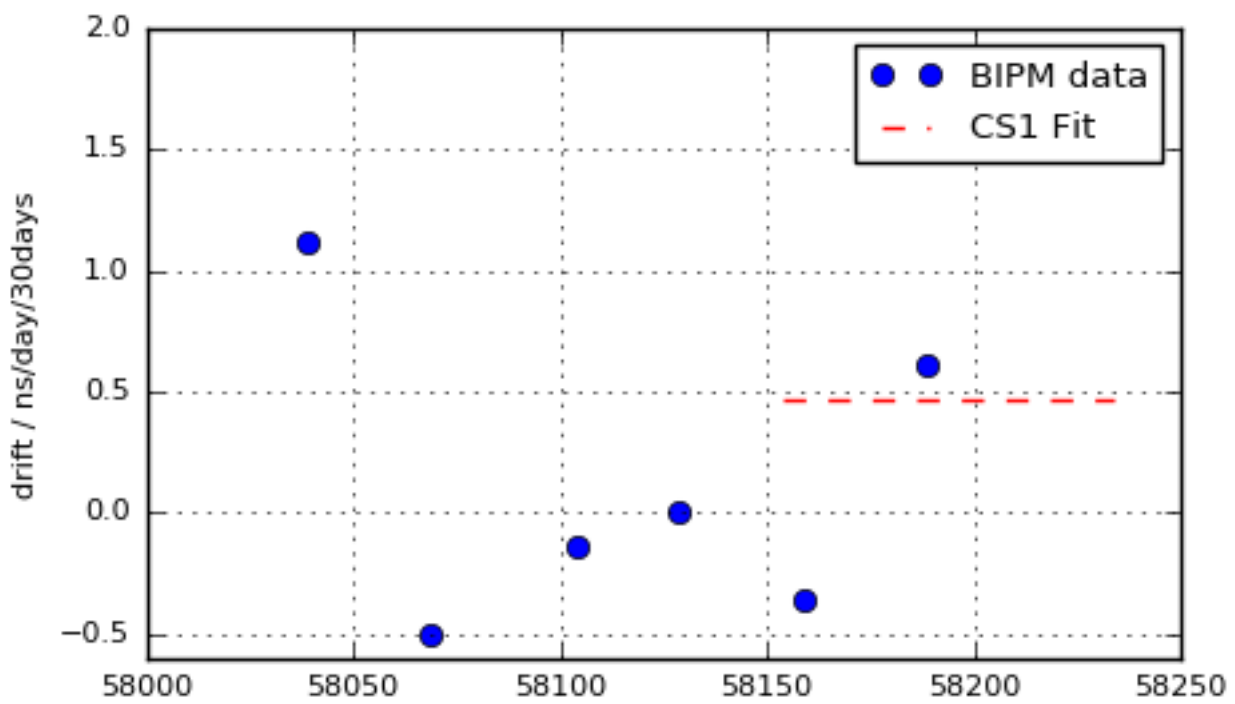
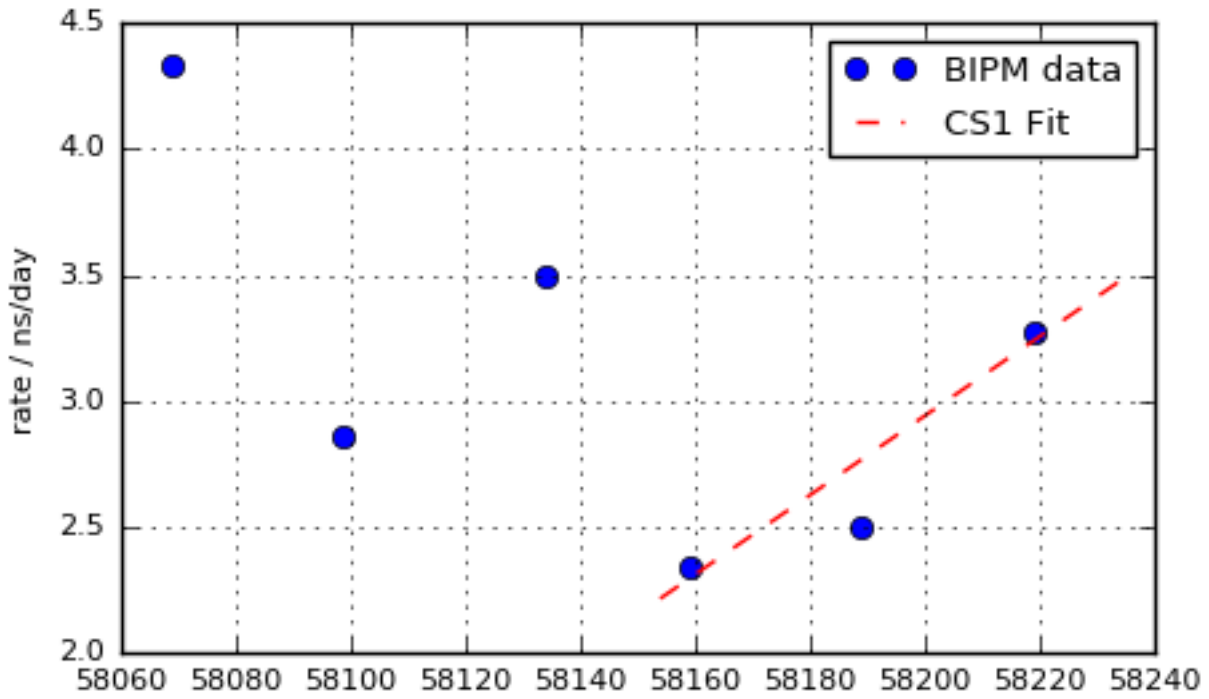


### UTC - CS1 Fit

UTC-CS1 (2018-05-14 / 58252)  
 $x \text{ (ns)} = 7807.624 + 3.476 * d + 0.0079 * d * d$   
 $y = -4.02305e-14 + -1.82104e-16 * d$   
 $d = (\text{mjd} - \text{mjd0}) \text{ with mjd0} = 58234$



### CS1 Rate and Drift



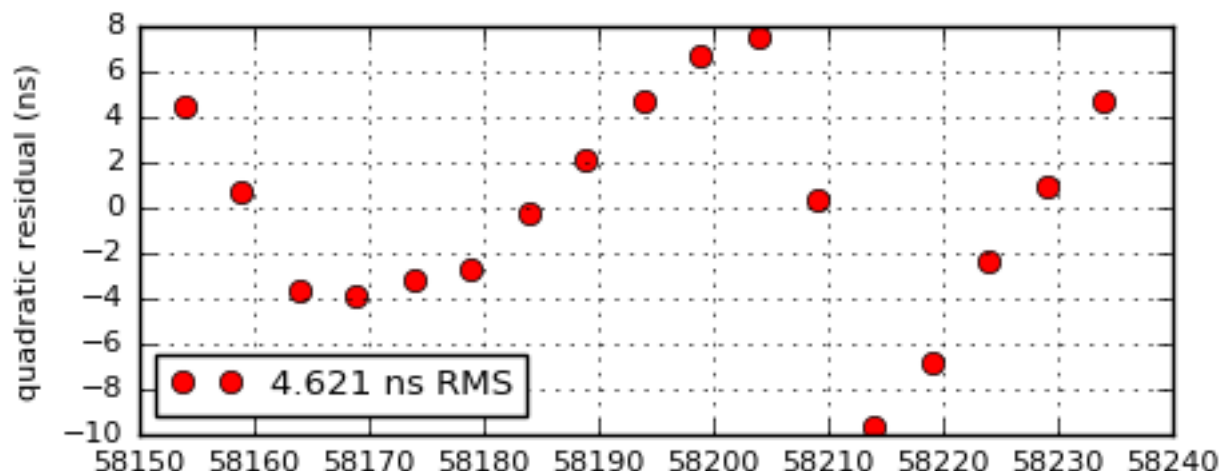
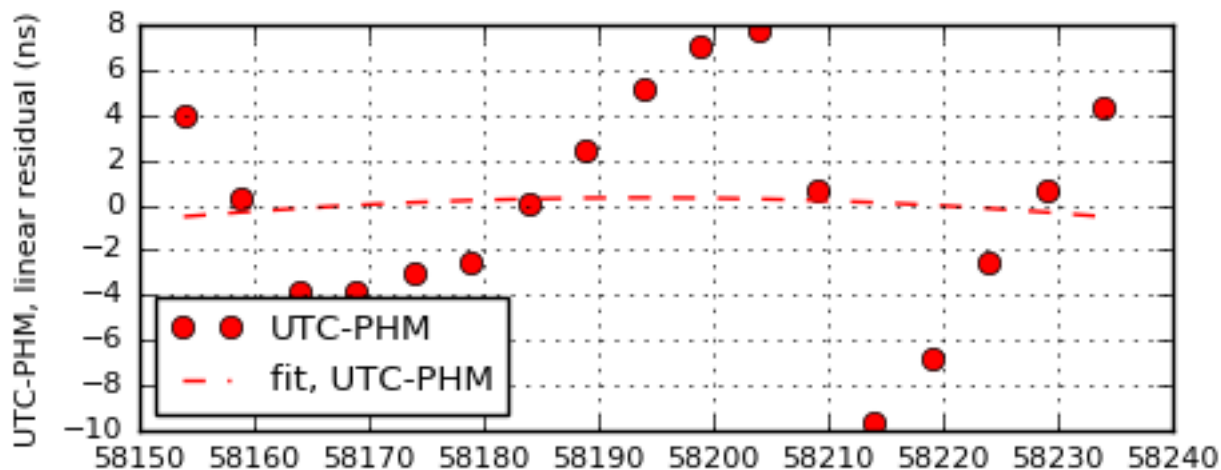
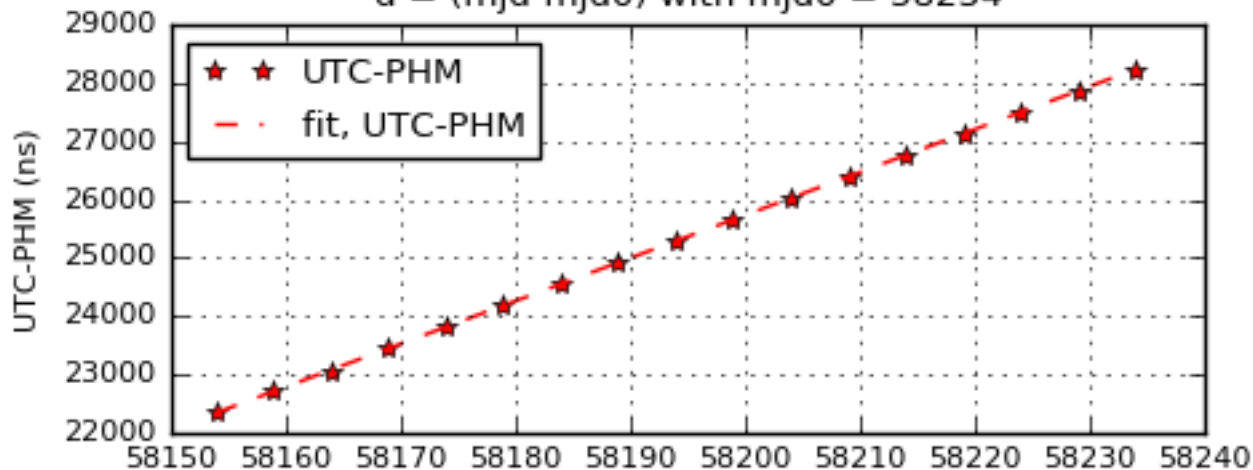
### UTC - PHM Fit

UTC-PHM (2018-05-14 / 58252)

$$x \text{ (ns)} = 28231.035 + 73.609 *d + -0.0005 *d*d$$

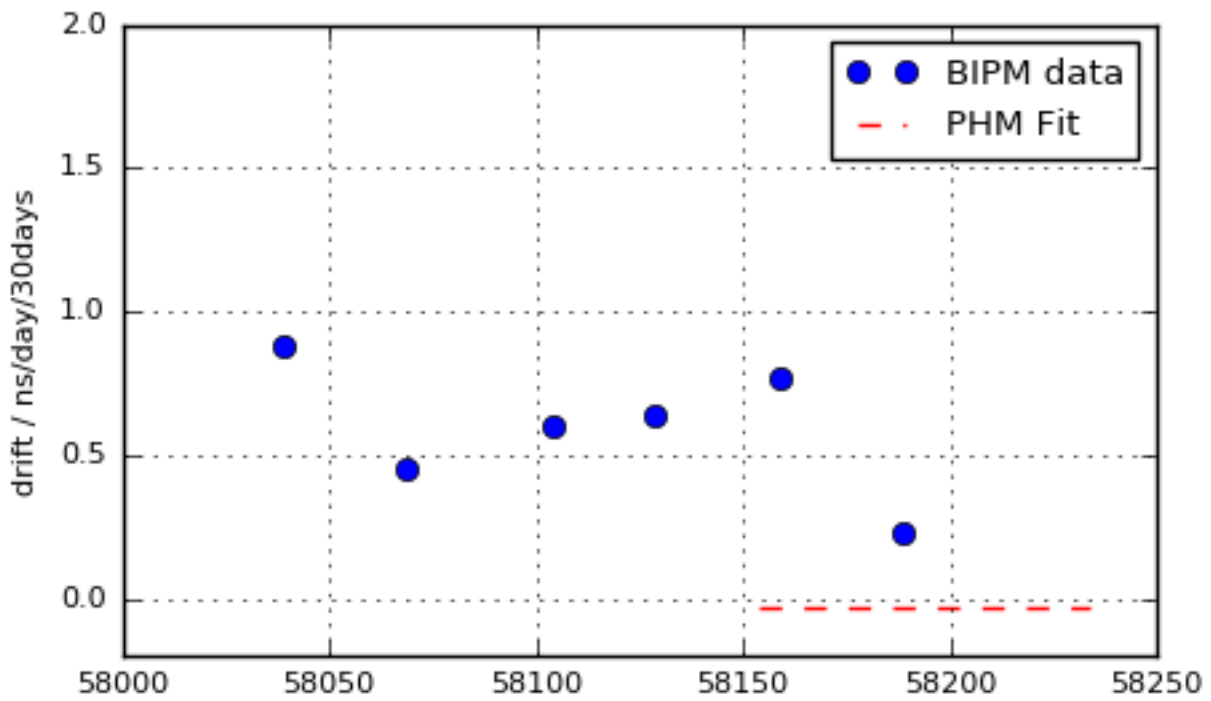
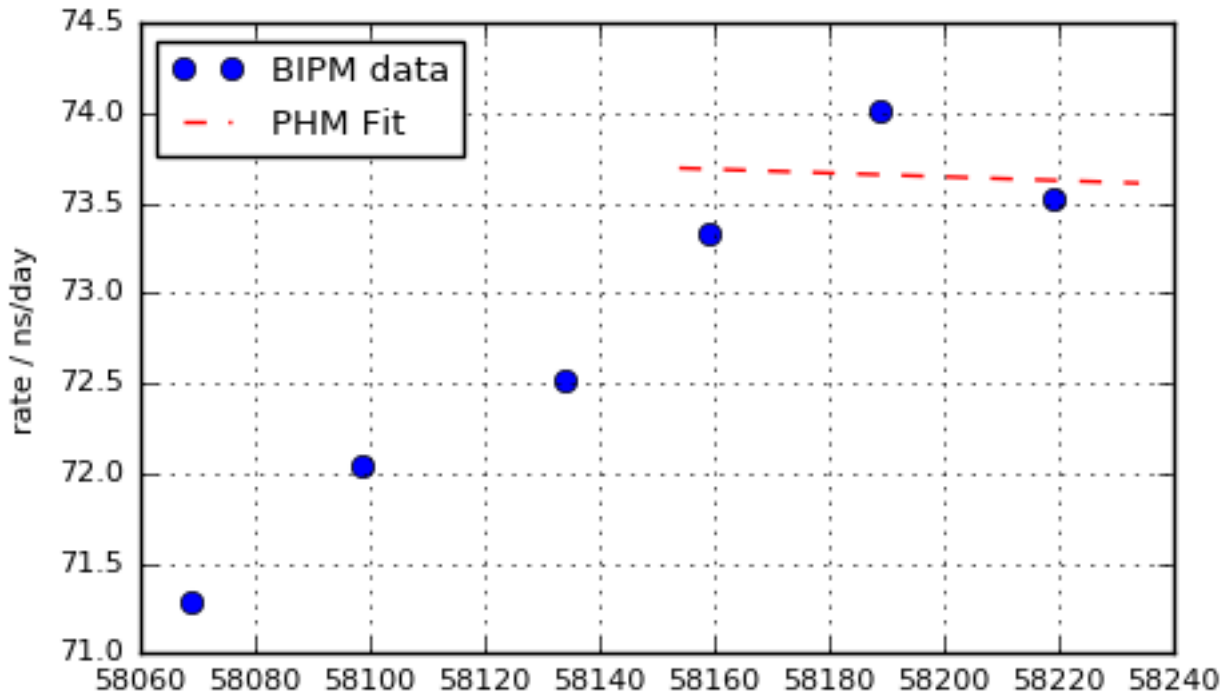
$$y = -8.51954e-13 + 1.20757e-17 *d$$

d = (mjd-mjd0) with mjd0 = 58234



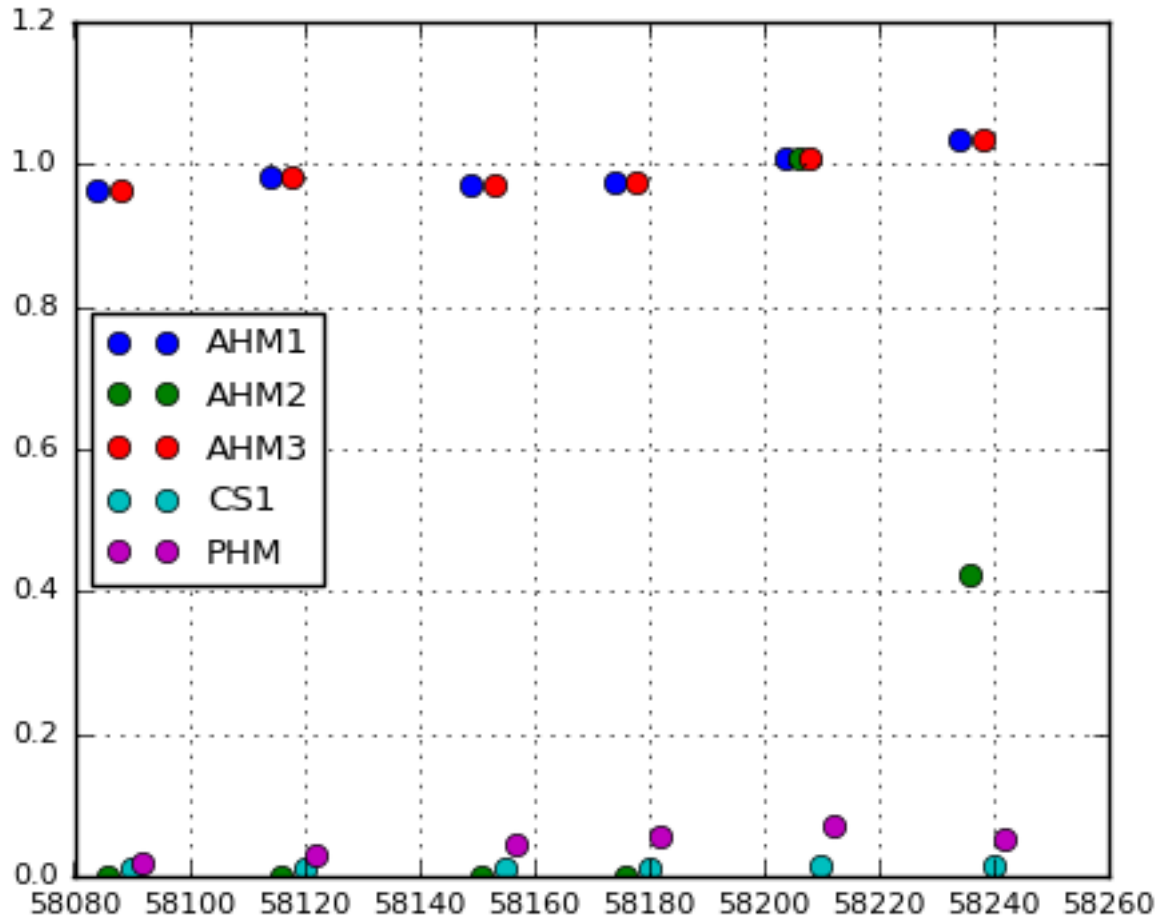
2018-02-20 2018-02-20 2018-02-20 2018-03-03 2018-03-20 2018-03-20 2018-04-02 2018-04-20 2018-04-20 2018-05-02

### 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.