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                  Mauna Loa Solar Observatory Observer's Log
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          Wed Jan  5 17:20:17 GMT 2000
Year: 00  Doy: 005
Observer: koon
WEATHER COMMENT: Wed Jan  5 17:20:23 GMT 2000
Clear sky, wind=5 mph from the SE, temp=39 F.
Wed Jan  5 17:21:00 GMT 2000    CHIP     Startup--Initializing new tape
Wed Jan  5 17:29:13 GMT 2000    MKIV     Start Patrol
Wed Jan  5 17:29:23 GMT 2000    CHIP     CHIP Start Patrol
**MKIV PROBLEM**: Wed Jan  5 17:34:00 GMT 2000
I haven't seen any messages in the akamai window so far this morning, but
it looks like everything else is working OK.
Wed Jan  5 17:36:52 GMT 2000    PICS     Start Patrol
**LOW-L PROBLEM**: Wed Jan  5 17:41:00 GMT 2000
L00656 was popped out of drive #0, data going to L00657 in drive #1, reason
unknown.  Installed L00658 in drive #0.
Wed Jan  5 18:03:12 GMT 2000    CHIP     Bias
Wed Jan  5 18:04:33 GMT 2000    CHIP     End Bias
Wed Jan  5 18:04:33 GMT 2000    CHIP     End Bias
Wed Jan  5 18:04:53 GMT 2000    CHIP     Water
Wed Jan  5 18:05:40 GMT 2000    CHIP     End Water
Wed Jan  5 18:07:33 GMT 2000    PICS     End Flat
**GONG PROBLEM**: Wed Jan  5 18:10:23 GMT 2000
There was a network related crash message on the console this morning I
exited and cycled power to the console but it won't come back far
enough for me to login.
**MLSO PROBLEM**: Wed Jan  5 18:12:44 GMT 2000
Network connection is still very slow, maybe this is related to the GONG
console problem.
**PICS PROBLEM**: Wed Jan  5 18:26:20 GMT 2000
Disk images not being taken because the occulting wheel isn't going to clear
position.  The LEDs show the wheel moving but the Bit #2 LED flashes very
quickly without the Home LED flashing, then it doesn't flash again while the
other LEDs do, then it has a Timeout.  Will try stopping then restarting
the Patrol to see if this clears the problem.
Wed Jan  5 18:29:39 GMT 2000    PICS     Start Patrol
Wed Jan  5 18:34:13 GMT 2000    PICS     End Patrol
**PICS PROBLEM**: Wed Jan  5 18:39:47 GMT 2000
Restarting Patrol didn't clear the problem.  I have the same problem when
I use the mouse/GUI to move the occulting wheel.  Will leave this paused
until I get back from the GONG shelter and have time to work on this
problem.
**GONG PROBLEM**: Wed Jan  5 18:41:23 GMT 2000
Going down to the GONG shelter soon to see if data are being taken after
the turret fix, and to see what I can do about the network connection
between the shelter and the outside world, I can't get through on the
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two IP addresses I know of, and I'm wondering if this is due to something
that is causing our network connections to be sluggish.
Wed Jan 5 19:03:07 GMT 2000   CHIP   Bias
Wed Jan 5 19:04:18 GMT 2000   CHIP   End Bias
Wed Jan 5 19:04:36 GMT 2000   CHIP   Water
Wed Jan 5 19:05:24 GMT 2000   CHIP   End Water
GONG PROBLEM: Wed Jan 5 19:30:58 GMT 2000
The system is working well in the shelter, data look good. Can ping
outer IP addresses in Hawaii and mainland from the shelter console.
So something is wrong with the MLSO GONG monitoring console or its
address. Priority on this has dropped, on to other problems for a
while.
Wed Jan 5 20:03:00 GMT 2000   CHIP   Gain
GONG PROBLEM: Wed Jan 5 20:04:36 GMT 2000
The IP addresses for GONG are being listed on the MLSO console as
128.171.231.081 (instead of .81) and 128.171.231.082 (instead of .82),
I'd guess that this was the problem, maybe someone from GONG made a
change to the software and got the IP addresses wrong. I'll try
calling them.

Wed Jan 5 20:08:53 GMT 2000   CHIP   End Gain
Wed Jan 5 20:09:09 GMT 2000   CHIP   Bias
Wed Jan 5 20:10:14 GMT 2000   CHIP   End Bias
Wed Jan 5 20:10:33 GMT 2000   CHIP   Water
Wed Jan 5 20:11:14 GMT 2000   CHIP   End Water
COMMENT: Wed Jan 5 20:55:46 GMT 2000
Spar wasn't tracking, I bumped it while working on PICS.
Wed Jan 5 21:03:00 GMT 2000   CHIP   Bias
Wed Jan 5 21:04:02 GMT 2000   CHIP   End Bias
Wed Jan 5 21:04:13 GMT 2000   CHIP   Water
Wed Jan 5 21:04:55 GMT 2000   CHIP   End Water
GONG PROBLEM: Wed Jan 5 21:59:25 GMT 2000
It looks like the GONG folks must have found the problem I told them
about, the xterm console is doing new things, still not up all the
way though.
Wed Jan 5 22:03:01 GMT 2000   CHIP   Bias
Wed Jan 5 22:03:58 GMT 2000   CHIP   End Bias
Wed Jan 5 22:04:13 GMT 2000   CHIP   Water
Wed Jan 5 22:04:59 GMT 2000   CHIP   End Water
PICS PROBLEM: Wed Jan 5 22:05:48 GMT 2000
I swapped the PICS Objective wheel board back to its proper place, that
should fix the Timeout problems. I used a spare Mk3 driver board in place
of the toasted PICS occulting wheel board. Now we are set correctly with
boards but there is still an indexing problem. Bit #1 alone isn't being seen
to signal that the wheel is in the Clear position, so the wheel spins until
it times out. I'm trying various tests on the encoder wheel positions now.
PICS PROBLEM: Wed Jan 5 22:28:37 GMT 2000
There are 2 HEI and disk type encoder wheels at the base of the occulting

wheel, used for position sensing. The innermost wheel is used for Bit #0
and Bit #1 sensing. In the Clear position only Bit #1 should be sensed
but there is no indication with the LED that this is happening. So
I moved the wheel to the PICS position which causes Bits #0 and #1 to
be sensed, then I blocked the light going through the HEI in various ways
to see how the LEDs would be lit. Starting with both LEDs lit I blocked
both holes in the encoder disk and both LEDs were then dark, then I blocked
just the upper hole and the Bit #0 LED was lit as it should be, then I
blocked the lower hole both LEDs were dark but the Bit #1 LED should
have been lit. This is the same situation as if the wheel were in the
Clear position which only has one hole for the Bit #1. So it appears
that Bit #1 is only sensed if Bit #0 is sensed at the same time.
PICS PROBLEM: Wed Jan 5 22:54:22 GMT 2000
With the wheel in the PICS position (both Bits #0 and #1 sensed) if I cover
the Bit #1 hole then both LEDs remain lit, but if I cover both holes then
uncover the Bit #0 hole then the Bit #0 LED is the only one lit.
0   CHIP   End Bias
Wed Jan 5 23:04:22 GMT 2000   CHIP   Water
Wed Jan 5 23:05:11 GMT 2000   CHIP   End Water
PICS PROBLEM: Wed Jan 5 23:16:36 GMT 2000
Earlier I tried using the PICS Objective wheel STATUS board in place of the
occulting wheel STATUS board, and I thought the problem of finding the
Clear position was still there, but now I've swapped the board again and
so far have no trouble getting into the Clear position. Maybe I was seeing
another problem related to misalignment of the Home switch back when I was
adjusting that. Now that the Clear position can be reached I can see that
the Home switch is being activated almost simultaneously with the Bit #1
sensor, this is too early for comfort, perhaps it was activating before
the Bit #1 sensor for the Clear position and that was the whole problem.
The Home activation is a little early for the PICS position too but good
for all the other positions. Anyway, it will have to be adjusted, I'll do
that next.
PICS PROBLEM: Wed Jan 5 23:37:38 GMT 2000
After moving the gear on the Home shaft by one cog the timing of the Home
and Bit #1 LEDs still seem simultaneous. I moved this shaft this morning
from a position that seemed to be too far in the other direction but I
think it was only 1 cog away from where I am now. Will try rotating the
Home actuator on the shaft to see what happens.
Thu Jan 6 00:03:01 GMT 2000   CHIP   Bias
Thu Jan 6 00:04:06 GMT 2000   CHIP   End Bias
Thu Jan 6 00:04:20 GMT 2000   CHIP   Water
Thu Jan 6 00:05:08 GMT 2000   CHIP   End Water
PICS PROBLEM: Thu Jan 6 00:23:40 GMT 2000
OK, everything is back together and working properly, I'll wait until
tomorrow to try Patrol. Once I got reliable LED readings and was able to point
to all positions I could see what was happening. It turns out that the
fiducial marks on the Home position shaft and cam are in a bad place, they
will work if you do a lot of fine tuning with the limit switch and Geneva

drive but that isn't necessary. geneva drives have a huge amount of
rotation that can be used for a home indication but this home position was
right at the beginning of that huge sweet spot, making things very
difficult. So I realigned the cam and adjusted the limit switch, now
there shouldn't be any problem and thinga will be MUCH easier to adjust
if this happens again.
 2000   CHIP   CHIP End Patrol
PICS COMMENT: Thu Jan 6 00:32:42 GMT 2000
I couldn't wait, I started Patrol to get at least a little data for today.
Everything looked fine, back in business again.
hu Jan 6 00:37:38 GMT 2000   PICS   End Patrol
COMMENT: Thu Jan 6 00:49:20 GMT 2000
I got the NOAA camera program to startup, by going with default login and
clicking OK at the error message, it looks normal anyway.
COMMENT: Thu Jan 6 00:54:25 GMT 2000

TAPES:
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MKIV: 00005
CHIP: C01004
PICS: P01628
LOWL: L00657 in drive #1

Thu Jan 6 00:55:26 GMT 2000
        MkIV

00_02.rawmk4   18_26.rawmk4   20_02.rawmk4   21_28.rawmk4   22_54.rawmk4
00_05.rawmk4   18_29.rawmk4   20_05.rawmk4   21_31.rawmk4   22_57.rawmk4
00_08.rawmk4   18_32.rawmk4   20_08.rawmk4   21_34.rawmk4   23_00.rawmk4
00_11.rawmk4   18_35.rawmk4   20_11.rawmk4   21_37.rawmk4   23_03.rawmk4
00_14.rawmk4   18_38.rawmk4   20_14.rawmk4   21_40.rawmk4   23_06.rawmk4
00_17.rawmk4   18_41.rawmk4   20_17.rawmk4   21_43.rawmk4   23_09.rawmk4
00_20.rawmk4   18_44.rawmk4   20_20.rawmk4   21_46.rawmk4   23_12.rawmk4
00_23.rawmk4   18_50.rawmk4   20_23.rawmk4   21_49.rawmk4   23_14.rawmk4
00_26.rawmk4   18_56.rawmk4   20_26.rawmk4   21_51.rawmk4   23_17.rawmk4
00_29.rawmk4   19_02.rawmk4   20_29.rawmk4   21_54.rawmk4   23_20.rawmk4
17_29.rawmk4   19_06.rawmk4   20_32.rawmk4   21_57.rawmk4   23_23.rawmk4
17_32.rawmk4   19_09.rawmk4   20_34.rawmk4   22_00.rawmk4   23_26.rawmk4
17_35.rawmk4   19_12.rawmk4   20_37.rawmk4   22_03.rawmk4   23_29.rawmk4
17_38.rawmk4   19_14.rawmk4   20_40.rawmk4   22_06.rawmk4   23_32.rawmk4
17_41.rawmk4   19_17.rawmk4   20_43.rawmk4   22_09.rawmk4   23_35.rawmk4
17_44.rawmk4   19_20.rawmk4   20_46.rawmk4   22_12.rawmk4   23_38.rawmk4
17_47.rawmk4   19_23.rawmk4   20_49.rawmk4   22_15.rawmk4   23_41.rawmk4
17_50.rawmk4   19_26.rawmk4   20_52.rawmk4   22_18.rawmk4   23_44.rawmk4
17_53.rawmk4   19_29.rawmk4   20_55.rawmk4   22_21.rawmk4   23_47.rawmk4
17_56.rawmk4   19_32.rawmk4   20_58.rawmk4   22_24.rawmk4   23_50.rawmk4
17_59.rawmk4   19_35.rawmk4   21_01.rawmk4   22_27.rawmk4   23_53.rawmk4
18_02.rawmk4   19_38.rawmk4   21_04.rawmk4   22_30.rawmk4   23_56.rawmk4

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18_05.rawmk4    19_41.rawmk4    21_07.rawmk4    22_33.rawmk4    23_59.rawmk4
18_08.rawmk4    19_44.rawmk4    21_10.rawmk4    22_36.rawmk4    c18_47.rawmk4
18_11.rawmk4    19_47.rawmk4    21_13.rawmk4    22_39.rawmk4    c18_53.rawmk4
18_14.rawmk4    19_50.rawmk4    21_16.rawmk4    22_42.rawmk4    c18_59.rawmk4
18_17.rawmk4    19_53.rawmk4    21_19.rawmk4    22_45.rawmk4
18_20.rawmk4    19_56.rawmk4    21_22.rawmk4    22_48.rawmk4
18_23.rawmk4    19_59.rawmk4    21_25.rawmk4    22_51.rawmk4
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