Contents

Page

Foreword ---- iii

A. INTRODUCTION ---- vii

Table of Code Letters and Abbreviations ---- viii

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 (plasma polarization shift, plasma oscillations with satellite bands); Asymmetries of H-lines; Microfield distributions; Magnetic fields; Turbulent plasmas] ---- 2
1.1.2. Broadening in foreign gases (Van der Waals broadening) ---- 2
1.1.2.1. Satellite bands ---- 2
1.1.3. Resonance broadening ---- 3

1.2. Basic articles on Doppler and natural line shapes ---- 3
1.2.1. Doppler broadening ---- 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 ---- 4
1.3.3. Superposition of broadening mechanisms ---- 4

1.4. Important line broadening applications ---- 4
1.4.1. Laser applications ---- 4
1.4.2. Astrophysical applications ---- 4
1.4.3. Plasma diagnostics ---- 4
1.4.4. Other applications ---- 5

1.5. Other topics involving line shapes and shifts ---- 5
1.5.1. The line shape in the presence of self-absorption; effects of radiative transfer ---- 5
1.5.2. Broadening of scattered radiation ---- 5
1.5.3. Some important papers on molecular line broadening ---- 5
1.5.4. Miscellaneous topics ---- 5

Page

1.6. Review articles ---- 6
1.6.1. General line broadening reviews ---- 6
1.6.2. Reviews on pressure broadening ---- 6
1.6.2.1. Reviews on Stark broadening ---- 6
1.6.2.2. Reviews on foreign gas broadening ---- 6
1.6.2.3. Reviews on resonance broadening ---- 6

1.7. References on line broadening tables and bibliographies ---- 6
1.7.1. General line broadening tables ---- 6
1.7.2. Pressure broadening tables ---- 6
1.7.2.1. Special Stark broadening tables ---- 6
1.7.3. Doppler and natural line broadening tables ---- 7
1.7.4. Tables of Voigt functions ---- 7
1.7.5. Line broadening bibliographies ---- 7

2. LITERATURE REFERENCES CONTAINING NUMERICAL DATA ---- 8

3. CHRONOLOGICAL LISTING OF ALL REFERENCES WITH FULL TITLES 16

4. LIST OF AUTHORS ---- 50

5. ERRATA ---- 65