

Index to Volume 39

- Alurkar, S. K.—
 See Slee, O. B. 103
- Alurkar, S. K., Slee, O. B., and Bobra, A. D.—
 Scattering of pulsar radiation and electron
 density turbulence in the interstellar
 medium 433
- Amos, K.—
 See Di Marzio, F. 203
- Andrew, A. L.—
 See Fiedler, R. A. S. 99
- Assafiri, Y. I.—
 See Eden, J. A. 871
- Atomic and molecular physics*
- Analysis and understanding of ionisation
 phenomena: *ab initio* molecular
 wavefunctions 731
- Application of Blanc's law to the
 determination of the diffusion coefficients
 for thermal electrons in gases 237
- Auger electron-ion coincidence studies to
 determine the pathways in soft X-ray
 induced fragmentation of isolated
 molecules 633
- Current developments in the relativistic
 quantum mechanics of atoms and
 molecules 649
- Current status and future directions of atomic
 studies by electron spectrometry with
 synchrotron radiation 601
- Deexcitation electron spectroscopy: a probe
 for the localisation of valence wavefunctions
 in free and adsorbed molecules 853
- Dependence of measured drift velocity on
 shutter open time in the four gauge time-of-
 flight method 225
- Determination of the diffusion coefficient for
 thermal electrons in water vapour by the use
 of a modified Blanc's law procedure 249
- Dynamics of single- and multi-photon
 ionisation processes in molecules 761
- Electron momentum spectroscopy 587
- Excitation of swift heavy ions in foil targets.
 II. X-radiation from Br 15
- Excited-state quenching phenomena in weakly
 ionised nitrogen 479
- Full CI extrapolation: application to H₂O with
 a double zeta basis set 711
- Inclusion of relativistic effects in electronic
 structure calculations 667
- Mobility of K⁺ ions in helium and argon 25
- Multivacancy effects in atomic and molecular
 spectra 845
- Numerical simulation of positron diffusion in
 the heavy noble gases Ar, Kr and Xe 497
- Numerical variational method for calculating
 accurate vibrational energy separations of
 small molecules and their ions 749
- Photoelectron spectroscopy using pulsed free
 jets 789
- Photoionisation and Auger electron emission
 from the lithium molecule: calculations
 using multicentre numerical continuum
 functions 809
- Photoionisation cross sections of chlorine
 atoms and molecules at 584 Å 779
- Photoionisation of unusual states of matter:
 atomic ions, excited states and open-shell
 atoms 799
- Polarisation and angular correlations of
 excited P states of helium and hydrogen
 621
- Recent developments in atomic lifetime
 determinations 829
- Recent progress in a Green's function method
 for the calculation of ionisation spectra
 687
- Relativistic effects in the photoionisation of
 heavy atoms: Cooper minima 679
- Satellite intensities in photoelectron
 spectroscopy and electron momentum
 spectroscopy—synchrotron radiation
 studies of argon 3s and xenon 5s
 photoionisation ($h\nu = 60\text{--}130\text{ eV}$) 565
- X-ray emission spectra of some carbon-
 containing molecules 717
- Awin, A. M.—
 Enhancement of parity violation for
 overlapping nuclear resonances 217
- Baggaley, W. J.—
 Low temperate zone sporadic-E: seasonal and
 diurnal variations at Rarotonga 401
- Bagus, P. S., Nelin, C. J., and Hermann, K.—
 The analysis and understanding of ionisation
 phenomena: *ab initio* molecular
 wavefunctions 731
- Ball, L. T., and Hewitt, R. G.—
 Finite Larmor radius modifications to the
 magnetoionic wave modes and their effects
 on electron cyclotron maser emission 407
- Batchelor, R. A.—
 See Macfarlane, J. C. 379
- Berge, L., and Petris, L.—
 A phenomenological nucleon-nucleon
 interaction 461
- Bhattacharya, S. K.—
 See Manson, S. T. 799
- Bobra, A. D.—
 See Alurkar, S. K. 433
 Slee, O. B. 103
- Boris, J. P.—
 See DeVore, C. R. 115

- Brion, C. E., and Tan, K. H.—
Satellite intensities in photoelectron spectroscopy and electron momentum spectroscopy—synchrotron radiation studies of argon 3s and xenon 5s photoionisation ($h\nu = 60\text{--}130\text{ eV}$) 565
- Burman, R. R.—
Relativistic electron injection into axisymmetric pulsar magnetospheres 421
- Burton, P. G.—
See Doherty, G. 749
Gray, P. D. 711
- Butselaar, R. J.—
See van der Meer, W. J. 779
- Carnovale, F., Peel, J. B., and Rothwell, R. G.—
Photoelectron spectroscopy using pulsed free jets 789
- Carr, R.—
See Eberhardt, W. 633
- Cassidy, R. A., and Elford, M. T.—
The mobility of K^+ ions in helium and argon 25
- Cederbaum, L. S.—
See von Niessen, W. 687
- Cheetham, A. D., Hamberger, S. M., How, J. A., Kuwahara, H., Morton, A. H., and Sharp, L. E.—
The LT-4 tokamak. II. MHD activity 35
- Chen, C. T.—
See Eberhardt, W. 853
- Christie, A. L.—
See Kaiser, A. B. 909
- Christos, G. A.—
Alternative scheme of spontaneous chiral symmetry breaking 347
- Ciampa, D.—
See Clay, R. W. 93
- Clark, A. G., and Tovey, S. N.—
Experimental aspects of the electroweak gauge theory 117
- Classical areas of phenomenology*
Intensity correlation functions for 'thermalised' TEM_{n0} laser beams 505
Kirkwood theory of shear viscosity in a simple dense fluid 881
- Clay, R. W., and Ciampa, D.—
Fast timing of air shower fronts 93
- Collings, A. F., and Evans, D. J.—
Kirkwood theory of shear viscosity in a simple dense fluid 881
- Collins, R. E.—
See Schmid, R. 919
- Condensed matter: electronic properties, etc.*
Conduction electron scattering in alloys 529
Electronic structure of the principal uranium centre in alkali fluorides 555
Investigation of the interaction of electrons and lattice vibrations using glassy metal thermopower 909
Phonon spectrum of ternary alloys 547
- Condensed matter: structure, etc.*
Calculation of the room temperature elastic constants of caesium thiocyanate 309
Experimental determination of the imaging properties of a 200 kV electron microscope 71
- Cross-disciplinary physics*
Effect of the flow distribution on the thermal efficiency of a solar collector 945
Experimental study of noise temperature and conversion loss of SIS junction mixers 379
Heat transport in liquid filled tubes 919
- de Lange, C. A.—
See van der Meer, W. J. 779
- Delbourgo, R., Hart, W., and Kenny, B. G.—
Dependence of the universal constants on the nature of the maximum of the mapping function 189
- Deshmukh, P. C., Tambe, B. R., and Manson, S. T.—
Relativistic effects in the photoionisation of heavy atoms: Cooper minima 679
- Deslattes, R. D.—
Multivacancy effects in atomic and molecular spectra 845
- DeVore, C. R., Sheeley, N. R., Jr, Boris, J. P., Young, T. R., Jr, and Harvey, K. L.—
Corrigendum to: Numerical simulations of large-scale solar magnetic fields 115
- Di Marzio, F., and Amos, K.—
An analytic distorted wave approximation for electropion and photopion production on ^{12}C near threshold 203
- Dimmler, G.—
See Schoenborn, B. P. 329
- Dixit, S. N.—
See McKoy, V. 761
- Doherty, G., Hamilton, M. J., Burton, P. G., and von Nagy-Felsobuki, E. I.—
A numerical variational method for calculating accurate vibrational energy separations of small molecules and their ions 749

- Drumm, P. V., Hebbard, D. F., Ophel, T. R., Nurzynski, J., Kondō, Y., Robson, B. A., and Smith, R.—
Excitation function for $^{16}\text{O} + ^{24}\text{Mg}$ elastic scattering at $\theta_{\text{c.m.}} = 90^\circ$ 369
- Dubs, R. L.—
See McKoy, V. 761
- Dyall, K. G.—
Inclusion of relativistic effects in electronic structure calculations 667
- Eberhardt, W., Plummer, E. W., Chen, C. T., and Ford, W. K.—
Deexcitation electron spectroscopy: a probe for the localisation of valence wavefunctions in free and adsorbed molecules 853
- Eberhardt, W., Plummer, E. W., Lyo, I. W., Reininger, R., Carr, R., Ford, W. K., and Sondericker, D.—
Auger electron-ion coincidence studies to determine the pathways in soft X-ray induced fragmentation of isolated molecules 633
- Eckhardt, B., Louw, J. A., and Steeb, W.-H.—
Is there a connection between local and global (in-)stability? 331
- Eden, J. A., and Assafiri, Y. I.—
Particle-hole description of dipole states in ^{17}O 871
- Elementary particles and fields*
Alternative scheme of spontaneous chiral symmetry breaking 347
Experimental aspects of the electroweak gauge theory 117
Parity violation from SUSY vertex corrections in deep inelastic scattering 449
- Elford, M. T.—
See Cassidy, R. A. 25
Ernest, A. 479
Williams, O. M. 225
- Ernest, A., Haydon, S. C., and Elford, M. T.—
Excited-state quenching phenomena in weakly ionised nitrogen 479
- Evans, D. J.—
See Collings, A. F. 881
- Fiedler, R. A. S., and Andrew, A. L.—
Finite element calculations for non-radial oscillations of stars 99
- Fluids, plasmas and electric discharges*
Dielectric tensor of weakly relativistic electron distributions separable in momentum and pitch angle 57
- EXAFS spectroscopy by continuum soft X-ray emission from a short pulse laser-produced plasma 253
- Four-wave processes involving two low frequency waves 891
- Influence of the spatial harmonics on the rotating magnetic field current drive 513
- Ionization growth between hyperboloidal needle and plane electrode under r.f. electric fields in N_2 .
I. Image intensifier observations and the influence of space charge accumulations 271
II. Spectroscopic investigations 293
The LT-4 tokamak. II. MHD activity 35
- Ford, W. K.—
See Eberhardt, W. 633, 853
- Francey, J. L. A.—
See O'Keefe, M. J. 945
- Gallagher, B. L.—
See Kaiser, A. B. 909
- General physics*
Connection between local and global (in-)stability? 331
Dependence of the universal constants on the nature of the maximum of the mapping function 189
Large numbers hypothesis and a relativistic theory of gravitation 339
- Geophysics, astronomy and astrophysics*
Comptonisation of radiation below the cyclotron frequency in a strong magnetic field 961
Fast timing of air shower fronts 93
Finite element calculations for non-radial oscillations of stars 99
Finite Larmor radius modifications to the magnetoionic wave modes and their effects on electron cyclotron maser emission 407
Flux densities, spectra and variability of pulsars at metre wavelengths 103
Interpretation of backscattered HF radio waves from the sea 395
Low temperate zone sporadic-E: seasonal and diurnal variations at Rarotonga 401
Relativistic electron injection into axisymmetric pulsar magnetospheres 421
Scattering of pulsar radiation and electron density turbulence in the interstellar medium 433
- Glanvill, S. R., Moodie, A. F., Whitfield, H. J., and Wilson, I. J.—
Experimental determination of the imaging properties of a 200 kV electron microscope 71

- Grant, I. P.—
Current developments in the relativistic quantum mechanics of atoms and molecules 649
- Gray, P. D., and Burton, P. G.—
Full CI extrapolation: application to H₂O with a double zeta basis set 711
- Grover, P. S.—
See Singh, V. 497
- Hamberger, S. H.—
See Cheetham, A. D. 35
- Hamilton, M. J.—
See Doherty, G. 749
- Hannaford, P., and Lowe, R. M.—
Some recent developments in atomic lifetime determinations 829
- Hart, W.—
See Delbourgo, R. 189
- Harvey, K. L.—
See DeVore, C. R. 115
- Hay, H. J., Pender, L. F., and Treacy, P. B.—
Excitation of swift heavy ions in foil targets. II. X-radiation from Br 15
- Haydon, S. C.—
See Ernest, A. 479
Sato, N. 271, 293
- Hebbard, D. F.—
See Drumm, P. V. 369
- Hermann, K.—
See Bagus, P. S.— 731
- Hewitt, R. G.—
See Ball, L. T. 407
- Hoare, R., Mardling, R., and Troup, G. J.—
Intensity correlation functions for 'thermalised' TEM_{n0} laser beams 505
- Hollenberg, L. C. L., and McKellar, B. H. J.—
Parity violation from SUSY vertex corrections in deep inelastic scattering 449
- Horsburgh, M. A.—
See Tallents, G. J. 253
- How, J. A.—
See Cheetham, A. D. 35
- Hua, G., and Ninio, F.—
A calculation of the room temperature elastic constants of caesium thiocyanate 309
- Hugrass, W. N.—
The influence of the spatial harmonics on the rotating magnetic field current drive 513
- Jaus, W., and Rasche, G.—
Superallowed Fermi β decays CVC and universality 1
- Kaiser, A. B., Christie, A. L., and Gallagher, B. L.—
Investigation of the interaction of electrons and lattice vibrations using glassy metal thermopower 909
- Kenny, B. G.—
See Delbourgo, R. 189
- Kondō, Y.—
See Drumm, P. V. 369
- Krause, M. O.—
Current status and future directions of atomic studies by electron spectrometry with synchrotron radiation 601
- Kuwahara, H.—
See Cheetham, A. D. 35
- Larkins, F. P.—
See Phillips, R. A. 717
- Larkins, F. P., and Richards, J. A.—
Photoionisation and Auger electron emission from the lithium molecule: calculations using multicentre numerical continuum functions 809
- Lau, Y. K., and Prokhorov, S. J.—
The large numbers hypothesis and a relativistic theory of gravitation 339
- Louw, J. A.—
See Eckhardt, B. 331
- Lowe, R. M.—
See Hannaford, P. 829
- Luther-Davies, B.—
See Tallents, G. J. 253
- Lynch, D. L.—
See McKoy, V. 761
- Lyo, I. W.—
See Eberhardt, W. 633
- McCarthy, I. E.—
Electron momentum spectroscopy 587
- Macfarlane, J. C., Whitbourn, L. B., and Batchelor, R. A.—
Experimental study of noise temperature and conversion loss of SIS junction mixers 379
- McKellar, B. H. J.—
See Hollenberg, L. C. L. 449
- McKoy, V., Dixit, S. N., Dubs, R. L., and Lynch, D. L.—
Dynamics of single- and multi-photon ionisation processes in molecules 761
- Manson, S. T.—
See Deshmukh, P. C. 679
- Manson, S. T., and Bhattacharya, S. K.—
Photoionisation of unusual states of matter: atomic ions, excited states and open-shell atoms 799

- Mardling, R.—
 See Hoare, R. 505
- Melrose, D. B.—
 Four-wave processes involving two low frequency waves 891
- Melrose, D. B., and Padden, W. E. P.—
 Comptonisation of radiation below the cyclotron frequency in a strong magnetic field 961
- Moodie, A. F.—
 See Glanville, S. R. 71
- Morton, A. H.—
 See Cheetham, A. D. 35
- Nayak, P.—
 Phonon spectrum of ternary alloys 547
- Naylor, G. R. S., and Robson, R. E.—
 Interpretation of backscattered HF radio waves from the sea 395
- Nelin, C. J.—
 See Bagus, P. S. 731
- Ninio, F.—
 See Hua, G. 309
- Nuclear physics*
 Analytic distorted wave approximation for electropion and photopion production on ^{12}C near threshold 203
- Discrepancy in the Fermi matrix elements of the isospin-forbidden $4^+ \rightarrow 4^+ \beta^-$ decay of ^{46}Sc 473
- Enhancement of parity violation for overlapping nuclear resonances 217
- Excitation function for $^{16}\text{O} + ^{24}\text{Mg}$ elastic scattering at $\theta_{\text{c.m.}} = 90^\circ$ 369
- Particle-hole description of dipole states in ^{17}O 871
- Phenomenological nucleon-nucleon interaction 461
- Superaligned Fermi β decays, CVC and universality 1
- Nurzynski, J.—
 See Drumm, P. V. 369
- O'Keefe, M. J., and Francey, J. L. A.—
 The effect of the flow distribution on the thermal efficiency of a solar collector 945
- Opel, T. R.—
 See Drumm, P. V. 369
- Padden, W. E. P.—
 See Melrose, D. B. 961
- Pailthorpe, B. A.—
 See Schmid, R. 919
- Peel, J. B.—
 See Carnovale, F. 789
- Pender, L. F.—
 See Hay, H. J. 15
- Petris, L.—
 See Berge, L. 461
- Petrović, Z. Lj.—
 The application of Blanc's law to the determination of the diffusion coefficients for thermal electrons in gases 237
 The determination of the diffusion coefficient for thermal electrons in water vapour by the use of a modified Blanc's law procedure 249
- Phillips, R. A., and Larkins, F. P.—
 X-ray emission spectra of some carbon-containing molecules 717
- Plummer, E. W.—
 See Eberhardt, W. 633, 853
- Prokhovnik, S. J.—
 See Lau, Y. K. 339
- Radeka, V.—
 See Schoenborn, B. P. 329
- Rasche, G.—
 See Jaus, W. 1
- Reininger, R.—
 See Eberhardt, W. 633
- Richards, J. A.—
 See Larkins, F. P. 809
- Robinson, P. A.—
 Dielectric tensor of weakly relativistic electron distributions separable in momentum and pitch angle 57
- Robson, B. A.—
 See Drumm, P. V. 369
- Robson, R. E.—
 See Naylor, G. R. S. 395
- Rossiter, P. L.—
 Conduction electron scattering in alloys 529
- Rothwell, R. G.—
 See Carnovale, F. 789
- Runciman, W. A., Srinivasan, B., and Saabo, S.—
 Electronic structure of the principal uranium centre in alkali fluorides 555
- Saabo, S.—
 See Runciman, W. A. 555
- Sato, N., and Haydon, S. C.—
 Ionization growth between hyperboloidal needle and plane electrode under r.f. electric fields in N_2 .
 I. Image intensifier observations and the influence of space charge accumulations 271
 II. Spectroscopic investigations 293

- Saw, E. L., and Yap, C. T.—
The discrepancy in the Fermi matrix elements
of the isospin-forbidden $4^+ \rightarrow 4^+ \beta^-$ decay of
 ^{46}Sc 473
- Saxena, A. M.—
See Schoenborn, B. P. 329
- Schirmer, J.—
See von Niessen, W. 687
- Schmid, R., Pailthorpe, B. A., and Collins,
R. E.—
Heat transport in liquid filled tubes 919
- Schoenborn, B. P., Saxena, A. M., Stamm, M.,
Dimmler, G., and Radeka, V.—
*Corrigendum to: A neutron spectrometer with
a two-dimensional detector for time-
resolved studies* 329
- Sharp, L. E.—
See Cheetham, A. D. 35
- Sheeley, N. R., Jr—
See DeVore, C. R. 115
- Singh, V., and Grover, P. S.—
Numerical simulation of positron diffusion in
the heavy noble gases Ar, Kr and Xe 497
- Slee, O. B.—
See Alurkar, S. K. 433
- Slee, O. B., Alurkar, S. K., and Bobra, A. D.—
Flux densities, spectra and variability of
pulsars at metre wavelengths 103
- Smith, R.—
See Drumm, P. V. 369
- Sondericker, D.—
See Eberhardt, W. 633
- Srinivasan, B.—
See Runciman, W. A. 555
- Stamm, M.—
See Schoenborn, B. P. 329
- Steeb, W.-H.—
See Eckhardt, B. 331
- Tallents, G. J., Luther-Davies, B., and
Horsburgh, M. A.—
EXAFS spectroscopy by continuum soft X-ray
emission from a short pulse laser-produced
plasma 253
- Tambe, B. R.—
See Deshmukh, P. C. 679
- Tan, K. H.—
See Brion, C. E. 565
- Tomasello, P.—
See von Niessen, W. 687
- Tovey, S. N.—
See Clark, A. G. 117
- Treacy, P. B.—
See Hay, H. J. 15
- Troup, G. J.—
See Hoare, R. 505
- van der Meer, W. J., Butselaar, R. J., and de
Lange, C. A.—
Photoionisation cross sections of chlorine
atoms and molecules at 584 Å 779
- von Nagy-Felsobuki, E. I.—
See Doherty, G. 749
- von Niessen, W., Tomasello, P., Schirmer, J.,
and Cederbaum, L. S.—
Recent progress in a Green's function method
for the calculation of ionisation spectra
687
- Whitbourn, L. B.—
See Macfarlane, J. C. 379
- Whitfield, H. J.—
See Glanvill, S. R. 71
- Williams, J. F.—
Polarisation and angular correlations of
excited P states of helium and hydrogen
621
- Williams, O. M., and Elford, M. T.—
The dependence of measured drift velocity on
shutter open time in the four gauze time-of-
flight method 225
- Wilson, I. J.—
See Glanvill, S. R. 71
- Yap, C. T.—
See Saw, E. L. 473
- Young, T. R., Jr—
See DeVore, C. R. 115