```
--------------------------------------------------------------------------------
                 Mauna Loa Solar Observatory Observer's Log
--------------------------------------------------------------------------------
          Thu Sep  9 16:53:59 GMT 1999
Year: 99  Doy: 252
Observer: koon
Thu Sep  9 16:54:26 GMT 1999     CHIP     Startup--Initializing new tape
Thu Sep  9 16:57:40 GMT 1999     MKIV    Start Patrol
Thu Sep  9 16:57:52 GMT 1999     PICS     Start Patrol
Thu Sep  9 16:57:52 GMT 1999     PICS     Start Patrol
Thu Sep  9 17:01:58 GMT 1999     CHIP     Bias
Thu Sep  9 17:02:51 GMT 1999     CHIP     End Bias
Thu Sep  9 17:03:01 GMT 1999     CHIP     Water
Thu Sep  9 17:03:38 GMT 1999     CHIP     End Water
LOW-L COMMENT: Thu Sep  9 17:09:15 GMT 1999
File count was at 78 so I removed L00624 from drive #0 and installed
L00626 there.  Restarted with data going to L00625 in drive #1.
COMMENT: Thu Sep  9 17:39:39 GMT 1999
Dome was blocking part of Spar, moved it.
Thu Sep  9 18:00:48 GMT 1999     CHIP     Bias
Thu Sep  9 18:01:49 GMT 1999     CHIP     End Bias
Thu Sep  9 18:02:04 GMT 1999     CHIP     Water
Thu Sep  9 18:02:30 GMT 1999     PICS     Flat
Thu Sep  9 18:02:43 GMT 1999     CHIP     End Water
Thu Sep  9 18:05:03 GMT 1999     PICS     End Flat
Thu Sep  9 18:21:02 GMT 1999     MKIV    Start Cal
Thu Sep  9 19:00:33 GMT 1999     PICS     polarization_calibration
Thu Sep  9 19:03:03 GMT 1999     CHIP     Bias
Thu Sep  9 19:03:59 GMT 1999     CHIP     End Bias
Thu Sep  9 19:04:09 GMT 1999     CHIP     Water
Thu Sep  9 19:04:47 GMT 1999     CHIP     End Water
Thu Sep  9 19:13:16 GMT 1999     MKIV    Start Patrol
COMMENT: Thu Sep  9 19:45:42 GMT 1999
Extended the dome slot about 10 minutes ago.
Thu Sep  9 20:02:47 GMT 1999     CHIP     Gain
Thu Sep  9 20:07:15 GMT 1999     CHIP     End Gain
Thu Sep  9 20:07:26 GMT 1999     CHIP     Bias
Thu Sep  9 20:08:15 GMT 1999     CHIP     End Bias
Thu Sep  9 20:08:24 GMT 1999     CHIP     Water
Thu Sep  9 20:09:01 GMT 1999     CHIP     End Water
Thu Sep  9 21:00:50 GMT 1999     CHIP     Bias
Thu Sep  9 21:01:45 GMT 1999     CHIP     End Bias
Thu Sep  9 21:02:00 GMT 1999     CHIP     Water
Thu Sep  9 21:02:43 GMT 1999     CHIP     End Water
MKIV COMMENT: Thu Sep  9 21:24:51 GMT 1999
I'm investigating the possible causes for unusual Sky Transmission readouts
that are getting written to MkIV data.  According to the screen display they
are varying between about 280 and about 340 regularly, with a lot of extreme
```

swinging with a period of 4 seconds, very regular too. The LED shows a
fairly constant value of around 1400, the Sky Trx telescope on the Spar
supplies the signal for both of these readings, so it appears to be
working correctly. About 12 days ago the screen readings were about
355 with very little fluctuation of about +/- 1. The AtoD connection at the
KCC is a possible problem.
Thu Sep 9 22:02:49 GMT 1999   CHIP   Bias
Thu Sep 9 22:03:44 GMT 1999   CHIP   End Bias
Thu Sep 9 22:03:54 GMT 1999   CHIP   Water
Thu Sep 9 22:04:34 GMT 1999   CHIP   End Water
Thu Sep 9 22:22:21 GMT 1999   CHIP   CHIP End Patrol
Thu Sep 9 22:22:32 GMT 1999   PICS   End Patrol
Thu Sep 9 22:29:13 GMT 1999   MKIV   End Patrol
MKIV PROBLEM: Thu Sep 9 22:31:47 GMT 1999
The connection to the Analog board on the KCC is good, two wires soldered to
pins that are pushed into two holes on the 37 Pin black connector on the
front of the chassis. The voltage between the pins is steady at 3.25 to
3.26 vdc, the same as the voltage between the black wire and the board
and chassis grounds. The white wire is at the board and chassis grounds.
Also, this voltage corresponds to the voltage shown on the 2nd GUI
screen, the field titled Sky Transmission. So it looks like a steady
signal that is within defined range is reaching the Analog board, and that
board is grounded correctly. But the Sky Trx reading on the primary
Mk4 GUI is still jumping between around 280 and around 340. I measured
the voltages while the pins where connected to the board connector.

MKIV PROBLEM: Thu Sep 9 23:33:44 GMT 1999
There is about 0.15+ VAC noise on the SKY Trx signal line. No discernable
pattern on scope trace , lots of various noise signals mixed together I
think. The cable isn't shielded. May be able to pick out pattern on trace
Maybe a pattern that matches the 4 seconds (4 screen writes) period between
maximum readings?
COMMENT: Thu Sep 9 23:46:26 GMT 1999

TAPES:
******
MKIV: 99252
CHIP: C00916
PICS: P01540
LOWL: L00625 in drive #1

Thu Sep 9 23:47:23 GMT 1999
        MkIII

16_57.rawmk3   18_00.rawmk3   19_44.rawmk3   20_47.rawmk3   21_50.rawmk3
17_01.rawmk3   18_03.rawmk3   19_48.rawmk3   20_51.rawmk3   21_54.rawmk3
17_04.rawmk3   18_07.rawmk3   19_51.rawmk3   20_54.rawmk3   21_57.rawmk3
17_08.rawmk3   18_10.rawmk3   19_55.rawmk3   20_58.rawmk3   22_01.rawmk3

```
17_11.rawmk3    18_14.rawmk3    19_58.rawmk3    21_01.rawmk3    22_04.rawmk3
17_15.rawmk3    18_17.rawmk3    20_02.rawmk3    21_05.rawmk3    22_08.rawmk3
17_18.rawmk3    18_24.rawmk3    20_05.rawmk3    21_08.rawmk3    22_11.rawmk3
17_21.rawmk3    18_31.rawmk3    20_09.rawmk3    21_12.rawmk3    22_15.rawmk3
17_25.rawmk3    18_39.rawmk3    20_12.rawmk3    21_15.rawmk3    22_18.rawmk3
17_28.rawmk3    19_13.rawmk3    20_16.rawmk3    21_19.rawmk3    22_22.rawmk3
17_32.rawmk3    19_16.rawmk3    20_19.rawmk3    21_22.rawmk3    22_25.rawmk3
17_35.rawmk3    19_20.rawmk3    20_23.rawmk3    21_26.rawmk3    c18_21.rawmk3
17_39.rawmk3    19_23.rawmk3    20_26.rawmk3    21_29.rawmk3    c18_28.rawmk3
17_42.rawmk3    19_27.rawmk3    20_30.rawmk3    21_33.rawmk3    c18_35.rawmk3
17_46.rawmk3    19_30.rawmk3    20_33.rawmk3    21_36.rawmk3
17_49.rawmk3    19_34.rawmk3    20_37.rawmk3    21_40.rawmk3
17_53.rawmk3    19_37.rawmk3    20_40.rawmk3    21_43.rawmk3
17_56.rawmk3    19_41.rawmk3    20_44.rawmk3    21_47.rawmk3
```