

Phase Relations in the Carbon Dioxide/Water System at High-Pressures and High-Temperatures

Evan Abramson^{C, S}

Department of Earth and Space Sciences, University of Washington, Seattle, Washington, U.S.A.

evan@ess.washington.edu

High-pressure, high-temperature properties of carbon dioxide/water solutions are of direct interest to geophysics and explosives modeling, and obtained results may inform models useful at lower pressures. Due to the many difficulties of working with these solutions, data to date are scarce; previously reported observations of phase behavior have been limited to pressures lower than 3 kbar. We report measurements of the phase behavior of this system, including fluid-fluid and fluid-solid equilibria, to pressures of 60 kbar and temperatures of 400°C.