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Mauna Loa Solar Observatory Observer's Log  
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Sat Apr 28 16:46:48 GMT 2001

Year: 01 Doy: 118

Observer: elmore

Sat Apr 28 16:52:57 GMT 2001 CHIP Start Patrol

Sat Apr 28 16:52:59 GMT 2001 PICS Start Patrol

Sat Apr 28 17:02:19 GMT 2001 CHIP LSD

WEATHER COMMENT: Sat Apr 28 17:01:37 GMT 2001

Some cirrus scattered about the sky. Light west wind  
50F.

\*\*MKIV PROBLEM\*\*: Sat Apr 28 17:04:01 GMT 2001

KCC crashed and 'reset' on processor board had no effect. Powered  
off chassis and it appears to work

Sat Apr 28 17:05:45 GMT 2001 CHIP End LSD

Sat Apr 28 17:05:51 GMT 2001 CHIP BiasLSD

Sat Apr 28 17:06:34 GMT 2001 CHIP End BiasLSD

Sat Apr 28 17:06:41 GMT 2001 CHIP Bias

Sat Apr 28 17:07:27 GMT 2001 CHIP End Bias

Sat Apr 28 17:08:34 GMT 2001 PICS End Patrol

Sat Apr 28 17:11:47 GMT 2001 MKIV Start Correct

Sat Apr 28 17:11:54 GMT 2001 PICS Start Patrol

Sat Apr 28 17:13:21 GMT 2001 MKIV End Correct

Sat Apr 28 17:13:36 GMT 2001 MKIV Start Patrol

MKIV COMMENT: Sat Apr 28 17:12:02 GMT 2001

O1 guider work by Judd Johnson is complete.

RA motor gear was stripped. Plastic replaced with metal  
one. Possibly as a result phase of motor and cam was messed  
up. Recentered so that guiding was possible.

Limit switches installed so that motor would not attempt to  
drive past limit. This eliminated the banging of the motor  
into the limit that resulted in the stripped gear.

The time constant of the integrator circuit was reduced slightly.  
See Judd for details.

The back end of the guide telescope was loose. It could rotate and  
was not secure in declination. Push pull screws were installed in  
declination and rotation was tightened. This should influence  
guiding changes during the day. -- david

Sat Apr 28 17:18:59 GMT 2001 MKIV Start Patrol

MKIV COMMENT: Sat Apr 28 17:19:16 GMT 2001

Camera has been replaced: I2 to camera optics aligned. Mangin  
mirror repositioned so that return beam is more on axis.

Slit widths have been changed. Formerly widths at lower and  
upper hairlines were 212 and 383 microns. Now widths are  
75 and 140 microns. Gain of camera and hopefully better optical  
alignment required the change. With new alignment there is more  
intensity at low heights and at upper heights.

MKIV COMMENT: Sat Apr 28 17:23:33 GMT 2001

Correct performed. Check values. Note the dark offsets are much larger than before. Also note the gain values are at low levels over much more of the range. I still have a concern that the Correct routine is not properly spanning the hairlines.

MKIV COMMENT: Sat Apr 28 17:28:19 GMT 2001

Cirrus during last scan. Look for bands moving through.

MKIV COMMENT: Sat Apr 28 17:28:47 GMT 2001

Scan azimuth has not been fixed. IN fact it is worse, approximately 12 degrees off.

\*\*MKIV PROBLEM\*\* : Sat Apr 28 17:29:44 GMT 2001

The resident tscp file and calibration are unable to produce a meaningful real time display.

\*\*ECHO PROBLEM\*\* : Sat Apr 28 17:34:29 GMT 2001

Not pointed on sun, guiding in Ephem mode. Light level shows about 12.1 but it usually shows much higher when the sun is clear like this. It looks like something has degraded the guiding since Thursday maybe. On Thursday it seemed like the guiding would go back to Quad C much sooner after a cloud passed over.

Sat Apr 28 18:01:25 GMT 2001	CHIP	LSD
Sat Apr 28 18:03:15 GMT 2001	PICS	Flat
Sat Apr 28 18:05:04 GMT 2001	CHIP	End LSD
Sat Apr 28 18:05:10 GMT 2001	CHIP	BiasLSD
Sat Apr 28 18:05:58 GMT 2001	CHIP	End BiasLSD
Sat Apr 28 18:06:04 GMT 2001	CHIP	Bias
Sat Apr 28 18:06:16 GMT 2001	PICS	End Flat
Sat Apr 28 18:06:49 GMT 2001	CHIP	End Bias

\*\*ECHO PROBLEM\*\* : Sat Apr 28 18:14:24 GMT 2001

I Just saw the "Quad C" guiding kick in after the light level got above 18.35, the threshold may have been lower but that was the value when I looked at it and I saw the images jump from the corner of the screen to the correct position, indicating that the quadcell guiding had just started. So maybe the threshold is the same as before but it sure took a long time for the light level reading to get up there. Maybe whatever is measuring the light level sees the sun easier when the telescope is off-pointed in certain directions.

Sat Apr 28 18:29:53 GMT 2001	MKIV	Start Patrol
Sat Apr 28 18:37:39 GMT 2001	MKIV	End Correct
Sat Apr 28 18:38:09 GMT 2001	MKIV	Start Patrol
Sat Apr 28 18:45:05 GMT 2001	MKIV	End Patrol
Sat Apr 28 18:48:06 GMT 2001	MKIV	Start Patrol

MKIV COMMENT: Sat Apr 28 18:57:55 GMT 2001

Phased the FLC for maximum modulation at 240Hz.

Did a Correct.

Realigned S-K lens to maximize signal

Did another Correct.

MKIV COMMENT: Sat Apr 28 18:58:55 GMT 2001

Calibration in cirrus just to see if we can cal. First corona inbetween scans is bad, but coronal scan just before cal apperas to be OK. It could be used as the coronal reference for the

calibration .

Sat Apr 28 19:03:14 GMT 2001 CHIP LSD  
Sat Apr 28 19:06:38 GMT 2001 CHIP End LSD  
Sat Apr 28 19:06:48 GMT 2001 CHIP BiasLSD  
Sat Apr 28 19:07:40 GMT 2001 CHIP End BiasLSD  
Sat Apr 28 19:07:53 GMT 2001 CHIP Bias  
Sat Apr 28 19:08:47 GMT 2001 CHIP End Bias  
Sat Apr 28 19:22:57 GMT 2001 MKIV Start Patrol

MKIV COMMENT: Sat Apr 28 19:36:41 GMT 2001

Pausing to correct barrel azimuth.

We can't believe that we can see the corona through the amount of cirrus in the sky!

COMMENT: Sat Apr 28 19:43:01 GMT 2001

Extended the dome slot.

Sat Apr 28 19:46:40 GMT 2001 PICS End Patrol  
Sat Apr 28 19:46:56 GMT 2001 CHIP End Patrol

COMMENT: Sat Apr 28 19:46:59 GMT 2001

Spar off pointed for mk4 work, paused instruments.

Sat Apr 28 20:36:42 GMT 2001 MKIV Start Patrol  
Sat Apr 28 20:37:37 GMT 2001 CHIP Start Patrol  
Sat Apr 28 20:37:39 GMT 2001 PICS Start Patrol

MKIV COMMENT: Sat Apr 28 20:37:45 GMT 2001

Done with some adjustments, doing a height mask test now. Spar is pointed and tracking again, restarted the instruments.

MKIV COMMENT: Sat Apr 28 20:41:23 GMT 2001

Height Mask Test: Opal gives a healthy signal for all three slots and above the top of the mask.

Sat Apr 28 20:51:26 GMT 2001 MKIV Start Patrol

MKIV COMMENT: Sat Apr 28 20:50:33 GMT 2001

Corrected azimuth reading so that it now reads 12 degrees less than before. This is the 9.5 degree error from comparisons with other instruments plus the 2.5 degree error introduced yesterday.

MKIV COMMENT: Sat Apr 28 20:52:35 GMT 2001

Sky looks as good as we have seen. Intensity trace on scope does not look great. This implies the lens is not clean.

Sat Apr 28 21:03:14 GMT 2001 MKIV Start Patrol  
Sat Apr 28 21:04:22 GMT 2001 CHIP LSD

MKIV COMMENT: Sat Apr 28 21:06:19 GMT 2001

We like the change in azimuth compared to LASCO C2.

MKIV COMMENT: Sat Apr 28 21:06:37 GMT 2001

Previous calibration from today no longer applies. Q and U gains have been increased by 4X in software.

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Sat Apr 28 21:07:46 GMT 2001 CHIP End LSD

MKIV COMMENT: Sat Apr 28 21:07:44 GMT 2001

I will soon clean the O1.

Sat Apr 28 21:07:56 GMT 2001 CHIP BiasLSD  
Sat Apr 28 21:08:44 GMT 2001 CHIP End BiasLSD

Sat Apr 28 21:08:53 GMT 2001 CHIP Bias  
Sat Apr 28 21:09:39 GMT 2001 CHIP End Bias  
Sat Apr 28 21:48:16 GMT 2001 MKIV Start Patrol  
MKIV COMMENT: Sat Apr 28 21:48:28 GMT 2001  
Cleaned front surface of O1. Scanning to sO1 is now clean and installed, Spar is guiding.  
Sat Apr 28 21:55:56 GMT 2001 CHIP End Patrol  
Sat Apr 28 21:56:25 GMT 2001 PICS End Patrol  
MKIV COMMENT: Sat Apr 28 23:08:11 GMT 2001  
Did some Hartman mask tests and found that the O1/Occulter distance is currently correct for the bandpass we get in our data, yay!  
COMMENT: Sat Apr 28 23:11:30 GMT 2001  
Darryl is heading down for the day.  
Sat Apr 28 23:12:09 GMT 2001  
MkIV

17_19.rawmk4	18_29.rawmk4	19_03.rawmk4	20_36.rawmk4	21_48.rawmk4
17_22.rawmk4	18_32.rawmk4	19_10.rawmk4	20_42.rawmk4	21_51.rawmk4
17_25.rawmk4	18_41.rawmk4	19_22.rawmk4	20_51.rawmk4	c18_54.rawmk4
17_28.rawmk4	18_48.rawmk4	19_26.rawmk4	20_54.rawmk4	c19_00.rawmk4
17_31.rawmk4	18_51.rawmk4	19_29.rawmk4	21_03.rawmk4	c19_07.rawmk4
17_34.rawmk4	18_57.rawmk4	19_31.rawmk4	21_06.rawmk4	