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Mauna Loa Solar Observatory Observer's Log  
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Tue Jul 6 16:47:58 GMT 2010

Year: 10 Doy: 187

Observer: koon

WEATHER COMMENT: Tue Jul 6 16:48:00 GMT 2010

Clear sky, wind=5mph from the SE, temp=53F.

\_\_\_\_end\_\_\_\_

Tue Jul 6 16:55:05 GMT 2010 MKIV Start Patrol

Tue Jul 6 16:55:22 GMT 2010 CHIP Start Patrol

PSPT COMMENT BY DARRYL: Tue Jul 6 17:14:00 GMT 2010

Observing.

\_\_\_\_end\_\_\_\_

Tue Jul 6 17:36:33 GMT 2010 MKIV End Patrol

Tue Jul 6 18:01:36 GMT 2010 CHIP LSD

Tue Jul 6 18:03:08 GMT 2010 CHIP End LSD

Tue Jul 6 18:03:16 GMT 2010 CHIP BiasLSD

Tue Jul 6 18:04:02 GMT 2010 CHIP End BiasLSD

Tue Jul 6 18:04:10 GMT 2010 CHIP Bias

Tue Jul 6 18:04:56 GMT 2010 CHIP End Bias

Tue Jul 6 18:05:09 GMT 2010 CHIP ReStart Patrol

Tue Jul 6 20:19:18 GMT 2010 MKIV Start Cal

\*\*MKIV PROBLEM COMMENT BY DARRYL\*\*:  
Tue Jul 6 20:19:40 GMT 2010

I think the CCD on the Mk4 camera is failing, we're seeing the same "dark noise" signal like we did when the last CCD sensor failed in this camera, it's not exactly the same but there is signal even when the sensor isn't illuminated by the solar image, last bad CCD had raised noise across the sensor with a high point in the central region, this sensor has a fairly level raised signal area across the sensor but dip a lot near the right edge, and there are high spikes on the outside edges of where the double signal "humps" normally fall and lowered spikes on the inside edges of where those humps normally fall - even though it is dark and there aren't any humps. This is the case even with the camera and SK lens covered with black photography cloth so it isn't a light leak problem. The double humps also show a big dip in the right humps as first noticed by Ben back on 6/28/10 before I started to realign the camera to increase the Vgain and in hopes of eliminating this dip. I've taken pictures and sent out an explanatory email with a timeline and the request for help in getting a new CCD sensor. We should keep running Mk4 anyway, the data may still be useful. I'm running a calibration now, after that I'll do a "Correct" and then run another calibration.

\_\_\_\_end\_\_\_\_

Tue Jul 6 20:38:05 GMT 2010 MKIV End Cal

Tue Jul 6 20:45:53 GMT 2010 MKIV Start Correct

Tue Jul 6 20:47:25 GMT 2010 MKIV End Correct

MKIV COMMENT BY DARRYL: Tue Jul 6 20:48:16 GMT 2010

Last output line from "Correct" shows:

s & p hairlines 97 274 97 282  
and the up/down signal looks greater than the last Correct showed. Back in 5/09 the hairlines were found at 107,275 and 108,274 instead of 97,274 and 97,282 like now, but the Correct graph looks bad at low heights around that 95-110 region if I'm reading it right (there aren't any labeled axes) so that corresponds to the bad looking lower heights in the scans and in the double humps (inside edges are lower heights for both humps) and so it makes sense that the Correct program would have difficulty finding hairlines there. I'm going to cycle the KCC power as we have to do between running a "Correct" and "Patrol" else the barrel runs to a limit and sits there. Then I'll go on with other tasks and leave Mk4 as-is until I get back to MLSO on 7/18.

\_\_\_\_end\_\_\_\_

Tue Jul 6 21:40:36 GMT 2010 MKIV Start Patrol

Tue Jul 6 21:46:52 GMT 2010 MKIV End Patrol

Tue Jul 6 21:47:42 GMT 2010 MKIV Start Cal

MKIV COMMENT BY DARRYL: Tue Jul 6 21:51:57 GMT 2010

After the Correct the real-time scans look the same except for the ring inside of the lowest corona is now mostly white instead of mostly blue. Running another Cal then it's back to Patrol.

\_\_\_\_end\_\_\_\_

Tue Jul 6 22:07:12 GMT 2010 MKIV End Cal

NOTE BY DARRYL: Tue Jul 6 22:12:41 GMT 2010

I setup a delivery of LN2 for 7/21/10, a 170 Liter dewar.

\_\_\_\_end\_\_\_\_

Tue Jul 6 23:02:37 GMT 2010 CHIP LSD

Tue Jul 6 23:04:12 GMT 2010 CHIP End LSD

Tue Jul 6 23:04:21 GMT 2010 CHIP BiasLSD

Tue Jul 6 23:04:56 GMT 2010 CHIP End BiasLSD

Tue Jul 6 23:05:12 GMT 2010 CHIP Bias

Tue Jul 6 23:05:56 GMT 2010 CHIP End Bias

Tue Jul 6 23:06:03 GMT 2010 CHIP ReStart Patrol

Tue Jul 6 23:40:42 GMT 2010 CHIP End Patrol

Tue Jul 6 23:44:14 GMT 2010 MKIV End Patrol

Wed Jul 7 00:00:40 GMT 2010

MkIV

16_55.rawmk4	17_30.rawmk4	22_17.rawmk4	22_53.rawmk4	23_32.rawmk4
16_58.rawmk4	17_33.rawmk4	22_20.rawmk4	22_56.rawmk4	23_35.rawmk4
17_01.rawmk4	20_22.rawmk4	22_23.rawmk4	22_59.rawmk4	23_38.rawmk4
17_03.rawmk4	20_28.rawmk4	22_26.rawmk4	23_01.rawmk4	23_41.rawmk4
17_06.rawmk4	20_34.rawmk4	22_29.rawmk4	23_04.rawmk4	c20_19.rawmk4
17_09.rawmk4	21_40.rawmk4	22_32.rawmk4	23_07.rawmk4	c20_25.rawmk4
17_12.rawmk4	21_43.rawmk4	22_35.rawmk4	23_13.rawmk4	c20_31.rawmk4
17_15.rawmk4	21_50.rawmk4	22_38.rawmk4	23_17.rawmk4	c21_54.rawmk4
17_18.rawmk4	21_57.rawmk4	22_41.rawmk4	23_20.rawmk4	c22_00.rawmk4
17_21.rawmk4	22_03.rawmk4	22_44.rawmk4	23_23.rawmk4	
17_24.rawmk4	22_11.rawmk4	22_47.rawmk4	23_26.rawmk4	

17\_27.rawmk4 22\_14.rawmk4 22\_50.rawmk4 23\_29.rawmk4