come very indistinct in the ultraviolet, sometimes completely disappearing at wavelengths below 3500 Å.

Syrtris Major is the same intensity as its surroundings in the blue, only becoming detectable at wavelengths longer than about 4500 Å, and remaining considerably darker than the rest of the disk out to a wavelength of at least 6000 Å.

The Elysium is visible on all scans for 17 April, being much brighter at wavelengths below 3500 Å and above 5000 Å than in the blue.

Most of these measurements of features are relative to the disk since only one night was of photometric quality; however, on that night calibrations were made by observing the standard star θ Virginis.

On the basis of their spectral distributions, the Martian blue haze and the white (or blue) clouds seem to be different manifestations of the same phenomenon. In addition, there is good indication that the Martian atmosphere is considerably more transparent at $\lambda 3400$ than at $\lambda 3700$.

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Spectrum Variations in the Wolf-Rayet Binary HD 211853. KATHERINE BRACHER, *University of Southern California*.—Spectrographic observations of the Wolf-Rayet double-lined spectroscopic and eclipsing binary HD 211853 were made at the Kitt Peak National Observatory in 1964 and 1966. Radial velocity measures indicate that the period should be modified slightly from that derived by Hjellming and Hiltner: the new value is 6.6881 days. The behavior of the variable absorption feature at 3870 Å has been investigated. If this is interpreted as a violet-displaced absorption of He I $\lambda 3889$ emission in the expanding shell of the W star, its average velocity is -1425 km/sec, somewhat larger than the expansion velocity of 1250 km/sec indicated by the width of the emission line He II $\lambda 4686$. The absorption feature is variable in intensity, being nearly absent on plates taken around phases 0.4 to 0.6, and increasing to a very prominent absorption line at phases 0.85 to 0.15, when the W star is in front. The line is also variable in radial velocity; however, the velocity variations seem to be in phase with the absorption lines of the B companion rather than with the W star. This raises doubts as to the identification of the line; this problem and the intensity variations with phase are discussed.

Solar Wind and Solar Rotation. JOHN C. BRANDT, *NASA/Goddard Space Flight Center*.—Braking of stellar rotation due to angular momentum loss in a stellar wind is an attractive, intrinsic mechanism

compatible with the observed rotations of main sequence stars; accurate determination for the solar case is essential as a calibration point. The azimuthal velocity w_i of the solar wind plasma near the orbit of earth was first assigned a value of 9 ± 3 km/sec from a study of the orientations of Type I comet tails by Brandt (*Astrophys. J.* **144**, 1221, 1966). Improvements in the analysis do not change this result. In addition, the results are supported by the fact that higher values of w_i are correlated with the higher values of the geomagnetic index K_p , as might be expected. Independent confirmation comes from studies with the Vela satellites by Strong, Asbridge, Bame, and Hundhausen (Conference: Zodiacal Light and Interplanetary Medium, Honolulu, February 1967), who find $w_i = 10 \pm 4$ km/sec.

Theoretical treatments by Weber and Davis (*Astrophys. J.* **147**, 217, 1967) and Modisette (*J. Geophys. Res.* 1967) indicate that part of the solar angular momentum is carried off in the magnetic stresses in the interplanetary magnetic field. The relative fractions are determined by the velocity structure of the solar wind near the sun; they are calculable from the observed azimuthal velocities and theoretical expressions. Typical parameters near the earth— $w_r = 400$ km/sec, $w_i = 9$ km/sec, $N_e = 4/\text{cm}^3$, and $B_r = 5\gamma$ —indicate that the solar angular momentum is lost nearly equally in particle motions and magnetic stresses and that the e -folding time for solar braking is $3\text{--}4 \times 10^9$ yr for a solar wind constant at its present value. If the solar wind has an independent e -folding time of 3×10^9 yr, the initial sun could have had an equatorial rotational velocity $\approx 10^3$ km/sec.

Radio Interferometry with a Baseline of 3074 km. N. W. BROTEN, T. H. LEGG, J. L. LOCKE, C. W. MCLEISH, R. S. RICHARDS, *National Research Council, Ottawa*, R. M. CHISHOLM, *Queen's University, Kingston, Ontario*, H. P. GUSH, J. L. YEN, *University of Toronto*, AND J. A. GALT, *Dominion Radio Astrophysical Observatory*.—Previous high-resolution measurements made at centimetric wavelengths with baselines of 100 km or so have indicated that some quasars have angular diameters of 0.025 sec of arc or less. Observations to this order of magnitude at metric wavelengths require very long baselines with subsequent problems in the transmission of data and local oscillator signals. Furthermore, it is difficult to compensate for the large and variable delay between reception of the signals at the two telescopes. These difficulties have been overcome by the use of wide-band magnetic tape recorders and independent local oscillators controlled by rubidium frequency standards.

Interferometric fringes have been observed from