Their structure under the microprobe resembles a terrestrial welded tuff except that the borders of the separate bits of ash (shards) are more difficult to distinguish because of the absence of devitrification.

The Distribution of the Brighter Galaxies in the Coma Cluster. GUY C. OMER, JR., *University of Florida*.—Three surveys of galaxies to brighter limiting magnitudes have been compared with the counts to faint limits made by Omer and Page over the Coma Cluster of galaxies. The 48-in. Schmidt blue plate used by Omer and Page was recounted by M. B. Baker. Two other counts to even brighter limits were derived from the original Metcalf plate of the Harvard College Observatory. This inter-comparison of bright and faint counts does not show any marked segregation of bright objects as compared to the faint. It would appear that the Coma Cluster of galaxies is not in detailed equilibrium. Furthermore, these four sets of counts appear to be in essential agreement with the luminosity function for the Coma Cluster which was first proposed by G. Abell.

The Effect of Rotation on the Structure of White Dwarfs. J. P. OSTRIKER, *Princeton University Observatory*.—Differentially rotating models of completely degenerate stars have been derived. For small masses and angular momenta, the results parallel those found in other investigations; rotation tends to increase the radius and decrease the central density. This is consistent with the observational evidence from the three well-observed white dwarfs in binary systems, 40 Eri B, Procyon B, and Sirius B, all of which have radii apparently larger than predicted by the classical mass-radius relation for spherical stars.

Differential rotation can have a more pronounced effect on the structure of white dwarfs than uniform rotation since it allows the construction of equilibrium models with large angular momenta. Also it appears that a given mass M , molecular weight μ_e , angular momentum J , and distribution of angular momentum $j(m)$ will uniquely define the structure of a completely degenerate axisymmetric configuration, and that, within certain limits, a nonsingular equilibrium model will exist for any choice of M , J , μ_e , and $j(m)$. Thus it seems that the white dwarf mass limit for rotating stars will be determined by considerations of stability rather than the presence or absence of equilibrium models, since it appears likely that for sufficiently large values of M the equilibria will be unstable, either bifurcating like the classical Maclaurin spheroid, or suffering the gen-

eral relativistic radial instability described by Chandrasekhar.

Preliminary results are presented for a $2.26 M_\odot$ rapidly rotating white dwarf and also for low mass, nearly spherical white dwarfs.

Detailed calculations by Ostriker and Bodenheimer based on a variational principle of Lynden-Bell and Ostriker will be published elsewhere.

The Earth Science Curriculum Project (ESCP) and the Teaching of Astronomy in U. S. High Schools. THORNTON PAGE, *Harvard, Smithsonian, and Van Vleck Observatories*, AND ARNE SLETTEBAK, *Perkins Observatory*.—A group of scientists and teachers representing astronomy, geology, meteorology, and oceanography has produced a new high school textbook, laboratory manual, and teacher's guide for the earth sciences. Under the auspices of the American Geological Institute and supported by a grant from the National Science Foundation, the Earth Science Curriculum Project (ESCP) is similar to high school curriculum projects already conducted by physicists (PSSC), chemists (CBA), and biologists (BSCS). The ESCP teaching materials are now being tested in over 100 high schools throughout the country.

About 25% of the ESCP course is devoted to astronomical topics, including the following: shape and size of the earth, solar energy and spectrum, gravitation, planetary motions, physical features of moon and planets, origin of the solar system, stars and stellar evolution, the galaxy and its mass and rotation, other galaxies, relativity, and cosmology.

If it is to be adopted in most U. S. high schools, as intended, it will be essential that astronomers help acquaint high school teachers with modern astronomy in any way possible, including participation in NSF institutes and special teacher-training courses.

Variations in the Flux Densities of Radio Sources. I. I. K. PAULINY-TOTH AND K. I. KELLERMANN, *National Radio Astronomy Observatory*.—The results of observations in the wavelength range 2–40 cm made during the past few years at the National Radio Astronomy Observatory and elsewhere have been combined to derive the variations in the intensity of several radio sources.

For the QSS 3C279, we find no variation at 40 cm, an increase of 1.1 flux units/yr at 22 cm, no change at 11 cm, and a decrease of 3 flux units/yr at 6 cm. Dent has reported a similar rate of decrease at 3.75 and 2 cm. The Seyfert galaxy NGC 1275 (3C84) shows no change at 40, 22, or 11 cm and an increase of 3.2 flux units/yr at 6 cm, while Dent