total intensity of the east component is 12% greater than of the west component. The intensities of linearly polarized radiation from the two components are equal, but the polarization is nearly opposite; $8.6 \pm 1.3\%$ at $41 \pm 4^\circ$ for the east component, and $9.7 \pm 1.3\%$ at $151 \pm 4^\circ$ for the west component.

Additional observations of lower accuracy and lower resolution of $2'.6$ which were made with the 85-ft reflector of the Naval Research Laboratory to measure the circularly polarized component of radiation gave negative results with values for circular polarization of less than $2 \pm 2\%$ for all three sources.

Aerospace Corporation Solar Observatory and Current and Proposed Research. E. B. MAYFIELD AND R. A. BECKER, *Aerospace Corporation*.—The Aerospace Corporation Solar Observatory located at the Upper Van Norman Lake near San Fernando, California, is approaching completion with installation of a 24-in. vacuum telescope and spectroheliograph expected in February 1968. This instrument, to be used for study of strong magnetic field, will obtain simultaneous photographs on 70-mm film of the circularly polarized components of selected lines to yield the longitudinal component of the field. The method described by R. B. Leighton (*Astrophys. J.* **130**, 366, 1959) in 1959 is used. Design features and expected operation of the instrument are described.

Already in operation are two 6-in objective telescopes used for $H\alpha$ and white light studies. The first uses a $\frac{1}{4} \text{ \AA}$ Zeiss filter which can be tuned $\pm 16 \text{ \AA}$ on either side of $H\alpha$. It is used with 3-in. image scale and 35-mm motion picture camera. Both axes are guided. Automatic programming and exposure permit time-lapse photography of the entire $H\alpha$ line. The second is a $300 \text{ \AA}$ filter centered in the green to obtain whole disk photographs at time intervals of approximately 1 min. Recent data of interest are shown.

A $0.15 \text{ \AA}$ bandpass filter centered at $\text{Ca II } K$ and tunable over $\pm 0.6 \text{ \AA}$ is expected to be delivered by September 1967. It will be used with large image scale as the $H\alpha$ system to study active regions and the calcium network.

This work was conducted under U. S. Air Force Space Division Contract AF04(695)-1001.

On the Interpretation of Be Stars. DAVID D. MEISEL, *Leander McCormick Observatory*.—Ten visual binaries which involve Be star components have been studied. Calibration of the absolute magnitudes of these Be components using magnitude differences and mean absolute magnitudes for the

MK types of the normal companions indicate over-luminosity relative to the assigned MK types of $1^m 0 \pm 0.2$ (p.e.). Examination of mean $V \sin i$ values for all field Be star data available to date indicates values between B0 and A0 are roughly 100 km/sec higher than luminosity class V stars and 200 km/sec higher than luminosity classes IV and III combined. Statistical analysis of hydrogen-line and double star calibrations of absolute magnitude for nonemission double star components indicates that M_v is correlated with $(V \sin i)^2$. The consequences of this on the interpretation of Be stars is discussed.

Additional Infrared Photometry of T Tauri Stars and Related Objects. EUGENIO E. MENDOZA, V, *Observatorio Astronomico, UNAM and Escuela Superior de Fisica, IPN*.—In addition to our previous photometry on the family of T Tauri objects (*Astrophys. J.* **143**, 1010, 1966), we have obtained the following observational data: (a) *UBVRJHKL* photometry for RY Tau, T Tau, DF Tau, SU Aur, RW Aur, CO Ori, GW Ori, V380 Ori, FU Ori, R Mon, and LkH α 120; (b) 5.0μ photometry for RY Tau, T Tau, GW Ori, V380 Ori, FU Ori, R Mon, and LkH α 120. Altogether 14 stars have been observed from 0.36 to 3.4μ through nine different filters, plus nine stars with 5.0μ measurements. The new observations confirm our previous result that T Tauri stars have large infrared excesses.

The published absorption spectra are used to derive effective temperatures, while the absolute luminosities are obtained using our photometry and the known distances. In a Hertzsprung–Russell diagram all the program stars lie above the main sequence. Because of their known youth we may use the derived temperatures and luminosities to make estimates of their masses and ages based on current theories of gravitational contraction. Under the assumption that R Monocerotis is a G5 star (Vyssotsky), it turns out to be the youngest and the most massive among the observed stars ($M \approx 6.6 M_\odot$, $T \approx 50\,000$ yr—younger and more massive, if it is a K1).

Infrared Opacity of Late-Type Stars. LAWRENCE MERTZ, *Block Associates, Inc.*.—Late-type stars display a peak in their spectral energy distribution at 1.6μ . This had been attributed to the relative transparency of the region between H^- bound-free absorption on the short-wave side and H^- free-free absorption on the long-wave side. With adequate spectral resolution however, the long-wave absorption is clearly resolved as the second overtone of CO. Numerous implications follow because a large portion of the stellar energy falls in this region.

(1) Atmospheric models should be less sensitive