
Mauna Loa Solar Observatory Observer's Log

Sat Mar 22 17:21:07 GMT 2025

Year: 25 Doy: 081

Observer: lisapg

Log Type BY Observer: Sat Mar 22 17:31:23 GMT 2025

Temp 39F with wind 7mph from the S-SW. Clear skies above and around us!!

____end____

GENERAL COMMENT BY Observer: Sat Mar 22 17:33:17 GMT 2025

Dome open and currently on Sun, Kcor not quite above the dome yet.

____end____

KCOR COMMENT BY Observer: Sat Mar 22 17:37:38 GMT 2025

Kcor heater at 31C and climbing

____end____

GENERAL COMMENT BY Observer: Sat Mar 22 17:38:22 GMT 2025

Batteries at 64% when we came in with load between 254-330W. Generator started at 708am HST.

____end____

UCoMP COMMENT BY Observer: Sat Mar 22 18:00:18 GMT 2025

Currently trouble shooting why UCoMP Shutter will not go out of beam.

____end____

GENERAL COMMENT BY Observer: Sat Mar 22 18:03:04 GMT 2025

Battery at 74%

____end____

GENERAL COMMENT BY Observer: Sat Mar 22 18:08:33 GMT 2025

UCoMP occulter seems to not know where it is, occulter LED said it was in but when we pulled the cover, it was completely out of beam.

____end____

GENERAL COMMENT BY Observer: Sat Mar 22 18:12:07 GMT 2025

SGS started osculating

____end____

GENERAL COMMENT BY Observer: Sat Mar 22 18:15:34 GMT 2025

Had to adjust the SGS Zero offset by hand as the Auto feature was causing the spar to oscillate.

____end____

GENERAL COMMENT BY Observer: Sat Mar 22 18:15:44 GMT 2025

Sky is bright

____end____

Sat Mar 22 18:16:30 GMT 2025 Kcor Focus/alignment program exited

Sat Mar 22 18:19:53 GMT 2025 KCOR Start Synoptic Patrol

UCoMP PROBLEM COMMENT BY Observer : Sat Mar 22 18:43:05 GMT 2025

Seems the occulter is confused on where it is. Currently has the LED for In lit but the occulter is completely out of beam. Restarted the computer, didn't seem to help. Walking through our issues on git hub

____end____

Sat Mar 22 18:46:58 GMT 2025 KCOR End Patrol

Sat Mar 22 18:47:18 GMT 2025 KCOR End Patrol

KCOR COMMENT BY Observer: Sat Mar 22 18:48:25 GMT 2025

Putting the cover in KCOR while Marc puts the back cover back on UCoMP

____end____

Sat Mar 22 18:50:59 GMT 2025 KCOR Start Synoptic Patrol

UCoMP COMMENT BY Observer: Sat Mar 22 18:59:54 GMT 2025

The hardware values for the Ocullter x & y for Mech in beam were changed to x=0 y=1. We opened a previous file from November 24, 2022 and checked those values, which were x=6 2.01 y=4.21. We copied the old values into the current document, saved and exited. Currently restarting to see if that worked.

____end____

Sat Mar 22 19:01:25 GMT 2025 KCOR End Patrol

Sat Mar 22 19:01:35 GMT 2025 KCOR End Patrol

Sat Mar 22 19:06:13 GMT 2025 KCOR Start Synoptic Patrol

GENERAL COMMENT BY Observer: Sat Mar 22 19:13:37 GMT 2025

We lost internet, can't update UCoMP till we figure this out.

____end____

GENERAL COMMENT BY Observer: Sat Mar 22 19:17:59 GMT 2025

Power cycling the internet to see if it brings it back

____end____

Sat Mar 22 19:34:21 GMT 2025 KCOR End Patrol
Sat Mar 22 19:34:28 GMT 2025 KCOR End Patrol
Sat Mar 22 19:35:47 GMT 2025 KCOR Start Synoptic Patrol
Sat Mar 22 19:36:14 GMT 2025 KCOR End Patrol
GENERAL COMMENT BY Observer: Sat Mar 22 19:37:38 GMT 2025
Spar hit the ladder
____end____
Sat Mar 22 19:40:28 GMT 2025 KCOR Start Synoptic Patrol
Sat Mar 22 19:50:08 GMT 2025 KCOR End Patrol
GENERAL COMMENT BY Observer: Sat Mar 22 19:53:33 GMT 2025
Replacing cover on Ucomp
____end____
Sat Mar 22 19:56:32 GMT 2025 KCOR Start Synoptic Patrol
Sat Mar 22 20:04:50 GMT 2025 KCOR End Patrol
Sat Mar 22 20:04:51 GMT 2025 KCOR Start Calibration script: c:\kcor\mlso-calibration22d
eg-20171025.ini
GENERAL COMMENT BY Observer: Sat Mar 22 20:06:16 GMT 2025
Batteries at 97%
____end____
Sat Mar 22 20:20:04 GMT 2025 KCOR End Calibration Script
Sat Mar 22 20:20:21 GMT 2025 KCOR Start Synoptic Patrol
Sat Mar 22 20:20:21 GMT 2025 KCOR Start Synoptic Patrol
Sat Mar 22 21:08:21 GMT 2025 Running UCOMP Cookbook synoptic-original-lines.cbk line 0
Sat Mar 22 21:46:25 GMT 2025 Running UCOMP Cookbook synoptic-original-lines.cbk line 0
GENERAL COMMENT BY Observer: Sat Mar 22 21:49:39 GMT 2025
Lost internet again
____end____
UCoMP COMMENT BY Observer: Sat Mar 22 21:52:08 GMT 2025
Turns out it was an ordering issue with the instrument_config.ini. We have put it back into the correct order and now everything is working just fine on UCoMP now. Taking data but we have
most likely less than an hour as clouds are starting to roll in from the West.
____end____
GENERAL COMMENT BY Observer: Sat Mar 22 22:01:20 GMT 2025
Lost internet connection
____end____
GENERAL COMMENT BY Observer: Sat Mar 22 22:12:56 GMT 2025
Having intermittent internet issues; Tom sending out an email to see what may be going on.
____end____
UCoMP COMMENT BY mlso: Sat Mar 22 22:12:11 GMT 2025
UCoMP occulter issues came in due to a slightly reorganization of the config files to be more human readable and debug-able if issues with the occulter came up. Unfortunately I forgot that that the source code had a hard coded order expected for stage config data. During the config cleanup I forgot this fact and assumed that the code looked up stage information by stage name.

This lead to the difficult to debug condition in that the occulter stage worked as expected when commanded to an absolute position; but looked up the wrong in-beam positions.
So all of the observing code steps that made commands to move IN failed.

The stage order in the config file has been restored; and I am working on some plans to change the way we load the config; to work by name instead of assumed order to avoid this type of bug in the future. This implementation will need to wait until normal power is restored.
____end____
Sat Mar 22 22:23:10 GMT 2025 Running UCOMP Cookbook waves_1074_1hour.cbk line 0
Sat Mar 22 22:32:22 GMT 2025 KCOR End Patrol
WEATHER COMMENT: Observer: Sat Mar 22 22:41:11 GMT 2025
Clouds are coming in and pilot is heading up.
____end____
GENERAL COMMENT BY Observer: Sat Mar 22 22:48:07 GMT 2025
Battery at 99%
____end____
GENERAL COMMENT BY lisapg: Sat Mar 23 02:07:01 GMT 2025
705am landed and made it to MLSO building.
708am batteries at 64% and load between 230-300w. Generator started; UComp up to temp,

Kcor at 31C but climbing. Typical behavior this time of year
712am Verified batteries were charging and started to power the building.
718am the Yeti that was powering the firewall and cosmic had completely drained, move t
hem to wall power and started to recharge the yeti
727am troubleshooting getting the logger online
731am logger up and running, Marc got the dome open and the instruments on Sun; Kcor no
t quite above the dome

Everything after this was written down in the logger, so I don't know the time stamps.

- brought up UComp, cameras would not initialize, shut down labview GUI and power cycle d the cameras. Came back fine. Started to run into an issue when centering the occulter on UComp; occulter led wasn't lit, position tracker said it was at 0 and shuttler was in beam. Had Marc check where the occulter was physically and saw it was out of beam. We went through the motions of using the move absolute while we had the cover open to make sure the mechanism was working. Was working as intended, power cycled the computer to see if that would fix it, it did not. During this time we got Kcor up and running; SG S oscillated a bit when trying to use the automatic zero offset but stopped when Kcor 0 1 was in focus.

Power cycling Ucomp computer did not fix the problem, so we pulled up our issues git hub page and went to find a situation similar.

Was able to find the correct steps and followed through with them. At some point, the hardware had set the mech in beam occulter to x=0, y=1. Looked at a previous good set of numbers and followed the document steps to copy them over. Saved them and restarted labview. However, this did not fix the problem. Power cycled the ucomp computer just in case it needed it.

Roughly 915am, we lost internet and this happened at least two, maybe three times through out the day.

Ben pinged us around that time and starting trouble shooting with him. After an extensive amount of block diagrams and different GUIs we resolved the problem at 1130am by moving where the read out for the occulter x,y were to where they were in the old document. Ben has a much better explanation in the log for all that happened.

Started taking data immediately and sent out emails to let everyone know. At that time, we started to see clouds pop up on the West, so I started checking in with the pilot as often as I felt was needed to insure we didn't over extend our stay and missed the heli while Marc monitored the instruments. At one point we lost internet and Ucomp seemed to have lost contact with Kodiak and opened its recipe loader. Ben advised us to cancel and as the internet had come back up, Ucomp was happy again. Around 1230pm we got the call to button up as the pilot was coming. We shut down Kcor first and tried to let Ucomp run as long as we could as we just got to 1074waves. Clouds came in roughly 1244pm and we shut everything down. Generator was turned off at 1248pm and unfortunately I shut down Kodiak before reading what the draw was on the batteries.

Rough day but I'm extremely happy we got data.

end

ONSITE STAFF: lisapg, mcotter