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Mauna Loa Solar Observatory Observer's Log  
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Mon Jun 29 16:53:12 GMT 2020

Year: 20 Doy: 181

Observer: mcotter

WEATHER COMMENT: mcotter: Mon Jun 29 16:53:22 GMT 2020

Temp: 46.5f, Humidity: 18%, Pressure: 28.733in, Wind: 9mph from 170degs, Skies: Clear.

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

GENERAL COMMENT BY mcotter: Mon Jun 29 17:40:56 GMT 2020

PM Blew off Kcor 01

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

GENERAL COMMENT BY mcotter: Mon Jun 29 17:41:05 GMT 2020

Opened windows upstairs

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

GENERAL COMMENT BY mcotter: Mon Jun 29 17:41:15 GMT 2020

PM Blew off Kcor Field Lens

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

Mon Jun 29 17:48:40 GMT 2020 Kcor Focus/alignment program exited

GENERAL COMMENT BY mcotter: Mon Jun 29 17:53:24 GMT 2020

Lots of dust visable in display. Inversion layer clearly seen on horizon.

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

GENERAL COMMENT BY mcotter: Mon Jun 29 17:56:42 GMT 2020

Guider issues, both Copley amplifiers indicated under voltage faults for Dec and RA.

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

Mon Jun 29 18:25:41 GMT 2020 KCOR Start Synoptic Patrol

Mon Jun 29 20:29:09 GMT 2020 KCOR End Patrol

KCOR COMMENT BY berkey: Mon Jun 29 20:31:55 GMT 2020

Reverted the Kcor lookup tables to the zero shift 20190307 tables.

NOTE: Actually the zero shift LUTs were not applied until early on June 30. All images this day have a 2-pixel shift LUT.

(jb)

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

Mon Jun 29 20:32:30 GMT 2020 KCOR Start Synoptic Patrol

Mon Jun 29 21:16:03 GMT 2020 KCOR End Patrol

Mon Jun 29 21:16:04 GMT 2020 KCOR Start Calibration script: c:\kcor\mlso-calibration22deg-20171025.ini

Mon Jun 29 21:31:18 GMT 2020 KCOR End Calibration Script

Mon Jun 29 21:31:34 GMT 2020 KCOR Start Synoptic Patrol

Mon Jun 29 21:31:35 GMT 2020 KCOR Start Synoptic Patrol

GPS COMMENT by MLSO: Mon Jun 29 21:45:08 GMT 2020

Successfully logged in to system

Good disk mount

GPS software running

Last 5 GPS data files are:

/mnt/usb/dataoutiq\_2020\_176\_2145.bin 1420685752

/mnt/usb/dataoutiq\_2020\_177\_2149.bin 2147483647

/mnt/usb/dataoutiq\_2020\_178\_2149.bin 2147483647

/mnt/usb/dataoutiq\_2020\_179\_2149.bin 2147483647

/mnt/usb/dataoutiq\_2020\_180\_2149.bin 2147483647

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

Mon Jun 29 21:52:26 GMT 2020 KCOR End Patrol

Mon Jun 29 22:12:02 GMT 2020 KCOR Start Synoptic Patrol

Mon Jun 29 22:40:08 GMT 2020 KCOR End Patrol

GENERAL OBSERVATORY COMMENT BY berkey: Tue Jun 30 02:06:51 GMT 2020

Investigating the SGS Copley under-voltage amplifier problem.

Found the Copley data sheet says the adp-055-018 accepts and input voltage of 20-50V and will throw and under voltage fault if the input drops below 20V.

The SOLA-HD SDN 20-24-100C has an rated output range of 24-28V. With the one installed in SGS adjusted to give 24.4V under normal load. So it seems like we must be seeing some sort of voltage transient that drops the 20-24-100C output voltage down below 20V; potentially this could be caused by an extra draw from one of the motors during startup or ?

As a test, we have bumped the 20-24-100C output to its maximum voltage, which is 29V.

We may also have a ground issue; as we may have observed a slight dimming of the 20-24-100C status LEDs when the vacuum was turned on in the dome. This dimming was very quick and not repeatable so it may have just been a mind trick. But if the dimming was real it could suggest some motor noise feeding back into the SGS.

We are currently running on the spare 20-24-100C. The original swapped out on Feb 24, 2020, but it should still be in working order per the Feb 24 log:

While doing the swap; we ran into an initial problem where the amplifiers would not turn on. Initially I thought there was an issue with the SDP 20-24-100C since it had no output. After swapping it out with a spare it was realized that the problem was related to power input into the SDP. Further digging shows, the code expected to talk to the SSR that turns on and off the SDP over COM5; but windows assigned the SSR COM4. Changing the com pots around allows us to power up the amplifiers; and start guiding.

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

GENERAL COMMENT BY mcotter: Tue Jun 30 02:31:50 GMT 2020

Cleaned and lubricated dome lower shutter door gear mechanism and take up cable. While working on dome shutter mechanism small clumps of fiber glass material around several of the socket head cap screws that hold the internal dome panels to the dome. the clumps of material are small and the fibers can possibly shake off with vibration and become airborne. I suspect the fiberglass particles may have been produced when the dome was originally assembled. Inspected dome drive rack and pinion mechanism. Entire rack is dry and no grease could be seen on pinion. Lubricating grease is needed to entire rack surface to improve performance, reliability and lifetime of mechanism. Preliminary inspection was done of the pier (concrete form and metal).

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

ONSITE STAFF: berkey, mcotter