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Mauna Loa Solar Observatory Observer's Log  
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Sat Sep 4 16:54:36 GMT 2021

Year: 21 Doy: 247

Observer: mlso

Sat Sep 04 17:06:16 GMT 2021 Running UCOMP Cookbook dark\_80ms\_2beam\_16sums\_BOTH.ckb line 0

Sat Sep 04 17:07:42 GMT 2021 Running UCOMP Cookbook 530\_Scan.ckb line 0

WEATHER COMMENT: mcotter: Sat Sep 04 17:08:09 GMT 2021

Temp: 50.4f, Humidity: 5%, Pressure: 28.565in, Wind: 4mph from 135degs, Skies: Clear skies overhead. Inversion layer visible on the horizon at or above Haleakala. Heavy fog in the Saddle Valley with rain, fog and mist to approximately 9,000' level.

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

GENERAL COMMENT BY mcotter: Sat Sep 04 17:08:33 GMT 2021

Opened windows upstairs

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

GENERAL COMMENT BY mcotter: Sat Sep 04 17:08:41 GMT 2021

PM Blew off Kcor O1

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

GENERAL COMMENT BY mcotter: Sat Sep 04 17:08:47 GMT 2021

PM Blew off UCOMP O1

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

Sat Sep 04 17:09:06 GMT 2021 Kcor Focus/alignment program exited

GENERAL COMMENT BY mcotter: Sat Sep 04 17:09:46 GMT 2021

Ucomp instrument now running.

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

KCOR COMMENT BY mcotter: Sat Sep 04 17:10:06 GMT 2021

Kcor instrument now running.

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

Sat Sep 04 17:11:05 GMT 2021 Running UCOMP Cookbook 637\_Scan.ckb line 0

Sat Sep 04 17:14:05 GMT 2021 Running UCOMP Cookbook 656\_Scan.ckb line 0

KCOR COMMENT BY mcotter: Sat Sep 04 17:16:13 GMT 2021

Kcor polarization checked good; Mis, Bright, Dark, Mid.

SGS offsets: X(RA): -130, Y(Dec): 98.

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

Sat Sep 04 17:17:02 GMT 2021 Running UCOMP Cookbook 691\_Scan.ckb line 0

Sat Sep 04 17:20:00 GMT 2021 Running UCOMP Cookbook 706\_Scan.ckb line 0

Sat Sep 04 17:22:57 GMT 2021 Running UCOMP Cookbook 789\_Scan.ckb line 0

Sat Sep 04 17:25:55 GMT 2021 Running UCOMP Cookbook 1074\_Scan.ckb line 0

Sat Sep 04 17:28:54 GMT 2021 Running UCOMP Cookbook 1079\_Scan.ckb line 0

Sat Sep 04 17:31:51 GMT 2021 Running UCOMP Cookbook 1083\_Scan.ckb line 0

Sat Sep 04 17:34:48 GMT 2021 Running UCOMP Cookbook all\_coronal\_7\_flats.ckb line 0

Sat Sep 04 17:58:16 GMT 2021 Running UCOMP Cookbook all\_coronal\_7.ckb line 0

GENERAL COMMENT BY mcotter: Sat Sep 04 18:11:33 GMT 2021

Last week Ben showed me SGS RA & Dec Target values that appear on the bottom of the Kcor Stand Alone Image Acquisition GUI . I could not use the values the last time I was observing as the weather was poor and I did not do any observing on that day. Today I started the day by aligning the spar using the values listed on the Kcor GUI and then checking the Kcor images to see how closely they align. So far the values listed are close. Currently the values listed on the Kcor GUI are RA: -

132, Dec: 82. The values I have inputted on the spar offsets are the same and the image looks pretty good; a well defined symmetrical sphere around the occulter is observed. The values on the Kcor GUI do bounce around so the values are constantly updating but so far they are close. I will continue to monitor the values and continue to try and match the values as best as I can.

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

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Sat Sep 04 18:21:59 GMT 2021 Running UCOMP Cookbook all_coronal_7.ckb line 0
Sat Sep 04 18:45:25 GMT 2021 Running UCOMP Cookbook dark_80ms_2beam_16sums_BOTH.ckb line 0
Sat Sep 04 18:46:47 GMT 2021 Running UCOMP Cookbook 530_Pol_Calibrate.ckb line 0
Sat Sep 04 18:51:29 GMT 2021 Running UCOMP Cookbook 637_Pol_Calibrate.ckb line 0
Sat Sep 04 18:55:51 GMT 2021 Running UCOMP Cookbook 656_Pol_Calibrate.ckb line 0
Sat Sep 04 19:00:11 GMT 2021 Running UCOMP Cookbook 691_Pol_Calibrate.ckb line 0
Sat Sep 04 19:04:30 GMT 2021 Running UCOMP Cookbook 706_Pol_Calibrate.ckb line 0
Sat Sep 04 19:08:51 GMT 2021 Running UCOMP Cookbook 789_Pol_Calibrate.ckb line 0
Sat Sep 04 19:13:11 GMT 2021 Running UCOMP Cookbook 1074_Pol_Calibrate.ckb line 0
Sat Sep 04 19:17:43 GMT 2021 Running UCOMP Cookbook 1079_Pol_Calibrate.ckb line 0
Sat Sep 04 19:22:02 GMT 2021 Running UCOMP Cookbook 1083_Pol_Calibrate.ckb line 0
Sat Sep 04 19:26:22 GMT 2021 Running UCOMP Cookbook sumtest-1074.ckb line 0
Sat Sep 04 19:31:21 GMT 2021 Running UCOMP Cookbook waves_1074_1hour.ckb line 0
Sat Sep 04 19:39:18 GMT 2021 KCOR Start Calibration script: c:\kcor\mlso-calibration22deg-20171025.ini
Sat Sep 04 19:54:31 GMT 2021 KCOR End Calibration Script
Sat Sep 04 20:35:06 GMT 2021 Running UCOMP Cookbook dark_200_200_1sums_80ms.ckb line 0
Sat Sep 04 20:40:11 GMT 2021 Running UCOMP Cookbook all_coronal_7_flats.ckb line 0
Sat Sep 04 21:03:59 GMT 2021 Running UCOMP Cookbook all_coronal_7.ckb line 0
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WEATHER COMMENT: mcotter: Sat Sep 04 21:14:25 GMT 2021

Temp: 56.3f, Humidity: 19%, Pressure: 28.56in, Wind: 5mph from 5degs, Skies: Beautiful clear skies overhead. Light breeze from the north.

**\*\*NOTE\*\*** Smoke is clearly visible on the leeward (west) side of the Big Island and the Kohala coastline is completely obscured from view. The smoke appears to be making its way up to the Saddle Valley.

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

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Sat Sep 04 21:27:42 GMT 2021 Running UCOMP Cookbook all_coronal_7.ckb line 0
Sat Sep 04 21:51:07 GMT 2021 Running UCOMP Cookbook all_coronal_7.ckb line 0
Sat Sep 04 22:14:32 GMT 2021 Running UCOMP Cookbook all_coronal_7.ckb line 0
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WEATHER COMMENT: mcotter: Sat Sep 04 22:19:31 GMT 2021

Temp: 55.4f, Humidity: 15%, Pressure: 28.559in, Wind: 2mph from 28degs, Skies: Clear skies overhead, but Orthographic are beginning to form to the south are are making their way over the summit of Maunaloa.

**\*\*NOTE\*\*** Smoke is increasing to the west northwest and has made its way into the Saddle Valley, obscuring the Kohala Mountains and parts of the Pohakaloa Army Training Center. The smoke is also gaining in altitude, as it is now visible on the horizon just below the summit of Haleakala.

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

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Sat Sep 04 22:37:57 GMT 2021 Running UCOMP Cookbook dark_80ms_2beam_16sums_BOTH.ckb line 0
Sat Sep 04 22:39:20 GMT 2021 Running UCOMP Cookbook 1074_Pol_Calibrate.ckb line 0
Sat Sep 04 22:44:04 GMT 2021 Running UCOMP Cookbook dark_200_200_1sums_80ms.ckb line 0
Sat Sep 04 22:49:09 GMT 2021 Running UCOMP Cookbook all_coronal_7_flats.ckb line 0
Sat Sep 04 23:12:37 GMT 2021 Running UCOMP Cookbook all_coronal_7.ckb line 0
Sat Sep 04 23:36:30 GMT 2021 Running UCOMP Cookbook all_coronal_7.ckb line 0
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WEATHER COMMENT: mcotter: Sat Sep 04 23:50:56 GMT 2021

Skies overhead continue to remain clear with Orthographic clouds staying to the south. High altitude Cirrus clouds can be seen stretching across the sky from the east to the northwest, with some high altitude Cirrus stretching from the north to

ward the observatory. So far nothing is showing up on the instrument images and the readings look good.

**\*\*NOTE\*\*** Smoke continues to make its way further into the Saddle Valley making its way up to higher altitudes with the very tip top of Haleakala barely visible on the horizon.

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

Sat Sep 04 23:59:54 GMT 2021 Running UCOMP Cookbook all\_coronal\_7.ckb line 0

Sun Sep 05 00:23:19 GMT 2021 Running UCOMP Cookbook all\_coronal\_7.ckb line 0

Sun Sep 05 00:46:44 GMT 2021 Running UCOMP Cookbook dark\_80ms\_2beam\_16sums\_BOTH.ckb line 0

Sun Sep 05 00:48:07 GMT 2021 Running UCOMP Cookbook 1074\_Pol\_Calibrate.ckb line 0

Sun Sep 05 00:52:50 GMT 2021 Running UCOMP Cookbook dark\_200\_200\_1sums\_80ms.ckb line 0

Sun Sep 05 00:57:56 GMT 2021 Running UCOMP Cookbook all\_coronal\_7\_flats.ckb line 0

GENERAL COMMENT BY mcotter: Sun Sep 05 01:15:11 GMT 2021

Sky conditions have become quite bright.

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

KCOR COMMENT BY mcotter: Sun Sep 05 01:17:16 GMT 2021

Kcor has been stopped due to the sky being too bright.

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

Sun Sep 05 01:21:34 GMT 2021 Running UCOMP Cookbook all\_coronal\_7\_flats.ckb line 32

Sun Sep 05 01:24:44 GMT 2021 Running UCOMP Cookbook all\_coronal\_7.ckb line 0

UCoMP COMMENT BY mcotter: Sun Sep 05 01:26:40 GMT 2021

As the sky is currently too bright for Kcor I wanted to check and make sure the sky was not too bright for Ucomp. In the Ucomp images I could see no sign of the occulter disk so I went to the center occulter procedure. When the GUI came up for centering the occulter I still could not see the occulter disk. I offset the occulter a few steps to the left to ensure there was an image coming through and sure enough I could see the crescent light behind the occulter. I moved the occulter back into position and am continuing to run Ucomp.

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

UCoMP COMMENT BY mcotter: Sun Sep 05 01:38:54 GMT 2021

Ucomp now stopped due to bright sky conditions.

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

GENERAL COMMENT BY mcotter: Sun Sep 05 01:39:46 GMT 2021

Emptied trash container in dome and control room.

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

GENERAL COMMENT BY mcotter: Sun Sep 05 01:41:06 GMT 2021

Removed e-waste from observatory and put it in my trunk; to be dropped off for recycling.

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

UCoMP COMMENT BY mcotter: Sun Sep 05 01:57:03 GMT 2021

I checked the camera(s) cooling pump and checked water the flow. The pump did not seem excessively warm and the water seemed to be flowing smoothly. Also the color of the cooling water seems lighter. I suspect that the gray color of the water that Ben and I observed when we installed this replacement pump was due to the water being aerated, giving the impression that the water was discolored.

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

GENERAL COMMENT BY mcotter: Sun Sep 05 02:14:00 GMT 2021

Ben had purchased some tools and other materials for the observatory. I began unpacking the tools and putting them away. I still have to find a permanent place to put some of the items, but for now I put them in the PSPT room against the wall. When I am in again I will continue to organize the PSPT room and make a permanent area where these items can be kept.

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

GENERAL COMMENT BY mcotter: Sun Sep 05 02:14:51 GMT 2021

Good day for taking data. Clear skies through most of the day into the afternoon when the sky became too bright to operate the instruments.

\_\_end\_\_

ONSITE STAFF: mcotter