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Mauna Loa Solar Observatory Observer's Log  
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Mon Mar 24 16:48:53 GMT 2003

Year: 03 Doy: 083

Observer: stueben

Mon Mar 24 16:56:19 GMT 2003 CHIP Start Patrol

Mon Mar 24 16:56:36 GMT 2003 PICS Start Patrol

WEATHER COMMENT: Mon Mar 24 16:56:32 GMT 2003

Clear, south wind 5-10mph, temp 45F.

A NEW TAPE HAS BEEN PUT INTO KAIEE DLT DRIVE, Mon Mar 24 17:11:33 GMT 2003

Mon Mar 24 17:16:52 GMT 2003 MKIV Start Patrol

MKIV COMMENT: Mon Mar 24 17:17:17 GMT 2003

Centered 01 guider.

WEATHER COMMENT: Mon Mar 24 17:57:02 GMT 2003

Some scattered patches of cirrus have come up.

Mon Mar 24 18:02:03 GMT 2003 PICS Flat

Mon Mar 24 18:02:53 GMT 2003 CHIP LSD

Mon Mar 24 18:04:37 GMT 2003 PICS End Flat

Mon Mar 24 18:04:48 GMT 2003 CHIP End LSD

Mon Mar 24 18:05:04 GMT 2003 CHIP BiasLSD

Mon Mar 24 18:06:04 GMT 2003 CHIP End BiasLSD

Mon Mar 24 18:06:18 GMT 2003 CHIP Bias

Mon Mar 24 18:07:14 GMT 2003 CHIP End Bias

MKIV COMMENT: Mon Mar 24 18:45:09 GMT 2003

Centered 01 guider.

\*\*MKIV PROBLEM\*\*: Mon Mar 24 19:01:06 GMT 2003

Tested barrel drag theory while in cirrus overcast. Introduced drag to barrel by using my hands to create friction against barrel rotation. I did not see any effect on stepper until I practically grabbed hold of the trough edges and pulled against the rotation. This caused the barrel to stop, the stepper reversed itself a couple of rotations and then reverted back to its nominal direction as I released the barrel. This was a lot of introduced drag. Downstairs on akamai's window, there were "t\_drive barrel glitch" messages, approximately one per test (or it could be four entries during one of the tests, I'm unsure how they were written to the display window). That exercise also caused the barrel to crash at the 175-degree turnaround. KCC gui indicated a barrel CCW rate of 30. When I selected Stop and then selected a CW rate of 120, the barrel started rotation in the CW direction to the CW limit. Selected CCW rate of 120 and barrel rotated off CW limit and began rotating to the 175-degree turnaround point. At that point, mk4 began scanning normally, displaying coronal data.

MKIV COMMENT: Mon Mar 24 19:36:21 GMT 2003

Centered 01 guider.

Mon Mar 24 19:49:11 GMT 2003 MKIV End Patrol

Mon Mar 24 19:49:52 GMT 2003 CHIP End Patrol

COMMENT: Mon Mar 24 19:49:20 GMT 2003

Stopped to reconfigure dome shutter. Also resetting KCC to attempt to change Xanim display which is displaying what looks like overexposed coronal images.

Mon Mar 24 19:54:00 GMT 2003 PICS End Patrol  
Mon Mar 24 19:56:33 GMT 2003 MKIV Start Cal  
Mon Mar 24 19:56:50 GMT 2003 CHIP Start Patrol  
Mon Mar 24 19:57:02 GMT 2003 PICS Start Patrol  
Mon Mar 24 20:16:10 GMT 2003 MKIV Start Patrol

MKIV COMMENT: Mon Mar 24 20:39:44 GMT 2003

Centered 01 guider.

COMMENT: Mon Mar 24 20:47:06 GMT 2003

Dec axis reset. Repointed spar, reset guider.

**\*\*MKIV PROBLEM\*\***: Mon Mar 24 21:09:19 GMT 2003

We did some stall tests in clouds and threw the guiding off temporarily while doing gorilla moves to the barrel. This time we applied some friction to the stepper motor directly at the "flywheel" device attached to the motor. The motor just chattered as we stalled it. Motor did not reverse direction like we were observing during the problem. We repeated trying to stall the motor with friction and tension to the barrel and again came to the conclusion that it took a whole lot of force to stall the barrel. The motor reversed itself for several turns, but that could have been from springing back due to the reverse force we had to apply to stop the barrel. This time there were no t\_drive barrel glitch messages on the akamai window and we did not crash the scanning like last time.

The barrel stalls could be from the wrap-up but I don't see how the wrap-up could get that tight and then loosen up by a few degrees of direction reversal when the stalls are occurring intermittently and often during a single scan.

**\*\*CHIP PROBLEM\*\***: Mon Mar 24 21:51:24 GMT 2003

CHIP image was offset due to its executing a centering while the spar was off-pointing during our barrel tests. Corrected centering by jogging the micrometer controller to default position in the Y direction.

MKIV COMMENT: Mon Mar 24 21:59:06 GMT 2003

Centered 01 guider.

MKIV COMMENT: Mon Mar 24 22:58:34 GMT 2003

Centered 01 guider.

WEATHER COMMENT: Mon Mar 24 23:36:30 GMT 2003

Cirrus getting thicker and a some orographic clouds coming up as well.

MKIV COMMENT: Mon Mar 24 23:39:35 GMT 2003

Letting the mk4 run just to watch the barrel rotation for intermittent stalls and stutters. Data no good at this time.

**\*\*PSPT PROBLEM\*\***: Tue Mar 25 00:47:49 GMT 2003

PSPT crashed making jpeg images at 01:10UT (same crash, same time as on Saturday ). Killed and restarted.

COMMENT: Tue Mar 25 01:25:03 GMT 2003

Reconfigured dome shutter.

Tue Mar 25 01:25:18 GMT 2003 CHIP End Patrol

**\*\*CHIP PROBLEM\*\***: Tue Mar 25 01:25:35 GMT 2003

CHIP recentered while spar was not pointed well. Recentering image.

Tue Mar 25 01:27:18 GMT 2003 CHIP Start Patrol

**\*\*MKIV PROBLEM\*\***: Tue Mar 25 01:32:17 GMT 2003

David suggested that the FLC flakiness I observed on DOY 03080 and the barrel stalls/stuttering are related via the modulator timing signals (1/rot and 64/rot). Checked the cabling between modulator and signal transformation board and they looked OK. Cable connector near spar test points are dreadfully near the mk4 wrap-up cover that we were removing and replacing. Barrel is not acting up today but we put a oscilloscope on the modulator testpoints in the rear of the mk4 transformation/KCC rack to monitor the voltage and timing of the signals. Other things to look for are flaky power supply to the transformation board and flaky components that are not operating at proper voltages.

**\*\*MKIV PROBLEM\*\***: Tue Mar 25 01:46:00 GMT 2003

Andrew requested a mk4 O1 cleaning at our earliest convenience. They are seeing a fixed spiral structure in the pB data in the SW and increased brightness in the coronal signals.

Tue Mar 25 02:27:44 GMT 2003 CHIP End Patrol

Tue Mar 25 02:28:07 GMT 2003 MKIV End Patrol

Tue Mar 25 02:28:22 GMT 2003 PICS End Patrol

WEATHER COMMENT: Tue Mar 25 02:30:25 GMT 2003

Clouds receded at the very end of the observing day.

Tue Mar 25 02:31:35 GMT 2003

MkIV

00_04.rawmk4	01_48.rawmk4	18_21.rawmk4	20_42.rawmk4	22_31.rawmk4
00_07.rawmk4	01_51.rawmk4	18_24.rawmk4	20_45.rawmk4	22_34.rawmk4
00_10.rawmk4	01_54.rawmk4	18_27.rawmk4	20_48.rawmk4	22_37.rawmk4
00_13.rawmk4	01_57.rawmk4	18_30.rawmk4	20_51.rawmk4	22_40.rawmk4
00_16.rawmk4	02_00.rawmk4	18_33.rawmk4	20_54.rawmk4	22_43.rawmk4
00_19.rawmk4	02_03.rawmk4	18_36.rawmk4	20_57.rawmk4	22_46.rawmk4
00_22.rawmk4	02_06.rawmk4	18_39.rawmk4	21_00.rawmk4	22_49.rawmk4
00_25.rawmk4	02_09.rawmk4	18_42.rawmk4	21_03.rawmk4	22_52.rawmk4
00_28.rawmk4	02_12.rawmk4	18_45.rawmk4	21_06.rawmk4	22_55.rawmk4
00_31.rawmk4	02_15.rawmk4	18_48.rawmk4	21_09.rawmk4	22_58.rawmk4
00_34.rawmk4	02_18.rawmk4	18_50.rawmk4	21_12.rawmk4	23_01.rawmk4
00_37.rawmk4	02_21.rawmk4	18_53.rawmk4	21_15.rawmk4	23_04.rawmk4
00_40.rawmk4	02_24.rawmk4	18_57.rawmk4	21_18.rawmk4	23_07.rawmk4
00_43.rawmk4	17_16.rawmk4	19_15.rawmk4	21_21.rawmk4	23_10.rawmk4
00_46.rawmk4	17_19.rawmk4	19_18.rawmk4	21_24.rawmk4	23_13.rawmk4
00_49.rawmk4	17_22.rawmk4	19_21.rawmk4	21_27.rawmk4	23_16.rawmk4
00_53.rawmk4	17_25.rawmk4	19_24.rawmk4	21_30.rawmk4	23_19.rawmk4
00_56.rawmk4	17_28.rawmk4	19_27.rawmk4	21_32.rawmk4	23_22.rawmk4
00_58.rawmk4	17_31.rawmk4	19_33.rawmk4	21_35.rawmk4	23_25.rawmk4
01_01.rawmk4	17_34.rawmk4	19_37.rawmk4	21_38.rawmk4	23_27.rawmk4
01_04.rawmk4	17_37.rawmk4	19_40.rawmk4	21_41.rawmk4	23_30.rawmk4
01_07.rawmk4	17_40.rawmk4	19_43.rawmk4	21_44.rawmk4	23_33.rawmk4

01_10.rawmk4	17_43.rawmk4	19_45.rawmk4	21_48.rawmk4	23_36.rawmk4
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01_16.rawmk4	17_49.rawmk4	20_05.rawmk4	21_55.rawmk4	23_42.rawmk4
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01_22.rawmk4	17_55.rawmk4	20_16.rawmk4	22_01.rawmk4	23_48.rawmk4
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01_31.rawmk4	18_04.rawmk4	20_24.rawmk4	22_14.rawmk4	c19_56.rawmk4
01_34.rawmk4	18_06.rawmk4	20_27.rawmk4	22_17.rawmk4	c20_02.rawmk4
01_37.rawmk4	18_09.rawmk4	20_30.rawmk4	22_20.rawmk4	c20_08.rawmk4
01_40.rawmk4	18_12.rawmk4	20_33.rawmk4	22_23.rawmk4	
01_43.rawmk4	18_15.rawmk4	20_36.rawmk4	22_26.rawmk4	
01_46.rawmk4	18_18.rawmk4	20_39.rawmk4	22_28.rawmk4	