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Mauna Loa Solar Observatory Observer's Log  
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Mon Nov 4 16:51:30 GMT 2002

Year: 02 Doy: 308

Observer: yasukawa

WEATHER COMMENT: Mon Nov 4 16:51:43 GMT 2002

Cool, clear, south wind.

Mon Nov 4 16:59:05 GMT 2002 CHIP Start Patrol

Mon Nov 4 16:59:21 GMT 2002 PICS Start Patrol

Mon Nov 4 17:03:03 GMT 2002 MKIV Start Patrol

\*\*MKIV PROBLEM\*\*: Mon Nov 4 17:08:43 GMT 2002

Patrol did not start when queued up. cmdTool looked like it was trying to read KCC. Reset KCC.

Mon Nov 4 17:11:47 GMT 2002 MKIV Start Patrol

\*\*MKIV PROBLEM\*\*: Mon Nov 4 17:14:33 GMT 2002

Cycled KCC power. That turned guider off briefly, affecting CHIP and PICS.

Mon Nov 4 17:17:36 GMT 2002 MKIV Start Patrol

\*\*MKIV PROBLEM\*\*: Mon Nov 4 17:32:36 GMT 2002

Still have not found problem. Tilt plate appears hosed, barrel angles appear hosed. Suspect problem is in KCC.

Mon Nov 4 17:40:12 GMT 2002 MKIV End Patrol

Mon Nov 4 17:59:45 GMT 2002 CHIP End Patrol

\*\*MLSO PROBLEM\*\*: Mon Nov 4 17:59:39 GMT 2002

Spar power is off while I check out Stepper motor drivers. Guiding is off.

Mon Nov 4 18:02:26 GMT 2002 PICS Flat

Mon Nov 4 18:04:47 GMT 2002 PICS End Flat

Mon Nov 4 18:23:51 GMT 2002 PICS End Patrol

Mon Nov 4 18:51:22 GMT 2002 CHIP Start Patrol

Mon Nov 4 18:51:33 GMT 2002 PICS Start Patrol

Mon Nov 4 18:55:30 GMT 2002 MKIV Start Patrol

Mon Nov 4 19:04:30 GMT 2002 MKIV Start Patrol

Mon Nov 4 19:10:28 GMT 2002 MKIV Start Patrol

\*\*MKIV PROBLEM\*\*: Mon Nov 4 19:12:43 GMT 2002

Guiding has been erratic due to switching KCC (thus spar) power on and off to swap cards. Swapped status and drive cards for tilt plate mechanism as well as swapping STM101 stepper motor drive card on spar. Swapped line receiver and transmitter on spar end of drive circuit and got no response out of the tilt plate each time. Cannot drive tilt plate out using Patrol or KCC virtual control panel. Patrol does not time out and start despite tilt plate status.

Barrel angle readout on Virtual Control Panel hosed. The one scan I got (not sure how that happened) displayed values that were wrong according to David. Problem is pointing to KCC or signal transformation board rather than the spar hardware.

\*\*MKIV PROBLEM\*\*: Mon Nov 4 19:42:30 GMT 2002

Barrel will rotate by selecting a barrel rate, either CW or CCW, on the VCP.

Angle readouts are coordinated when going CCW between 0 to 90 to 180 but was negative from start at 180 thru 270 to 360. 270 was -90. Going CW, VCP readout went from 180 thru 90 to 0 then began going negative after passing 0 thru -90 (270) and on to -180.

Mon Nov 4 20:20:46 GMT 2002 CHIP End Patrol

Mon Nov 4 20:20:50 GMT 2002 PICS End Patrol

\*\*MLSO PROBLEM\*\* Mon Nov 4 20:20:56 GMT 2002

turning off guider (spar power) to work with tilt plate.

Mon Nov 4 20:35:13 GMT 2002 CHIP Start Patrol

Mon Nov 4 20:35:24 GMT 2002 PICS Start Patrol

\*\*MKIV PROBLEM\*\* Mon Nov 4 20:34:36 GMT 2002

Turned Spar power off. Opened up tube above tilt plate mechanism.

Rotated tilt plate out and held it there with tape. Turned spar power back on, removed tape. Now will try Patrol.

Mon Nov 4 20:36:39 GMT 2002 MKIV Start Patrol

\*\*MKIV PROBLEM\*\* Mon Nov 4 20:41:36 GMT 2002

Tilt plate command appears at Drive LEDs. Tilt plate is out, Drive not turning off. Patrol stalled. Turned tilt out drive off at VCP. Patrol started up. Data ratty because tube is open. lots of scattered light for now.

\*\*MKIV PROBLEM\*\* Mon Nov 4 20:50:37 GMT 2002

Tubes closed up. Data still noisy. Resetting KCC.

Mon Nov 4 20:52:33 GMT 2002 MKIV Start Patrol

\*\*MKIV PROBLEM\*\* Mon Nov 4 20:58:06 GMT 2002

KCC reset got rid of the noise--loaded corrector information, I suppose.

Restart of Patrol required stopping Tilt-out command at VCP.

\*\*MKIV PROBLEM\*\* Mon Nov 4 21:53:17 GMT 2002

#### MK4 Status:

If we can manually move tilt plate out before starting Patrol, we can observe by stopping the tilt-out at the VCP. We probably cannot calibrate.

I have been tracing cables and locating documents to understand the tilt system again. Plan is to put the tilt drive card out on extenders tomorrow and look for the tilt pulses. Leds indicate that the card is receiving the pulses and trying to pass them thru. If they are getting thru, I'll look at the tranceiver card on the spar and then the STM101 for output to the motor. Last suspect would be motor and limiting resistor.

\*\*MKIV PROBLEM\*\* Mon Nov 4 21:59:37 GMT 2002

Patrol barrel angles on KCC monitor and on OCP still out of sync. Now the

\*\*MKIV PROBLEM\*\* Mon Nov 4 22:01:31 GMT 2002

Barrel angle readouts still negative on west side of limb on the KCC readout. Can't say whether this is normal or not.

Mon Nov 4 22:04:31 GMT 2002 PICS End Patrol

Mon Nov 4 22:05:40 GMT 2002 CHIP End Patrol

\*\*MKIV PROBLEM\*\* Mon Nov 4 22:06:52 GMT 2002

I just tried driving the tilt-plate in with the VCP command and it went in.

Still cannot drive it out with the command.

Mon Nov 4 22:08:01 GMT 2002 MKIV End Patrol

Mon Nov 4 22:24:46 GMT 2002

MkIV

17_17.rawmk4	21_00.rawmk4	21_17.rawmk4	21_35.rawmk4	21_52.rawmk4
17_30.rawmk4	21_02.rawmk4	21_20.rawmk4	21_38.rawmk4	21_55.rawmk4
20_36.rawmk4	21_05.rawmk4	21_23.rawmk4	21_41.rawmk4	21_58.rawmk4
20_43.rawmk4	21_08.rawmk4	21_26.rawmk4	21_44.rawmk4	22_01.rawmk4
20_46.rawmk4	21_11.rawmk4	21_29.rawmk4	21_47.rawmk4	22_04.rawmk4
20_54.rawmk4	21_14.rawmk4	21_32.rawmk4	21_50.rawmk4	