
Mauna Loa Solar Observatory Observer's Log

Sun Jul 4 16:56:29 GMT 2010

Year: 10 Doy: 185

Observer: koon

WEATHER COMMENT: Sun Jul 4 16:56:30 GMT 2010

Clear sky, no wind. temp=48F.

____end____

Sun Jul 4 17:02:30 GMT 2010 CHIP Start Patrol

PSPT COMMENT BY DARRYL: Sun Jul 4 17:16:30 GMT 2010

Observing.

____end____

Sun Jul 4 18:02:40 GMT 2010 CHIP LSD

Sun Jul 4 18:04:11 GMT 2010 CHIP End LSD

Sun Jul 4 18:04:18 GMT 2010 CHIP BiasLSD

Sun Jul 4 18:05:06 GMT 2010 CHIP End BiasLSD

Sun Jul 4 18:05:12 GMT 2010 CHIP Bias

Sun Jul 4 18:05:51 GMT 2010 CHIP End Bias

Sun Jul 4 18:05:56 GMT 2010 CHIP ReStart Patrol

Sun Jul 4 19:32:51 GMT 2010 MKIV Start Patrol

MKIV PROBLEM COMMENT BY DARRYL: Sun Jul 4 19:34:16 GMT 2010

I'm working on the camera alignment, I aligned it better than it was back when I started this on Tuesday judging by the analog o-scope signals, and those signals show a dip in the middle of the right "hump" that was noticed recently before I started trying to increase the "gain" by aligning the camera. That dip may be due to the CCD. Most interesting is how great the real-time scans look, I haven't seen the corona so bright and the background blue so noise-free in a long time - if ever. The psueudo-calibrated scans in the animations look terrible with lots of radial streaks. I also changed the line-driver chip at U12 on the transformation board to try to improve the dip in the right hump of the analog displays but that didn't help, I left the new chip in place and saved the old chip since we have many of those. Another improvement I see is that the analog signals stay very steady throughout the scan azimuth range whereas this was changing before alignment, I think this is due to a folding mirror angle change and corresponding realignment of the SK lens and the camera assembly as explained next. The SK lens was always so low to the rail-like mounting surface inside the mk4 camera chamber that it would touch the prefilter edge on the camera assembly and there wasn't much movement available at the SK mount in X and Y directions normal to the lightpath, and it seems that the folding mirror was angled too much in order to get the light through the low lens and that angle seemed to cause azimuth-related sensor signal, so I mounted 1/16" shims under the SK mount to correct things, that seemed to straighten the lightpath and allowed me to change the angle of the folding mirror, I removed a 1/16" shim from under the camera mount. I then aligned the camera assembly as good as I could get it (it is Very Difficult to do) and tightened things for a test. I've been running scans with the new alignment.

Looking in at the folding mirror mount there are 2 adjusting screws to the left and right at the top and closest to the inner chamber rail, I turned the left screw 1 turn CW, at the camera side of that mount there is a single adjusting screw at a position farther from the chamber rail surface - I turned that screw 2 turns CW.

___end___
Sun Jul 4 20:08:25 GMT 2010 MKIV End Patrol
Sun Jul 4 20:29:35 GMT 2010 MKIV Start Patrol
Sun Jul 4 21:00:06 GMT 2010 MKIV Start Cal
Sun Jul 4 21:15:31 GMT 2010 MKIV End Cal
Sun Jul 4 21:15:37 GMT 2010 MKIV Start Patrol
Sun Jul 4 21:29:43 GMT 2010 CHIP End Patrol
Sun Jul 4 21:33:32 GMT 2010 MKIV End Patrol
Sun Jul 4 21:44:43 GMT 2010

MkIV

19_32.rawmk4	19_53.rawmk4	20_35.rawmk4	20_56.rawmk4	21_24.rawmk4
19_35.rawmk4	19_56.rawmk4	20_38.rawmk4	21_03.rawmk4	21_27.rawmk4
19_38.rawmk4	19_59.rawmk4	20_41.rawmk4	21_04.rawmk4	21_30.rawmk4
19_41.rawmk4	20_02.rawmk4	20_44.rawmk4	21_12.rawmk4	c21_00.rawmk4
19_44.rawmk4	20_05.rawmk4	20_47.rawmk4	21_15.rawmk4	c21_09.rawmk4
19_47.rawmk4	20_29.rawmk4	20_50.rawmk4	21_18.rawmk4	
19_50.rawmk4	20_32.rawmk4	20_53.rawmk4	21_21.rawmk4	