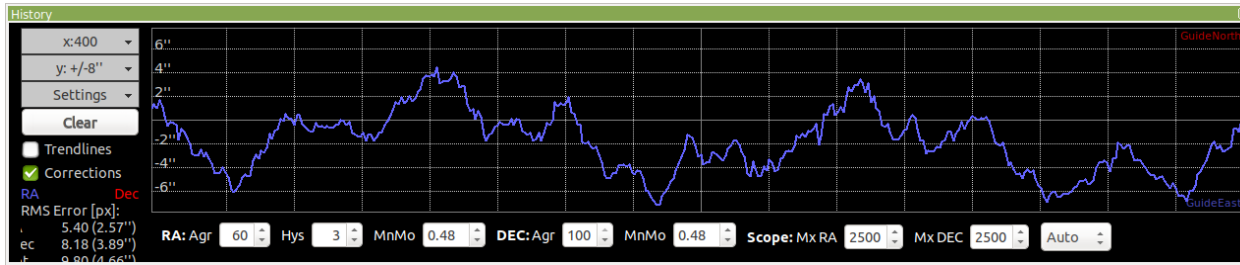


G11 RA PE Improvement

5/6/21

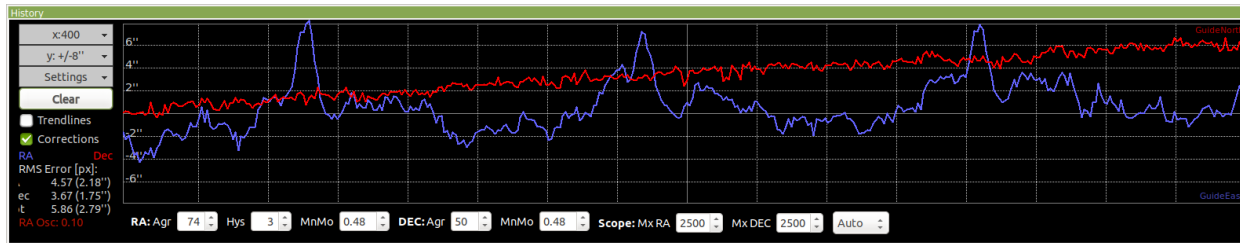
Prior to modifications

1/2/21 Test - Approx. 11"pp, large jags



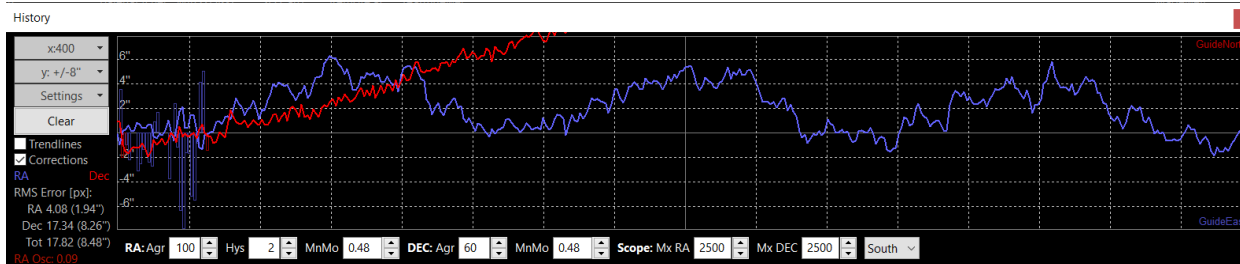
After 1st round of modifications - New bearing blocks, replaced bearings (all new Losmandy), regreased worm & worm gear with Tungsten Disulfide & Superlube, added 1 Belleville washer, new Oldham coupler (compressed), aligned motor, RA right bearing gap set to 0.039", regreased entire DEC axis and replaced Oldham coupler, DEC right bearing gap set to 0.030"

4/10/21 Test - Approx. 11"pp, pulse every 4 minutes



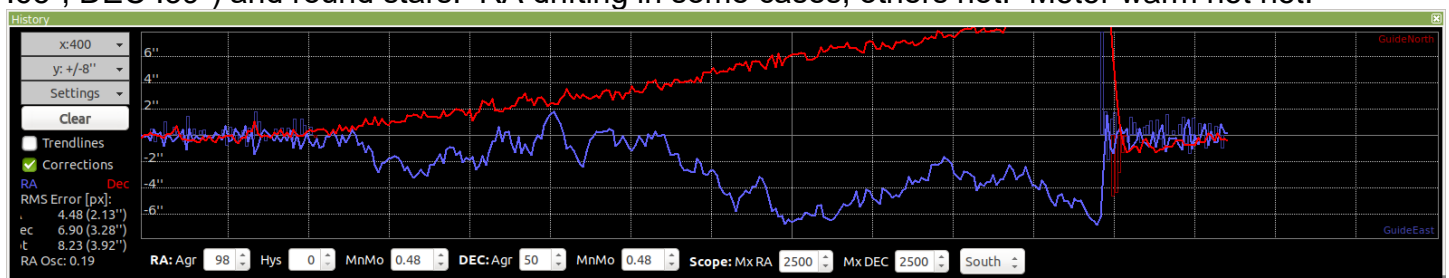
After 2nd round of modifications - Replaced new left bearing block (new left bearing block causing worm to be too close to ring gear) near motor with old block, replaced left bearing with new Boca bearing, right bearing still new Losmandy, still 1 Belleville washer, relubed bottom part of axis components near captain tightening knob, improved alignment of motor, RA right bearing block 0.032", left 0.028", found best areas on ring gear and marked CWD position on ring gear

4/21/21 Test - Approx. 6"pp, RA Motor Lags message



After 3rd round of modifications – Set RA bearing blocks: right 0.035", left 0.030"; loosened Oldham coupler and applied Superlube on outside hoping to get some on inside.

4/24/21 Test – Approx. 6" pp, RA Motor Lags message. Very good autoguiding results (approx. RA .65", DEC .39") and round stars. RA drifting in some cases, others not. Motor warm not hot.



After 4th round of modifications – After disassembly found worm to be turning easily. Theory that mount worked out whatever problem it had during last use. Greased inside of Oldham Coupler, aligned motor and put wires in filed out motor mounting holes to keep motor from moving, cleaned RA clutch teflon plate and interfaces.

5/6/21 Test – Approx. 4" pp but with drift following DEC, did not see RA Motor Lags message. Very good autoguiding results (approx. RA .59", DEC .60") and round stars. Motor cooler than previous.

