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Mauna Loa Solar Observatory Observer's Log  
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Tue Dec 28 17:06:29 GMT 1999

Year: 99 Doy: 362

Observer: yasukawa

WEATHER COMMENT: Tue Dec 28 17:09:03 GMT 1999

Cool, clear, brisk west wind.

Tue Dec 28 17:10:19 GMT 1999 CHIP Startup--Initializing new tape

\*\*MKIV PROBLEM\*\*: Tue Dec 28 17:24:20 GMT 1999

Cold morning, checked 1/2-wave plate encoder power supply voltage.

Voltage was 11.98 VDC. On DOY 99351, I checked it after phasing stabilized and voltage was 12.1 VDC.

Tue Dec 28 17:27:04 GMT 1999 MKIV Start Patrol

\*\*MKIV PROBLEM\*\*: Tue Dec 28 17:49:08 GMT 1999

Experienced a phasing reversal. Checked voltage at 1/2-wave plate encoder power supply, it was 11.99 VDC. Still relatively cold in dome.

Tue Dec 28 18:01:12 GMT 1999 CHIP Bias

Tue Dec 28 18:02:21 GMT 1999 CHIP End Bias

Tue Dec 28 18:02:31 GMT 1999 CHIP Water

Tue Dec 28 18:02:53 GMT 1999 PICS Flat

Tue Dec 28 18:03:18 GMT 1999 CHIP End Water

Tue Dec 28 18:05:29 GMT 1999 PICS End Flat

\*\*MKIV PROBLEM\*\*: Tue Dec 28 18:07:07 GMT 1999

Another phasing reversal occurrence. Power supply voltage varied between 11.99 and 12.00 vdc.

\*\*PICS PROBLEM\*\*: Tue Dec 28 18:14:05 GMT 1999

There was a timeout error on Optics during last halphadisc, wheel may not have gotten to clear position.

\*\*PICS PROBLEM\*\*: Tue Dec 28 18:18:33 GMT 1999

Occluding wheel is not changing to Clear position. Investigating.

\*\*PICS PROBLEM\*\*: Tue Dec 28 18:36:26 GMT 1999

Checked out status and driver cards by swapping with objective wheel cards. Problem not with boards. Will try a Kill/Run. Unloading tape and loading new tape.

\*\*MKIV PROBLEM\*\*: Tue Dec 28 18:40:50 GMT 1999

Power supply voltage is 12.10 VDC. Have not had phase reversal for a bit.

\*\*PICS PROBLEM\*\*: Tue Dec 28 18:43:26 GMT 1999

Kill/Run did not fix occluding wheel problem. Stopping CHIP so I can reset YCC.

Tue Dec 28 18:45:32 GMT 1999 CHIP CHIP End Patrol

\*\*PICS PROBLEM\*\*: Tue Dec 28 18:48:01 GMT 1999

YCC reset did not fix problem.

Tue Dec 28 18:48:44 GMT 1999 CHIP CHIP Start Patrol

Tue Dec 28 19:02:08 GMT 1999 CHIP Bias

Tue Dec 28 19:03:18 GMT 1999 CHIP End Bias

Tue Dec 28 19:03:35 GMT 1999 CHIP Water

Tue Dec 28 19:04:25 GMT 1999 CHIP End Water

\*\*PICS PROBLEM\*\*: Tue Dec 28 19:08:30 GMT 1999

Indication is occulter wheel drive motor is not working. There is 22K-ohms across windings. Spare motor measures 1.8 ohms. Motor does not turn when 12V applied, spare turns with 12V.

Tue Dec 28 20:02:00 GMT 1999 CHIP Gain

Tue Dec 28 20:07:39 GMT 1999 CHIP End Gain

Tue Dec 28 20:07:49 GMT 1999 CHIP Bias

Tue Dec 28 20:08:44 GMT 1999 CHIP End Bias

Tue Dec 28 20:08:59 GMT 1999 CHIP Water

Tue Dec 28 20:09:46 GMT 1999 CHIP End Water

Tue Dec 28 20:41:30 GMT 1999 PICS Start Patrol

\*\*PICS PROBLEM\*\*: Tue Dec 28 20:41:47 GMT 1999

Removed motor assembly and stripped it down. With motor off gear assembly, the motor turned with 12VDC applied. Recheck of resistance and it was 2-ohms across the motor windings--good. Gearbox was occasionally sticking--really stuck in one direction! Stripped gearbox, lubricated planetary gears and reassembled. Reassembled motor and gearbox and tested. It ran OK with 12V. Reinstalled assembly and tested with program. Motor runs OK, but need to realign Home.

**\*\*PICS PROBLEM\*\***: Tue Dec 28 20:57:29 GMT 1999

OK, Home is aligned. Geneva arm wasn't quite engaged in lock position when Home bump reached the microswitch. Adjusted the cam so that geneva locks up before home is enabled. Marked the cam with fiducial.

AND..... just to throw me off, for good measure..... the declination decided to reach its limit and reset itself! When I looked at the PICS display to check if things were OK, the display was dark!! Once I reset the dec, PICS went into transfers, further delaying confirmation that fix went OK.

PICS appears to be working OK now.

9 CHIP End Water

**COMMENT**: Tue Dec 28 21:06:20 GMT 1999

Checked other systems and they appear to be humming along after being ignored during the PICS fix. I do not see any evidence of activity.

**\*\*PICS PROBLEM\*\***: Tue Dec 28 21:54:06 GMT 1999

Occulting wheel is sticking again. Stopping.

**\*\*PICS PROBLEM\*\***: Tue Dec 28 21:59:44 GMT 1999

Same problem. I will stop for the day and have Darryl take a look at the gearing to see if he can find what is causing the jam. His mechanical expertise may help him see something I couldn't.

Tue Dec 28 22:02:00 GMT 1999 CHIP Bias

Tue Dec 28 22:03:05 GMT 1999 CHIP End Bias

Tue Dec 28 22:03:16 GMT 1999 CHIP Water

Tue Dec 28 22:04:00 GMT 1999 CHIP End Water

Tue Dec 28 22:13:32 GMT 1999 CHIP CHIP End Patrol

Tue Dec 28 22:15:25 GMT 1999 CHIP ending tape

**\*\*MKIV PROBLEM\*\***: Tue Dec 28 22:22:52 GMT 1999

Voltage on encoder power supply was 12.05 after stopping MKIV.

I increased voltage +0.2 volts to 12.25V. Hopefully this will raise the voltage from 11.98 to 12.18 in the morning if it is cold again. If theory is correct, we should not see phasing errors if voltage is above 12.1 V.

Tue Dec 28 22:34:07 GMT 1999

MkIV

17_27.rawmk4	18_36.rawmk4	19_35.rawmk4	20_34.rawmk4	21_34.rawmk4
17_30.rawmk4	18_39.rawmk4	19_38.rawmk4	20_37.rawmk4	21_37.rawmk4
17_33.rawmk4	18_42.rawmk4	19_41.rawmk4	20_40.rawmk4	21_40.rawmk4
17_36.rawmk4	18_45.rawmk4	19_44.rawmk4	20_43.rawmk4	21_43.rawmk4
17_39.rawmk4	18_48.rawmk4	19_47.rawmk4	20_46.rawmk4	21_46.rawmk4
17_41.rawmk4	18_51.rawmk4	19_50.rawmk4	20_49.rawmk4	21_49.rawmk4
17_44.rawmk4	18_54.rawmk4	19_53.rawmk4	20_52.rawmk4	21_52.rawmk4
17_47.rawmk4	18_57.rawmk4	19_56.rawmk4	20_55.rawmk4	21_55.rawmk4
17_50.rawmk4	19_00.rawmk4	19_59.rawmk4	20_58.rawmk4	21_58.rawmk4
17_53.rawmk4	19_02.rawmk4	20_02.rawmk4	21_01.rawmk4	22_00.rawmk4
17_56.rawmk4	19_05.rawmk4	20_05.rawmk4	21_04.rawmk4	22_03.rawmk4
17_59.rawmk4	19_08.rawmk4	20_08.rawmk4	21_07.rawmk4	22_06.rawmk4
18_02.rawmk4	19_11.rawmk4	20_11.rawmk4	21_10.rawmk4	22_09.rawmk4
18_05.rawmk4	19_14.rawmk4	20_14.rawmk4	21_13.rawmk4	c18_08.rawmk4
18_11.rawmk4	19_17.rawmk4	20_17.rawmk4	21_16.rawmk4	c18_14.rawmk4
18_18.rawmk4	19_20.rawmk4	20_20.rawmk4	21_19.rawmk4	c18_21.rawmk4
18_24.rawmk4	19_23.rawmk4	20_23.rawmk4	21_22.rawmk4	
18_27.rawmk4	19_26.rawmk4	20_26.rawmk4	21_25.rawmk4	
18_30.rawmk4	19_29.rawmk4	20_29.rawmk4	21_28.rawmk4	
18_33.rawmk4	19_32.rawmk4	20_32.rawmk4	21_31.rawmk4	