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Mauna Loa Solar Observatory Observer's Log  
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Wed Nov 3 17:31:10 GMT 2021

Year: 21 Doy: 307

Observer: mlso

GENERAL COMMENT BY mcotter: Wed Nov 03 17:32:02 GMT 2021

Opened windows upstairs

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

GENERAL COMMENT BY mcotter: Wed Nov 03 17:32:21 GMT 2021

PM Blew off UCOMP 01

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

GENERAL COMMENT BY mcotter: Wed Nov 03 17:32:48 GMT 2021

PM Blew off Kcor 01

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

Wed Nov 03 17:33:48 GMT 2021 Kcor Focus/alignment program exited

Wed Nov 03 17:34:23 GMT 2021 Running UCOMP Cookbook dark\_80ms\_2beam\_16sums\_BOTH.cbk line 0

Wed Nov 03 17:35:40 GMT 2021 Running UCOMP Cookbook 637\_Scan.cbk line 0

Wed Nov 03 17:37:48 GMT 2021 Running UCOMP Cookbook 656\_Scan.cbk line 0

Wed Nov 03 17:39:38 GMT 2021 Running UCOMP Cookbook 789\_Scan.cbk line 0

Wed Nov 03 17:41:27 GMT 2021 Running UCOMP Cookbook 1074\_Scan.cbk line 0

Wed Nov 03 17:43:17 GMT 2021 Running UCOMP Cookbook 1079\_Scan.cbk line 0

Wed Nov 03 17:45:06 GMT 2021 Running UCOMP Cookbook all\_wavelength\_coronal\_flat.cbk line 0

Wed Nov 03 18:03:13 GMT 2021 Running UCOMP Cookbook all\_wavelength\_coronal.cbk line 0

\*\*KCOR PROBLEM COMMENT BY mcotter\*\* : Wed Nov 03 18:25:10 GMT 2021

PM Blew off Kcor 01

When the Kcor NRGF image came up an anomaly in the image was quite prevalent. When looking at the image there appeared what looked like an "Infinity" symbol, or an elongated number "8" shaped darkish blue, stretching from north to south. It almost had the appearance of a polarization problem, but generally that type of problem will look to be in a "X" shape. Ben and I put the polarization filter in the path and it did not correct for the anomaly. Ben suspected something was on the Kcor 01 Lens, or possibly the Kcor Field Lens. We went to the dome and inspected the Kcor 01 Lens by looking down into the front of the telescope with the Sun behind us. We were able to see several dust particles, but nothing large like a hair or fiber which could have accounted for the large anomaly visible in the Kcor NRGF image. We blew off the Kcor 01 Lens multiple times to ensure that anything that could possibly be blown off was indeed removed. There are still several particles of dust still present, but we were able to correct for the anomaly that was observed in the Kcor NRGF image.

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

GENERAL COMMENT BY mcotter: Wed Nov 03 18:40:32 GMT 2021

PM Blew off Kcor Field Lens.

As mentioned earlier in the log, we observed an anomaly in the Kcor NRGF image that had the appearance of an "Infinity" symbol or an elongated number "8", stretching from north to south and being a darkish blue in appearance. We were able to resolve the Kcor NRGF image anomaly by blowing off the Kcor 01 Lens several times, but for good measure we inspected the Kcor Field Lens at the same time. Dust was visible on the Kcor Field Lens, as well as there being some dust particle observed by Ben floating around in the lens chamber. Ben also noticed that a SHCS that normally is in place in the Tube was missing, possibly allowing unwanted air and dust to enter the Tube chamber. A new SHCS was inserted into the hole and covered with foil tape to ensure it stays in place. Ben blew out the Kcor Field Lens chamber several times and removed as much of the dust that was prevalent in the chamber as was possible. Ben also noted that the free floating dust that was in the Kcor Field Lens chamber was continuously drawn out of the chamber by the HEPA vacuum return. The Kcor NRGF image now appears normal.

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

KCOR COMMENT BY mcotter: Wed Nov 03 18:43:00 GMT 2021

Kcor instrument is now running and the images look good.

SGS Offsets: X(RA): -5, Y(Dec): 5.

Polarization checked good: Mid, Bright, Dark, Mid.

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

UCOMP COMMENT BY mcotter: Wed Nov 03 18:43:36 GMT 2021

Ucomp instrument now running and the image looks good.

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

GENERAL OBSERVATORY COMMENT BY berkey: Wed Nov 3 18:59:17 GMT 2021

Accelometer data logger temporarily installed on the south face of the spar.

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

Wed Nov 03 19:14:33 GMT 2021 Running UCOMP Cookbook dark\_80ms\_2beam\_16sums\_BOTH.cbk line 0

Wed Nov 03 19:15:50 GMT 2021 Running UCOMP Cookbook 637\_Pol\_Calibrate.cbk line 0

Wed Nov 03 19:20:12 GMT 2021 Running UCOMP Cookbook 656\_Pol\_Calibrate.cbk line 0

Wed Nov 03 19:24:17 GMT 2021 Running UCOMP Cookbook 789\_Pol\_Calibrate.cbk line 0

Wed Nov 03 19:28:20 GMT 2021 Running UCOMP Cookbook 1074\_Pol\_Calibrate.cbk line 0

Wed Nov 03 19:32:24 GMT 2021 Running UCOMP Cookbook 1079\_Pol\_Calibrate.cbk line 0

Wed Nov 03 19:36:28 GMT 2021 Running UCOMP Cookbook waves\_1074\_1hour.cbk line 0

Wed Nov 03 20:14:17 GMT 2021 KCOR Start Calibration script: c:\kcor\mlso-calibration22deg-20171025.ini

Wed Nov 03 20:29:34 GMT 2021 KCOR End Calibration Script

Wed Nov 03 20:46:04 GMT 2021 Running UCOMP Cookbook dark\_200\_1sums\_80ms.cbk line 0

Wed Nov 03 20:51:04 GMT 2021 Running UCOMP Cookbook all\_wavelength\_coronal\_flat.cbk line 0

Wed Nov 03 21:09:29 GMT 2021 Running UCOMP Cookbook all\_wavelength\_coronal.cbk line 0

\*\*\*\*Possible CME in Progress mcotter\*\*\*\* : Wed Nov 03 21:34:53 GMT 2021

Possible CME seen launching near PA:240 at time 21:06:02 UT.

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

\*\*\*\*Possible CME in Progress mcotter\*\*\*\* : Wed Nov 03 22:13:32 GMT 2021

Possible CME seen launching near PA:130 deg at time 21:58:07 UT.

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

Wed Nov 03 22:20:48 GMT 2021 Running UCOMP Cookbook all\_wavelength\_coronal.cbk line 0

Wed Nov 03 23:31:40 GMT 2021 Running UCOMP Cookbook dark\_80ms\_2beam\_16sums\_BOTH.cbk line 0

Wed Nov 03 23:32:57 GMT 2021 Running UCOMP Cookbook 1074\_Pol\_Calibrate.cbk line 0

Wed Nov 03 23:37:19 GMT 2021 Running UCOMP Cookbook all\_wavelength\_coronal\_flat.cbk line 0

Wed Nov 03 23:55:25 GMT 2021 Running UCOMP Cookbook all\_wavelength\_coronal.cbk line 0

Thu Nov 04 00:40:17 GMT 2021 Running UCOMP Cookbook all\_wavelength\_coronal.cbk line 23

GENERAL COMMENT BY mcotter: Thu Nov 04 01:03:48 GMT 2021

Dome shutter obscured kcor for a few frames. Back to proper tracking.

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

Thu Nov 04 01:07:29 GMT 2021 Running UCOMP Cookbook all\_wavelength\_coronal.cbk line 0

Thu Nov 04 01:56:46 GMT 2021 Running UCOMP Cookbook all\_wavelength\_coronal.cbk line 25

Thu Nov 04 02:20:00 GMT 2021 Running UCOMP Cookbook all\_wavelength\_coronal\_flat.cbk line 0

Thu Nov 04 02:37:22 GMT 2021 UCOMP Paused for clouds

Thu Nov 04 02:47:22 GMT 2021 UCOMP Restarted from pause

Thu Nov 04 02:48:20 GMT 2021 Running UCOMP Cookbook all\_wavelength\_coronal.cbk line 0

GENERAL COMMENT BY mcotter: Thu Nov 04 03:12:50 GMT 2021

Spar Harmonic troubleshooting.

Ben inserted his phone into the RA Mechanism chamber while in "Record Audio" mode and made recordings of the spar movement. We paused both Kcor and Ucomp and then recorded spar movements while in "Open Loop" and "Closed Loop" spar states. Additionally, we put the proportional gain of the amplifier output to the Dec at zero and then recorded spar movements with RA movement only.

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

GONG COMMENT BY mcotter: Thu Nov 04 03:26:11 GMT 2021

The GONG trailer had gotten a little warm today so I opened the door to the trailer. While doing a walk through of the GONG trailer I noticed that the duct vent that attaches to the fresh air intake had separated from the wall and was slightly skewed, essentially causing the air intake to be of the ambient air in the trailer and not fresh air from outside. I reattached the duct vent to the fresh air intake opening. Additionally, I noticed that the emergency light was slightly illuminated. This light should only illuminate if it is separated from its charging source or if there is a loss of electricity. I located the small plugged in transformer that supplies power to the emergency light and it was extremely hot; too hot to touch and maintain contact with the unit. I unplugged the transformer and left it unplugged next to the desk. I will send an email to the GONG folks and advise them of this condition. I took a photo of the transformer so that they can order a new one if they should decide to.

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

GENERAL COMMENT BY mcotter: Thu Nov 04 03:36:40 GMT 2021

Installed new tack mat in the dome vestibule.

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

GENERAL COMMENT BY mcotter: Thu Nov 04 03:40:46 GMT 2021

Very good day of observing and taking data. The sky was clear all day with only a gradual increase in aerosols in the late afternoon. The sky eventually became a little too bright to observe. Kcor instrument picked up two CME's; one rather large in the southwestern area of the Sun and a smaller but well defined one in the southeastern area.

Good Day!

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

ONSITE STAFF: berkey, mcotter