
Mauna Loa Solar Observatory Observer's Log

Thu Apr 15 16:52:52 GMT 2021

Year: 21 Doy: 105

Observer: mlso

WEATHER COMMENT: mcotter: Thu Apr 15 16:53:49 GMT 2021

Temp: 37.6f, Humidity: 28%, Pressure: 28.699in, Wind: 5mph from 182degs, Skies: Clear skies in all directions. Inversion layer visible on horizon at or above level of Haleakala.

___end___

GENERAL COMMENT BY mcotter: Thu Apr 15 17:06:59 GMT 2021

Opened windows upstairs

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GENERAL COMMENT BY mcotter: Thu Apr 15 17:07:03 GMT 2021

PM Blew off Kcor 01

___end___

Thu Apr 15 17:07:54 GMT 2021 Kcor Focus/alignment program exited

GENERAL COMMENT BY mcotter: Thu Apr 15 17:11:45 GMT 2021

Dust artifact visible toward bottom of Kcor 01 lens, approximately 6:00 o'clock position, even after attempting to blow it off several times.

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Thu Apr 15 19:11:02 GMT 2021 KCOR Start Calibration script: c:\kcor\mlso-calibration22deg-20171025.ini

Thu Apr 15 19:26:17 GMT 2021 KCOR End Calibration Script

GENERAL COMMENT BY mcotter: Thu Apr 15 21:51:02 GMT 2021

Pausing observing to look at the SGS tuning.

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GENERAL COMMENT BY mcotter: Fri Apr 16 01:32:00 GMT 2021

RA guider loosened clutch. To give ~12 pounds of resistance on the T-handle. Just slightly tighter than hand tight. Before starting T-handled need about 40 pounds of force to move the spar.

When we first started working on the RA clutch mechanism we had noticed that the large "Dumb bell" shaped cam roller had moved away from center and was riding up against the RA assembly, tangent to the RA cam rollers. We readjusted the position and centered the cam rollers where they should be located. We fully backed off the RA clutch pad and then brought it back into position so that it would seat itself normally back against the friction plate. We then attempted multiple tightening sequences until we were satisfied the clutch was riding smoothly with approximately the same amount of force in both directions.

The RA motor/clutch assembly position set screw was found to be loose. This was letting the whole assembly move back and forth by about 5 degrees. The set screw was tightened reducing the range of motion against the springs. The motor now sits just above the big RA friction wheel.

Tuned the SGS RA PID settings new settings found to be $k_c=40.5$ $T_i=.008$. K_c is similar to Tuesday T_i is 2.5x smaller.

Loosened the Dec clutch from about 30 pounds needed at the T handle to about 12. After this we found a Dec miss balanced with too much weight on the UCOMP/north side of the spar. Added 22 pounds to the shelf on the south side of the spar to get

-Dec moment. Added 15 pounds to bottom of spar to cancel the Z component of the extra Dec weight.
____end____

GENERAL COMMENT BY mcotter: Fri Apr 16 01:36:42 GMT 2021

Ben and I were able to run Kcor for most of the morning. The sky was a little bright but a calibration was run and the images looked good. Starting around 1150 HST we began working on the RA and DEC clutch mechanisms. For the RA we inspected and cleaned the inside of the housing of any metallic particles that were present (little to none was found). We adjusted both friction plates to be smoother.

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ONSITE STAFF: berkey, mcotter