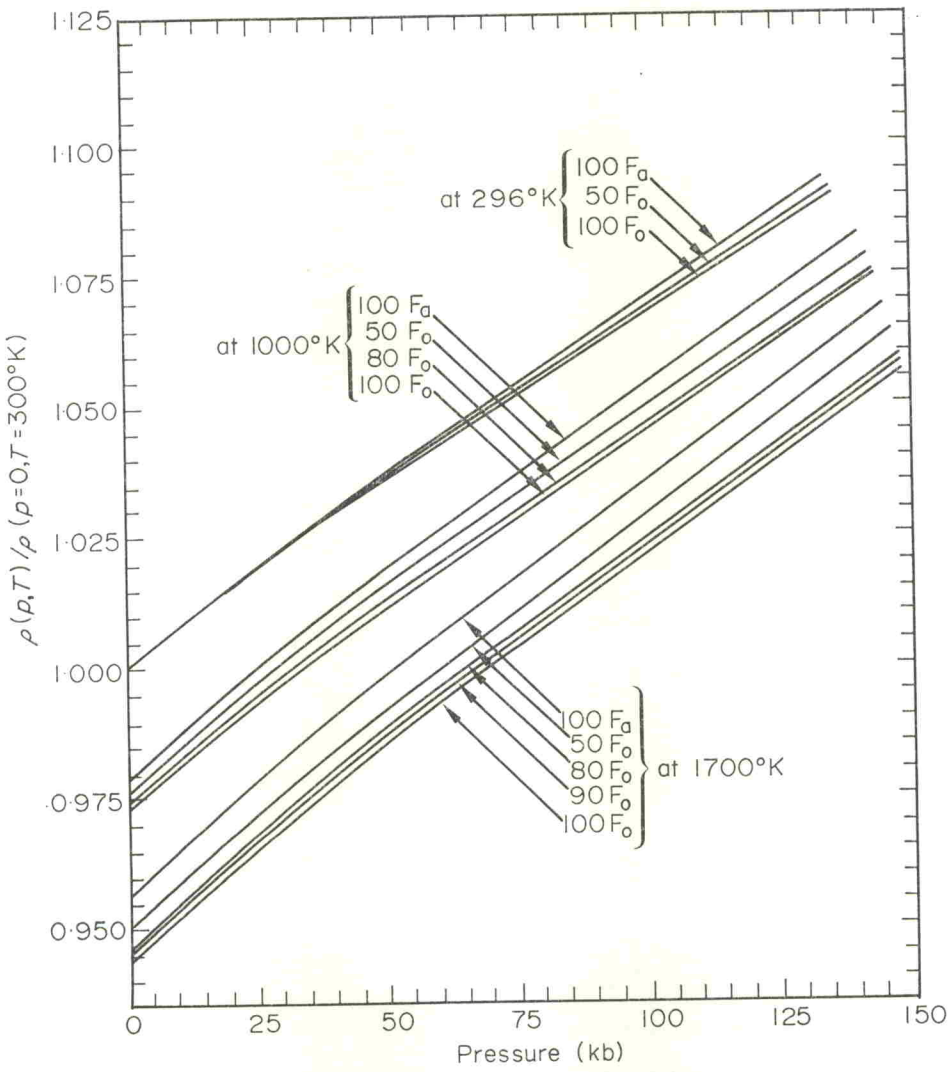

FIG. 7. The density–pressure trajectories of olivines with different (Fe/Mg) ratios at three different temperatures; an illustration of the '*critical pressure* p_{cr}' (defined in the text) of olivines.

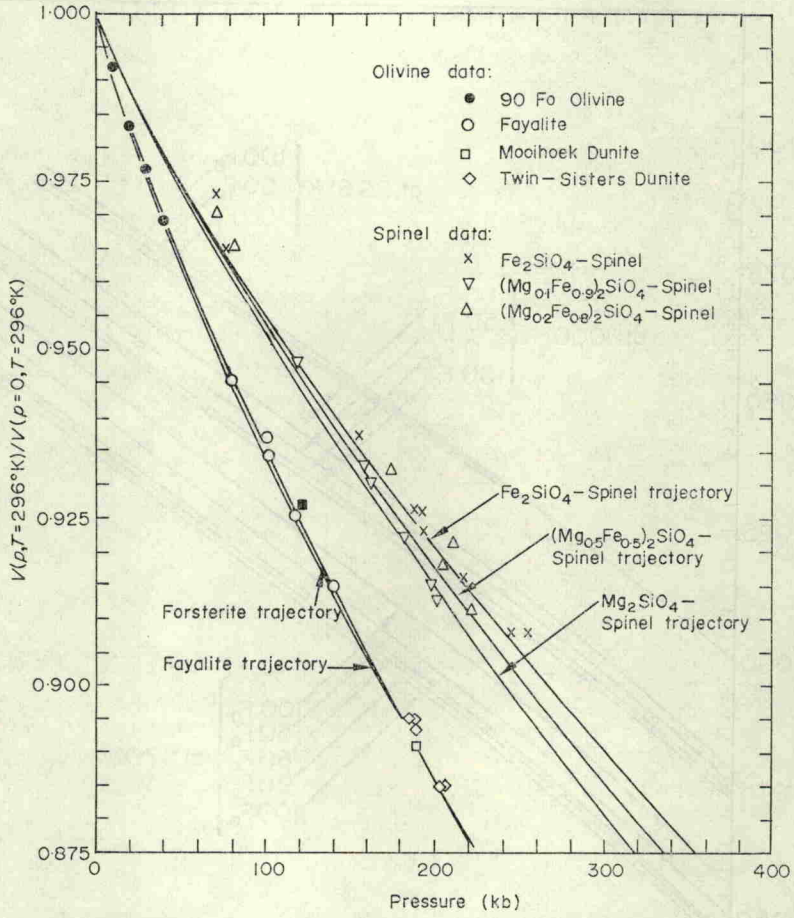

FIG. 8. Comparison of the calculated pressure–volume relation of olivine with experimental compression data. The solid lines are the present work, independent of compression data points. The isothermal compression data of olivine are due to Bridgman (●) and to Takahashi (○). The shock compression data 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).