

This volume is a collection of some of the papers presented at the International Conference on Geothermometry and Geobarometry convened at The Pennsylvania State University, October 5–10, 1975. Sponsors for this gathering were the United States Geodynamics Committee, the Inter-Union Commission on Geodynamics, the U.S. National Committee for Geochemistry, the American Geophysical Union, The Pennsylvania State University, and the Mineralogical Society of America.

Joe Boyd, Derrill Kerrick, Ian MacGregor, Tom McGetchin, and Howard Wilshire assumed some of the responsibilities for editing the manuscripts.

One of the goals of earth scientists is to determine the temperature and pressure of formation of rocks that by one way or another are brought to the surface for study. Of paramount significance are our attempts to determine the distribution of temperatures within the earth, at present the most poorly known of the major physical parameters. Geophysicists, petrologists, geochemists, and geologists addressed these problems at the Conference in state-of-the-science papers using a variety of theoretical, experimental, and observational techniques.

Conjecture lacks good footing in struggling with these problems—reliable experimental data are necessary. Nevertheless, I was impressed at this conference with the increasing dependability of mathematical modeling and the sophistication of field investigations, each in turn arming the experimentalists with fresh problems and recycling the results, hopefully toward convergence.

Some problems remain unsolved.

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