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Mauna Loa Solar Observatory Observer's Log  
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Tue May 25 16:14:00 GMT 1999

Year: 99 Doy: 145

Observer: yasukawa

WEATHER COMMENT: Tue May 25 16:14:45 GMT 1999

Cool, clear, brisk southeast wind.

Tue May 25 16:23:16 GMT 1999 MKIII Start Patrol

Tue May 25 16:23:47 GMT 1999 PICS Start Patrol

Tue May 25 17:00:33 GMT 1999 PICS Flat

Tue May 25 17:01:43 GMT 1999 PICS End Flat

\*\*PSPT PROBLEM\*\*: Tue May 25 17:52:05 GMT 1999

After removing several covers, I found the focus stepper. I cannot see the rest of the mechanism without disassembling the secondary optics package, I think, NO DOCUMENTATION ON MECHANICAL ASSEMBLIES!!!!, three versions of optical schematics are just ray tracing with the lenses and filters drawn in, versions are different so apparently two are obsolete, also figured out how to move the focus with the PC, NO DOCUMENTATION ON THIS EITHER!!!! to test the focus motor and mechanisms.

Before I started to open things up, I tried a Run to listen to the focus mechanism, BUT, guider would not lock on for some reason.

I will have to query Roy before proceeding with focus mechanism check-out to avoid removing something that will screw up alignment.

Tue May 25 18:00:31 GMT 1999 PICS Flat

Tue May 25 18:01:44 GMT 1999 PICS End Flat

\*\*PSPT PROBLEM\*\*: Tue May 25 18:56:52 GMT 1999

Found out why guider would not acquire sun. Beam splitter is not secure in its mount. I noticed that the beam to the quad cells was not projecting on the lens when the spar was closely pointed toward the sun. I was able to yaw beam splitter about the stem and move the beam onto the quad cell lens. Once this occurred, the guider locked on and the Run program continued. If it is possible to tighten the stem down, I will do that during the wait between data runs.

Tue May 25 19:01:51 GMT 1999 PICS End Flat

\*\*PSPT PROBLEM\*\*: Tue May 25 19:02:39 GMT 1999

Initial (around 1900 UT) data in focus.

Tue May 25 19:08:48 GMT 1999 MKIII Start Cal

\*\*PSPT PROBLEM\*\*: Tue May 25 19:19:51 GMT 1999

I did see one image of Ca out of focus during cal series where xy motion is going on. I did not see image before the out-of focus one, and next image, Ca again offset in xy, was in focus. Shift to red after the Ca xy offset series was in focus.

COMMENT: Tue May 25 19:30:50 GMT 1999

Stopping to reconfigure dome shutter.

Patrol

Tue May 25 19:36:49 GMT 1999 MKIII Start Patrol

Tue May 25 19:37:26 GMT 1999 PICS Start Patrol

\*\*PSPT PROBLEM\*\*: Tue May 25 20:02:40 GMT 1999

Could not eliminate the yaw in the beamsplitter no matter how tight I made the screw, I did not want to tighten it too much for fear of stripping the screw or the threaded hole. Position holds so long as no one deliberately or accidentally moves it. Repositioned the beamsplitter to correct alignment after tightening both axes.

\*\*PSPT PROBLEM\*\*: Tue May 25 20:58:07 GMT 1999

Opened up main optics housing cover (plate with the latches) and accessed the stepper motor for the focus mechanism. According to Roy, only the lead screw extending out of the motor can be lubricated, the rest of the mechanism is sealed. Phew! this avoids having to remove the entire secondary optics package! Extended screw with "fcs goto blue" command on PC. Lubricated screw threads with Dow 33 silicone grease. Exercised the focus to spread the grease to the threads. Squeaky noise was eliminated.

Tue May 25 21:03:36 GMT 1999 PICS End Flat

\*\*PSPT PROBLEM\*\*: Tue May 25 21:09:26 GMT 1999

2100 UT data run was good, focus was good.

Tue May 25 22:02:27 GMT 1999 PICS Flat  
Tue May 25 22:03:36 GMT 1999 PICS End Flat  
Tue May 25 22:08:28 GMT 1999 PICS End Patrol

COMMENT: Tue May 25 22:12:17 GMT 1999

Tapes:

MKIV: 99-145

PICS: P01449

CHIP: out of service

LOWL: L00601

Tue May 25 22:14:33 GMT 1999 MKIII End Patrol

\*\*PSPT PROBLEM\*\*: Tue May 25 22:21:08 GMT 1999

2200 UT data run images were in focus.

Tue May 25 22:21:59 GMT 1999

MkIII

16_23.rawmk3	17_34.rawmk3	18_46.rawmk3	20_14.rawmk3	21_25.rawmk3
16_26.rawmk3	17_38.rawmk3	18_49.rawmk3	20_18.rawmk3	21_29.rawmk3
16_30.rawmk3	17_41.rawmk3	18_53.rawmk3	20_21.rawmk3	21_33.rawmk3
16_34.rawmk3	17_45.rawmk3	18_57.rawmk3	20_25.rawmk3	21_37.rawmk3
16_38.rawmk3	17_49.rawmk3	19_01.rawmk3	20_29.rawmk3	21_40.rawmk3
16_41.rawmk3	17_53.rawmk3	19_05.rawmk3	20_33.rawmk3	21_44.rawmk3
16_45.rawmk3	17_57.rawmk3	19_12.rawmk3	20_37.rawmk3	21_48.rawmk3
16_49.rawmk3	18_00.rawmk3	19_20.rawmk3	20_40.rawmk3	21_52.rawmk3
16_53.rawmk3	18_04.rawmk3	19_28.rawmk3	20_44.rawmk3	21_55.rawmk3
16_56.rawmk3	18_08.rawmk3	19_36.rawmk3	20_48.rawmk3	21_59.rawmk3
17_00.rawmk3	18_12.rawmk3	19_40.rawmk3	20_52.rawmk3	22_03.rawmk3
17_04.rawmk3	18_16.rawmk3	19_44.rawmk3	20_55.rawmk3	22_07.rawmk3
17_08.rawmk3	18_19.rawmk3	19_48.rawmk3	20_59.rawmk3	22_10.rawmk3
17_11.rawmk3	18_23.rawmk3	19_51.rawmk3	21_03.rawmk3	c19_08.rawmk3
17_15.rawmk3	18_27.rawmk3	19_55.rawmk3	21_07.rawmk3	c19_16.rawmk3
17_19.rawmk3	18_31.rawmk3	19_59.rawmk3	21_10.rawmk3	c19_24.rawmk3
17_23.rawmk3	18_34.rawmk3	20_03.rawmk3	21_14.rawmk3	
17_27.rawmk3	18_38.rawmk3	20_06.rawmk3	21_18.rawmk3	
17_30.rawmk3	18_42.rawmk3	20_10.rawmk3	21_22.rawmk3	