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Mauna Loa Solar Observatory Observer's Log  
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Wed Dec 11 16:53:26 GMT 2019

Year: 19 Doy: 345

Observer: berkey

WEATHER COMMENT: berkey: Wed Dec 11 16:53:46 GMT 2019

Temp: 44.8f, Humidity: 23%, Pressure: 28.764in, Wind: 13mph from 150degs, Skies: clear

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

KCOR COMMENT BY berkey: Wed Dec 11 17:39:20 GMT 2019

Found the source of the erroneous 'mid' values for the foreoptics.

We do a check of the foreoptics state when the observing code starts. This call (like all move hardware state queires in kcor) is done asynchronously and were not waiting long enough to get current results and ended up reporting based on the default values of the mechims being both not in or out of the beam.

It looks like it takes a fixed amount of time (between the old and new computers) to negotiate a connection between labview and the ACS controller. But the new comptuer is so much faster at running the rest of the code that it collected the results from the state poll before the ACS connection was completed. We now force a 300ms wait between creating a connection and collecting the results. This seems to give a lot of time buffer to collect the right results without costing too much wall clock time.

Based on about 10 tests this looks to have completely cleared up the 'mid' issues.

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

KCOR COMMENT BY berkey: Wed Dec 11 17:54:42 GMT 2019

In yesterdays log there was a note that while trying to clear up the 'mid' issue a command on the MC4u was issued to move the foreoptics into the beam. This led to the side effect of the Datatype changing from Science to engineering in the header while the "Science Data" button/LED still appeared to be in science mode.

Two changes were made to hopefully address. We no longer change the data type to engineering when moving the foreoptics out of the beam with the MC4u gui. The data type will still automatically change when the optics are move out.

And now if the fits Datatype value is engineering and the "Science data" is on the the "Science data" button LED will be set to false to update the observer GUI to the actual state of the header.

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

GENERAL COMMENT BY berkey: Wed Dec 11 18:05:49 GMT 2019

PM Blew off Kcor 01 and opened the windows.

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

Wed Dec 11 18:12:04 GMT 2019 Kcor Focus/alignment program exited

Wed Dec 11 18:13:19 GMT 2019 KCOR Start Synoptic Patrol

KCOR COMMENT BY berkey: Wed Dec 11 18:15:28 GMT 2019

Looks like the 'mid' code fixed described above didn't work. Diffuser and CALPOL started in 'mid'. Need to think about how to proceed with troubleshooting this.

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

GENERAL COMMENT BY berkey: Wed Dec 11 18:35:47 GMT 2019

Some sort ball seen moving off the disk near PA120 in the NRGF images. I think this is a slow moving aerosol or maybe particle dust on a lens.

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

GENERAL COMMENT BY berkey: Wed Dec 11 18:41:03 GMT 2019  
Corona seems a bit more tilted today than what I remember for a while.

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

Wed Dec 11 18:58:33 GMT 2019 KCOR End Patrol

Wed Dec 11 18:58:33 GMT 2019 KCOR Start Calibration script: c:\kcor\mlso-calibration22deg-20171025.ini

Wed Dec 11 19:13:48 GMT 2019 KCOR End Calibration Script

Wed Dec 11 19:14:04 GMT 2019 KCOR Start Synoptic Patrol

Wed Dec 11 19:14:04 GMT 2019 KCOR Start Synoptic Patrol

GENERAL COMMENT BY berkey: Wed Dec 11 19:18:59 GMT 2019

Switching moonfish to xfce instead of gnome fixed the display transparency issues we have been seeing. Travis will make this the default.

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

Wed Dec 11 19:19:28 GMT 2019 KCOR End Patrol

Wed Dec 11 19:21:51 GMT 2019 SGS Alignment complete

Wed Dec 11 19:21:34 GMT 2019 Kcor Focus/alignment program exited

Wed Dec 11 19:22:53 GMT 2019 KCOR Start Synoptic Patrol

\*\*\*\*EVENT COMMENT BY berkey\*\*\*\* : Wed Dec 11 19:57:26 GMT 2019

Small fast prominence seen launching PA315 at about 18:30UT in Halpha. Looks like there could also be some activity in Kcor as well.

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

Wed Dec 11 21:12:24 GMT 2019 KCOR End Patrol

Wed Dec 11 21:14:11 GMT 2019 SGS Alignment complete

Wed Dec 11 21:14:33 GMT 2019 Kcor Focus/alignment program exited

Wed Dec 11 21:15:37 GMT 2019 KCOR Start Synoptic Patrol

Wed Dec 11 22:02:24 GMT 2019 KCOR End Patrol

Wed Dec 11 22:04:21 GMT 2019 SGS Alignment complete

GENERAL COMMENT BY berkey: Wed Dec 11 22:05:21 GMT 2019

Afternoon clouds starting to blow in. Pausing for a short period of time.

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

Wed Dec 11 22:10:29 GMT 2019 Kcor Focus/alignment program exited

Wed Dec 11 22:11:25 GMT 2019 KCOR Start Synoptic Patrol

Log Type BY berkey: Wed Dec 11 23:43:54 GMT 2019

Dome closed.

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

Thu Dec 12 00:01:07 GMT 2019 KCOR Start Synoptic Patrol

Thu Dec 12 00:01:32 GMT 2019 KCOR End Patrol

Thu Dec 12 00:02:02 GMT 2019 KCOR Start Synoptic Patrol

Thu Dec 12 00:03:03 GMT 2019 KCOR End Patrol

KCOR COMMENT BY berkey: Thu Dec 12 00:11:22 GMT 2019

I have been doing some testing of foreoptics fits values at startup and adding feedback to the "science data" button feedback to the observer.

The "Science data" button appears to do the right thing changing from ON to off if something else changes the datatype in to engineering.

For the foreoptics we are now updating the FITS header to the current state of the fore-optics from the prox sensors every 15 seconds. So the fits data should now be stale for at most 15 seconds. Testing seems to suggest \*this\* is the final fix of the 'mid' state bug.

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

GENERAL COMMENT BY berkey: Thu Dec 12 01:08:16 GMT 2019  
Nice morning poor afternoon due to aerosols.

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

GENERAL COMMENT BY berkey: Thu Dec 12 01:09:44 GMT 2019

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

ONSITE STAFF: berkey