
Mauna Loa Solar Observatory Observer's Log

Wed Sep 30 17:02:32 GMT 1998

Year: 98 Doy: 273

Observer: koon

WEATHER COMMENT: Wed Sep 30 17:02:34 GMT 1998

Clear sky, wind=5 mph from the South, temp=50 F.

****MKIII PROBLEM****: Wed Sep 30 17:03:13 GMT 1998

VCP screen didn't turn on as it should have, rebooted the KCC to fix.

Wed Sep 30 17:05:40 GMT 1998 CHIP Startup--Initializing new tape

Wed Sep 30 17:10:22 GMT 1998 MKIII Start Patrol

Wed Sep 30 17:10:45 GMT 1998 PICS Start Patrol

Wed Sep 30 17:10:45 GMT 1998 PICS Start Patrol

Wed Sep 30 18:01:55 GMT 1998 CHIP Bias

Wed Sep 30 18:02:35 GMT 1998 PICS Flat

Wed Sep 30 18:02:55 GMT 1998 CHIP End Bias

Wed Sep 30 18:03:07 GMT 1998 CHIP Water

Wed Sep 30 18:03:50 GMT 1998 CHIP End Water

Wed Sep 30 18:03:50 GMT 1998 CHIP End Water

****CHIP PROBLEM****: Wed Sep 30 18:41:51 GMT 1998

Animation sequence images from yesterday and this morning look strange.

CHIP Filter Temp was 35.381 at 1830 and is 35.281 right now, will monitor

for oscillation. All connections to the controller on the spar look

good, and the cooling unit is functioning properly.

Wed Sep 30 19:01:58 GMT 1998 CHIP Bias

Wed Sep 30 19:02:39 GMT 1998 PICS Flat

Wed Sep 30 19:03:01 GMT 1998 CHIP End Bias

Wed Sep 30 19:03:15 GMT 1998 CHIP Water

Wed Sep 30 19:04:12 GMT 1998 PICS End Flat

Wed Sep 30 19:04:00 GMT 1998 CHIP End Water

****PSPT PROBLEM****: Wed Sep 30 19:21:30 GMT 1998

The mirror is oscillating again. I pulled off the side cover earlier to

look at the optics when there was no oscillation, it looks the same now.

Light beams aren't centered on the quad-cell lens or the beam splitter

or the baffle tube leading into the secondary optics package, but I think

they are close enough for everything to work as designed. The light

spill on the side of the baffle looks like a secondary reflection from

the SOP to the beam-splitter and then back towards the SOP but hitting

the baffle, so it probably isn't a problem. I noticed that the entire

instrument is shuddering slightly for 2-4 cycles every now and then, the

period between the shudder sequences may be matching the period between

the mirror oscillations as seen when the meter needles swing back and forth.

Wed Sep 30 20:01:51 GMT 1998 CHIP Gain

Wed Sep 30 20:02:43 GMT 1998 PICS Flat

Wed Sep 30 20:04:09 GMT 1998 PICS End Flat

Wed Sep 30 20:06:30 GMT 1998 CHIP End Gain

Wed Sep 30 20:06:41 GMT 1998 CHIP Bias

Wed Sep 30 20:07:35 GMT 1998 CHIP End Bias
Wed Sep 30 20:07:48 GMT 1998 CHIP Water
Wed Sep 30 20:08:25 GMT 1998 CHIP End Water

****PSPT PROBLEM****: Wed Sep 30 20:14:03 GMT 1998

It looks like the shudder only happens when the mirror servo loop is active, when the green led is on. I blocked the light to the quad cell and the shudders eventually stopped, but the telescope lost guiding and I had to exit and do a Restart.

Wed Sep 30 21:02:38 GMT 1998 PICS Flat
Wed Sep 30 21:02:55 GMT 1998 CHIP Bias
Wed Sep 30 21:03:56 GMT 1998 CHIP End Bias
Wed Sep 30 21:03:56 GMT 1998 CHIP End Bias
Wed Sep 30 21:04:09 GMT 1998 CHIP Water
Wed Sep 30 21:04:52 GMT 1998 CHIP End Water

****CHIP PROBLEM****: Wed Sep 30 21:19:27 GMT 1998

Filter temp is still out of range on the high side. Right now the temp is 35.122 and the DC output from the controller on the spar varies between 7 to 9 vdc. At 1830 temp was 35.381, at 1840 = 35.284, at 1900 = 35.263, at 1930 = 35.242, at 1955 = 35.190, at 2020 = 35.172, at 2044 = 35.126, and at 2115 = 35.122

I've been working on the PSPT all day so I haven't been able to check out this problem any further.

Wed Sep 30 22:02:39 GMT 1998 PICS Flat
Wed Sep 30 22:03:00 GMT 1998 CHIP Bias
Wed Sep 30 22:04:05 GMT 1998 PICS End Flat
Wed Sep 30 22:04:05 GMT 1998 CHIP End Bias
Wed Sep 30 22:04:19 GMT 1998 CHIP Water
Wed Sep 30 22:05:06 GMT 1998 CHIP End Water

****PSPT PROBLEM****: Wed Sep 30 22:08:07 GMT 1998

Since it looks like the mirror oscillation problem is just a symptom of a telescope drive problem I opened the RA drive trans case and adjusted the meshing of the gears. I thought if the gears were binding or too loosely meshed there could be drive oscillation problems. The oscillation problem still exists, but with the trans open I can see that the motor is driving the gears back and forth.

T 1998 CHIP CHIP End Patrol

Wed Sep 30 22:53:39 GMT 1998 PICS End Patrol

****PSPT PROBLEM****: Wed Sep 30 23:02:57 GMT 1998

I talked to Haosheng, the mirror driver board is still being suspected of causing the mirror to drive too far. I will change the software gain, decreasing it by a factor of two, we'll see what happens after this.

Wed Sep 30 23:05:44 GMT 1998 CHIP ending tape

****PSPT PROBLEM****: Wed Sep 30 23:10:05 GMT 1998

OK, I changed the software mirror gain values from -20 to -10 in pspt_sys.h

COMMENT: Wed Sep 30 23:26:13 GMT 1998

TAPES:

PICS: P01308

CHIP: C00705

LOWL: L00545 in drive #1

Wed Sep 30 23:27:32 GMT 1998

MkIII

17_10.rawmk3	18_14.rawmk3	19_28.rawmk3	20_33.rawmk3	21_37.rawmk3
17_13.rawmk3	18_17.rawmk3	19_31.rawmk3	20_36.rawmk3	21_40.rawmk3
17_16.rawmk3	18_20.rawmk3	19_34.rawmk3	20_39.rawmk3	21_43.rawmk3
17_19.rawmk3	18_23.rawmk3	19_37.rawmk3	20_42.rawmk3	21_46.rawmk3
17_22.rawmk3	18_26.rawmk3	19_40.rawmk3	20_44.rawmk3	21_49.rawmk3
17_25.rawmk3	18_29.rawmk3	19_43.rawmk3	20_47.rawmk3	21_52.rawmk3
17_28.rawmk3	18_32.rawmk3	19_46.rawmk3	20_50.rawmk3	21_55.rawmk3
17_31.rawmk3	18_35.rawmk3	19_49.rawmk3	20_53.rawmk3	21_57.rawmk3
17_33.rawmk3	18_38.rawmk3	19_52.rawmk3	20_56.rawmk3	22_00.rawmk3
17_36.rawmk3	18_41.rawmk3	19_55.rawmk3	20_59.rawmk3	22_03.rawmk3
17_39.rawmk3	18_47.rawmk3	19_58.rawmk3	21_02.rawmk3	22_06.rawmk3
17_42.rawmk3	18_53.rawmk3	20_01.rawmk3	21_05.rawmk3	22_09.rawmk3
17_45.rawmk3	18_59.rawmk3	20_04.rawmk3	21_08.rawmk3	22_12.rawmk3
17_48.rawmk3	19_02.rawmk3	20_06.rawmk3	21_11.rawmk3	22_15.rawmk3
17_51.rawmk3	19_05.rawmk3	20_09.rawmk3	21_14.rawmk3	22_18.rawmk3
17_54.rawmk3	19_08.rawmk3	20_12.rawmk3	21_17.rawmk3	22_21.rawmk3
17_57.rawmk3	19_11.rawmk3	20_15.rawmk3	21_20.rawmk3	22_24.rawmk3
18_00.rawmk3	19_14.rawmk3	20_18.rawmk3	21_22.rawmk3	c18_44.rawmk3
18_03.rawmk3	19_17.rawmk3	20_21.rawmk3	21_25.rawmk3	c18_50.rawmk3
18_06.rawmk3	19_20.rawmk3	20_24.rawmk3	21_28.rawmk3	c18_56.rawmk3
18_09.rawmk3	19_23.rawmk3	20_27.rawmk3	21_31.rawmk3	
18_12.rawmk3	19_25.rawmk3	20_30.rawmk3	21_34.rawmk3	