

ATOMIC DATA – A BIBLIOGRAPHY

K. BUTLER

Universitätssternwarte München, Scheinerstraße 1, D-W-8000 München 80

Space does not allow for a discussion of methods here. The reader is referred to the reviews or critical evaluations in the relevant sections. The current bibliography is an attempt to update the evaluations/reviews through to June 1992. Note that the Opacity Project provides an enormous amount of LS-coupling radiative data (see the Opacity Workshop reference). There is to be a follow-up project, the IRON project to provide radiative data in intermediate coupling including electric quadrupole and magnetic dipole transitions AND collisional excitation data.

The following abbreviations are used for journals:

AA *Astron. Astrophys.* and **AA_{Suppl}** *Astron. Astrophys. Suppl. Ser.*

ADNDT *At. Data Nucl. Data Tables*

ApJ *Astrophys. J.* and **ApJ_{Suppl}** *Astrophys. J. Suppl. Ser.*

IAU103 *IAU Symposium No. 103*, Ed. Flower, D.R.

JPB *J. Phys. B: Atom. Molec. Phys.*

JPCRD *J. Phys. Chem. Ref. Data*

JQSRT *J. Quant. Spectrosc. Radiat. Transfer*

MNRAS *Mon. Not. R. astr. Soc.*

PRA *Phys. Rev. A*

ZMLD *J. de Phys.*, Vol. 1, Coll. 1, Suppl. JP II, 3, ed. Zeippen, C.J. and Le Dourneuf, M.

Energy Levels and Wavelengths

Review Wiese, W.L., 1991, in *ZMLD*, 287

Review Martin, W.C., 1992, in *Lecture Notes in Physics*, in press

Na ions Martin, W.C. and Zalubas, R., 1981, *JPCRD*, **10**, 153

Mg ions Martin, W.C. and Zalubas, R., 1980, *JPCRD*, **9**, 1

Al ions Martin, W.C. and Zalubas, R., 1979, *JPCRD*, **8**, 817

Si ions Martin, W.C. and Zalubas, R., 1983, *JPCRD*, **12**, 323

P ions Martin, W.C., Zalubas, R. and Musgrove, A., 1985, *JPCRD*, **14**, 751

S ions Martin, W.C., Zalubas, R. and Musgrove, A., 1990, *JPCRD*, **19**, 821

K – Ni Sugar, J. and Corliss, C., 1985, *JPCRD*, **14**, Suppl. 2.

Mg ions Kaufman, V. and Martin, W.C., 1991a, *JPCRD*, **20**, 83

Al ions Kaufman, V. and Martin, W.C., 1991b, *JPCRD*, **20**, 775

Collisional Ionization

- Critical Evaluation** Itikawa, Y., 1992, *ADNDT*, **49**, 209
Critical Evaluation Bell, K.L., Gilbody, H.B., Hughes, J.G., Kingston, A.E., Smith, F.J., 1983, *JPCRD*, **12**, 891.
Critical Evaluation Lennon, M.A., Bell, K.L., Gilbody, H.B., Hughes, J.G., Kingston, A.E., Murray, M.J., Smith, F.J., 1988, *JPCRD*, **17**, 1285
General Arnaud, M. and Rothenflug, R., 1990, *AAsup*, **60**, 425
Excited States Golden, L.B. and Sampson, D.H., 1980, *JPB*, **13**, 2645.
H and He Jones, S., Madison, D.H. and Srivastava, M.K., 1991, *JPB*, **24**, 1899
General Freund, R.S., Wetzel, R.C., Shul, R.J. and Hayes, T.R., 1990, *PRA*, **41**, 3575
Ca II Badnell, N.R., Griffin, D.C. and Pindzola, M.S., 1991, *JPB*, **24**, L275

Line Broadening

- Critical Evaluations** Konjević, N., Dimitrijević, M.S. and Wiese, W.L., 1984, *JPCRD*, **13**, 619 and 649
Review Dimitrijević, M.S. and Sahal-Bréchot, S., 1991, in *ZMLD*, 111
C IV Burke, V.M., 1992, *JPB*, **25**, in press
C IV Schöning, T., 1992, *AA*, in press and *JPB*, submitted
General Seaton, M.J., 1987/8, *JPB*, **20**, 6431 and *JPB*, **21**, 3033
General Dimitrijević, M.S. and Konjević, N., 1987, *AA*, **172**, 345
Neutrals Seaton, M.J., 1989, *JPB*, **22**, 3603
H Seaton, M.J., 1990, *JPB*, **23**, 3255
Shifts Wiese, W.L. and Konjević, N., 1992, *JQSRT*, **47**, 185
He I Dimitrijević, M.S. and Sahal-Bréchot, S., 1990, *AAsup*, **82**, 519
Li I Dimitrijević, M.S. and Sahal-Bréchot, S., 1991, *JQSRT*, **46**, 41
C IV Dimitrijević, M.S., Sahal-Bréchot, S. and Bommier, V., 1991, *AAsup*, **89**, 581
O VI Dimitrijević, M.S. and Sahal-Bréchot, S., 1992, *AAsup*, **93**, 359
Mg I and Mg II Djeniže, S., Srećković, A., Platiša, M., Labat, J., Konjević, R. and Purić, J., 1990, *JQSRT*, **44**, 405
Si III Djeniže, S., Srećković, A., Labat, J., Purić, J. and Platiša, M., 1992, *JPB*, **25**, 785
Si III Bakshi, V., 1990, *AIP Conf. Proc.*, **216**, 71
Si IV Djeniže, S., Srećković, A., Labat, J., Purić, J. and Platiša, M., 1992, *JPB*, **25**, 785
Si IV Dimitrijević, M.S., Sahal-Bréchot, S. and Bommier, V., 1991, *AAsup*, **89**, 591
Na I Dimitrijević, M.S. and Sahal-Bréchot, S., 1990, *JQSRT*, **44**, 421
Ca I Spielfiedel, A., Feautrier, N., Chambaud, G. and Lévy, B., 1991, *JPB*, **24**, 4711

Opacities

- Workshop** Ed. Lynas-Gray, A.E., Mendoza, C. and Zeippen, C.J., 1992, *Rev. Mex. Astro. y Astrofísica*, **23**
Tables Rogers, F.J. and Iglesias, C.A., 1992, *ApJsup*, **79**, 507

Photoionization

- Bibliography** Le Dourneuf, M., 1991, in *ZMLD*, 227
H ions Storey, P.J. and Hummer, D.G., 1991, *Comput. Phys. Commun.*, **66**, 129
Heavy systems Kelly, H.P., 1990, *AIP Conf. Proc.*, **215**, 292
Positive Ions Manson, S.T., 1990, *AIP Conf. Proc.*, **205**, 189
Li I and Li II Hollauer, E. and Nascimento, M.A.C., 1990, *PRA*, **42**, 6608
C seq Luo, D. and Pradhan, A.K., 1989, *JPB*, **22**, 3377
N I Bell, K.L., Berrington, K.A. and Ramsbottom, C.A., 1991, *JPB*, **24**, 1209
N I Bell, K.L. and Berrington, K.A., 1991, *JPB*, **24**, 933
O I Butler, K. and Zeippen, C.J., 1990, *AA*, **234**, 569
Al VII Baliyan, K.S. and Kingston, A.E., 1991, *JPB*, **24**, 4743

Recombination

- Review** Pindzola, M.S., Badnell, N.R. and Griffin, D.C., 1990, *AIP Conf. Proc.*, **215**, 659
General fits Péquignot, D., Petitjean, P. and Boisson, C., 1991, *AA*, 251, 680
General Smits, D.P., 1991, *MNRAS*, **248**, 193
Scaling McLaughlin, D.J. and Hahn, Y., 1991, *PRA*, **43**, 1313
C&O ions Griffin, D.C., 1989, *Phys. Scr.*, **T28**, 17
C&O ions Hahn, Y., 1989, *Phys. Scr.*, **T28**, 25
C&O ions Badnell, N.R., 1989, *Phys. Scr.*, **T28**, 33
H Seq Pindzola, M.S. and Badnell, N.R., 1990, *PRA*, **42**, 282
H Seq-with dust Hummer, D.G. and Storey, P.J., 1992, *MNRAS*, **254**, 277
He, Li, Be and Ne Seq Romanik, C.J., 1988, *ApJ*, **330**, 1022
Li Seq Dittner, P.F., Dutz, S., Miller, P.D. and Pepmiller, P.L., 1987, *PRA*, **35**, 3668
Be Seq McLaughlin, D.J., LaGattuta, K.J. and Hahn, Y., 1987, *JQSRT*, **37**, 47
Be Seq Badnell, N.R., 1987, *JPB*, **20**, 2081
Be and B Seq Badnell, N.R., Pindzola, M.S., Andersen, L.H., Bolko, J. and Schmidt, H.T., 1991, *JPB*, **24**, 4441
B III Pradhan, A.K., 1984, *PRA*, **30**, 2141
B III Griffin, D.C., Pindzola, M.S. and Bottcher, C., 1985, *PRA*, **31**, 568
B III Geltman, S., 1985, *JPB*, **18**, 1425
Ar ions Moussa, A.H. and Hahn, Y., 1990, *JQSRT*, **43**, 45
C I Escalante, V. and Victor, C.A., 1990, *ApJsup*, **73**, 513
C IV Pradhan, A.K., 1984, *PRA*, **30**, 2141
C IV Griffin, D.C., Pindzola, M.S. and Bottcher, C., 1985, *PRA*, **31**, 568
C IV Geltman, S., 1985, *JPB*, **18**, 1425
C V Hahn, Y. and Bellantone, R., 1989, *PRA*, **40**, 6117
C V and C VI Bellantone, R. and Hahn, Y., 1989, *PRA*, **40**, 6913
C V Badnell, N.R., Pindzola, M.S. and Griffin, D.C., 1990, *PRA*, **41**, 2422
N II Escalante, V. and Victor, C.A., 1990, *ApJsup*, **73**, 513
N III Nasser, I. and Hahn, Y., 1989, *PRA*, **39**, 401
N V and F VII Andersen, L.H., Pan, G.-Y., Schmidt, H.T., Pindzola, M.S. and Badnell, N.R., 1992, *PRA*, **45**, 6332

- O I** Chung Sunggi and Lin, C.C., 1991, *PRA*, **43**, 3433
O II Terao, M., Bell, K.L., Burke, P.G. and Hibbert, A., 1991, *JPB*, **24**, L321
O III Roszman, L.J., 1989, *Phys. Scr.*, **T28**, 36
O IV Nasser, I. and Hahn, Y., 1989, *PRA*, **39**, 401
O IV Janjusevic, M. and Hahn, Y., 1989, *PRA*, **40**, 5641
O VI Pradhan, A.K., 1984, *PRA*, **30**, 2141
O VI Griffin, D.C., Pindzola, M.S. and Bottcher, C., 1985, *PRA*, **31**, 568
O VI Roszman, L.J., 1989, *Phys. Scr.*, **T28**, 36
O VII Bellantone, R. and Hahn, Y., 1989, *PRA*, **40**, 6913
O VII Badnell, N.R., Pindzola, M.S. and Griffin, D.C., 1990, *PRA*, **41**, 2422
O VIII Bellantone, R. and Hahn, Y., 1989, *PRA*, **40**, 6913
F V Nasser, I. and Hahn, Y., 1989, *PRA*, **39**, 401
Ne Seq Dalhed, S., Nilsen, J. and Hagelstein, P., 1986, *PRA*, **33**, 264
Ne Seq Chen, M.H., 1986, *PRA*, **34**, 1073
Ne ions Nussbaumer, H. and Storey, P.J., 1987, *AAsup*, **69**, 123
Mg Seq Dube, M.P., Rasoanaivo, R. and Hahn, Y., 1985, *JQSRT*, **33**, 13
Mg Seq Dube, M.P. and LaGattuta, K.J., 1987, *JQSRT*, **38**, 311
Mg II Pradhan, A.K., 1984, *PRA*, **30**, 2141
Mg II Geltman, S., 1985, *JPB*, **18**, 1425
Mg, Al and Si ions Nussbaumer, H. and Storey, P.J., 1986, *AAsup*, **64**, 545
Cl VII Pradhan, A.K., 1984, *PRA*, **30**, 2141
Ca II Geltman, S., 1985, *JPB*, **18**, 1425

Charge Exchange

- Review** Dalgarno, A., 1985, *Nucl. Instrum. & Methods. Phys. Res. Sect. B*, **B9**, 662
General Butler, S.E. and Dalgarno, A., 1980, *ApJ*, **241**, 838 and the program **LZRATE**
 Bienstock, S., 1983, *Comput. Phys. Commun.*, **29**, 333
H I Jouin, H. and Harel, C., 1991, *JPB*, **24**, 3219
H I Hoekstra, H.R., de Heer, F.J. and Morgenstern, R., 1991, *JPB*, **24**, 4025
H I and He II Jackson, D., Slim, H.A., Bransden, B.H. and Flower, D.R., 1992, *JPB*, **25**, L127
H I Errea, L.F., López, A., Méndez, L. and Riera, S., 1992, *JPB*, **25**, 811
He I Valiron, P., Gayet, R., McCarroll, R., Masnou-Seeuws, F. and Philippe, M., 1979, *JPB*, **12**, 53
He I Slim, H.A., Heck, E.L., Bransden, B.H. and Flower, D.R., 1991, *JPB*, **24**, 1683
C II, C III and C IV Butler, S.E., Heil, T.G. and Dalgarno, A., 1980, *ApJ*, **241**, 442
C IV Watson, W.D. and Christensen, R.B., 1979, *ApJ*, **231**, 627
C IV Errea, L.F., Herrero, B., Mendez, L., Mó, O. and Riera, A., 1991, *JPB*, **24**, 4049
C IV Opradolce, L., Benmeuraiem, L., McCarroll, R. and Piacentini, R.D., 1988, *JPB*, **21**, 503
C V Gargaud, M., McCarroll, R. and Valiron, P., 1987, *JPB*, **20**, 1555
N III and N IV Butler, S.E., Heil, T.G. and Dalgarno, A., 1980, *ApJ*, **241**, 442
N IV Watson, W.D. and Christensen, R.B., 1979, *ApJ*, **231**, 627
N IV and N VI Gargaud, M. and McCarroll, R., 1985, *JPB*, **18**, 463
O III and O IV Butler, S.E., Heil, T.G. and Dalgarno, A., 1980, *ApJ*, **241**, 442

- O III** Bacchus-Montabonel, M.C., Courbin, C. and McCarroll, R., 1991, *JPB*, **24**, 4409
O III Gargaud, M., McCarroll, R. and Opradolce, L., 1989, *AA*, **208**, 251
O VI Andersson, L.R., Gargaud, M. and McCarroll, R., 1991, *JPB*, **24**, 2073
Ne III and Ne IV Butler, S.E., Heil, T.G. and Dalgarno, A., 1980, *ApJ*, **241**, 442
Ne III Forster, H.C., Cooper, I.L., Dickinson, A.S., Flower, D.R. and Mendez, L., 1991, *JPB*, **24**, 3433
Al III Gargaud, M., McCarroll, R., Lennon, M.A., Wilson, S.M., McCullough, R.W. and Gilbody, H.B., 1990, *JPB*, **23**, 505
Si II Gargaud, M., McCarroll, R. and Valiron, P., 1982, *AA*, **106**, 197
Si III McCarroll, R. and Valiron, P., 1976, *AA*, **53**, 83
Si V Opradolce, L., McCarroll, R. and Valiron, P., 1985, *AA*, **148**, 229
Ar VII Opradolce, L., Valiron, P. and McCarroll, R., 1983, *JPB*, **16**, 2017

Transition Probabilities

- MBPT** Gaigalas *et al.*, This Meeting
Bibliography Biémont, E. and Zeippen, C.J., 1991, in *ZMLD*, 209
Review Wiese, W.L., 1991, in *ZMLD*, 287
Review Martin, W.C., 1992, in *Lecture Notes in Physics*, in press
M1–Tables Kaufman, V. and Sugar, J., 1986, *JPCRD*, **20**, 321
Critical Evaluation Mendoza, C., 1983, in *IAU103*, 143
Critical Evaluation Martin, W.C., Fuhr, J.R. and Wiese, W.L., 1988, *JPCRD*, **16**, Suppl. 3 and Fuhr, J.R., Martin, W.C. and Wiese, W.L., 1988, *JPCRD*, **17**, Suppl. 4
Critical Evaluation Fuhr, J.R. and Wiese, W.L., 1990, in *CRC Handbook of Chemistry and Physics, 71st Edition*, Ed. Lide, D.R.
Critical Evaluation Morton, D.C., 1991, *ApJsup*, **77**, 119
Iron Group Kurucz, R.L., 1992, in *Rev. Mex. Astro. y Astrofísica*, **23**, Ed. Lynas-Gray, A.E., Mendoza, C. and Zeippen, C.J.
H ions Storey, P.J. and Hummer, D.G., 1991, *Comput. Phys. Commun.*, **66**, 129
Be Seq Trabert, E., 1990, *Phys. Scr.*, **41**, 675
Be Seq Eissner, W.B. and Tully, J., 1992, *AA*, **253**, 625
Be I Chang, T.N., 1990, *PRA*, **41**, 4922
Be I Chang, T.N. and Tang, X., 1990, *JQSRT*, **43**, 45
C seq Luo, D. and Pradhan, A.K., 1989, *JPB*, **22**, 3377
C I Goldbach, C., Martin, M. and Nollez, G., 1989, *AA*, **221**, 155
C III, N IV and O V Allard, N., Artru, M.-C., Lanz, T. and Le Dourneuf, M., 1990, *AAsup*, **84**, 563
N Seq Becker, S.R., Butler, K. and Zeippen, C.J., 1989, *AA*, **221**, 375
N Seq Curtis, L.J., Rudzikas, Z.B. and Ellis, D.G., 1991, *PRA*, **44**, 776
N I Vaeck, N. and Hansen, J.E., 1991, *JPB*, **24**, L469
N I Bell, K.L. and Berrington, K.A., 1991, *JPB*, **24**, 933
N I Zhu, Q., Bridges, J.M., Hahn, T. and Wiese, W.L., 1989, *PRA*, **40**, 3721
N I Hibbert, A., Biémont, E., Godefroid, M. and Vaeck, N., 1990, *AAsup*, **88**, 505
N II Bell, K.L., Ramsbottom, C.A. and Hibbert, A., 1992, *JPB*, **25**, 1735
N IV Chang, T.N. and Mu Yi, 1990, *JQSRT*, **44**, 413
N IV Laughlin, C., 1990, *Phys. Scr.*, **42**, 551

- N IV** Chang, T.N., *JQSRT*, **44**, 413
- O Seq** Chen, M.H., 1989, *PRA*, **40**, 4330
- O I** Bell, K.L., Hibbert, A., McLaughlin, B.M. and Higgins, K., 1991, *JPB*, **24**, 2665
- O I** Hibbert, A., Biémont, E., Godefroid, M. and Vaeck, N., 1991, *JPB*, **24**, 3943
- O I** Biémont, E., Hibbert, A., Godefroid, M., Vaeck, N. and Fawcett, B.C., 1991, *ApJ*, **375**, 818
- O I** Bell, K.L. and Hibbert, A., 1990, *JPB*, **23**, 2673
- O I** Tayal, S.S. and Henry, R.J.W., 1989, *PRA*, **39**, 4531
- O III** Aggarwal, K.M. and Hibbert, A., 1991, *JPB*, **24**, 4685
- O III** Aggarwal, K.M. and Hibbert, A., 1991, *JPB*, **24**, 3445
- Ne II** Burshtein, M.L. and Vučnović, V., 1991, *AA*, **247**, 252
- Mg Seq** Trabert, E., 1990, *Phys. Scr.*, **41**, 675
- Mg Seq** Chang, T.N. and Rong-qi Wang, 1991, *PRA*, **44**, 80
- Mg I** Chang, T.N. and Tang, X., 1990, *JQSRT*, **43**, 45
- Mg I** Beck, D.R. and Ziyong Cai, 1989, *Phys Lett. A*, **142**, 378
- Mg I** Chang, T.N., 1990, *PRA*, **41**, 4922
- Mg IV** Mohan, M. and Baluja, K.L., 1989, *Z. Phys. D: At. Mol. Clusters*, **14**, 135
- Mg IV** Mohan, M. and Hibbert, A., 1991, *Phys. Scr.*, **44**, 158
- Al Seq** Hjorth-Jensen, M., Aashamar, K., 1990, *Phys. Scr.*, **42**, 309
- Al I** Davidson, M.D., Volten, H. and Dönszelmann, A., 1990, *AA*, **238**, 452
- Al II** Serrão, J.M.P., 1990, *JQSRT*, **45**, 121
- Al V – VII** Biémont, E., 1991, *At. Dat. Nuc. Tab.*, **48**, 1
- Si III** Serrão, J.M.P., 1990, *JQSRT*, **45**, 349
- Si VI** Mohan, M. and Le Dourneuf, M., 1990, *PRA*, **41**, 2862
- P Seq** Curtis, L.J., Rudzikas, Z.B. and Ellis, D.G., 1991, *PRA*, **44**, 776
- S I** Doering, J.P., 1990, *J. Geophys. Res.*, **95**, 21313
- S I** Delalic, Z., Erman, P. and Kallne, E., 1990, *Phys. Scr.*, **42**, 540
- S VII** Hibbert, A., Mohan, M. and Le Dourneuf, M., 1992, *JPB*, **25**, 1107
- S VIII** Mohan, M. and Hibbert, A., 1991, *Phys. Scr.*, **44**, 158
- Cl I** Delalic, Z., Erman, P., Kallne, E. and Zastrow, K.-D., 1990, *JPB*, **23**, 2727
- Cl I** Ojha, P.C. and Hibbert, A., 1990, *Phys. Scr.*, **42**, 424
- Cl VIII** Hibbert, A., Mohan, M. and Le Dourneuf, M., 1992, *JPB*, **25**, 1107
- Ar II** Das, M.B. and Bhattacharya, R., 1991, *JPB*, **24**, 423
- Ar II** Lüdtke, T. and Helbig, V., 1990, *JQSRT*, **44**, 261
- Ar IX** Hibbert, A., Mohan, M. and Le Dourneuf, M., 1992, *JPB*, **25**, 1107
- K seq** Zilitis, V.A., 1989, *Opt. Spectrosc.*, **67**, 595
- K seq** Zeippen, C.J., 1990, *AA*, **229**, 248
- Ca I** Vaeck, N., Godefroid, M. and Hansen, J.E., 1991, *JPB*, **24**, 361
- Ca II** Guet, C. and Johnson, W.R., 1991, *PRA*, **44**, 1531
- Ti II** Savanov, I.S., Huovelin, J. and Tuominen, I., 1990, *AA sup*, **86**, 531
- Fe I** Bard, A., Kock, A. and Kock, M., 1991, *AA*, **248**, 315
- Fe I** O'Brian, T.R., Wickliffe, M.E., Lawler, J.E., Whaling, W. and Brault, J.W., 1991, *J. Opt. Soc. Am. B*, **8**, 1165
- Fe I – IV** Sawey, P.M.J. and Berrington, K.A., 1992, *JPB*, **25**, 1451
- Fe II** Heise, C. and Kock, M., 1990, *AA*, **230**, 244
- Fe II** Fawcett, B.C., 1987, *ADNDT*, **37**, 333
- Fe III – VI** Fawcett, B.C., 1989, *ADNDT*, **41**, 181

Collisional Excitation

- Critical Evaluation** Itikawa, Y., 1992, *ADNDT*, **49**, 209
- Critical Evaluation** Pradhan, A.K. and Gallagher, J.W., 1992, *ADNDT*, in press and Gallagher, J.W. and Pradhan, A.K., 1985, *JILA Report No. 30*
- Critical Evaluation** Mendoza, C., 1983, in *IAU103*, 143
- General** Percival, I.C. and Richards, D., 1977, *JPB*, **8**, 1497
- van Regemorter?** Sampson, D.H. and Zhang, H.L., 1992, *PRA*, **45**, 1556
- H seq** Clark, R.E.H., 1990, *ApJ*, **354**, 382
- H I** Chang, E.S., Avrett, E.H. and Loeser, R., 1991, *AA*, **247**, 580
- H I** King, G.C., Trajnar, S. and McConkey, J.W., 1989, *Comments At. Mol. Phys.*, **23**, 229
- H I** Aggarwal, K.M., Berrington, K.A., Burke, P.G., Kingston, A.E. and Pathak, A., 1991, *JPB*, **24**, 1411
- H I** Fon, W.C., Aggarwal, K.M. and Ratnavelu, K., 1992, *JPB*, **25**, 2625
- He I** Fon, W.C., Berrington, K.A. and Kingston, A.E., 1991, *JPB*, **24**, 2161
- He I** Cartwright, D.C., Csanak, G., Trajmar, S. and Register, D.F., 1992, *PRA*, **45**, 1602
- He I** Sawey, P.M.J., Berrington, K.A., Burke, P.G. and Kingston, A.E., 1990, *JPB*, **23**, 4321
- He I** Scholz, T.T., Walters, H.R.J., Burke, P.G. and Scott, M.P., 1990, *MNRAS*, **242**, 692
- He I** Nakazaki, S., Berrington, K.A., Sakimoto, K. and Itikawa, Y., 1991, *JPB*, **24**, L27
- He II** Aggarwal, K.M., Berrington, K.A., Kingston, A.E. and Pathak, A., 1991, *JPB*, **24**, 1757
- He II** Aggarwal, K.M., Callaway, J., Kingston, A.E. and Unnikrishnan, K., 1992, *ApJsup*, **80**, 473
- Li Seq** Zhang, H.L., Sampson, D.H. and Fontes, C.J., 1990, *ADNDT*, **44**, 31
- Li I** Gien, T.T., 1987, *JPB*, **20**, 1337
- Li I** Tayal, S.S. and Tripathi, A.N., 1984, *Can. J. Phys.*, **62**, 198
- Li II** Berrington, K.A. and Nakazaki, S., 1991, *JPB*, **24**, 1411
- Be I** Fon, W.C., Berrington, K.A., Burke, P.G., Burke, V.M. and Hibbert, A., 1992, *JPB*, **25**, 507
- Be II** Lengyel, V.I., Navrotsky, V.T. and Sabad, E.P., 1990, *JPB*, **23**, 2847
- B I** Nakazaki, S. and Berrington, K.A., 1991, *JPB*, **24**, 4263
- C I** Doering, J.P. and Dagdigian, P.J., 1989, *Chem. Phys. Lett.*, **154**, 234
- C I** Johnson, C.T., Burke, P.G. and Kingston, A.E., 1987, *JPB*, **20**, 2553
- C II** Luo, D. and Pradhan, A.K., 1990, *PRA*, **41**, 165 and Blum, R.D. and Pradhan, A.K., 1992, *ApJsup*, **80**, 425
- C IV** Burke, V.M., 1992, *JPB*, **25**, in press
- C VI** Aggarwal, K.M. and Kingston, A.E., 1991, *JPB*, **24**, 4583
- N I** Doering, J.P. and Goembel, L., 1991, *J. Geophys. Res.*, **96**, 16021
- N III** Luo, D. and Pradhan, A.K., 1990, *PRA*, **41**, 165 and Blum, R.D. and Pradhan, A.K., 1992, *ApJsup*, **80**, 425
- O I** Williams, J.F. and Allen, L.J., 1989, *JPB*, **22**, 3529
- O I** Tayal, S.S. and Henry, R.J.W., 1989, *PRA*, **39**, 4531
- O I** Doering, J.P. and Gulcicek, E.E., 1989, *J. Geophys. Res.*, **94**, 2733
- O I** Laher, R.R. and Gilmore, F.R., 1990, *JPCRD*, **19**, 227
- O I - Review** Itikawa, Y. and Ichimura, A., 1990, *JPCRD*, **19**, 637

- O I** Mantas, G.P. and Carlson, H.C., 1991, *Geophys. Res. Lett.*, **18**, 159
- O I** Tayal, S.S., 1992, *JPB*, **25**, 2639
- O III** Aggarwal, K.M. and Hibbert, A., 1991, *JPB*, **24**, 3445
- O IV** Luo, D. and Pradhan, A.K., 1990, *PRA*, **41**, 165 and Blum, R.D. and Pradhan, A.K., 1992, *ApJsup*, **80**, 425
- O V** Kato, T., Lang, J. and Berrington, K.A., 1990, *ADNDT*, **44**, 133
- F IV** Conlon, E.S., Keenan, F.P. and Aggarwal, K.M., 1992, *Phys. Scr.*, **45**, 309
- Na I** Ganas, P.S., 1985, *J. Appl. Phys.*, **57**, 154
- Na I** Msezane, A.Z., 1988, *PRA*, **37**, 1787
- Na I** Msezane, A.Z., Handy, C.R., Mantica, G. and Lee, J., 1988, *PRA*, **38**, 1604
- Na I** Bielschowsky, C.E., Lucas, C.A. de Souza, G.G.B., and Noqueria, J.C., 1991, *PRA*, **43**, 5975
- Na VI** Conlon, E.S., Keenan, F.P. and Aggarwal, K.M., 1992, *Phys. Scr.*, **45**, 309
- Ne Seq** Chen, M.H. and Reed, K.J., 1989, *PRA*, **40**, 2292
- Ne I** Bubelev, V.E. and Grum-Grzhimailo, A.N., 1990, *Opt. Spectrosc.*, **69**, 178
- Ne I** Pilsof, N. and Blagoev, A., 1988, *JPB*, **21**, 639
- Ne I** Taylor, K.T., Clark, C.W. and Fon, W.C., 1985, *JPB*, **18**, 2967
- Ne V** Lennon, D.J. and Burke, V.M., 1991, *MNRAS*, **251**, 628
- Ne VI** Hayes, M.A., 1992, *JPB*, **25**, 2649
- Mg I** Clark, R.E.H., Csanak, G. and Abdallah, J., Jr., 1991, *PRA*, **44**, 2874
- Mg I** Meneses, G.D., Pagan, C.B. and Machado, L.E., 1990, *PRA*, **41**, 4740
- Mg I** Brunger, M.J., Riley, J.L., Scholten, R.E. and Teubner, P.J.O., 1988, *JPB*, **21**, 1639
- Mg I** Brunger, M.J., Riley, J.L., Scholten, R.E. and Teubner, P.J.O., 1989, *JPB*, **22**, 1431
- Mg I** McCarthy, I.E., Ratnavelu, K. and Zhou, Y., 1989, *JPB*, **22**, 2597
- Mg II** Lengyel, V.I., Navrotsky, V.T. and Sabad, E.P., 1990, *JPB*, **23**, 2847
- Mg IV** Mohan, M. and Baluja, K.L., 1989, *Z. Phys. D: At. Mol. Clusters*, **14**, 135
- Mg VII** Burgess, A., Mason, H.E. and Tully, J.A., 1991, *ApJ*, **376**, 803
- Al VIII** Conlon, E.S., Keenan, F.P. and Aggarwal, K.M., 1992, *Phys. Scr.*, **45**, 309
- Si II** Dufton, P. and Kingston, A.E., 1990, *MNRAS*, **248**, 827
- Si III** Dufton, P. and Kingston, A.E., 1989, *MNRAS*, **241**, 209
- Si IV** Whalin, E.K., Thompson, J.S., Dunn, G.H., Phaneuf, R.A., Gregory, D.C. and Smith, A.C.H., 1991, *Phys. Rev. Lett.*, **66**, 157
- Si VI** Mohan, M. and Le Dourneuf, M., 1990, *PRA*, **41**, 2862 and *AA*, **227**, 285
- S I** Ganas, P.S., 1990, *J. Chem. Phys.*, **92**, 2374
- S II** Ho, Y.K. and Henry, R.J.W., 1990, *ApJ*, **351**, 701
- S VII** Mohan, M., Hibbert, A., Berrington, K.A., and Burke, P.G., *JPB*, **23**, 989
- Ar I** Bubelev, V.E. and Grum-Grzhimailo, A.N., 1990, *Opt. Spectrosc.*, **69**, 178 and 1991, *JPB*, **24**, 2183
- Ar I** Subramanian, K.P. and Kumar, V., 1987, *JPB*, **20**, 5505
- Ar I** Bielschowsky, C.E., de Souza, G.G.B., Lucas, C.A. and Boechat-Roberty, H.M., 1988, *PRA*, **38**, 3405
- Ar III** Johnson, C.T. and Kingston, A.E., 1990, *JPB*, **23**, 3393
- Cl I** Ganas, P.S., 1988, *J. Appl. Phys.*, **63**, 277
- Ca II** Zatsarinny, O.I., Lendel, V.I. and Masalovich, E.A., 1989, *Opt. Spectrosc.*, **67**, 10
- Fe III** Berrington, K.A., Zeippen, C.J., Le Dourneuf, M., Eissner, W.B. and Burke, P.G., 1991, *JPB*, **24**, 3467
- Fe VII** Keenan, P. and Norrington, P.H., 1990, *ApJ*, **368**, 486