

A Brief Introduction to Perple_X

Perple_X is a collection of computer programs for calculating phase diagrams, equilibrium reactive transport models, and manipulating thermodynamic data. This one-day short course will consist of theoretical and practical halves. The theoretical half will be devoted to explaining how Gibbs energy minimization, the essential tool of phase equilibrium calculations, is done in Perple_X and the consequences that this choice of algorithms have for the user. In the practical half, students will compute a phase diagram section for a metabasaltic lithology and learn how to extract compositional and modal data from the section. Alternative practical problems dealing phase fractionation and reactive transport will be provided for students who are already familiar with Perple_X.