

Contents

Abstract	iii
Preface	v
List of Participants	vii
Program	x
Table of Contents	xvii
Plasma Polarization Spectroscopy: Past, Present and future Scopes <i>T. Fujimoto</i>	1
Theoretical Principles of Spectropolarimetric Sensing	11
<i>S.A. Kazantsev and A.G. Petrashen</i>	
Quantitative Spectropolarimetric Sensing of Ionized Media	39
<i>S.A. Kazantsev, A.G. Petrashen and Pudovkin M.I.</i>	
Density-Matrix Description of Atomic Radiative Emission from Autoionizing States In Electric and Magnetic Fields	69
<i>V. L. Jacobs</i>	
Theoretical Development of X-Ray line Polarization Spectroscopy: Polarization Database and influence of magnetic fields	93
<i>A.S. Shlyaptseva, S. Hansen, V.L. Kantsyrev, S.A. Kazantsev, A.G. Petrashen and U.I. Safronova</i>	
Quasiclassical Theory of Dielectronic Recombination in Plasmas	121
<i>L.A. Bureyeva, T. Kato, V.S. Lisitsa and C. Namba</i>	
Effect of Charge Exchange on Spectral Line Intensity of Multicharge Ions in Plasmas.	143
<i>L. Bureyeva, V. Lisitsa, V. Sergeev, R. Stamm and S. Sudo</i>	
Plasma Polarization Spectroscopy for the OV Ion: Relevant Collision Cross Sections for Kinetic Modeling	153
<i>G. Csanak, D.P. Kilcrease, Honglin Zhang, D.V. Fursa, I Bray, T. Fujimoto and A. Iwamae</i>	

Contents contd.

Polarization of Emission Lines from Beryllium-like oxygen OV: Analysis based on the Population-Alignment Collisional-Radiative model	165
<i>A. Iwamae, A. Tanaka, T. Inoue, T. Fujimoto, Honglin Zhang, D. Kilcrease and G. Csanak</i>	
Monte Carlo calculation of Collisions of Directionally-Incident Electrons on highly excited hydrogen atoms	187
<i>K. Kawakami and T. Fujimoto</i>	
Hydrogen Spectra in microwave fields	201
<i>R. More</i>	
Spectral Motional Stark Effect Measurement of $ B $ in Low-Field Devices	205
<i>D. J. Hartog, D. Craig, G. Fiksel, The MST Group, V.I. Davydenko, A.A. Ivanov and A.A. Lizunov</i>	
Determination of the line emission locations in the LHD on the basis of the Zeeman effect	209
<i>M. Goto and S. Morita</i>	
Plasma Polarization Spectroscopy in the tandem mirror GAMMA 10	215
<i>M. Yoshikawa, T. Furukawa, A. Tanaka, A. Iwamae and T. Fujimoto</i>	
Plasma Polarization Spectroscopy on an Optical-Field-Ionization Plasma	221
<i>T. Kawachi, A. Iwamae and T. Fujimoto</i>	
Measurement of Polarization of atomic helium lines due to strong cavaton fields caused by IREB-plasma interactions	227
<i>M. Yoshikawa, F. Osawa, R. Ando, K. Kamada and M. Masuki</i>	
Analysis of Charge Separation in Neutral Gas-Confined Laser-Produced Plasmas by Polarization Spectroscopy	231
<i>Y. W. Kim</i>	
Polarized X-Ray Satellite line Emission in Non-Equilibrium transient Si plasmas ..	249
<i>P. Hakel, R. Mancini, J. Gauthier, E. Minguez, J. Dubau and M. Cornille</i>	
Measurement of the degree of Polarization of the Spectra from laser produced Al Plasmas	263
<i>Jaehoon Kim and Dong-Eon Kim</i>	
Relativistic Cross Sections for Excitation and Ionization by an Electron Beam and Application to the Polarization of the Subsequent Radiation.....	271
<i>D. H. Sampson, H.L. Zhang, M.K. Inal and C.J. Fontes</i>	

Contents contd.

Measurement of the Polarization of the K β 2 Line of heliumlike V ²¹⁺	299
<i>A.J. Smith, P. Beiersdorfer, K.L. Wong and K.J. Reed</i>	
Relativistic effects on the Polarization of line radiation emitted from He-like and H-like ions following electron-impact excitation	305
<i>K.J. Reed and M.H. Chen</i>	
Measurement of the relative intensity of the Ly- α lines in Fe ²⁵⁺	311
<i>K. L. Wong, P. Beiersdorfer, K.J. Reed and A.L. Osterheld</i>	
Effect of Polarization on the measurements of Electron Impact Excitation Cross-Section of L-shell Fe in an Electron Beam Ion Source	319
<i>H. Chen</i>	
Measurement of the Electron Cyclotron Energy Component of the EBIT II Electron Beam	329
<i>P. Beiersdorfer and M. Slater</i>	
X-Ray Spectropolarimetry studies at the Nevada Terawatt Facility and LLNL EBIT 339 ..	339
<i>A.S. Shlyaptseva, V.L. Kantsyrev, B.S. Bauer, P. Neill, C. Harris, D.A. Fedin, S. Hansen, N. Quart, P. Beiersdorfer, A.G. Petrashen, U.I. Safronova</i>	
Polarimeter, based on one quartz crystal	359
<i>E.O. Baronova and M.M. Stepanenko</i>	
Polarization studies in Fast-Ion Beam Spectroscopy	363
<i>E. Träbert</i>	