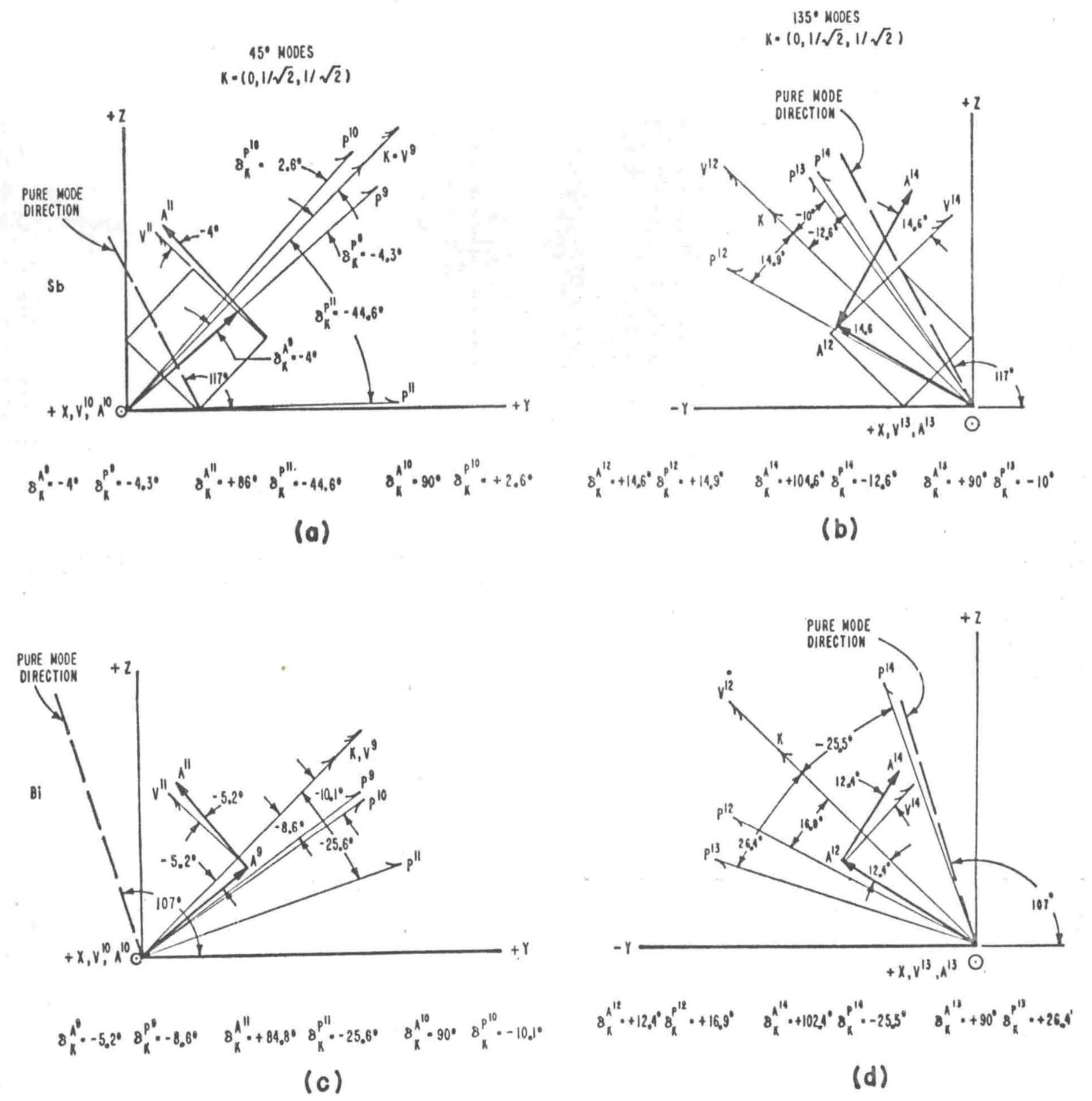

FIG. 2. Energy density flow, displacement, propagation and pure-mode directions in Y-Z mirror plane. $\delta_K{}^s$ is the angle between the vectors K and s where s is any of the vectors A^q and P^q. The signs for $\delta_K{}^s$ indicate placement at opposite sides of K with $+\delta$ counterclockwise. Parts (a) and (b) are for antimony, (c) and (d) for bismuth; (a) and (c) are for the 45° modes, and (b) and (d) for the 135° modes.

of finite dimensions. For isotropic circular bars the dilatational and distortional wave phase velocities have been shown by Pochhammer[20,21] to depend on the ratio of the cross section radius to wavelength a/λ and upon two functions of the Lamé stiffness constants. Chree[22] extended Pochhammer's results to noncircular, normal cross-sectioned cylinders and to nonisotropic media. In the absence of an exact treatment giving the longitudinal and two transverse phase velocities in anisotropic cubes it is reasonable to assume that the size of the correction for each phase velocity would be different. If these corrections are large in relation to the experimental errors, fitting the plane-wave formalism of redundancy eight to the 14 corrected velocities is not assured. That we are able to do so, however, suggests that the corrections are not significant. Our large minimum value of about 25 for k/λ, where k is the radius

[20] A. E. H. Love, *A Treatise on the Mathematical Theory of Elasticity* (Dover Publications, Inc., New York, 1944), p. 287.
[21] H. Kolsky, *Stress Waves in Solids* (Dover Publications, Inc., New York, 1963), p. 54.
[22] A. E. H. Love, *A Treatise on the Mathematical Theory of Elasticity* (Dover Publications, Inc., New York, 1944), p. 290.