

-----  
Mauna Loa Solar Observatory Observer's Log  
-----

Mon Jan 22 17:32:08 GMT 2001

Year: 01 Doy: 022

Observer: yasukawa

WEATHER COMMENT: Mon Jan 22 17:33:15 GMT 2001

Cool, clear, light south breeze.

\*\*MLSO PROBLEM\*\* Mon Jan 22 17:47:40 GMT 2001

checking out guider declination.

Mon Jan 22 18:05:15 GMT 2001 MKIV Start Patrol

Mon Jan 22 18:05:23 GMT 2001 CHIP Start 7 Passband Patrol

Mon Jan 22 18:05:23 GMT 2001 PICS Start Patrol

\*\*MLSO PROBLEM\*\* Mon Jan 22 18:05:20 GMT 2001

Dec appeared dead when I started checking a few things. Checked reset switch. That is OK. Looked at voltages at test points and I could see output and input variation. At that time I also noticed that the meter was active again. Starting observations while I ponder the situation.

\*\*PSPT PROBLEM\*\* Mon Jan 22 18:28:00 GMT 2001

Turned shutter from NC to NO instead of turning controller on this morning in my chaotic startup/declination troubleshoot. Aborting Obs so PSPT can properly center sun with an operating shutter.

\*\*PICS PROBLEM\*\* Mon Jan 22 19:02:03 GMT 2001

PICS was domed out. ADR wasn't turned on.

\*\*MLSO PROBLEM\*\* Mon Jan 22 19:14:32 GMT 2001

Cut down sky tx by 40% to see if declination gets more active. This should increase gain.

\*\*MLSO PROBLEM\*\* Mon Jan 22 19:22:15 GMT 2001

Removed nd filter, sky tx normal again. RA reacted to increased gain, dec did not.

\*\*MLSO PROBLEM\*\* Mon Jan 22 19:25:26 GMT 2001

Dec is unresponsive and spar is drifting, experiencing occulter spill in north.

stopping mk4 and PICS.

Mon Jan 22 19:27:27 GMT 2001 PICS End Patrol

CHIP COMMENT: Mon Jan 22 19:28:21 GMT 2001

Stopping CHIP too. Looking at dec limit switching.

Mon Jan 22 19:29:40 GMT 2001 CHIP End Patrol

\*\*MLSO PROBLEM\*\* Mon Jan 22 19:38:29 GMT 2001

dec motor/tach is very hot. Dec is centered and not on a limit.

I do not hear the motor running while guider is on.

Mon Jan 22 21:35:59 GMT 2001 MKIV Start Patrol

Mon Jan 22 21:36:02 GMT 2001 CHIP Start 7 Passband Patrol

Mon Jan 22 21:40:15 GMT 2001 PICS Start Patrol

\*\*MLSO PROBLEM\*\* Mon Jan 22 21:36:08 GMT 2001

Found the dec problem. Vernitron motor/tach was binding. This was intermittent, it could be turned sometimes, but at other times, shaft would bind and be hard to turn. This was pulling the

voltage down and causing the motor to get hot. Voltage reading from dec out test point was around 21V when guider got sluggish. It varied quite a bit when dec was active.

Replaced motor/tach with new one sent out in '95. There's a trick to removing it without the usual swearing:

Do not remove the hold-downs. This looks like the obvious way to remove the motor. Instead, cut the tie-wrap around the gearbox ahead of the Vernitron motor assembly. The cover it is holding together, has a dovetail holding it together. Use a sharp object to pop the dovetail out and the cover springs apart enough to slide it away. There are two hex-head screws holding the motor to the gearbox, they are painted RED. Use a 1/4" box wrench (there is a combination wrench in the workbench drawer) to loosen the bolts. The box end works better than the open end!

Dec worked "normally" with the new motor.

**\*\*PICS PROBLEM\*\***: Mon Jan 22 21:49:03 GMT 2001

PICS got domed out. ADR sensor was shaded, so the ADR did not reset.

Mon Jan 22 22:05:31 GMT 2001 PICS End Patrol

Mon Jan 22 22:06:52 GMT 2001 CHIP End Patrol

Mon Jan 22 22:09:15 GMT 2001

MkIV

18_05.rawmk4	18_29.rawmk4	19_02.rawmk4	19_26.rawmk4	21_56.rawmk4
18_08.rawmk4	18_32.rawmk4	19_05.rawmk4	21_36.rawmk4	21_59.rawmk4
18_11.rawmk4	18_38.rawmk4	19_08.rawmk4	21_38.rawmk4	22_02.rawmk4
18_14.rawmk4	18_44.rawmk4	19_11.rawmk4	21_41.rawmk4	c18_35.rawmk4
18_17.rawmk4	18_50.rawmk4	19_14.rawmk4	21_44.rawmk4	c18_41.rawmk4
18_20.rawmk4	18_53.rawmk4	19_17.rawmk4	21_47.rawmk4	c18_47.rawmk4
18_23.rawmk4	18_56.rawmk4	19_20.rawmk4	21_50.rawmk4	
18_26.rawmk4	18_59.rawmk4	19_23.rawmk4	21_53.rawmk4	