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American Mineralogist
Vol. 57, pp. 1309-1310 (1972)

ANTIPHASE DOMAIN STRUCTURE OF THE
INTERMEDIATE COMPOSITION PLAGIOCLASE
FELDSPARS: ADDENDUM

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We wish to thank Dr. M. G. Bown and Dr. P. Gay for pointing out to us that certain statements in our recent article (Cinnamon and Bailey, 1971) are open to misinterpretation. The statements of concern are (p. 1185) . . . "The reciprocal $1/|S|$ has been cited as a measure of domain size by Smith and Ribbe (1969). This usage of equation (2) is based on the assumption that the same split-"b" reflections are being viewed in projections along the x , y , and z axes, however, and reduces the antiphase structure of the plagioclases to a one-dimensional system. This is an unproven assumption that has become accepted as a basic "truth" in the literature concerning the structure of the intermediate composition plagioclases. It seems much more probable from the general nature of the results discussed below that entirely different reflections with different splitting vectors are being viewed along each axis." . . .

The original intent of these statements was to question the interpretation of the intermediate plagioclase domain system as a one-dimensional system. We continue to do so. We no longer consider it probable, however, that entirely different reflections with different splitting vectors are being viewed along each axis. We have investigated the nature of splitting of the "b" satellites in detail, and confirm that the satellites occur only as pairs around the missing class (b) reciprocal points. We

are in complete agreement with the description of these satellites by Bown and Gay (1958). Agreement on the diffraction data is important because a successful structural model of the intermediate plagioclases must explain the known diffraction effects.

This change in our view as to the nature of satellite splitting does not affect any other parts of the Cinnamon and Bailey paper. In particular, we retain our belief that domain size in a given direction must be obtained from the component of satellite separation in that direction, as given in our Figures 4 and 5, rather than by the reciprocal of the S vector ($1/|S|$). This emphasizes our view of the antiphase domains as forming a three-dimensional rather than one-dimensional system.

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