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          Mauna Loa Solar Observatory Observer's Log
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          Tue Feb  9 17:45:23 GMT 2021
Year: 21  Doy: 040
Observer: mlso
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WEATHER COMMENT: mcotter: Tue Feb 09 17:49:12 GMT 2021
Temp: 31.5f, Humidity: 50%, Pressure: 28.659in, Wind: 7mph from 230degs, Skies: Altostratus and Altocumulus clouds are covering most of the sky making it overcast. Light wind out of the southwest. It looks like more clouds are moving in from the west bring precipitation.
___end___
GENERAL COMMENT BY mcotter: Tue Feb 09 17:49:50 GMT 2021
Leaving the dome closed at this time because of overcast skies.
___end___
UCoMP COMMENT BY mcotter: Tue Feb 09 20:57:32 GMT 2021
I received the replacement drive from Steve yesterday and installed it in the instrument this morning, but ran into the same issue with the new motor. As a last-ditch effort, I tried swapping the usb->rs485 controller between the O1 and diffuser and was able to talk to the spare O1 motor again. Further troubleshooting seemed to show that if the motor completely hangs we need to unplug both the power and serial connector for a couple of minutes to clear the running state. I had not been unplugging the serial connection last week.

Even with the motor state reset I was unable to reprogram the replacement motor. For some reason, the SEM Terminal can download the control software onto the motor but I cannot call the loaded programs.   At this point, I switched back to the originally deployed motor to test the software load and ran into the same issue. So I think there is either an issue with the O1 control code saved in subversion or I am missing a step to load programs (second doesn't seem likely because I was able to change the m-drive diffuser code).

GOOD NEWS! With the old motor fully reset it is back to moving in its nominal range of 0-59mm. At some point past 59mm (haven't found the exact number) we hit the front limit sensor and motion gets killed. I am not sure if this is a requirement of the m-drive or how we wrote the control code bit if we hit the front sensor motion is disabled until we rehome the stage which required a very slow creep to the back of the range.

Looking at the hardware it looks like we might be able to get 2 more mm of travel on both ends of the range if we are able to move the limit sensors further away from the center of the range. Looking at the structure I am not sure if it is possible to move these senors.

Sky has heavy overcast so we cannot do any focus checks or alignments.
___end___
GENERAL COMMENT BY mcotter: Wed Feb 10 01:15:01 GMT 2021
Overcast skies all day. No data taken today.
Left early to take e-waste to Mr. K's recycler.
___end___
ONSITE STAFF: berkey, mcotter