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Mauna Loa Solar Observatory Observer's Log  
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Sat Jan 23 17:23:57 GMT 2021

Year: 21 Doy: 023

Observer: berkey

WEATHER COMMENT: berkey: Sat Jan 23 17:26:06 GMT 2021

Temp: 36.0f, Humidity: 12%, Pressure: 28.746in, Wind: 11mph from 159degs, Skies: patchy cirrus covering the sky. Startup of kcor will be delayed.

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

GPS COMMENT by MLSO: Sat Jan 23 21:45:08 GMT 2021

Successfully logged in to system

Unable to mount disk

GPS software failure to start

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

UCoMP COMMENT BY berkey: Sun Jan 24 02:29:57 GMT 2021

Most of the morning was spent bring up and verifying UCoMP subsystems.

Shutter: After swapping the +/-28V input leads on the Uniblitz board the shutter was found to be functional. In software the DAQ addresses to the shutter were hardwired to the old Boulder values. The code was updated to read routes out of the instrument\_config.ini and the routes in the ini file were updated to reflect the MLSO as built DAQ routes.

Cameras: When running the full observing code/camera setup code an error was thrown while trying to get/set attributes. This was traced down to having the wrong camera\_config.fmt file. Looks like the camera config files explicitly describe/reference individual cameras (SN not model numbers). And I think this is the first time we have tried to bring up the whole system with the new camera. This issue was fixed (after much head scratching) by going into XCAP and exporting a new format file that describes the as deployed cameras from the XCAP PIXCI Menu -> "PIXCI Export Video Setup" Once we started pointing the instrument\_config.ini file at this new format file the cameras appear to be working properly.

We also change the default camera NUC from normal (nothing) to Offset+Gain correction. Previously this was hard coded in to the camera initialization code. The NUC is now configurable in the instrument\_config.ini, and captured in the fits headers as the TCAMNUC, RCAMNUC keywords.

Filter wheel: Filter wheel was found to be unresponsive thru the ASCOM routes. I am not sure what failed, as we could still talk to it via the provided filter wheel controller application. I was also able to talk to the wheel via python thru the same utilities we are using to control the Chromag filter wheels. With no obvious way to fix the ASCOM control of the wheels, I implemented some new VI's that call the python move code to replace the code we were using for filter wheel control in Boulder.

Lyot filter: The lyot filter was rotated to its alignment pin

Manual Occulter alignment code: Code to take a dark (saved in memory not written to disk) at the beginning of the occulter alignment and apply that dark to the streaming images was implemented.

T-Cam focus on the occulter was attempted but even in the thinnest cirrus we had to day the diffuser signal was too variable and faint to make any assessments.

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

GENERAL COMMENT BY berkey: Sun Jan 24 02:30:12 GMT 2021  
Skies never fully cleared so no data today.

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

ONSITE STAFF: berkey