
Mauna Loa Solar Observatory Observer's Log

Fri Oct 11 16:48:45 GMT 1996

Year: 96 Doy: 285

Observer: koon

Fri Oct 11 16:48:49 GMT 1996 CHIP Startup--Initializing new tape

WEATHER COMMENT: Fri Oct 11 16:48:53 GMT 1996

Scattered cirrus, wind=15 mph from the SSE, temp=46 F.

Fri Oct 11 16:53:50 GMT 1996 dPMon Start Patrol

Fri Oct 11 16:54:02 GMT 1996 CHIP CHIP Start Patrol

MKIII COMMENT: Fri Oct 11 16:58:36 GMT 1996

Tape H01409 was in the drive, probably has data on it judging from
yesterdays log. Will prepare it for mailing.

Fri Oct 11 17:02:58 GMT 1996 dPMon Flat

Fri Oct 11 17:03:52 GMT 1996 dPMon End Flat

Fri Oct 11 17:04:34 GMT 1996 CHIP Bias

Fri Oct 11 17:05:41 GMT 1996 CHIP End Bias

Fri Oct 11 17:05:49 GMT 1996 CHIP Water

Fri Oct 11 17:06:24 GMT 1996 CHIP End Water

Fri Oct 11 18:02:58 GMT 1996 dPMon Flat

Fri Oct 11 18:03:51 GMT 1996 dPMon End Flat

Fri Oct 11 18:04:14 GMT 1996 CHIP Bias

Fri Oct 11 18:05:22 GMT 1996 CHIP End Bias

Fri Oct 11 18:05:30 GMT 1996 CHIP Water

Fri Oct 11 18:06:03 GMT 1996 CHIP End Water

Fri Oct 11 19:02:57 GMT 1996 dPMon Flat

Fri Oct 11 19:03:48 GMT 1996 dPMon End Flat

Fri Oct 11 19:03:46 GMT 1996 CHIP Bias

Fri Oct 11 19:04:54 GMT 1996 CHIP End Bias

Fri Oct 11 19:05:04 GMT 1996 CHIP Water

Fri Oct 11 19:05:43 GMT 1996 CHIP End Water

MKIII COMMENT: Fri Oct 11 19:58:38 GMT 1996

Still haven't been able to do a cal due to clouds.

Fri Oct 11 20:03:03 GMT 1996 dPMon Flat

Fri Oct 11 20:03:58 GMT 1996 dPMon End Flat

Fri Oct 11 20:05:35 GMT 1996 CHIP Gain

Fri Oct 11 20:09:57 GMT 1996 CHIP End Gain

Fri Oct 11 20:10:06 GMT 1996 CHIP Bias

Fri Oct 11 20:10:50 GMT 1996 CHIP End Bias

Fri Oct 11 20:11:00 GMT 1996 CHIP Water

Fri Oct 11 20:11:29 GMT 1996 CHIP End Water

MKIII COMMENT: Fri Oct 11 20:20:02 GMT 1996

Pausing due to medium cirrus.

Fri Oct 11 21:02:54 GMT 1996 dPMon Flat

Fri Oct 11 21:03:46 GMT 1996 dPMon End Flat

Fri Oct 11 21:07:29 GMT 1996 dPMon End Patrol

DPMON COMMENT: Fri Oct 11 21:07:45 GMT 1996

Pausing due to medium cirrus.

Fri Oct 11 21:09:25 GMT 1996 CHIP Bias
Fri Oct 11 21:10:32 GMT 1996 CHIP End Bias
Fri Oct 11 21:10:39 GMT 1996 CHIP Water
Fri Oct 11 21:11:14 GMT 1996 CHIP End Water

MKIII COMMENT: Fri Oct 11 21:38:24 GMT 1996

I watched the barrel angle readout downstairs carefully and didn't see any jumps that might account for the 5 degree mismatch versus rotational direction. I watched the encoder upstairs and there are no missing teeth on the encoder or barrel gears. The gears mesh fine and the encoder gear is sprung to always ride on the same face of each barrel gear cog, so backlash seems eliminated. I could see one or two setscrews and/or pins that fix the encoder shaft to the gear but they are almost impossible to get to, and one of them is partially hidden by the plate that is perpendicular to the shaft access. It is difficult to see if the end of the shaft always rotates fixed with the encoder gear. It is possible that there is some slippage between the two whenever the barrel changes direction. I'll try to figure out a way to determine this.

Fri Oct 11 22:08:15 GMT 1996 CHIP Bias
Fri Oct 11 22:09:22 GMT 1996 CHIP End Bias
Fri Oct 11 22:09:29 GMT 1996 CHIP Water
Fri Oct 11 22:10:04 GMT 1996 CHIP End Water

COMMENT: Fri Oct 11 22:23:21 GMT 1996

Forgot to not that I extended the dome slot around 11:45, and that the CHIP image was vignetted just before that.

Fri Oct 11 22:40:49 GMT 1996 CHIP End Patrol

MKIII COMMENT: Fri Oct 11 22:24:11 GMT 1996

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The large encoder gear (closest to the encoder) appears to move along with the barrel OK, but it could be slipping on that primary shaft, I'll try to find out if it is. I found out that the encoder gears aren't always sprung to ride on the same face of the barrel gear cogs as we thought they were. As the barrel rotates CCW (viewed from bottom looking towards front of Spar) somewhere around Az=80 degrees backlash is introduced as the gears suddenly become sprung in the opposite direction, they stay sprung incorrectly until the barrel stops at Az=184.10 and starts to rotate in the CW direction. In the CW scans the gears are sprung correctly and no backlash is introduced. I'm not sure if this accounts for the difference that Alice discovered, but it does introduce some encoder position error. I think I can fix it by increasing the coil spring force (probably easier said than done) so I'll try that tomorrow after I try to determine the amount of error that backlash can introduce.

Fri Oct 11 23:41:30 GMT 1996 CHIP ending tape

COMMENT: Fri Oct 11 23:57:06 GMT 1996

Activity report:

QP: 135; 232; 278.

No coronal activity.

TAPES:

MKIII: H01410

DPMON: P00734

CHIP: C00151

LOWL: L00420 in drive #0

SCAN-LOG

SCAN-LOG 16:54:29. 10/11/96 DOY 285

17:06:34	17:09:49	17:13:04	17:16:18	17:19:33
17:22:46	17:25:59	17:29:12	17:32:25	17:35:37
17:38:51	17:42:03	17:45:16	17:48:28	17:51:40
17:54:52	17:58:05	18:01:17	18:04:29	18:07:39
18:10:51	18:14:04	18:17:15	18:20:26	18:23:37
18:26:48	18:30:00	18:33:10	18:36:22	18:39:32
18:42:44	18:45:55	18:49:07	18:52:18	18:55:30
18:58:41	19:01:54	19:05:05	19:08:17	19:11:28
19:14:41	19:17:52	19:21:05	19:24:17	19:27:29
19:30:41	19:33:54	19:37:06	19:40:19	19:43:32
19:46:45	19:49:57	19:53:10	19:56:22	19:59:35
20:02:47	20:06:00	20:09:13	20:12:26	20:15:38
20:18:51				

0 ERRORS

OK