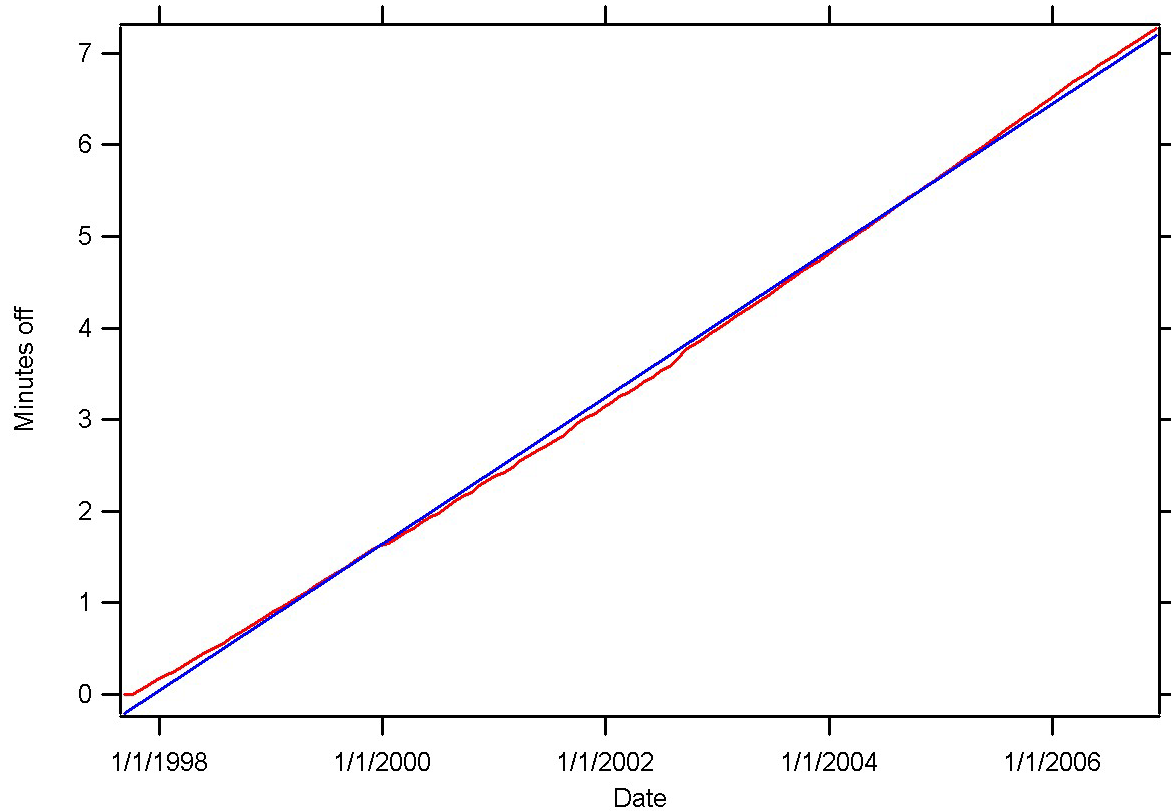


The EPAM team has identified a timing drift in the EPAM data. This small timing drift is ~ 1 minute/year. We are currently in the process of identifying the source of this drift. Once the source has been located and fixed we will regenerate the entire EPAM dataset.

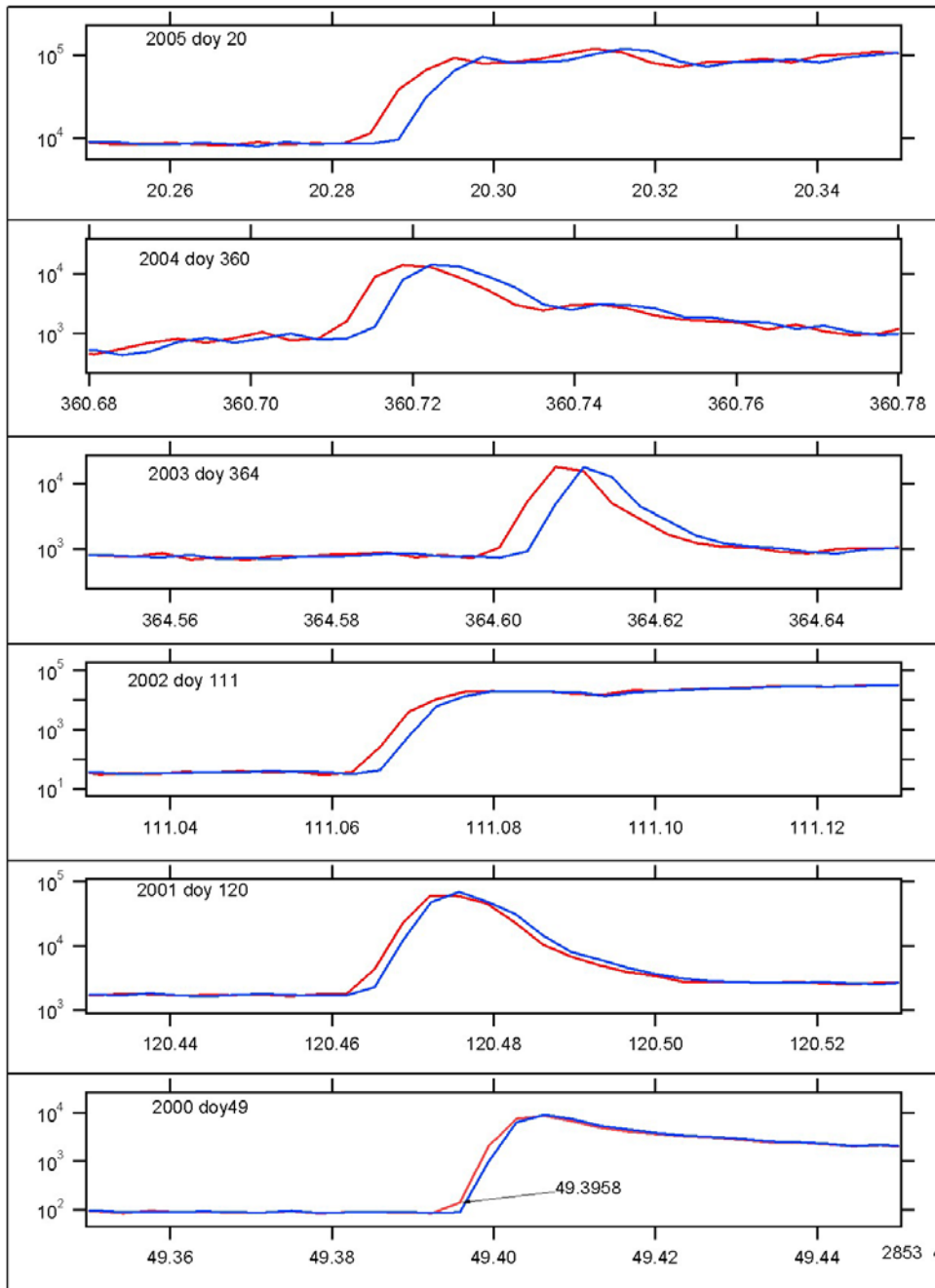
Below we present evidence we have collected on this drift.



When we examine the timing difference between the ACE spacecraft clock and the ACE Epoch we find a constant drift, very similar to what is observed in the EPAM data.

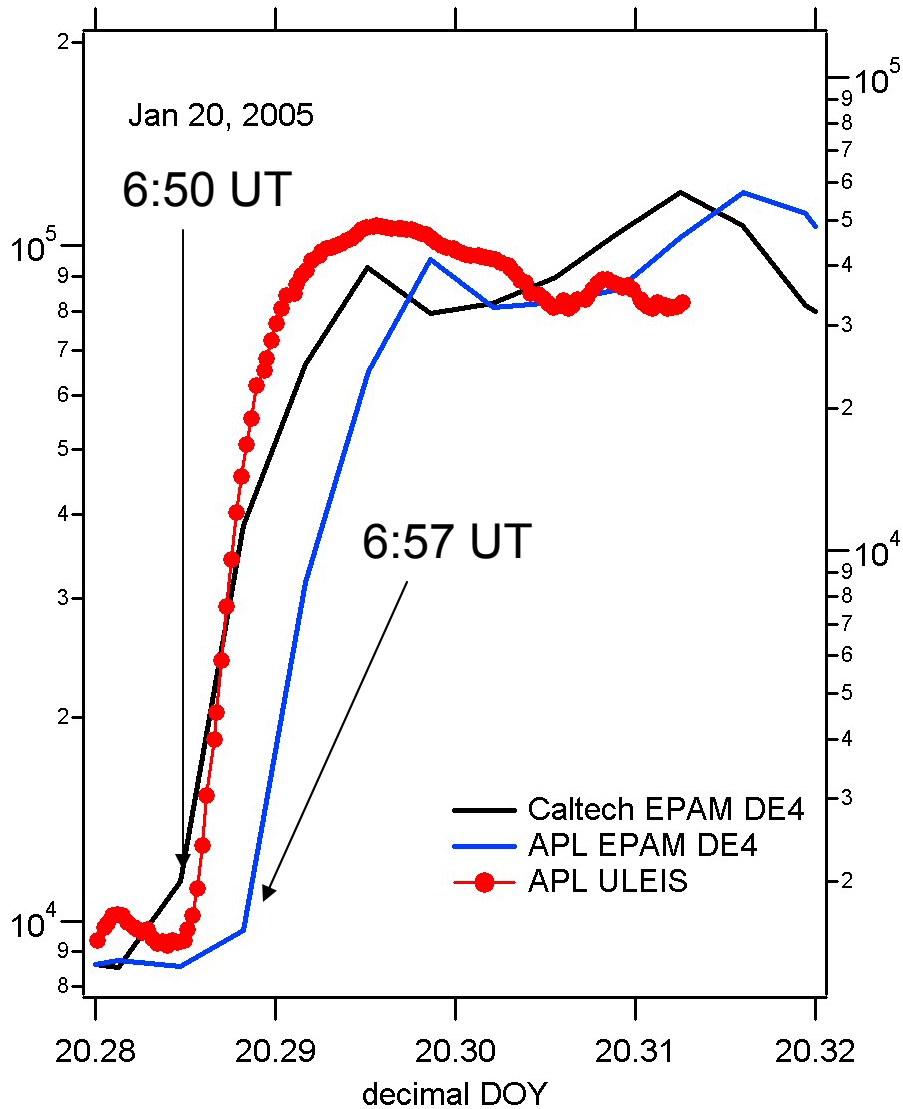
The ACE SOC has made routines available to correct the drift, however if these routines were not implemented or incorrectly implemented then a drift of this nature is what we would expect.

As we are solving the problem, if high resolution data is required then a simple function based on this curve can give an estimated correction.



Browse data going backward in time.

If we compare the browse data to the level 2 data going backwards in time, the difference decreases.



5 minute averaged data produced as a browse product at Caltech (shown in black) goes up ~ 7 minutes prior to the 5 minute averaged level 2 data (shown in blue).

ULEIS observations (shown in red) and SIS observations (not shown) go up at the same time as the Caltech browse, and at the same time as instruments on IMP8, SOHO, and WIND.

The observed 7 minute offset by 2005 is what would be expected by incorrect use of the spacecraft clock.

The Plan

- We first will **identify** the exact source of the drift.
- We will **repair** the archive generation software at APL and Kansas.
- We will carefully **test** the new software to ensure it's in sync with other instrument observations
- We will **reprocess** the entire dataset from launch
- As we reprocess data we will **generate new level 2 datasets** and submit them to the SOC