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Mauna Loa Solar Observatory Observer's Log  
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Thu Sep 17 16:36:59 GMT 1998

Year: 98 Doy: 260

Observer: yasukawa

WEATHER COMMENT: Thu Sep 17 16:41:05 GMT 1998

Cool, clear, light southeast wind.

Thu Sep 17 16:43:03 GMT 1998 CHIP Startup--Initializing new tape

Thu Sep 17 16:45:12 GMT 1998 PICS Start Patrol

Thu Sep 17 16:45:14 GMT 1998 MKIII Start Patrol

Thu Sep 17 16:45:20 GMT 1998 CHIP CHIP Start Patrol

Thu Sep 17 17:00:49 GMT 1998 CHIP Bias

Thu Sep 17 17:01:40 GMT 1998 PICS Flat

Thu Sep 17 17:01:45 GMT 1998 CHIP End Bias

Thu Sep 17 17:01:55 GMT 1998 CHIP Water

Thu Sep 17 17:02:32 GMT 1998 CHIP End Water

Thu Sep 17 17:03:07 GMT 1998 PICS End Flat

PSPT COMMENT: Thu Sep 17 17:08:02 GMT 1998

Noticed that temperature controller is on. There is no log entry or email about it so I will turn it back off, may have gotten turned on while looking for fans in the rack. I will turn it back on if instructed.

PSPT COMMENT: Thu Sep 17 17:37:49 GMT 1998

Haosheng confirmed that the temperature controller should remain off.

\*\*MKIII PROBLEM\*\*: Thu Sep 17 17:40:38 GMT 1998

Stopping to check MKIII O1. Alice suspects a bit of fluff on it.

Thu Sep 17 17:51:32 GMT 1998 MKIII Start Patrol

\*\*MKIII PROBLEM\*\*: Thu Sep 17 17:51:40 GMT 1998

There was a small water spot near the edge of the O1. Polished it off with ethyl alcohol and dusted off both front and rear surface of O1.

Thu Sep 17 18:01:45 GMT 1998 PICS Flat

Thu Sep 17 18:02:48 GMT 1998 CHIP Bias

Thu Sep 17 18:03:13 GMT 1998 PICS End Flat

Thu Sep 17 18:03:46 GMT 1998 CHIP End Bias

Thu Sep 17 18:04:00 GMT 1998 CHIP Water

Thu Sep 17 18:04:47 GMT 1998 CHIP End Water

Thu Sep 17 19:01:47 GMT 1998 PICS Flat

Thu Sep 17 19:02:55 GMT 1998 CHIP Bias

Thu Sep 17 19:03:13 GMT 1998 PICS End Flat

Thu Sep 17 19:04:01 GMT 1998 CHIP End Bias

Thu Sep 17 19:04:10 GMT 1998 CHIP Water

Thu Sep 17 19:04:51 GMT 1998 CHIP End Water

COMMENT: Thu Sep 17 19:06:35 GMT 1998

Stopping to reconfigure dome shutter.

Thu Sep 17 19:07:35 GMT 1998 PICS End Patrol

Thu Sep 17 19:08:31 GMT 1998 CHIP CHIP End Patrol

Thu Sep 17 19:14:44 GMT 1998 MKIII Start Patrol

Thu Sep 17 19:14:56 GMT 1998 PICS Start Patrol

Thu Sep 17 19:14:53 GMT 1998 CHIP CHIP Start Patrol

\*\*MKIII PROBLEM\*\* : Thu Sep 17 19:15:18 GMT 1998

Mangin mirror iris adjustment ring was rotated a hair, less than 1 degree. fiducial marks were off by the thickness of the grease pencil marks and tape was crooked and a little torn. Repositioned it and re-taped it.

\*\*PSPT PROBLEM\*\* : Thu Sep 17 19:42:24 GMT 1998

Pulled out mirror drive card and mounted it on an extender after cooling it down. Will investigate whether 2000 UT Run will work without oscillation if the card is exposed to the cooler air outside of the rack.

\*\*PSPT PROBLEM\*\* : Thu Sep 17 19:53:19 GMT 1998

Also jury rigged a cooling fan to blow air onto heatsink.

Thu Sep 17 20:00:49 GMT 1998 CHIP Gain

Thu Sep 17 20:01:44 GMT 1998 PICS Flat

Thu Sep 17 20:03:14 GMT 1998 PICS End Flat

\*\*PSPT PROBLEM\*\* : Thu Sep 17 20:03:53 GMT 1998

2000 UT Run started up OK.

Thu Sep 17 20:05:18 GMT 1998 CHIP End Gain

Thu Sep 17 20:05:31 GMT 1998 CHIP Bias

Thu Sep 17 20:06:20 GMT 1998 CHIP End Bias

Thu Sep 17 20:06:30 GMT 1998 CHIP Water

Thu Sep 17 20:07:05 GMT 1998 CHIP End Water

\*\*PSPT PROBLEM\*\* : Thu Sep 17 20:44:47 GMT 1998

PSPT ran the 2000 UT observation and calibration program just fine.

Mirror drive semiconductor and heat sink was relatively cool to the touch right after program finished and went into wait mode.

It was quite hot compared to now when I pulled it out between the 1900 and 2000 UT runs.

Thu Sep 17 21:01:39 GMT 1998 PICS Flat

Thu Sep 17 21:01:51 GMT 1998 CHIP Bias

Thu Sep 17 21:03:04 GMT 1998 PICS End Flat

Thu Sep 17 21:03:04 GMT 1998 PICS End Flat

Thu Sep 17 21:03:07 GMT 1998 CHIP Water

Thu Sep 17 21:03:50 GMT 1998 CHIP End Water

\*\*PSPT PROBLEM\*\* : Thu Sep 17 21:07:50 GMT 1998

2100 UT observations started after one attempt to stabilize the active mirror. Got one

mirror oscillating... 29 more tries

message, then

Active mirror OK

message. The program then continued, but I could see the meters oscillating, both X and Y, at around a 1/sec frequency, mostly between +/- 4 millivolts with occasional swings between +/- 30 millivolts. Meters settled after 3 minutes. Then after a short period,

the oscillations resumed at the same frequency and amplitude variations. Images were very soft. I paused writing this log entry and looked at the PSPT again and found that after 11 minutes into the program, The active mirror was again trying to find the image and the

mirror oscillating            n more tries...

message started scrolling through.

This time they kept scrolling and the meters kept swinging, this time at a 1 or 2/sec frequency at a +/- 4 millivolt amplitude with occasional jumps to + or - 10 millivolts. Mirror driver is cool.

When it got to 0 tries.... the message changed to

Cannot activate Active mirror...

Check sky condition...

Check mirror gain...

Type q to quit program...

xRMS xxx.xx    yRMS yyy.yy    QCsum qqqq

mirror oscillating            -n more tries...

I don't think we will recover from this. I will halt system and try Restart near 2200 UT.

\*\*PSPT PROBLEM\*\* : Thu Sep 17 21:36:12 GMT 1998

So much for cooling the driver. Removed fan, removed extender, reinserted module into PSPT chassis.

\*\*PSPT PROBLEM\*\* : Thu Sep 17 21:51:01 GMT 1998

Tried Restart. Guider was trying to lock on sun, but cap was closed!!

quit, tried again, same thing. Trying Run.

\*\*PSPT PROBLEM\*\* : Thu Sep 17 21:57:04 GMT 1998

Run did not work. Cap opened, but guider did not point to sun.

Only Dec ran after homing and the spar looks like it is pointing where the sun is in the morning at sunrise. Aborting tests.

Will see what happens tomorrow morning. BTW, started Run with spar in last guided position, not at shutdown position.

Thu Sep 17 22:01:46 GMT 1998    PICS    Flat

Thu Sep 17 22:01:48 GMT 1998    CHIP    Bias

Thu Sep 17 22:02:47 GMT 1998    CHIP    End Bias

Thu Sep 17 22:02:57 GMT 1998    CHIP    Water

Thu Sep 17 22:03:18 GMT 1998    PICS    End Flat

Thu Sep 17 22:03:42 GMT 1998    CHIP    End Water

Thu Sep 17 22:06:32 GMT 1998    CHIP    CHIP End Patrol

Thu Sep 17 22:07:00 GMT 1998    CHIP    ending tape

Thu Sep 17 22:07:45 GMT 1998    PICS    End Patrol

COMMENT: Thu Sep 17 22:10:11 GMT 1998

Tapes:

PICS: P01296

CHIP: C00693  
LOWL: L00543  
Thu Sep 17 22:13:32 GMT 1998  
MkIII

16_45.rawmk3	17_57.rawmk3	19_17.rawmk3	20_22.rawmk3	21_26.rawmk3
16_48.rawmk3	18_00.rawmk3	19_20.rawmk3	20_24.rawmk3	21_29.rawmk3
16_51.rawmk3	18_03.rawmk3	19_23.rawmk3	20_27.rawmk3	21_32.rawmk3
16_54.rawmk3	18_06.rawmk3	19_26.rawmk3	20_30.rawmk3	21_35.rawmk3
16_57.rawmk3	18_09.rawmk3	19_29.rawmk3	20_33.rawmk3	21_37.rawmk3
17_00.rawmk3	18_12.rawmk3	19_32.rawmk3	20_36.rawmk3	21_40.rawmk3
17_02.rawmk3	18_18.rawmk3	19_35.rawmk3	20_39.rawmk3	21_43.rawmk3
17_05.rawmk3	18_24.rawmk3	19_38.rawmk3	20_42.rawmk3	21_46.rawmk3
17_08.rawmk3	18_30.rawmk3	19_41.rawmk3	20_45.rawmk3	21_49.rawmk3
17_11.rawmk3	18_33.rawmk3	19_44.rawmk3	20_48.rawmk3	21_52.rawmk3
17_14.rawmk3	18_36.rawmk3	19_46.rawmk3	20_51.rawmk3	21_55.rawmk3
17_17.rawmk3	18_39.rawmk3	19_49.rawmk3	20_54.rawmk3	21_58.rawmk3
17_20.rawmk3	18_42.rawmk3	19_52.rawmk3	20_57.rawmk3	22_01.rawmk3
17_23.rawmk3	18_45.rawmk3	19_55.rawmk3	20_59.rawmk3	22_04.rawmk3
17_26.rawmk3	18_48.rawmk3	19_58.rawmk3	21_02.rawmk3	22_07.rawmk3
17_29.rawmk3	18_51.rawmk3	20_01.rawmk3	21_05.rawmk3	c18_15.rawmk3
17_32.rawmk3	18_53.rawmk3	20_04.rawmk3	21_08.rawmk3	c18_21.rawmk3
17_35.rawmk3	18_56.rawmk3	20_07.rawmk3	21_11.rawmk3	c18_27.rawmk3
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17_40.rawmk3	19_02.rawmk3	20_13.rawmk3	21_17.rawmk3	
17_51.rawmk3	19_05.rawmk3	20_16.rawmk3	21_20.rawmk3	
17_54.rawmk3	19_14.rawmk3	20_19.rawmk3	21_23.rawmk3	