
Mauna Loa Solar Observatory Observer's Log

Tue Jan 5 17:35:22 GMT 2021

Year: 21 Doy: 005

Observer: berkey

WEATHER COMMENT: berkey: Tue Jan 05 17:36:18 GMT 2021

Temp: 37.3f, Humidity: 10%, Pressure: 28.817in, Wind: 8mph from 171degs, Skies: Beautiful clear skies! Low winds. Light inversion layer at or just below Maunakea.

____end____

GENERAL COMMENT BY berkey: Tue Jan 05 17:37:02 GMT 2021

Working on Ucomp this morning; no Kcor data will be taken.

____end____

GENERAL COMMENT BY berkey: Wed Jan 06 02:35:24 GMT 2021

Shabar removed from the spar to be shipped to Boulder for Cosoda testings.

____end____

COMP COMMENT BY berkey: Wed Jan 06 03:55:46 GMT 2021

Continued on the UCOMP alignmnet.

Found that the PSM moved over the course of the night (maybe Bessel as well). Not sure how much if any of this is related to thermal issues with the spar or simply weak alignment lasers mounts.

Re-aligned PSM (then Bessel) to restate alignment about 2 hours in to shimming optical elements we found the PSM had again misaligned it self to the O1. So we decided to change tactics.

PSM was aligned the O1, then Bessel beam was aligned to the PSM. The T-cam was then installed replacing the PSM as the alignment fiducial. T-Cam mount was shimmed up about 20 thousandths to center the Bessel on the camera, and tip tilt of the camera was established by retroreflecting the Bessel beam off the camera window back up the telescope.

At this point we installed the PBS and shimmed it to align the Bessel to the center of the camera. Then marked the shims and removed the PBS repeating the exercise with the modulator and then field lens.

We then did a "final" install of the modulator, field lens and finally the PBS each time slightly tweaking the shims for best alignment.

With all the powered optics in the beam and looking good. We installed the Lyot filter and telescope tube to support further camera work and testing later in the week.

As we were packing up I was a little disturbed to see the Bessel beam reflection off the front of the Lyot filter falling outside the glass of the modulator. Seems like there is a bit of a tilt of the beam from the modulator as it hits the front of the Lyot. Not sure how bad this is.

Spar is currently too far out of balance to observe and will require some work tomorrow to fix this.

____end____

ONSITE STAFF: mcotter