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Mauna Loa Solar Observatory Observer's Log  
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Tue Aug 1 16:36:14 GMT 2006

Year: 06 Doy: 213

Observer: yasukawa

WEATHER COMMENT: Tue Aug 1 16:36:27 GMT 2006

Clear, S wind 13 mph, temp 40 F.

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

**\*\*MKIV PROBLEM\*\***: Tue Aug 1 16:37:35 GMT 2006

Found the likely suspect TO MK4 startup problem.

Symptoms are consistent with Sunday and Monday summaries.

Allen put probes on the synchro power supplies yesterday afternoon.

This morning, 5VDC supply is reading 1.547VDC.

+ and - 15 VDC supplied reading supplying correct values.

Barrel synchro pulses showing low, 1V p-p at 25% duty cycle.

Barrel CW pulses normal for what it should be doing.

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

Tue Aug 1 16:42:31 GMT 2006 CHIP Start Patrol

Tue Aug 1 16:42:46 GMT 2006 PICS Start Patrol

SBM COMMENT: Tue Aug 1 16:42:55 GMT 2006

Observing.

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

PSPT COMMENT: Tue Aug 1 16:44:53 GMT 2006

Starting up.

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

PSPT COMMENT: Tue Aug 1 16:57:03 GMT 2006

Observing.

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

A NEW TAPE HAS BEEN PUT INTO KAIEE DLT DRIVE, Tue Aug 1 17:02:42 GMT 2006

**\*\*MKIV PROBLEM\*\***: Tue Aug 1 17:40:01 GMT 2006

Back in late 2001, we had a similar barrel failure attributed to a degradation of the Semiconductor Circuits (SC) +/-15 and 5V PS. The 5V side wasn't supplying enough current to support the synchro circuits. To fix this, a separate 5V ps (in the black box mounted below the synchro panel) was added to boost the capacity. The additional unit now powers the Binary-BCD module and the original SC power supply mounted on the panel powers the Vernitech module. This is the supply that is now probably flaky, running at only 1.5V (the 5V side of the triple-output supply) in the early morning.

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

Tue Aug 1 17:46:29 GMT 2006 MKIV Start Patrol

**\*\*MKIV PROBLEM\*\***: Tue Aug 1 17:45:35 GMT 2006

Just turned around and noted that the SC power supply is now providing 5.07 VDC and the barrel is turning. Starting Patrol.

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

**\*\*MKIV PROBLEM\*\***: Tue Aug 1 17:47:05 GMT 2006

Synchro LSB pulses now look normal, barrel is turning and barrel pulses look fine.

Replacing the SC ps will require obtaining another unit -- no spares --  
or rigging a temporary alternate supply.

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

Tue Aug 1 18:00:51 GMT 2006 CHIP LSD  
Tue Aug 1 18:01:18 GMT 2006 PICS Flat  
Tue Aug 1 18:02:34 GMT 2006 CHIP End LSD  
Tue Aug 1 18:02:43 GMT 2006 CHIP BiasLSD  
Tue Aug 1 18:03:26 GMT 2006 CHIP End BiasLSD  
Tue Aug 1 18:03:37 GMT 2006 CHIP Bias  
Tue Aug 1 18:03:47 GMT 2006 PICS End Flat  
Tue Aug 1 18:03:54 GMT 2006 PICS ReStart Patrol  
Tue Aug 1 18:04:19 GMT 2006 CHIP End Bias  
Tue Aug 1 18:04:32 GMT 2006 CHIP ReStart Patrol

\*\*PSPT PROBLEM\*\* : Tue Aug 1 18:20:54 GMT 2006

Crashed at 1732, k/r

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

Tue Aug 1 18:28:05 GMT 2006 MKIV End Patrol  
Tue Aug 1 18:28:11 GMT 2006 MKIV Start Cal  
Tue Aug 1 18:46:54 GMT 2006 MKIV End Cal  
Tue Aug 1 18:47:00 GMT 2006 MKIV Start Patrol

NICE MK4 IMAGE: 1816

NICE CHIP IMAGE: 1816

NICE PICSLIMB IMAGE: 1816

NICE PICSDISC IMAGE: 1816

Tue Aug 1 19:33:43 GMT 2006 CHIP End Patrol

Tue Aug 1 19:33:57 GMT 2006 PICS End Patrol

Tue Aug 1 19:34:34 GMT 2006 MKIV End Patrol

\*\*MKIV PROBLEM\*\* : Tue Aug 1 19:32:17 GMT 2006

Barrel culprit appears to be Semiconductor Circuits MP1.5.500/2.15.100  
encapsulated power supply. That unit has been replaced by MP35-070. Ron  
ordered a replacement and a spare for us. Replacement is in stock, spare  
will take 6 weeks.

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

Tue Aug 1 19:41:22 GMT 2006 MKIV Start Patrol

COMMENT: Tue Aug 1 19:41:30 GMT 2006

Reconfigured dome shutter.

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

Tue Aug 1 19:41:37 GMT 2006 CHIP Start Patrol

Tue Aug 1 19:41:47 GMT 2006 PICS Start Patrol

MKIV COMMENT: Tue Aug 1 21:09:03 GMT 2006

Set up bench power supply next to KCC cabinet to allow temporary hookup  
of 5VDC @ 1A (using adjusted +32V@1A terminal rather than the 8V@3A terminal  
adjusted to 5V) to the +5V@500mA supply in the morning when the SC power  
supply is flaked-out. This will allow an extra 1-1.5 hours of observation  
early in the morning.

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

WEATHER COMMENT: Tue Aug 1 21:20:26 GMT 2006

In orographic clouds.

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

Tue Aug 1 21:21:32 GMT 2006	CHIP	End Patrol
Tue Aug 1 21:21:41 GMT 2006	PICS	End Patrol
Tue Aug 1 21:23:50 GMT 2006	MKIV	End Patrol

MkIV

17_46.rawmk4	18_31.rawmk4	19_19.rawmk4	20_07.rawmk4	20_48.rawmk4
17_49.rawmk4	18_37.rawmk4	19_22.rawmk4	20_10.rawmk4	20_51.rawmk4
17_52.rawmk4	18_43.rawmk4	19_25.rawmk4	20_13.rawmk4	20_54.rawmk4
17_55.rawmk4	18_47.rawmk4	19_28.rawmk4	20_16.rawmk4	21_00.rawmk4
17_58.rawmk4	18_49.rawmk4	19_31.rawmk4	20_19.rawmk4	21_04.rawmk4
18_01.rawmk4	18_52.rawmk4	19_41.rawmk4	20_22.rawmk4	21_07.rawmk4
18_04.rawmk4	18_55.rawmk4	19_44.rawmk4	20_25.rawmk4	21_10.rawmk4
18_07.rawmk4	18_58.rawmk4	19_47.rawmk4	20_28.rawmk4	21_14.rawmk4
18_10.rawmk4	19_01.rawmk4	19_50.rawmk4	20_31.rawmk4	21_17.rawmk4
18_13.rawmk4	19_04.rawmk4	19_53.rawmk4	20_34.rawmk4	21_20.rawmk4
18_16.rawmk4	19_07.rawmk4	19_56.rawmk4	20_37.rawmk4	c18_28.rawmk4
18_19.rawmk4	19_10.rawmk4	19_58.rawmk4	20_40.rawmk4	c18_34.rawmk4
18_21.rawmk4	19_13.rawmk4	20_01.rawmk4	20_42.rawmk4	c18_40.rawmk4
18_24.rawmk4	19_16.rawmk4	20_04.rawmk4	20_45.rawmk4	