

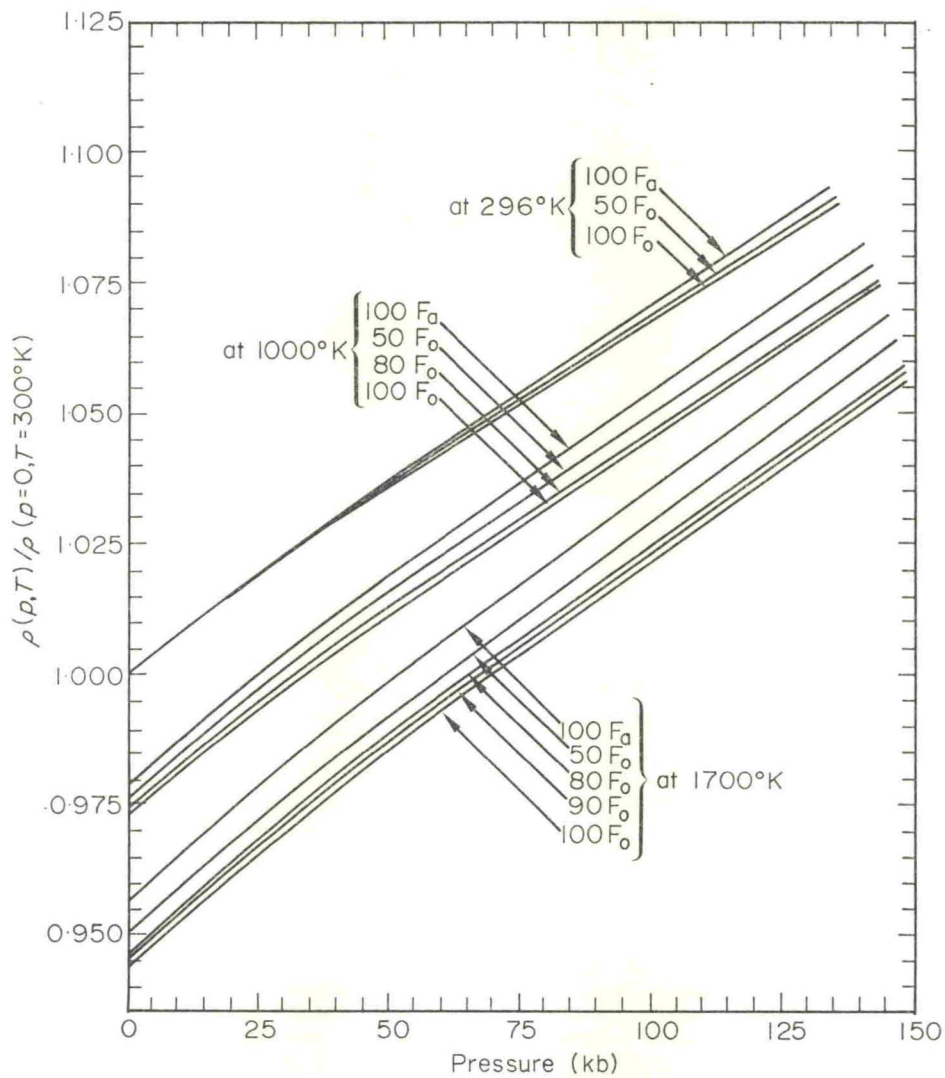


FIG. 7. The density-pressure trajectories of olivines with different (Fe/Mg) ratios at three different temperatures; an illustration of the 'critical pressure p_{cr} ' (defined in the text) of olivines.

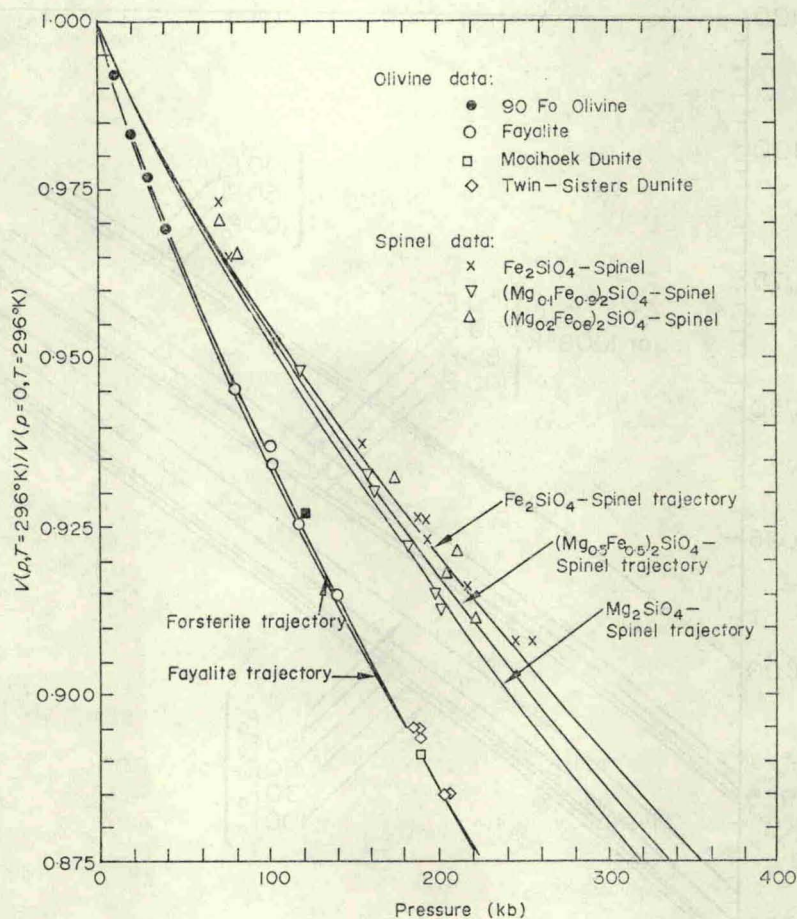


FIG. 8. Comparison of the calculated pressure-volume relation of olivine with experimental compression data. The solid lines are the present work, independent of compression data points. The isothermal compression data of olivine are due to Bridgman (●) and to Takahashi (○). The shock compression data are due to McQueen, Marsh, & Fritz for Mooihoek dunite (□) and Twin-Sisters dunite (◇). The isothermal compression data of olivine-transformed spinels are due to Mao *et al.* (1969), and the solid lines are the calculated pressure-volume relation for the olivine-transformed spinels in the Mg_2SiO_4 - Fe_2SiO_4 series established by Chung (1971b).