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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
Occulting wheel is not changing to Clear position.  Investigating.
**PICS PROBLEM**: Tue Dec 28 18:36:26 GMT 1999
Checked dout 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 occulting 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
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**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
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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	