Dielectric Susceptibility Studies of the Glass Transition of Glycerol at High Pressure\textsuperscript{1} KYAW WIN, NARAYANAN MENON, University of Massachusetts — We have measured the dielectric susceptibility of glycerol as a function of frequency (0.01Hz-10kHz), temperature (190K-250K) and pressure (0-9kB). The glass transition temperature $T_g$ increases with increasing pressure, however, the thermal fragility, which measures the rate of approach to $T_g$, is independent of pressure. This result is in contrast to studies based on viscosity measurements which probe a higher frequency range, where it was found that fragility increases with pressure. We have also found that the width of relaxation when plotted as a function of the relaxation frequency is only weakly dependent on pressure within this range.

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