Spectral Line Shapes in Helium Gas A. ANAND, J. ROBERTS, T. IMHOLT, D. HENLEY, J.N. DAHIYA, University of North Texas — Microwave stimulated emission lines in helium gas were studied through their shapes. Lorentzian shape profiles were assumed to establish a reference for comparison between the emission lines shapes and the assumed profiles. Departures from the Lorentzian shapes are explained in terms of overlapping spectral line profiles and possible weak fine structure components arising in the spectra. Comparison of spectral line shapes is made for two species of helium.