
Mauna Loa Solar Observatory Observer's Log

Tue Apr 19 16:27:59 GMT 2022

Year: 22 Doy: 109

Observer: mcotter

WEATHER COMMENT: mcotter: Tue Apr 19 16:35:46 GMT 2022

Temp: 36.6f, Humidity: 61%, Pressure: 28.863in, Wind: 6mph from 213degs, Skies: The entire sky is criss crossed with high altitude Cirrus clouds. The air quality is very poor as Kilauea is erupting and pumping thousands of tons of noxious gas into the atmosphere. The inversion layer is a thick blue gray with an indiscernible elevation. The Kohala Mountains are obscured and difficult to make out; Maui and Haleakala cannot be seen. The roads were icy above approximately 9500' elevation. Light wind from the north-north west.

____end____

Tue Apr 19 17:49:56 GMT 2022 Kcor Focus/alignment program exited

GENERAL COMMENT BY mcotter: Tue Apr 19 17:52:48 GMT 2022

Large bands of High altitude Cirrus and Cirrostratus clouds are covering most of the sky. I have opened the dome in the hope that the thin cloud coverage may burn off, but I have just tried the Kcor instrument and the sky is entirely too bright to observe at this time.

____end____

UCoMP COMMENT BY berkey: Tue Apr 19 18:32:09 GMT 2022

Skies clearing, may not be coronal but close.

Setting up for the focus position test on the O1#2.

Some change made to the observing gui and mechanism controller to accommodate swapping between O1s. The Filter-O1 positions are now defined separately for each O1, previously the one value was edited when switching between optics. Now we just have to swap an ID. The O1 ID is now defined in the instrument_config.ini and not the header_static_data.ini

The mechanism controller will now turn orange when we turn off the occulter safety switch. Unless there is an ND or other filter in front of the O1 in the beam the gui should never be orange. And the manual ND safety switch on the engineering panel needs to be turned back off.

____end____

Tue Apr 19 18:36:12 GMT 2022 Running UCOMP Cookbook find_focus.cbk line 0

Tue Apr 19 18:38:19 GMT 2022 Running UCOMP Cookbook find_focus.cbk line 0

Tue Apr 19 18:58:39 GMT 2022 Running UCOMP Cookbook find_focus.cbk line 0

Tue Apr 19 19:17:10 GMT 2022 Kcor Focus/alignment program exited

Tue Apr 19 19:19:31 GMT 2022 Running UCOMP Cookbook find_focus.cbk line 0

Tue Apr 19 19:52:38 GMT 2022 Running UCOMP Cookbook all_wavelength_coronal_flat.cbk line 0

Tue Apr 19 20:01:30 GMT 2022 UCoMP Paused for clouds

Tue Apr 19 20:11:37 GMT 2022 UCoMP Restarted from pause

WEATHER COMMENT: berkey: Tue Apr 19 20:13:28 GMT 2022

The upper level Cirrus has thinned out quite a bit and the sky is now good enough to observe.

____end____

KCOR COMMENT BY berkey: Tue Apr 19 20:14:25 GMT 2022

The Kcor instrument is now observing, though the sky remains a bit bright.

____end____

UCoMP COMMENT BY berkey: Tue Apr 19 20:16:29 GMT 2022

The Ucomp O1#1 has been put back into the instrument and the Ucomp O1#2 is in the clamp of the lens cleaning station.

____end____

Tue Apr 19 20:17:51 GMT 2022 Running UCOMP Cookbook all_wavelength_coronal.cbk line 0

UCoMP COMMENT BY berkey: Tue Apr 19 20:18:34 GMT 2022

The Ucomp configuration files have been updated to reflect the instrument lens change to Ucomp O1#1.

The Ucomp instrument is now observing, though the sky remains a bit bright.

____end____

WEATHER COMMENT: berkey: Tue Apr 19 20:19:47 GMT 2022

The upper level Cirrus continues to dissipate and the sky conditions are markedly improved.

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Tue Apr 19 20:50:03 GMT 2022 Running UCOMP Cookbook all_wavelength_coronal_flat.cbk line 0

Tue Apr 19 20:50:10 GMT 2022 UCOMP Paused for clouds

Tue Apr 19 20:50:18 GMT 2022 UCOMP Restarted from pause

****Possible CME in Progress berkey**** : Tue Apr 19 20:51:10 GMT 2022

Observers report with High confidence a CME seeing launching near PA 155 deg, with a minimum width of 30 deg, at UT time 19:56:11.

This event was already in progress at start the of observing.

___end___

Tue Apr 19 21:07:02 GMT 2022 Running UCOMP Cookbook all_wavelength_coronal_flat.cbk line 0

****Possible CME in Progress berkey**** : Tue Apr 19 21:07:30 GMT 2022

Observers report with High confidence a CME seeing launching near PA240 deg, with a minimum width of 50 deg, at UT time 20:46:00.

This appears to be a fast moving CME and is still in the early stages of prominence.

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Tue Apr 19 21:09:09 GMT 2022 Running UCOMP Cookbook all_wavelength_coronal_flat.cbk line 2

UCOMP PROBLEM COMMENT BY berkey : Tue Apr 19 21:13:46 GMT 2022

UCOMP GUI went red in the middle of observing and stopped taking data.

Looks like the root cause was the diffuser getting stuck and not responding to inputs either from the mechamis controller gui or the low level mdrive controller.

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Tue Apr 19 21:14:17 GMT 2022 UCOMP Paused for clouds

Tue Apr 19 21:19:43 GMT 2022 UCOMP Restarted from pause

Tue Apr 19 21:28:47 GMT 2022 Running UCOMP Cookbook all_wavelength_coronal.cbk line 0

UCOMP COMMENT BY berkey: Tue Apr 19 21:38:07 GMT 2022

To fix the Diffuser issue. The diffuser (and 01) motor controllers were power cycled and rebooted. The labview code was then restarted; and things appear to be working now.

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Tue Apr 19 21:47:12 GMT 2022 UCOMP Paused for clouds

Tue Apr 19 21:47:49 GMT 2022 UCOMP Restarted from pause

Tue Apr 19 21:57:06 GMT 2022 Running UCOMP Cookbook all_wavelength_coronal.cbk line 0

Tue Apr 19 22:24:43 GMT 2022 Running UCOMP Cookbook all_wavelength_coronal.cbk line 0

Tue Apr 19 22:39:08 GMT 2022 UCOMP Paused for clouds

Tue Apr 19 22:48:29 GMT 2022 UCOMP Restarted from pause

Tue Apr 19 22:49:20 GMT 2022 UCOMP Paused for clouds

Wed Apr 20 00:19:48 GMT 2022 UCOMP Restarted from pause

UCOMP PROBLEM COMMENT BY berkey : Wed Apr 20 00:26:53 GMT 2022

The Ucomp-Controller GUI just turned Red, indication that the instrument is not taking data. I am unsure why the Ucomp instrument has stopped. I tried stopping the controller program using the stop button but after waiting a few minutes the program was still running so I stopped the program using the "Abort" command button. The program stopped and I restarted the Ucomp-Controller. The program appears to have started normally. I engaged the Align Occulter button and the alignment GUI came up immediately, but after waiting several minutes the small GUI for aligning the occulter did not come up and the screen remained black. I tried engaging the "Stop Alignment" button but after many more minutes the "Ucomp Manually Align Occulter" GUI did not close down and nothing happened, except for the X Cut and Y Cut Amplitude graph GUI's appearing to update as normal. After approximately 5 minutes I tried engaging the Stop Alignment button again, but after several minutes again nothing happened. I exited the program using the red "X" in the upper right corner. The GUI disappeared. I exited the Ucomp-Controller program using the File pull down menu. I restarted the Ucomp-Controller program using the Desktop Icon along with the Mech-Controller program. Both programs were restarted with no problem and they appeared to open normally. I engaged the "Load Menu" button and the GUI opened within a minute and the "daily-menu" file was selected. When the Ucomp-Controller GUI came back up I engaged the "Run Cookbook" button and engaged the Center Occulter button. Ben finished his meeting and then he started to troubleshoot the Ucomp-Controller issue. By looking into the "Instrument Status" script Ben was able to determine that for unknown reasons the Diffuser stopped communicating with the Ucomp-Controller program so the program, even after being reset, was unable to proceed with the program cadence. Ben finally went to the back of the Comp rack and manually unplugged the power cable and the two USB cables that control the Diffuser and Ucomp 01. He waited 30 seconds and plugged all the cable back in place and then restarted the Ucomp-Controller program. This time the program came up normally and operated as usual.

___end___

WEATHER COMMENT: berkey: Wed Apr 20 00:31:23 GMT 2022

The sky has become completely overcast with high altitude Cirrus clouds, additionally Orographic clouds have moved in from the south-southwest.

The dome has been closed.

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UCoMP COMMENT BY berkey: Wed Apr 20 02:08:50 GMT 2022

Added some error messages to the ucomp such that if it takes more than a minute to make a mechanism move we will start getting messages in the UCoMP controller instrument status.

The message provides the name of the offending mechanism and repeats every minute to warn that there is an on going issue.

I think this would have helped catch the failed diffuser condition this morning.

We also added some better error checking and handling in the diffuser that should prevent other error from causing issues.

___end___

ONSITE STAFF: berkey, mcotter