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Mauna Loa Solar Observatory Observer's Log  
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Fri Jun 30 16:31:16 GMT 2006

Year: 06 Doy: 181

Observer: yasukawa

WEATHER COMMENT: Fri Jun 30 16:31:21 GMT 2006

In broken cirrostratus, SE wind 10 mph, temp 50 F.

\_\_\_\_end\_\_\_\_

Fri Jun 30 16:37:11 GMT 2006 CHIP Start Patrol

Fri Jun 30 16:37:27 GMT 2006 PICS Start Patrol

PSPT COMMENT: Fri Jun 30 16:39:34 GMT 2006

Starting up.

\_\_\_\_end\_\_\_\_

SBM COMMENT: Fri Jun 30 16:39:45 GMT 2006

Observing

\_\_\_\_end\_\_\_\_

PSPT COMMENT: Fri Jun 30 16:51:17 GMT 2006

Observing

\_\_\_\_end\_\_\_\_

Fri Jun 30 16:51:29 GMT 2006 MKIV Start Patrol

WEATHER COMMENT: Fri Jun 30 16:51:46 GMT 2006

"clear"

\_\_\_\_end\_\_\_\_

A NEW TAPE HAS BEEN PUT INTO KAIEE DLT DRIVE, Fri Jun 30 16:52:38 GMT 2006

Fri Jun 30 17:09:32 GMT 2006 MKIV End Patrol

Fri Jun 30 17:17:50 GMT 2006 MKIV Start Patrol

Fri Jun 30 17:59:16 GMT 2006 MKIV End Patrol

Fri Jun 30 18:01:49 GMT 2006 CHIP LSD

Fri Jun 30 18:02:18 GMT 2006 PICS Flat

Fri Jun 30 18:03:33 GMT 2006 CHIP End LSD

Fri Jun 30 18:03:42 GMT 2006 CHIP BiasLSD

Fri Jun 30 18:04:23 GMT 2006 CHIP End BiasLSD

Fri Jun 30 18:04:32 GMT 2006 CHIP Bias

Fri Jun 30 18:04:44 GMT 2006 PICS End Flat

Fri Jun 30 18:04:51 GMT 2006 PICS ReStart Patrol

Fri Jun 30 18:05:13 GMT 2006 CHIP End Bias

Fri Jun 30 18:05:21 GMT 2006 CHIP ReStart Patrol

Fri Jun 30 18:23:32 GMT 2006 MKIV Start Patrol

\*\*PSPT PROBLEM\*\* Fri Jun 30 19:31:28 GMT 2006

Crashed at 1913, k/r

\_\_\_\_end\_\_\_\_

WEATHER COMMENT: Fri Jun 30 20:05:16 GMT 2006

In cirrostratus. Stopping MK4 to troubleshoot opal mechanism.

May stop PICS and CHIP if I need to move the spar to gain access.

\_\_\_\_end\_\_\_\_

Fri Jun 30 20:06:50 GMT 2006 MKIV End Patrol

PSPT COMMENT: Fri Jun 30 20:06:28 GMT 2006

Flat field is being done thru cirrostratus. I will keep the new "N" filter's ND filter with no tilt for now and await a good day with no clouds before increasing the tilt with 4 washers.

\_\_\_\_end\_\_\_\_

\*\*MKIV PROBLEM\*\*:  
Fri Jun 30 20:12:24 GMT 2006

Dark shutter and ND filter drives and status mechanisms use identical cards and utilize the same power supplies. Both work so the power supplies are not suspect.

\_\_\_\_end\_\_\_\_

Fri Jun 30 20:14:48 GMT 2006 CHIP End Patrol

Fri Jun 30 20:15:06 GMT 2006 PICS End Patrol

SBM COMMENT: Fri Jun 30 20:17:34 GMT 2006

Pausing sbm observations.

\_\_\_\_end\_\_\_\_

\*\*MKIV PROBLEM\*\*:  
Fri Jun 30 22:38:20 GMT 2006

Tied down spar to ladder as removing O1 housing will cause imbalance causing the spar to want to swing its snout upward.

Removed O1 cover.

(When doing this be sure to disconnect dust cap status connector on the INSIDE of the O1 housing before removing hold-down screws.

Dust cap status connector is right angle connector on the left side, looking from front. There is a connector to the dust cap microswitches on the outside of the same bulkhead connector)

Checked microswitches on opal (forward) diffuser and they appeared to work when removed from the circuit.

(Need to remove the opal assembly to get to microswitch mounting screws)

Opal wasn't going in and out on Wednesday. I tried swapping opal connector to the ground-glass connector in back of KCC. I could run the opal motor using the GG button. Status on GG remained unlit, status on OP did not change--IN stayed lit. Moved cable back to Opal connector and tried moving opal in and out. It moved today, but timed out as the status still appeared failed with the IN LED constantly lit. Progress from Wednesday, but still haven't resolved status problem.

\_\_\_\_end\_\_\_\_

\*\*MKIV PROBLEM\*\*:  
Fri Jun 30 22:54:55 GMT 2006

Opal IN status led remains lit even with cable from upstairs disconnected so it must be getting it's signal from the KCC--status must be latched on one of the KCC boards. IN status not changing with change of opal position or with cable (?? status) removed.

\_\_\_\_end\_\_\_\_

Fri Jun 30 23:21:29 GMT 2006 MKIV Start Patrol

Fri Jun 30 23:21:47 GMT 2006 CHIP Start Patrol

Fri Jun 30 23:22:00 GMT 2006 PICS Start Patrol

SBM COMMENT: Fri Jun 30 23:22:55 GMT 2006

Resumed obs.

\_\_\_\_end\_\_\_\_

\*\*MKIV PROBLEM\*\*:  
Fri Jun 30 23:23:09 GMT 2006

Reassembled opal mechanism and reinstalled O1 housing. Dusted off O1s.  
Reconfigured dome shutter and repointed spar.  
Resumed observations while I ponder the next move.

\_\_\_\_end\_\_\_\_

Fri Jun 30 23:27:53 GMT 2006 MKIV End Patrol

Fri Jun 30 23:28:02 GMT 2006 MKIV Start Cal

\*\*MKIV PROBLEM\*\*  
Fri Jun 30 23:31:46 GMT 2006

Attempted calibration but looks like the cal program checks the status of the mechanisms at the beginning and either thinks that the opal is in or is confused by what it sees. Cal stalls before it can put the opal in. I could not move the opal manually in the cal mode. Have to reboot KCC in order to abort the cal program to resume observations.

\_\_\_\_end\_\_\_\_

\*\*MKIV PROBLEM\*\*  
Fri Jun 30 23:40:40 GMT 2006

Tried moving opal. Now I cannot move it in or out. IN led remains lit. Selecting OUT light up the OUT drive LEDs, stays lit until time-out. Selecting IN does not light up the IN drive LEDs, opal doesn't go in. Very confusing.... drive was working before.

\_\_\_\_end\_\_\_\_

Fri Jun 30 23:43:26 GMT 2006 MKIV Start Patrol

NICE MK4 IMAGE: 2321

NICE CHIP IMAGE: 2322

NICE PICSLIMB IMAGE: 2323

NICE PICSDISC IMAGE: 2322

Sat Jul 1 00:36:40 GMT 2006 MKIV End Patrol

Sat Jul 1 00:36:47 GMT 2006 MKIV Start Cal

\*\*MKIV PROBLEM\*\*  
Sat Jul 1 00:37:17 GMT 2006

After tracing connections and signals across the various pages of the documentation, I decided that the status card might still be suspect. Problem there is regardless of change in opal IN/OUT signal from upstairs, IN LED remains lit. Tried swapping out U7 (74S135). No change in LED status. Changed out U6 (74LS132). IN LED status went off.

Tried moving opal manually with gui button and managed to move opal.

LED status lights did not go on, all stayed off.

Tried Calibration. LED status did not change but opal went in and out at the correct times.

Drive LEDs (opal, tilt plate, shutter) indicating OK.

\_\_\_\_end\_\_\_\_

Sat Jul 1 00:56:18 GMT 2006 MKIV Start Patrol

Sat Jul 1 00:58:33 GMT 2006 CHIP Start Patrol

\*\*CHIP PROBLEM\*\*  
Sat Jul 1 00:51:41 GMT 2006

CHIP stalled at FixCenter. Cancelled Wait and program stepped and stalled at Exposure. Cancel WaitOpti, stepped to next exposure and stalled. Repeat, same result. Killing program and restarting.

\_\_\_\_end\_\_\_\_

WEATHER COMMENT: Sat Jul 1 01:00:21 GMT 2006

In and out of cirrocumulus patches.

\_\_\_\_end\_\_\_\_

Sat Jul 1 01:06:21 GMT 2006 CHIP End Patrol  
Sat Jul 1 01:06:30 GMT 2006 PICS End Patrol  
COMMENT: Sat Jul 1 01:06:27 GMT 2006  
Stopping while in clouds to reconfigure dome shutter.  
\_\_\_\_end\_\_\_\_

Sat Jul 1 01:08:20 GMT 2006 MKIV End Patrol  
Sat Jul 1 01:14:24 GMT 2006 CHIP Start Patrol  
Sat Jul 1 01:14:35 GMT 2006 PICS Start Patrol  
Sat Jul 1 01:15:09 GMT 2006 MKIV Start Patrol  
Sat Jul 1 02:31:04 GMT 2006 CHIP End Patrol  
Sat Jul 1 02:31:12 GMT 2006 PICS End Patrol  
Sat Jul 1 02:31:50 GMT 2006 MKIV End Patrol

**\*\*MKIV PROBLEM\*\***: Sat Jul 1 02:37:02 GMT 2006  
Not sure we are out of the woods with the opal issue yet. Troubleshoot was a bit haphazard so I'm not sure whether I covered all the bases. There is still the issue of why the LEDs don't indicate status. Why the opal worked sometimes and didn't work at other times. Did I cover the bases on swapping the status cards with other DC motor drive mechanisms as I did the drive cards. Good news is it did work for the calibration I tried at 2320 UT.

\_\_\_\_end\_\_\_\_  
Sat Jul 1 02:41:21 GMT 2006  
MkIV

00_01.rawmk4	01_26.rawmk4	16_54.rawmk4	18_35.rawmk4	19_42.rawmk4
00_04.rawmk4	01_29.rawmk4	16_57.rawmk4	18_38.rawmk4	19_45.rawmk4
00_07.rawmk4	01_32.rawmk4	17_00.rawmk4	18_41.rawmk4	19_48.rawmk4
00_09.rawmk4	01_35.rawmk4	17_03.rawmk4	18_44.rawmk4	19_51.rawmk4
00_12.rawmk4	01_38.rawmk4	17_06.rawmk4	18_47.rawmk4	19_54.rawmk4
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00_30.rawmk4	01_56.rawmk4	17_32.rawmk4	19_04.rawmk4	23_43.rawmk4
00_33.rawmk4	01_59.rawmk4	17_35.rawmk4	19_07.rawmk4	23_46.rawmk4
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01_24.rawmk4	16_51.rawmk4	18_32.rawmk4	19_39.rawmk4	