

Index to Volume 34

- Ahmad, Mubarak, and Sofi, G. Q.—
Mass splitting of beautiful baryons in broken SU(4) in the non-strange sector 1
- Amos, K., Morrison, I., Smith, R., and Schmid, K. W.—
The spectrum of ^{12}C in a multi-configuration Hartree-Fock basis 493
- Anderson, M. R.—
See Gardner, H. J. 25
- Anderson, M. R., Kennett, S. R., Sevior, M. E., and Sargood, D. G.—
 $^{45}\text{Sc}(\text{p}, \text{p}')^{45}\text{Sc}^*$ and the attainment of a thermal distribution of states in an astrophysical environment 105
- Astronomy and astrophysics*
- Boundary-layer acceleration and particle mirroring in pulsar magnetospheres 317
 - Corotation and poloidal flow in pulsar magnetospheres 303
 - Cylindrical isothermal blast waves in a magnetic field 279
 - Equilibrium statistical mechanics of self-gravitating systems 267
 - Flux densities at 8.87 GHz of 347 small-diameter radio sources 471
 - Inertial development of vorticity in pulsar magnetospheres 91
 - New optical identifications for weak sources from Parkes 2700 MHz catalogue 445
 - Positions and flux densities at 5000 MHz for 1133 weak radio sources 407
 - Pulsar magnetospheres: some fundamental considerations 595
 - $^{45}\text{Sc}(\text{p}, \text{p}')^{45}\text{Sc}^*$ and astrophysical thermal distribution of states 105
 - Southern survey of OH masers at 1612 MHz 333
 - Sub-rotation and super-rotation in pulsar magnetospheres 97
- Atomic and molecular physics*
- Analytic approximations for integrated electron-atom excitations 135
 - Boundary effects in solution of Boltzmann's equation for electron swarms 223
 - Compton scattering of photons by K-shell electrons 163
 - Dicke narrowing reduction of Doppler contribution to line width 639
 - Effect of diffusion on analysis of pulsed radiolysis drift tube experiments 677
 - Effects of anisotropic scattering on electron transport 243
 - Electron vacancy production in near-symmetric collisions of 100 MeV Cu ions 155
 - Empirical lineshape for computer fitting of spectral data 51
 - New deconvolution method for data analysis in translational spectroscopy 43
 - Oscillator strengths, transition probabilities and lifetimes in O V 147
 - Solution with third-order accuracy for electron distribution function in weakly ionized gases 361
- Barber, Michael N., and Enting, I. G.—
High-field polynomial expansions for the six-state planar Potts model 551
- Barker, F. C.—
Low-lying levels of ^{10}B 7
- Barnea, Z.—
See Tibballs, J. E. 689
- Benke, Kurt K.—
Mathematical modelling of the modulation transfer function of X-ray film/screen systems 585
- Binette, Luc—
See Bolton, J. G. 445
- Binette, Luc, Carignan, Claude, Bolton, J. G., and Wright, Alan E.—
Positions and flux densities at 5000 MHz for 1133 weak radio sources 407
- Bird, J. R., Rose, A., and Wilkins, R. W. T.—
Proton decoration of halite crystals 529
- Bolton, J. G.—
See Binette, Luc 407
Shimmins, A. J. 471
- Bolton, J. G., Trett, Jenny, Carignan, Claude, and Binette, Luc—
New optical identifications for weak sources from the Parkes 2700 MHz catalogue 445
- Burman, R. R.—
Boundary-layer acceleration and particle mirroring in pulsar magnetospheres 317
- Corotation and poloidal flow in pulsar magnetospheres 303
- Inertial development of vorticity in pulsar magnetospheres 91
- Sub-rotation and super-rotation in pulsar magnetospheres 97

- Cally, P. S.—
 The equilibrium statistical mechanics of self-gravitating systems 267
- Campbell, S. J.—
See McKenna, T. J. 539
- Carignan, Claude—
See Binette, Luc 407
 Bolton, J. G. 445
- Cassidy, R. A.—
 The effect of diffusion on the analysis of pulsed radiolysis drift tube experiments 677
- Caswell, J. L., Haynes, R. F., Goss, W. M., and Mebold, U.—
 A southern survey of OH masers at 1612 MHz 333
- Cavalleri, G.—
 Solution with third-order accuracy for the electron distribution function in weakly ionized gases (or in intrinsic semiconductors): application to the drift velocity 361
- Chaplin, D. H.—
See McKenna, T. J. 539
- Clay, R. W., and Dawson, B. R.—
 A southern hemisphere search for a non-random component in cosmic rays 591
- Condensed matter*
- Effects of broadening on high temperature critical susceptibility exponent γ 539
 - Multiple scattering in neutron polarization analysis 193
 - Neutron diffraction determination of mean-square atomic displacements in InAs and GaSb 689
 - Profile refinement of single crystal and powder data 707
 - Proton decoration of halite crystals 529
 - Quantitative piezospectroscopy of 1s and 2p states of arsenic impurity in germanium 511
 - Thermal expansion of zinc sulfide: 300–1300 K 701
- Cosmic rays*
- Southern hemisphere search for nonrandom component in cosmic rays 591
- Cywinski, R.—
See Wells, P. 193
- Dawson, B. R.—
See Clay, R. W. 591
- DuBow, J. B.—
See Wilhelm, H. E. 207
- Electromagnetism and optics*
- Coaxial wave guides with dielectric and magnetic discontinuities 207
 - Modulation transfer function of X-ray film/screen systems 585
 - Photon correlation spectroscopy using optical heterodyne detection 575
 - Transformation properties of energy-momentum tensor for dispersive waves 563
- Enting, I. G.—
See Barber, Michael N. 551
- Feteris, S. M.—
See Tibballs, J. E. 689
- Fewell, M. F.—
See Spear, R. H. 609
- Fisher, P.—
See Martin, A. D. 511
- Fletcher, Guy C., and Harnett, Julianne I.—
 Photon correlation spectroscopy using optical heterodyne detection 575
- Fluid dynamics and plasma physics*
- Frictional force on two equal slowly rotating spheres on axis of circular cylinder 57
 - Nonlinear double-diffusive convection in moderate Prandtl number fluid 185
 - Nonlinear magnetic convection at small Prandtl numbers 251
 - Relativistic and nonlinear radiation interaction between laser beams and plasmas 385
- Gardner, H. J., Mitchell, L. W., Kennett, S. R., Anderson, M. R., and Sargood, D. G.—
 Cross section measurements for the reactions $^{53}\text{Cr}(\text{p}, \gamma)^{54}\text{Mn}$, $^{53}\text{Cr}(\text{p}, \text{n})^{53}\text{Mn}$ and $^{53}\text{Cr}(\text{p}, \text{p}')^{53}\text{Cr}$ 25
- General relativity and gravitation*
- Spatially homogeneous and anisotropic cosmological models in Brans-Dicke theory 261
- Geophysics*
- Day-to-day variability of S_q geomagnetic field variation 81
- Glass, R.—
 Oscillator strengths, transition probabilities and lifetimes involving 2p3p states in O V 147

- Goh, S. C.—
A new deconvolution method for data analysis in translational spectroscopy 43
- Goss, W. M.—
See Caswell, J. L. 333
- Goswami, G. K.—
See Johri, V. B. 261
- Greenstein, T., and Zocco, J. G.—
Frictional force exerted on two equal spheres situated along the axis of a circular cylinder slowly rotating about axes perpendicular to their line of centres 57
- Haddad, G. N., Lin, S. L., and Robson, R. E.—
The effects of anisotropic scattering on electron transport 243
- Hanley, Joan M., and Peacock, Thomas E.—
Order-disorder transformations in alloys.
The inclusion of non-nearest neighbour interactions in cluster variation methods.
I. Critical temperature and high temperature specific heats for body centred cubic lattices 61
- Order-disorder transformations in alloys.
The inclusion of non-nearest neighbour interactions in cluster variation methods.
II. Low temperature specific heats for body centred cubic lattices 75
- Harnett, Julianne I.—
See Fletcher, Guy C. 575
- Harty, P. D., and Thompson, M. N.—
The photoneutron cross section of ^{44}Ca 505
- Hay, H. J., Pender, L. F., and Treacy, P. B.—
Electron vacancy production in near-symmetric collisions of 100 MeV copper ions 155
- Haynes, R. F.—
See Caswell, J. L. 333
- Hewat, A. W., and Sabine, T. M.—
Profile refinement of single crystal and powder data: the accuracy of crystallographic parameters 707
- Hibberd, F. H.—
Day-to-day variability of the S_q geomagnetic field variation 81
- Hora, Heinrich—
See Kane, Edward L. 385
- Jeffery, E. A.—
New classical solutions to ϕ^4 theory 113
- Johri, V. B., and Goswami, G. K.—
Spatially homogeneous and anisotropic cosmological models in Brans-Dicke theory 261
- Kamran, Mujahid—
Proton-proton total cross sections and the neglect of masses in data fitting in the Regge region 121
- The Regge pole model and forward elastic data at high energies—an analysis 611
- Kane, Edward L., and Hora, Heinrich—
Relativistic and nonlinear radiation interaction between laser beams and plasmas 385
- Kennett, S. R.—
See Anderson, M. R. 105
Gardner, H. J. 25
- Kenny, M. J.—
Thick target gamma yields from fluorine 35
- Koo, W. K., and Tassie, L. J.—
Electron excitations and sum rules for multipole transitions 15
- Lerche, I.—
Mathematical theory of cylindrical isothermal blast waves in a magnetic field 279
- Lin, S. L.—
See Haddad, G. N. 243
- McCarthy, I. E., Saha, B. C., and Stelbovics, A. T.—
Analytic approximations for integrated electron-atom excitations 135
- McKenna, T. J., Wilson, G. V. H., Campbell, S. J., Chaplin, D. H., and Wantenaar, G. H. J.—
The effects of broadening on the high temperature critical susceptibility exponent γ 539
- McMahon, D. R. A.—
Dicke narrowing reduction of the Doppler contribution to a line width 639
- Martin, A. D., Fisher, P., and Simmonds, P. E.—
Quantitative piezospectroscopy of the 1s and 2p states of arsenic impurity in germanium 511
- Mebold, U.—
See Caswell, J. L. 333
- Melrose, D. B.—
The transformation properties of the energy-momentum tensor for dispersive waves 563
- Mitchell, L. W.—
See Gardner, H. J. 25
- Morrison, I.—
See Amos, K. 493

Nuclear physics

- Collective model description of dipole states in even-even $N = 28$
isotones 627
Cross section measurements for reactions $^{53}\text{Cr}(p, \gamma)$, $^{53}\text{Cr}(p, n)$ and $^{53}\text{Cr}(p, p')$ 25
Elastic scattering of ^{152}Eu γ rays by tungsten 125
Electron excitations and sum rules for multipole transitions 15
Low-lying levels of ^{10}B 7
Photoneutron cross section of ^{44}Ca 505
Spectrum of ^{12}C in multi-configuration Hartree-Fock basis 493
Thick target gamma yields from fluorine 35

Particles and fields

- Coherent and Fock states at very high average photon numbers 357
Mass splitting of beautiful baryons in broken SU(4) in non-strange sector 1
New classical solutions to ϕ^4 theory 113
Proton-proton total cross sections and neglect of masses in Regge data fitting 121
Regge pole model and forward elastic data at high energies 611

- Peacock, Thomas E.—
See Hanley, Joan M. 61, 75
Pender, L. F.—
See Hay, H. J. 155
Perlman, H. S.—
See Troup, G. J. 357
Price, D. C.—
Empirical lineshape for computer fitting of spectral data 51

- Riahi, N.—
Nonlinear double-diffusive convection in a moderate Prandtl number fluid 185
Nonlinear magnetic convection at small Prandtl numbers 251
Roberts, R. B., White, G. K., and Sabine, T. M.—
Thermal expansion of zinc sulfide: 300–1300 K 701
Robson, R. E.—
Boundary effects in solution of Boltzmann's equation for electron swarms 223
See also Haddad, G. N. 243
Rose, A.—
See Bird, J. R. 529

- Sabine, T. M.—
See Hewat, A. W. 707
Roberts, R. B. 701
Saha, B. C.—
See McCarthy, I. E. 135
Sargood, D. G.—
See Anderson, M. R. 105
Gardner, H. J. 25
Schmid, K. W.—
See Amos, K. 493
Sevior, M. E.—
See Anderson, M. R. 105
Shimmins, A. J., and Bolton, J. G.—
Flux densities at 8·87 GHz of 347 small-diameter radio sources 471
Simmonds, P. E.—
See Martin, A. D. 511
Singh, P.—
See Wilhelm, H. E. 207
Smith, R.—
See Amos, K. 493
Sofi, G. Q.—
See Ahmad, Mubarak 1
Spear, R. H., and Fewell, M. F.—
Corrigendum to: Static quadrupole moment of the first excited state of ^{28}Si 609
Stelbovics, A. T.—
See McCarthy, I. E. 135

- Tassie, L. J.—
See Koo, W. K. 15
Taylor, R. B., Teansomprasong, P., and Whittingham, I. B.—
Elastic scattering of ^{152}Eu γ rays by tungsten 125
Teansomprasong, P.—
See Taylor, R. B. 125

Thermodynamics and statistical mechanics

- High-field polynomial expansions for six-state planar Potts model 551
Order-disorder transformations in alloys. I. Critical temperature and high temperature specific heats for body centred cubic lattices 61
Order-disorder transformations in alloys. II. Low temperature specific heats for body centred cubic lattices 75

- Thompson, M. N.—
See Harty, P. D. 505
Tibballs, J. E., Feteris, S. M., and Barnea, Z.—
Neutron diffraction determination of mean-square atomic displacements in InAs and GaSb 689

- Treacy, P. B.—
 See Hay, H. J. 155
- Trett, Jenny—
 See Bolton, J. G. 445
- Troup, G. J., and Perlman, H. S.—
 Coherent states and Fock states at very
 high average photon numbers 357
- Wantenaar, G. H. J.—
 See McKenna, T. J. 539
- Weise, J.—
 A collective model description of the
 dipole states in the even-even $N = 28$
 isotones 627
- Wells, P., and Cywinski, R.—
 Multiple scattering in neutron polarization
 analysis 193
- Westfold, K. C.—
 Pulsar magnetospheres: some fundamental
 considerations 595
- White, G. K.—
 See Roberts, R. B. 701
- Whittingham, I. B.—
 Compton scattering of 279·1 and 661·6 keV
 photons by K-shell electrons 163
 See also Taylor, R. B. 125
- Wilhelm, H. E., DuBow, J. B., and
 Singh, P.—
 Theory of coaxial wave guides with
 dielectric and magnetic
 discontinuities 207
- Wilkins, R. W. T.—
 See Bird, J. R. 529
- Wilson, G. V. H.—
 See McKenna, T. J. 539
- Wright, Alan E.—
 See Binette, Luc 407
- Zocco, J. G.—
 See Greenstein, T. 57

50



