

31 August 1964

THE CLIMAX - AUGUST 1964

Mid-afternoon of 27 August Joe Rush stepped back from the new spectrograph and announced the system aligned - both single and double pass! At present we have only one grating installed, the eight inch, 300 line/mm Bausch & Lomb. The internal aluminum covers are in place. About all that remains to be done now are the external styrofoam and masonite covers installed, a bit of work to clean up minor mechanical problems and the completion of the camera. The camera plate casting will be taken to Boulder soon to facilitate the camera fabrication; therefore, it will be difficult to even jerry-rig a camera for the present. Magnetograph operation will be possible, however, as soon as it arrives (hopefully the latter part of September). Before serious coronal work can be attempted, the optics in the coronagraph must be cleaned, the filtered air system put into operation and the new cover completed for the F_1 region of the instrument.

Data output with the 5" coronagraph was limited for the month - due to lack of sky, lack of the B & L grating and an over-abundance of Amateur Astronomers. Almost all of the coronal sky occurred in two blocks - at mid-month and again near the end of August. However, the percentage of coronal sky/available sky time was 14% with the majority Class III & IV.

The 2160 B & L was sent back to B & L for cleaning on 12 August and was returned to us and installed in the 5" system on 24 August. It was reported that the grating reflectivity was high but resolution was down - and they suggested we consider buying a new 2160. The purchase price is \$600 and they are in the grating business - but we should consider the possibility.

An observing problem with filter transmissivity was encountered this month in Tandberg-Hanssen's triplet-singlet Helium program that we still haven't satisfactorily worked out. There is a need to observe both faint and strong emission lines on the same spectrogram at precisely the same height. No manner how we juggled the filters now at Climax could we achieve the desired transmissivities. Close scrutiny of the Schott catalogue and a comprehensive buying program is indicated.

About two years ago all the secondary optics of the 5" system were checked in a spectrophotometer. We learned that the ultra-violet limiting elements were the doublet F_1 's (cutting off about 3900 Å). New singlet F_1 's were immediately ordered. They arrived! last week. We are anticipating working down to Balmer limit more efficiently. More about this next month.

An old scheme of observers vs instruments was rejuvenated this month. We are attempting specialization on specific instruments while anticipating possible specialization on specific observing problems. Instrument assignments and specific areas of responsibility are listed below:

Dale King	5" coronagraph; small spectrograph; filters (excluding Birefringent)
John Kirkpatrick	Flare patrol; Birefringent filters (including a Bandpass monitoring spectrograph); Climax library
Charles Ross	Image tube; sensitometry
Chester Porter	Magnetograph
Steve Rodgers	Magnetograph; Climax electronic problems
Bob James	16" coronagraph; spectrograph

Office space for observers and visitors was reworked during the month. The old lab quonset office was renovated and we now have reasonable office facilities for three observers and a desk for visitors. Too, the Climax Library is housed in this office. We are attempting to build up our library - several new reference books as well as journals have been ordered. John has a system setup with Florence Lister whereby we will have an exposure to re & pre prints. Our ambitions do not exceed a good basic library that can be supplemented by short term borrowing from Boulder.

The Climax meal service is working smoothly and seems to be less complicated all the time. During August we served - or there was eaten - 206 meals. For the first half of the month the average cost per meal was \$1.42.

August was an exciting month as well as an exasperating month for visitors. An off-the-top-of-the-head count for visitors totals about 220. Bob Howard and Dr. Bumba fit into the exciting category - there were many casual tourists that qualified for both categories and then there were 135 Amateur Astronomers. Dale King and Jerry Armstrong have been hawking prints of the sun as well as postcards. But after the fact, it seems we missed the best opportunity to supplement The Party Fund. We should have followed Mary Lynn Watson's suggestion of a toll gate - charge them a quarter to get out.

Bob James