Mauna Loa Solar Observatory Observer's Log ______ Tue May 25 16:30:50 GMT 2021 Year: 21 Doy: 145 Observer: mlso WEATHER COMMENT: mcotter: Tue May 25 16:32:53 GMT 2021 Temp: 37.6f, Humidity: 60%, Pressure: 28.87lin, Wind: 5mph from 159degs, Skies: Clear but slightly hazy skies with slight traces of high altitude Cirrus visible in small patches at various places. Inversion layer visible on the horizon at or ab ove Maunakea. end GENERAL COMMENT BY mcotter: Tue May 25 16:32:59 GMT 2021 Opened windows upstairs end GENERAL COMMENT BY mcotter: Tue May 25 16:33:04 GMT 2021 PM Blew off Kcor O1 end Tue May 25 17:06:38 GMT 2021 Kcor Focus/alignment program exited UCOMP COMMENT BY mcotter: Tue May 25 17:18:14 GMT 2021 Based on Steve's calculation that T-cam came in to focus with the Ol 1.5mm closer to the sun than R-cam. Pats calculation that 1mm of focus in the O1 space translates to 95 microns on the camera focus stages. And 1 rotation of the camera focus stage == .5mm of travel. So we needed to move t-cam about .15mm away from the O1 or a little over 1/4 of a turn on the focus stage. Before rotating the T-cam focus a small dot was put on the vernier barrel so that we could see our approximate rotation mo vement (we could not clearly and accurately see the vernier graticules). The T-cam focus was moved approximately 1/4 plus a small amount of a rotation clockwise. GENERAL COMMENT BY mcotter: Tue May 25 17:20:00 GMT 2021 Kcor now running. SGS offsets: X(RA): 88, Y(Dec): -130. Polarization checked: Mid, Bright, Dark, Mid. end GENERAL COMMENT BY mcotter: Tue May 25 17:30:35 GMT 2021 PM Blew off Kcor Field Lens. Small artifacts can be seen in the Kcor NRGF image. The Kcor 01 was blown off in an attempt to remedy the items observed i n the image. end GENERAL COMMENT BY mcotter: Tue May 25 17:34:11 GMT 2021 A small patch of High altitude Cirrus formed right in the path of the Kcor viewing area. Kcor has been left running as the patch seems to be mostly below the current viewing area, but it should be noted that there has been a substantial increas e in sky brightness. ____end_

****Possible CME in Progress mcotter**** : Tue May 25 18:17:16 GMT 2021 Possible CME seen launching near PA: 240 deg at time17:58:09 UT. end GENERAL COMMENT BY mcotter: Tue May 25 18:21:54 GMT 2021 A small patch of high altitude Cirrus formed right in the path of the Kcor viewing area. Kcor has been left running as the patch seems to be mostly below the viewing area, but it should be noted that there has been a substantial increase in sky brightness. end GENERAL COMMENT BY mcotter: Tue May 25 20:52:23 GMT 2021 Kcor was stopped at approximately 10:00am HST. UCOMP COMMENT BY mcotter: Tue May 25 20:53:50 GMT 2021 Kcor was stopped to put the Ucomp distortion grid in the beam at approximately 10:00am HST. WEATHER COMMENT: mcotter: Tue May 25 20:56:39 GMT 2021 Temp: 49.4f, Humidity: 58%, Pressure: 28.9lin, Wind: 7mph from 343degs, Skies: The skies have quickly become overcast with Orthographic clouds seemingly to move in from all directions and additionally forming over the observatory at the same ti The dome shutter doors and windows have been closed at this time. GENERAL COMMENT BY mcotter: Tue May 25 21:37:17 GMT 2021 Emptied trash containers in the dome and the control room. UCOMP COMMENT BY mcotter: Wed May 26 01:03:04 GMT 2021 UCoMP work today:

Ben adjusted focus of Tcam by rotating the focusing vernier by 1/4 turn. Took more through focus data and verified that bo th cameras came into focus at the same O1 distance. Aligned to within 20 microns at the prime focus.

Inserted distortion grid and took distortion grid data at all wavelengths. Steve will need to analyze.

Removed point source microscope and mounting plate from spar.

Completed hookup of camera cooling system and filled with water. Getting the air out of the line was difficult. Plumbing w as modified and that improved water filling. Most air bubbles were removed from line.

ONSITE STAFF: berkey, mcotter, Tomczyk