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Mauna Loa Solar Observatory Observer's Log  
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Sat Mar 26 17:09:55 GMT 2022

Year: 22 Doy: 085

Observer: mlso

WEATHER COMMENT: mcotter: Sat Mar 26 17:18:45 GMT 2022

Temp: 38.0f, Humidity: 27%, Pressure: 28.778in, Wind: 4mph from 137degs, Skies:Overcast  
skies with wet roads to approximately the 8500' elevation. Somewhat hazy skies with an  
inversion layer visible on the horizon above Maunakea. Cold morning with light steady  
wind from the north.

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

GENERAL COMMENT BY mcotter: Sat Mar 26 17:18:51 GMT 2022

Opened windows upstairs

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

GENERAL COMMENT BY mcotter: Sat Mar 26 17:18:58 GMT 2022

PM Blew off Kcor 01

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

GENERAL COMMENT BY mcotter: Sat Mar 26 17:19:03 GMT 2022

PM Blew off UCOMP 01

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

GENERAL COMMENT BY mcotter: Sat Mar 26 17:22:45 GMT 2022

The sky is much too bright at this time to run the instruments.

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

Sat Mar 26 17:43:13 GMT 2022 Kcor Focus/alignment program exited

Sat Mar 26 17:56:05 GMT 2022 Running UCOMP Cookbook all\_wavelength\_coronal\_flat.cbk line 0

\*\*UCOMP PROBLEM COMMENT BY mcotter\*\* : Sat Mar 26 18:04:57 GMT 2022

I started the Ucomp program as I normally do. The daily menu button was selected and I waited for the GUI that contains the daily menu to come up. The program never went in to the daily menu selection mode. On the bottom of the Ucomp-Controller GUI the "Filter wheel" LED never illuminated. I checked the temperatures displayed in the "Cropico Temp" display in the upper left of the GUI and all the temps were in the 35 deg range except the top "T Rack" temp which displayed in the 19 range. Looking at the Cropico controller over my shoulder, on the right side of the rack the display read 30.8 deg. I tried exiting the program and restarting the program but the program hung up again when I selected the daily menu button. I restarted the computer and tried running the program again. This time the computer came up, and it appears to be running normally, but it does seem a little slow. The temps in the Cropico Temps fields in the upper left were initially reading all approximately 34 deg except for the top "T RACK" which read 24 deg. When I engaged the daily menu program it came up properly and I select the "Daily Menu" file. The program appears to be running normally but the bottom "ILX" and "01" LED's are not illuminated. Also the T RACK temp read approximately 18 deg in the Cropico Temp fields. Everything appears to be running normally but the clouds button is now engaged due to bright skies.

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

Sat Mar 26 18:25:49 GMT 2022 Kcor Focus/alignment program exited

GENERAL COMMENT BY mcotter: Sat Mar 26 18:29:50 GMT 2022

The sky continues to be too bright to observe.

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

Sat Mar 26 19:21:17 GMT 2022 Kcor Focus/alignment program exited

KCOR COMMENT BY mcotter: Sat Mar 26 19:26:24 GMT 2022

I ran the Kcor focus routine, though the sky appears really bright and got a well shaped parabola on the first try. I started the Kcor synoptic program and though the images are bright they look acceptable and a coronal ring can be easily discerned.

Kcor now running.

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

Sat Mar 26 19:32:09 GMT 2022 Running UCOMP Cookbook all\_wavelength\_coronal\_flat.cbk line 0

UCOMP COMMENT BY mcotter: Sat Mar 26 19:41:24 GMT 2022

I had the Ucomp instrument running but in a "CLOUDS" paused state. I un-paused the Ucomp program and engaged the Center Occulter button but so far nothing has happened. I am going to attempt to restart the Ucomp Controller program again and see if it starts normally. When I restarted the Ucomp Controller program this time I did it by first restarting the "Labview" program first, then starting the Ucomp Controller program from the Labview GUI. The Ucomp Controller program has now started up normally with no apparent problems.

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

GENERAL COMMENT BY mcotter: Sat Mar 26 19:50:56 GMT 2022

PM Blew off Kcor Field Lens.

The are some particles appearant on the Kcor NRGF image. The look to be in focus and are at the approxomate loactions:

- 1) A spot at approx 20 deg approx 1" from edge of FOV.
- 2) A bright dot that looks like a pixel at approx 100 deg approx half inch from occulter.
- 3) A small fiber at approx 120 deg approx quarter inch from edge of FOV.
- 4) Two fibers that appear to be the same particle at approx 120 deg and 170 deg.both approx 1" from edge of FOV.

Blowing off the Kcor Field Lens appears to have removed the #1 particle but the particles # 2, 3 & 4 have not moved.

I will attempt to blow off the Kcor Field Lens again and the Kcor 01 and see if this works.

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

GENERAL COMMENT BY mcotter: Sat Mar 26 20:03:35 GMT 2022

Blew off Kcor 01 and the Kcor Field Lens again to see if the particles I see in the Kcor NRGF image may be removed. So far I have not observed any positive effect, but I will give it a few minutes to see if the foreign particles persist.

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

\*\*KCor PROBLEM COMMENT BY mcotter\*\* : Sat Mar 26 20:26:39 GMT 2022

I waited several minutes to see if blowing the Kcor 01 and the Kcor Field Lens again made any positive difference with the particle observed in the Kcor NRGF image, but no apparent improvement was observed.

I removed the Kcor detector box cover and tried blowing the lenses and detectors surfaces while the instrument is running, as there appears to be activity in the Sun's corona.

I will wait and see if this has any positive effect on the particles observed.

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

Sat Mar 26 21:21:36 GMT 2022 KCOR Start Calibration script: c:\kcor\mlso-calibration22deg-20171025.ini

Sat Mar 26 21:36:47 GMT 2022 KCOR End Calibration Script

Sat Mar 26 22:17:02 GMT 2022 Running UCOMP Cookbook all\_wavelength\_coronal\_flat.cbk line 0

UCOMP COMMENT BY mlso: Sat Mar 26 22:23:51 GMT 2022

UCOMP was hung for most of the morning while waiting on the filter wheel to return. Marc was able to follow the cable train up to the filter wheel reseating the cables and it looked like we had a poor connection either at the back of the bulkhead or at the filter wheel connection itself. After getting all the cables reseated we found we were able to move the wheel with the manufacturer's software but the labview code was hung up.

It looks like we had a few hundred (maybe more) queued move commands that were waiting to be processed all morning. A bug fix was applied to the observing code to prevent this queuing of extra moves while a filter wheel move is pending.

We are now observing.

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

Sat Mar 26 22:32:18 GMT 2022 Running UCOMP Cookbook all\_wavelength\_coronal.cbk line 0

Sat Mar 26 23:00:15 GMT 2022 Running UCOMP Cookbook all\_wavelength\_coronal.cbk line 0

WEATHER COMMENT: mcotter: Sat Mar 26 23:18:53 GMT 2022

Some Orthographic clouds have moved into the viewing area and the instruments were paused for a short while. Additionally aerosols have increased.

The clouds that were in the viewing area have broken up and the viewing area, though bright, shows blue sky.

Instruments are back on sky.

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

\*\*\*\*Possible CME in Progress mcotter\*\*\*\* : Sat Mar 26 23:20:44 GMT 2022

Observers report with medium confidence a CME seeing launching near PA 120 deg, with a minimum width of 20 deg, at UT time 19:24:09.

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

Sat Mar 26 23:21:15 GMT 2022 Running UCOMP Cookbook all\_wavelength\_coronal.cbk line 14

\*\*\*\*Possible CME in Progress mcotter\*\*\*\* : Sat Mar 26 23:25:32 GMT 2022

Observers report with low confidence a CME seeing launching near PA 320 deg, with a min

imum width of 10 deg, at UT time 20:46:04.

This event is difficult to see and was detected using Kcor NRGF & Kcor Diff images.

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

Sat Mar 26 23:29:06 GMT 2022 Running UCOMP Cookbook all\_wavelength\_coronal.cbk line 0

Sat Mar 26 23:35:34 GMT 2022 UCOMP Paused for clouds

WEATHER COMMENT: mcotter: Sat Mar 26 23:38:29 GMT 2022

Clouds have blown into the viewing area.

Both Instrument have been paused due to sky conditions.

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

WEATHER COMMENT: mcotter: Sat Mar 26 23:56:01 GMT 2022

Clouds above the observatory and in the viewing area are getting a bit thick and gray.

The dome shutter doors and windows have been closed in the event of precipitation.

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

WEATHER COMMENT: mcotter: Sun Mar 27 02:08:02 GMT 2022

Overcast skies persist with a light mist.

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

GENERAL COMMENT BY mcotter: Sun Mar 27 02:14:18 GMT 2022

The day started out relatively clear but the skies were quite bright. After approximately an hour or so the skies were good enough for me to try the Kcor focus routine and obtain a decent parabola and begin running the instrument. Shortly after Ucomp started the controller program lost contact with the filter wheel and the instrument got hung up.

I was in contact with Ben for other reasons, so he helped me trouble shoot the problem. The cable connector going to the filter mechanism was reseated and the issue went away. Also there was an issue with the weather getting updated by the Kodiak computer, but stopping and then restarting the computer seemed to have solved the problem.

A good morning for taking data, though it was a bit bright.

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

ONSITE STAFF: mcotter