## Mauna Loa Solar Observatory Observer's Log

\_\_\_\_\_\_

Tue Mar 7 16:53:34 GMT 2000

Year: 00 Doy: 067 Observer: yasukawa

WEATHER COMMENT: Tue Mar 7 16:53:56 GMT 2000

\*\*PSPT PROBLEM\*\*: Tue Mar 7 21:25:12 GMT 2000

Cool, clear, south wind.

Tue Mar 7 16:55:08 GMT 2000 Startup--Initializing new tape CHIP Tue Mar 7 17:05:42 GMT 2000 CHIP Start 7 Passband Patrol CHTP Tue Mar 7 17:05:55 GMT 2000 PICS Start Patrol Tue Mar 7 17:06:27 GMT 2000 MKIV Start Patrol Tue Mar 7 18:02:59 GMT 2000 PICS Flat Tue Mar 7 18:05:44 GMT 2000 PICS End Flat \*\*\*\* EVENT COMMENT \*\*\*\*: Tue Mar 7 18:57:19 GMT 2000 possible fast cme at PA 230-240 from 1836-1851 UT. Tue Mar 7 20:00:55 GMT 2000 CHIP Gain7 Tue Mar 7 20:09:16 GMT 2000 CHIP End Gain Tue Mar 7 20:09:32 GMT 2000 CHIP Bias Tue Mar 7 20:10:42 GMT 2000 CHIP End Bias

I found some info on the fuzzy image problem. Darryl suspected there may still be a quad cell problem when the images are far off-center. Haosheng concurred with that and was going to reduce the offsets and load the program mods at some point--he hasn't alerted us that this was done so I don't know if he did this--although the offset values appeared to be the same during the 1900 UT flat-field cal this morning.

What I found while watching the program run on the sparc and the PC was that focus was not changing(!!) Images were fine for the 2000 series data and I recall seeing the "position = xxx.xxx" values change according to the "fcs goto xxx.xxx" request. During the 2100 series, the "position =" values went to 58 (or was already there) on the first exposure and THE VALUE DID NOT CHANGE FROM 58 the whole time during the image subset where a bunch of exposures were made with the focus changing between each exposure. The first exposure subsets, before the focus series, were in good focus. The result of this focus failure was the RED images were out of focus. The BLUE and CAK focus change requests must have been close enough to 58 that the focus was not too hosed (50-450 or so?). Red focus requests were for 1600-2000, quite far from 58, no? Tried requesting focus changes manually from PC after the 2100 series finished and go no response. In thinking back to yesterday, the out of focus images occurred in the later series-probably 2100, definitely 2200. One troubleshoot path would be to determine if the focus stall is a time-of-day (spar position) thing or a thermal thing, or ?????

I will look at the U2A and U2B outputs during the next series to

determine that the active mirror is NOT oscillating and the focus iss the only thing causing this particular out-of-focus condition. this should put the active mirror problem to bed as "fixed by Koon". COMMENT: Tue Mar 7 21:52:11 GMT 2000 AARGH! forgot to reconfigure dome shutter. CHIP domed out. I will stop CHIP rather than reconfigure dome at this late time. Tue Mar 7 21:54:23 GMT 2000 CHIP CHIP End Patrol Tue Mar 7 22:01:40 GMT 2000 ending tape CHIP Tue Mar 7 22:10:10 GMT 2000 End Patrol PICS \*\*PSPT PROBLEM\*\*: Tue Mar 7 22:10:56 GMT 2000 Fuzzy RED image is NOT due to active mirror oscillations. I watched the U2A and U2B outputs on the scope and the values did not change or show oscillation during the out-of-focus RED images. All RED images during the 2200 series, including during the first two subsets, were out-of-focus. Position = values were not changing to fcs goto requests. There is a definite problem with the focus mechanism. It was good yesterday morning and again this morning. Problem is definitely intermittent, not totally failed. COMMENT: Tue Mar 7 22:16:12 GMT 2000 Tapes: MKIV: 00-067 PICS: P01685 CHIP: C01066 LOWL: L00675 in drive #0 Tue Mar 7 22:25:27 GMT 2000 MkIV 17\_06.rawmk4 20\_22.rawmk4 21 25.rawmk4 18 08.rawmk4 19 20.rawmk4 17\_09.rawmk4 18\_14.rawmk4 19\_23.rawmk4 20\_25.rawmk4 21\_28.rawmk4 17\_12.rawmk4 18\_21.rawmk4 19\_26.rawmk4 20\_28.rawmk4 21\_31.rawmk4 17 15.rawmk4 18 27.rawmk4 19 29.rawmk4 20 31.rawmk4 21 34.rawmk4 17 18.rawmk4 18\_30.rawmk4 19 32.rawmk4 20 34.rawmk4 21 37.rawmk4 18\_33.rawmk4 20\_37.rawmk4 17\_21.rawmk4 19\_35.rawmk4 21\_40.rawmk4 17 24.rawmk4 18 36.rawmk4 19 38.rawmk4 20 40.rawmk4 21 43.rawmk4 17 27.rawmk4 18 39.rawmk4 19 41.rawmk4 20 43.rawmk4 21 45.rawmk4 17 30.rawmk4 18 42.rawmk4 19 44.rawmk4 20 46.rawmk4 21 48.rawmk4 17 33.rawmk4 18 45.rawmk4 19 47.rawmk4 20 49.rawmk4 21 51.rawmk4 17\_36.rawmk4 18\_48.rawmk4 19\_50.rawmk4 20\_52.rawmk4 21\_54.rawmk4 17 39.rawmk4 18 51.rawmk4 19 53.rawmk4 20 55.rawmk4 21 57.rawmk4 17 42.rawmk4 18 54.rawmk4 19 56.rawmk4 20 58.rawmk4 22 00.rawmk4 17\_45.rawmk4 18\_57.rawmk4 19\_59.rawmk4 21\_01.rawmk4 22\_03.rawmk4 17 48.rawmk4 19 00.rawmk4 20 02.rawmk4 21 04.rawmk4 22 06.rawmk4 19 03.rawmk4 20 05.rawmk4 17 51.rawmk4 21 07.rawmk4 22 09.rawmk4 17\_54.rawmk4 19\_05.rawmk4 20\_08.rawmk4 21\_10.rawmk4 22 12.rawmk4 17 56.rawmk4 19 08.rawmk4 20 11.rawmk4 21 13.rawmk4 c18 11.rawmk4 17 59.rawmk4 19 11.rawmk4 20 14.rawmk4 21 16.rawmk4 c18 17.rawmk4 18 02.rawmk4 19 14.rawmk4 20 17.rawmk4 21 19.rawmk4 c18 24.rawmk4

20 20.rawmk4

21 22.rawmk4

19 17.rawmk4

18 05.rawmk4