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Mauna Loa Solar Observatory Observer's Log  
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Sat May 8 16:57:03 GMT 1999

Year: 99 Doy: 128

Observer: koon

Sat May 8 16:57:41 GMT 1999 CHIP Startup--Initializing new tape

WEATHER COMMENT: Sat May 8 16:59:28 GMT 1999

Thin cirrostratus, wind=5 mph from the SE, temp=45 F.

Sat May 8 16:59:40 GMT 1999 CHIP CHIP Start Patrol

Sat May 8 16:59:40 GMT 1999 CHIP CHIP Start Patrol

Sat May 8 17:03:00 GMT 1999 CHIP Bias

Sat May 8 17:03:55 GMT 1999 CHIP End Bias

Sat May 8 17:04:04 GMT 1999 CHIP Water

Sat May 8 17:04:43 GMT 1999 CHIP End Water

MKIV COMMENT: Sat May 8 17:05:23 GMT 1999

Scans look bad, radial streaks are present, but so are clouds.

\*\*CHIP PROBLEM\*\*: Sat May 8 17:06:08 GMT 1999

Filter temperature is high at 39.9

\*\*PICS PROBLEM\*\*: Sat May 8 17:11:34 GMT 1999

Stalled with Program:H-alpha.disc, and no Camera window. Tried Kill/Run sequence but still didn't get a Camera window, and the Camera task is listed as running.

\*\*CHIP PROBLEM\*\*: Sat May 8 17:21:29 GMT 1999

Temperature seems to be steady at around 39.960, and the images do look bad so that is probably an accurate temperature reading, maybe the setpoint needs to be changed, I'll check it after I get some of the other instruments stabilized.

\*\*PICS PROBLEM\*\*: Sat May 8 17:25:30 GMT 1999

Halted and cycled power to the Sparcstation.

\*\*MKIV PROBLEM\*\*: Sat May 8 17:26:14 GMT 1999

Radial streaks are diminishing and now the scans just look washed out from the bright sky, the clouds are very thin now.

WEATHER COMMENT: Sat May 8 17:29:22 GMT 1999

Clouds have thinned out quite a bit.

\*\*PICS PROBLEM\*\*: Sat May 8 17:32:25 GMT 1999

OK, now I have a Camera window and the Patrol is working.

\*\*MKIV PROBLEM\*\*: Sat May 8 17:37:13 GMT 1999

Scans are looking fine now and cirrostratus is gone, but sky is still a little bright.

Sat May 8 18:00:38 GMT 1999 PICS Flat

Sat May 8 18:01:49 GMT 1999 CHIP Bias

Sat May 8 18:02:06 GMT 1999 PICS End Flat

Sat May 8 18:02:42 GMT 1999 CHIP End Bias

Sat May 8 18:03:00 GMT 1999 CHIP Water

Sat May 8 18:03:46 GMT 1999 CHIP End Water

\*\*CHIP PROBLEM\*\*: Sat May 8 18:35:22 GMT 1999

Filter Temperature at 40.114

Sat May 8 18:44:25 GMT 1999 MKIII Start Cal  
Sat May 8 19:00:28 GMT 1999 PICS Flat  
Sat May 8 19:00:53 GMT 1999 CHIP Bias  
Sat May 8 19:01:46 GMT 1999 CHIP End Bias  
Sat May 8 19:01:57 GMT 1999 CHIP Water  
Sat May 8 19:01:57 GMT 1999 CHIP Water  
Sat May 8 19:02:36 GMT 1999 CHIP End Water  
Sat May 8 19:07:51 GMT 1999 MKIII Start Patrol

WEATHER COMMENT: Sat May 8 19:15:16 GMT 1999

Cirrus clouds are moving in again.

\*\*CHIP PROBLEM\*\*: Sat May 8 19:18:31 GMT 1999

Filter temp up to 40.280

Sat May 8 20:00:33 GMT 1999 PICS Flat  
Sat May 8 20:02:03 GMT 1999 PICS End Flat  
Sat May 8 20:02:48 GMT 1999 CHIP Gain  
Sat May 8 20:07:19 GMT 1999 CHIP End Gain  
Sat May 8 20:07:38 GMT 1999 CHIP Bias  
Sat May 8 20:08:34 GMT 1999 CHIP End Bias  
Sat May 8 20:08:44 GMT 1999 CHIP Water  
Sat May 8 20:09:19 GMT 1999 CHIP End Water

\*\*CHIP PROBLEM\*\*: Sat May 8 20:16:22 GMT 1999

Filter temp=40.452, thermistor testpoint=0.542, setpoint testpoint=0.633

I have read through the filter log book and the temperature controller manual to try to understand what is going on. I'm still not sure, but Greg noted a similar problem back around 8/18/95, he determined that a LM324 failed due to overvoltage, and had the controller board replaced and voltage limits corrected so that an overvoltage would not be able to occur again.

COMMENT: Sat May 8 20:23:53 GMT 1999

Extended the Dome slot.

\*\*CHIP PROBLEM\*\*: Sat May 8 20:24:05 GMT 1999

Filter temp=40.472, thermistor testpoint=0.541, setpoint testpoint=0.643 which is very close to the 0.644 that Eric reported as being the desired setpoint voltage.

MKIV COMMENT: Sat May 8 20:25:53 GMT 1999

Pausing due to clouds.

Sat May 8 20:30:36 GMT 1999 MKIII End Patrol

\*\*CHIP PROBLEM\*\*: Sat May 8 20:57:07 GMT 1999

It looks like the thermistor reading of 0.541 vdc is about right for the temperature of about 40 C that is shown on the observing screen. The setpoint reading also looks correct. So it appears the temperature control board is receiving the correct input but not giving the correct output, it gives 10 vdc or nothing (occasionally). I removed the controller and brought it downstairs for an examination.

\*\*CHIP PROBLEM\*\*: Sat May 8 21:27:39 GMT 1999

I couldn't find anything wrong inside the temperature controller box, but if any ICs are bad I wouldn't know. As a final test I waited for the Filter temp reading to drop to within range (34.5 C) and then I reconnected

the temperature controller and turned it back on and read the voltages again. The setpoint still reads 0.644 vdc as it should, the output is 10 vdc (fullpower for heating I think), and the thermistor read 0.697 which seems reasonable for the temperature of the filter at the time I read it, it was about 34.3 C according to the observing screen readout downstairs. I watched the observing readout and it drop to about 34.1 before starting to rise. The normal range for the filter should be 34.3 to 34.5 according to the observing screen limits. Also, the images looked fairly good when the screen readout showed the filter temperature was within range, so the readout must be correct.

COMMENT: Sat May 8 21:37:18 GMT 1999

Lost guiding in Dec, repointed and reset the guider.

Sat May 8 22:00:31 GMT 1999 PICS Flat  
Sat May 8 22:01:58 GMT 1999 PICS End Flat  
Sat May 8 22:02:48 GMT 1999 CHIP Bias  
Sat May 8 22:03:42 GMT 1999 CHIP End Bias  
Sat May 8 22:03:52 GMT 1999 CHIP Water  
Sat May 8 22:04:35 GMT 1999 CHIP End Water  
Sat May 8 22:40:39 GMT 1999 PICS End Patrol  
Sat May 8 22:41:52 GMT 1999 CHIP ending tape

CHIP COMMENT: Sat May 8 22:42:00 GMT 1999

No data due to bad filter temperature controller, will reuse the tape.

\*\*CHIP PROBLEM\*\*: Sat May 8 22:58:06 GMT 1999

I removed the filter temperature controller box from the Spar, the controller board inside it was driving the filter to unwanted temperatures and so we can't use the CHIP again until we solve that problem which will probably require a new controller board, I've sent out email asking how to proceed from here.

COMMENT: Sat May 8 23:01:03 GMT 1999

TAPES:

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MKIV: 99128

PICS: P01434

LOWL: L00597 in drive #0

CHIP: No data, down for repair.

Sat May 8 23:07:06 GMT 1999

MkIII

16_59.rawmk3	17_44.rawmk3	18_29.rawmk3	19_26.rawmk3	20_11.rawmk3
17_03.rawmk3	17_48.rawmk3	18_33.rawmk3	19_30.rawmk3	20_15.rawmk3
17_06.rawmk3	17_51.rawmk3	18_37.rawmk3	19_34.rawmk3	20_19.rawmk3
17_10.rawmk3	17_55.rawmk3	18_40.rawmk3	19_37.rawmk3	20_23.rawmk3
17_14.rawmk3	17_59.rawmk3	18_48.rawmk3	19_41.rawmk3	20_26.rawmk3
17_18.rawmk3	18_03.rawmk3	18_56.rawmk3	19_45.rawmk3	c18_44.rawmk3
17_21.rawmk3	18_07.rawmk3	19_04.rawmk3	19_49.rawmk3	c18_52.rawmk3
17_25.rawmk3	18_10.rawmk3	19_07.rawmk3	19_52.rawmk3	c19_00.rawmk3

17_29.rawmk3	18_14.rawmk3	19_11.rawmk3	19_56.rawmk3
17_33.rawmk3	18_18.rawmk3	19_15.rawmk3	20_00.rawmk3
17_36.rawmk3	18_21.rawmk3	19_19.rawmk3	20_04.rawmk3
17_40.rawmk3	18_25.rawmk3	19_22.rawmk3	20_08.rawmk3