

Contents

	Page
Foreword -----	iii
A. INTRODUCTION -----	vii
Table of Code Letters and Abbreviations -----	vii
B. BIBLIOGRAPHICAL MATERIAL -----	1
1. LITERATURE REFERENCES OF GENERAL INTEREST -----	1
1.0. General articles on line shapes and shifts (general theories and comments, etc.) -----	1
1.1. Pressure broadening -----	1
1.1.1. Stark broadening and shifts -----	1
1.1.1.1. Hydrogen and hydrogen-like (overlapping) lines -----	1
1.1.1.2. Isolated lines of neutral spectra -----	1
1.1.1.3. Isolated lines of ionic spectra -----	1
1.1.1.4. Topics of particular interest: [Line wings; Effects of collective electric fields; Asymmetries of hydrogenic lines; Microfield distributions; Magnetic fields; Turbulent plasmas; Ion dynamics of hydrogenic lines; Plasma polarization shifts; Stark effect on states above the ionization threshold; Small field limit, fine structure; Relativistic effects] -----	1
1.1.2. van der Waals broadening -----	2
1.1.2.1. Satellite bands -----	2
1.1.2.2. Polarization effects -----	3
1.1.2.3. Fine structure; hyperfine structure -----	3
1.1.3. Resonance broadening -----	3
1.2. Basic articles on Doppler and natural line shapes -----	3
1.2.1. Doppler broadening and shifts -----	3
1.2.2. Natural line broadening -----	3
1.2.3. Radiation induced broadening -----	3
1.3. Basic papers on instrumental broadening, deconvolution, superposition of two or more simultaneously acting broadening mechanisms -----	3
1.3.1. Determination of instrumental line profiles; experimental techniques for determining line shapes -----	3
1.3.2. Deconvolution -----	3
1.3.3. Superposition of broadening mechanisms -----	3
1.3.4. Two-photon and saturation methods -----	4
1.4. Important line broadening applications -----	4
1.4.1. Laser & maser applications -----	4
1.4.2. Astrophysical applications -----	4
1.4.3. Plasma diagnostics -----	4
1.4.4. Other applications -----	4

	Page
1.5. Other topics involving line shapes and shifts	4
1.5.1. The line shape in the presence of self-absorption; effects of radiative transfer	4
1.5.2. Broadening of scattered radiation	4
1.5.3. Some important papers on molecular line broadening	5
1.5.4. Miscellaneous topics: [Broadening of x-ray lines; Light shifts, relaxation; Zeeman broadening; New anomalous redshifts]	5
1.6. Review articles	5
1.6.1. General line broadening reviews	5
1.6.2. Reviews on pressure broadening	5
1.6.2.1. Reviews on Stark broadening	5
1.6.2.2. Reviews on foreign gas broadening	5
1.7. References on line broadening tables and bibliographies	5
1.7.1. General line broadening tables	5
1.7.2. Pressure broadening tables	5
1.7.2.1. Special Stark broadening tables	5
1.7.2.2. Special foreign gas broadening tables	5
1.7.3. Doppler and natural line broadening tables	5
1.7.4. Tables of Voigt functions	5
1.7.5. Line broadening bibliographies	5
2. LITERATURE REFERENCES CONTAINING NUMERICAL DATA	6
3. CHRONOLOGICAL LISTING OF ALL REFERENCES WITH FULL TITLES	15
4. LIST OF AUTHORS	62
5. ERRATA	76

