photons/cm²-sec over the 18 to 120 keV range. Additional features of the spectra are discussed.

Radial Velocity Measures of Double Spectra and Stellar Masses. R. M. PETRIE AND D. H. ANDREWS, *Dominion Astrophysical Observatory.*—Measures of two-spectrum binaries of types O and B indicate that blending effects introduce systematic errors into the velocity curves and the deduced masses. Spectra of type B3 with artificially produced double lines of equal intensity have been measured to give an estimate of the size of the errors to be expected. Such spectra with a dispersion of 30 Å/mm at Hγ have been measured by an oscilloscope comparator. When the expected line separations were in the range 45 to 200 μ, the measured separations of the components of Hε, Hδ, Hγ, Hβ, and He I, λ4026, were significantly smaller than the expected values. There is substantial agreement between the measured and expected separations of the components of the He I lines λ4120, λ4387, λ4471 and the Mg II line, λ4481. Thus if the true radial-velocity differences between blending components are 100, 300, and 500 km/sec, measurements of all the foregoing lines would yield mean separations of 75, 275, and 485 km/sec, respectively. The masses of two-spectrum binaries exhibiting these velocities at maximum separation would be in error by approximately 30, 10, and 5%, respectively. Limited visual measurements of these artificially produced spectra indicate a similar, though apparently less serious, effect. The He I line λ4026 does not show any systematic effect when measured visually. Also, the components of broad lines cannot be resolved visually at small separations, thus their perturbing influence is eliminated from the mean velocity.

On the Determination of the Angular Momentum of a Galaxy. PARIS PIŞMIŞ, *Observatorio Astronómico Nacional.*—A global property which has bearing on the evolutionary path followed by a galaxy is doubtless its angular momentum per unit mass. From the observed forms, spiral galaxies are expected to possess the largest angular momenta. So far in the very few quantitative discussions of this quantity, the velocity of rotation of the spiral forms is applied to the total mass of the system. This procedure is objectionable as the rotation curve observed of a spiral is that of the fastest rotating population which carries, however, only a small fraction of the mass of the whole galaxy.

In this report we emphasize that the concept of subsystems should be extended to galaxies to take account of it in a correct determination of the angular momentum of the whole system. We adopt the model of a spiral composed of three subsystems with mass distribution and kinematics resembling our Galaxy; these subsystems are the extreme Population II, the disk population, and the spiral forms. The masses are in the proportion 2:7:1 and the rotational velocities run as 3:9:10, respectively, where 10 refers to the velocity of the spiral arms.

The angular momentum of this mixed system is estimated by applying to each of the subsystems the corresponding rotational velocity. (The velocity curve is computed, at the start, for the flattest subsystem.) This is compared to the angular momentum obtained by applying the same rotational velocity—that of the spiral forms—to all subsystems. It is found that the error involved is an overestimation of the total angular momentum of around 25%, if one ignores the fact that the lesser flattened a subsystem, the slower its effective rotation.

Survey of Spectra of Southern Eclipsing Binaries. DANIEL M. POPPER, *University of California, Los Angeles.*—In the months of December 1964 to June 1965 a survey of spectra of southern eclipsing binaries was carried out at the Mount Stromlo Observatory. The grating dispersion was 22 Å/mm. Table I summarizes the results obtained from inspection of the spectrograms.

TABLE I.

Star	HD mag.	Type	No. of spectrograms	Comment
HD 38882	8.2	F0	2	Sharp single lines.
HD 39780	6.2	A0	3	Sharp single lines.
HD 55173	7.3	B3	1	Broad lines.
AU Pup	8.5	A0	2	K line possibly double.
AY Vel	9.0	B9	2	Very broad H lines only.
HD 75747	6.1	A5	14	Two components, approximately equal intensity.
HP Car	8.5	B2	1	Broad lines.
AC Vel	8.5	B8	2	Two components. Earlier than B8.
HD 93486	8.3	F5	9	Two components, approximately equal intensity.
EM Car	8.5	B0	1	Two components. Large velocity separation.
GV Car	9.0	A0	1	Sharp single lines.
TU Mus	8.5	B3	2	Broad shallow double lines.
BF Cen	8.5	B8	2	Broad shallow double lines.
V346 Cen	8.5	B5	1	Lines single.
SV Cen	9.0	B8	1	Lines possibly double. Very difficult.
LZ Cen	8.0	B5	2	Two components. Lines diffuse.
AI Cru	9.0	B5	2	In NGC 4103. Two unequal components. Lines diffuse.
AB Cru	8.5	B0	2	Two unequal components. Very difficult.
SZ Cen	8.5	A2	10	Two equal components. Later than A2. Visual binary.
HD 122314	8.2	A5	2	Lines single.
HD 123423	8.7	F5	1	Two components approximately equal.
HD 124195	6.7	B9	6	Lines single.
RR Cen	7.0	F5	3	Lines single. Diffuse.