

**95Ma01** *C<sub>4</sub> Symmetry Effects in Nuclear Rotational Motion*

A. O. Macchiavelli, B. Cederwall, R. M. Clark, M. A. Deleplanque, R. M. Diamond, P. Fallon, I. Y. Lee, F. S. Stephens, S. Asztalos, Phys. Rev. C51, R1 (1995).

**Nuclear Structure:** A=149-238; analyzed, reviewed  $\Delta I=2$  staggering effects in  $E_\gamma$  of superdeformed band transitions. Multiple K-bands mixing approach.

**95Ma02** *Structure of the p-h Nucleus*  $^{132}\text{Sb}$

H. Mach, D. Jerrestam, B. Fogelberg, M. Hellstrom, J. P. Omtvedt, K. I. Erokhina, V. I. Isakov, Phys. Rev. C51, 500 (1995).

**Radioactivity:**  $^{132}\text{Sn}(\beta^-)$  [from  $^{235}\text{U}(n,f)^{132}\text{In}(\beta^+)$ -decay), E=thermal]; measured  $\beta\gamma(t)$ ,  $\gamma\gamma(\theta)$ , I(ce).  $^{132}\text{Sb}$  deduced levels, J,  $\pi$ ,  $\delta(E2/M1)$ , B( $\lambda$ ),  $\gamma$ -branching,  $T_{1/2}$ , ICC. Model comparison.

**95Ma03** *Lifetime of the  $2^+_1$  State in  $^{154}\text{Gd}$  and Deduction of the  $\alpha$  Coefficient for the  $2^+_1 \rightarrow 0^+_1$  Transition*

H. Mach, B. Fogelberg, Phys. Rev. C51, 509 (1995).

**Radioactivity:**  $^{154}\text{Eu}(\beta^-)$ ; measured  $\beta\gamma(t)$ ,  $\beta\gamma\gamma(t)$ .  $^{154}\text{Gd}$  level deduced  $T_{1/2}$ , ICC.

**95Ma04** *Onset of Multifragmentation in Intermediate Energy Light Asymmetrical Collisions*

Y. G. Ma, W. Q. Shen, Phys. Rev. C51, 710 (1995).

**Nuclear Reactions:**  $^{27}\text{Al}(^{40}\text{Ar},X)$ ,  $E=45\text{-}100$  MeV/nucleon; calculated fragment mass distributions; deduced multi-fragmentation onset critical energy point features.

**95Ma05** *Collective Motion of Reverse-Reaction System in the Intermediate-Energy Domain Via the Quantum-Molecular-Dynamics Approach*

Y. G. Ma, W. Q. Shen, Z. Y. Zhu, Phys. Rev. C51, 1029 (1995).

**Nuclear Reactions:**  $^{27}\text{Al}(^{40}\text{Ar},\text{X})$ ,  $E=36$  MeV/nucleon; calculated target-like, mid-central, projectile-like rapidities azimuthal distributions, other aspects. Quantum molecular dynamics approach, collective rotation in collisions.

**95Ma06** *Fragmentation of Neutron-Hole Strengths in  $^{59}\text{Ni}$  Observed in the  $^{60}\text{Ni}(p,d)^{59}\text{Ni}$  Reaction at 65 MeV*

M. Matoba, O. Iwamoto, Y. Uozumi, T. Sakae, N. Koori, H. Ohgaki, H. Kugimiya, H. Ijiri, T. Maki, M. Nakano, Nucl. Phys. A581, 21 (1995).

**Nuclear Reactions:**  $^{60}\text{Ni}(\text{polarized } p,d)$ ,  $E=65$  MeV; measured  $\sigma(E, \theta)$ ,  $A(y)(E,\theta)$ .  $^{59}\text{Ni}$  deduced levels, L, J, spectroscopic factors. DWBA analysis. Enriched target.

**95Ma07** *Nuclear Structure of  $^{166}\text{Tm}$  from  $(\alpha,3n)$   $\gamma$ -Ray and Conversion Electron Measurements*

S. J. Mannanal, B. Boschung, M. W. Carlen, J. -Cl. Dousse, S. Drissi, P. E. Garrett, J. Kern, B. Perny, Ch. Rheme, J. P. Vorlet, C. Gunther, J. Manns, U. Muller, Nucl. Phys. A582, 141 (1995); Erratum Nucl. Phys. A584, 758 (1995).

**Nuclear Reactions:**  $^{165}\text{Ho}(\alpha,3n)$ ,  $E=32.6, 38.1, 43.1, 47.9$  MeV; measured  $E_\gamma$ ,  $I_\gamma(E(\alpha),\theta)$ ,  $I(\text{ce})$ ,  $\gamma\gamma$ -,  $(e^-e^-)$ -coin.  $^{166}\text{Tm}$  deduced high-spin levels, J, K,  $\pi$ . Natural targets, Ge detectors, curved-crystal spectrometer,  $\beta$ -ray spectrometer.

**95Ma08** *Study of the Threshold Anomaly in the Scattering of Polarized  ${}^7\text{Li}$  from  ${}^{208}\text{Pb}$*

I. Martel, J. Gomez-Camacho, C. O. Blyth, N. M. Clarke, P. R. Dee, B. R. Fulton, J. A. R. Griffith, S. J. Hall, N. Keeley, G. Tungate, N. J. Davis, K. Rusek, K. A. Connell, J. S. Lilley, M. W. Bailey, Nucl. Phys. A582, 357 (1995).

**Nuclear Reactions:**  ${}^{208}\text{Pb}(\text{polarized } {}^7\text{Li}, {}^7\text{Li})$ ,  $(\text{polarized } {}^7\text{Li}, {}^7\text{Li}')$ ,  $E=27\text{-}35$  MeV; measured  $T_{20}(\theta)$ ,  $\sigma(\theta)$ ; deduced central, transition potentials. Coupled-channels, DWBA analyses.

**95Ma09** *Constraints on Coupling Constants Through Charge  $\Sigma$  Photoproduction*

T. Mart, C. Bennhold, C. E. Hyde-Wright, Phys. Rev. C51, R1074 (1995).

**Nuclear Reactions:**  $^1_0n, ^1_1H(\gamma, X)$ ,  $E=1-2$  GeV; analyzed  $\Sigma^+, \Sigma^-$  production  $\sigma(E)$  data; deduced Born coupling constants. Phenomenological models.

**95Ma10** *Deuteron Polarizability Shifts and the Deuteron Matter Radius*

J. Martorell, D. W. L. Sprung, D. C. Zheng, Phys. Rev. C51, 1127 (1995).

**Nuclear Structure:**  $^2\text{H}$ ; calculated electric dipole polarizability.  $^1, ^2\text{H}$ ; analyzed isotope shift data.  $^2\text{H}$  deduced matter radius.

**95Ma11** *Factorization Contributions and the Breaking of the  $\Delta I = 1/2$  Rule in Weak  $(\Lambda)N_p$  and  $\Sigma N_p$  Couplings*

K. Maltman, M. Shmatikov, Phys. Rev. C51, 1576 (1995).

**95Ma12** *Fermi Hypernetted-Chain Evaluation of a Generalized Momentum Distribution for Model Nuclear Matter*

E. Mavrommatis, M. Petraki, J. W. Clark, Phys. Rev. C51, 1849 (1995).

**95Ma13** *Causality with Noncausal Optical Potentials*

V. A. Madsen, K. I. Goldman, Phys. Rev. C51, 2011 (1995).

**95Ma14** *Two-Proton Correlation Function Measured at Very Small Relative Momenta*

L. Martin, B. Erasmus, J. Pluta, D. Nouais, D. Ardouin, P. Eudes, F. Guilbault, P. Lautridou, C. Lebrun, R. Lednicky, A. Rahmani, T. Reposeur, D. Roy, L. Sezac, M. Lewitowicz, W. Mittig, P. Roussel-Chomaz, N. Carjan, P. Auger, W. Burzynski, W. Peryt, H. Dabrowski, P. Stefanski, Nucl. Phys. A583, 407c (1995).

**Nuclear Reactions:**  $^{48}\text{Ti}(^{129}\text{Xe},X)$ ,  $E=45$  MeV/nucleon; measured pp-coin; deduced emission mechanism, source velocity.

**95Ma15** *Dilepton Production from p-p to Ca-Ca at the Bevalac*

H. S. Matis, S. Beedoe, M. Bougheb, J. Carroll, W. Christie, W. Gong, T. Hallman, L. Heilbronn, H. Huang, P. N. Kirk, G. Krebs, G. Igo, A. Letessier-Selvon, L. Madansky, F. Manso, J. Miller, C. Naudet, R. J. Porter, M. Prunet, G. Roche, L. S. Schroeder, P. Seidl, Z. F. Wang, R. Welsh, W. K. Wilson, A. Yegneswaran, and the DLS Collaboration, Nucl. Phys. A583, 617c (1995).

**Nuclear Reactions:** Ca(Ca,X), E=1.05 GeV/nucleon;  $^2$ ,  $^1$ H(p, X), E=1-4.9 GeV; measured dilepton production  $\sigma$  ratio, transverse momentum, rapidity, mass spectra; deduced pp-, nn-systems features.

**95Ma16** *The Shape of the Nuclear Spin-Orbit Potential*

G. Mairle, Z. Phys. A350, 285 (1995).

***Nuclear Structure:***  $^{208}\text{Pb}$ ; calculated proton, neutron spin-orbit potentials.

**95Ma17** *The Decay  $H_0 \rightarrow Z^0 Z^0$  in the Two-Higgs-Doublet Model*

W. -G. Ma, L. -Z. Sun, L. Han, J. Phys. (London) G21, 7 (1995).

**95Ma18** *Does the Longitudinal Suppression of Quasielastic Electron Scattering Exist ( Question )*

Z. Y. Ma, D. -C. Feng, B. -Q. Chen, W. -Q. Liu, J. Phys. (London) G21, 79 (1995).

**Nuclear Reactions:**  $^{40}\text{Ca}(e,e'X)$ ,  $E=407.8\text{-}840.7$  MeV; calculated  $\sigma(\theta)$  vs energy transfer. Relativistic mean field, nonrelativistic quasiparticle approaches.

**95Ma19** *Search for the Presence of H Particles in Neutral Beam*

M. May, and the BNL-E888 Collaboration, Nucl. Phys. A585, 97c (1995).

**95Ma20** *Production of (Lambda)-Hypernuclei with a Large Neutron Excess and a Neutron Halo*

L. Majling, Nucl. Phys. A585, 211c (1995).

**Nuclear Structure:** A=3-9; analyzed hypernuclei binding energies data; deduced extrapolations.

**95Ma21** *Search for T-Violation in  $K^+$  Decays*

J. A. Macdonald, and the KEK E246 Japan-Russia-Korea-Canada-USA Collaboration, Nucl. Phys. A585, 345c (1995).

**95Ma22** *Relativistic Mean Field Theory and Hypernuclei*

J. Mares, B. K. Jennings, Nucl. Phys. A585, 347c (1995).

**Nuclear Structure:** A=41; calculated hyperon single particle levels vs parameter ( $\alpha(TY)$ ), hypernuclei. Relativistic mean field theory.

**95Ma23** *High Energy Proton-Carbon Scattering in the Alpha-Particle Model*

J. Matero, Z. Phys. A351, 29 (1995).

**Nuclear Reactions:**  $^4\text{He}$ ,  $^{12}\text{C}(p,p)$ ,  $E=1.04$  GeV;  $^{12}\text{C}(p, p')$ ,  $E=1.04$  GeV; calculated  $\sigma(\theta)$ . Alpha-particle model.

**95Ma24**  $^{60}\text{Ni}(n,d)$  Reaction at 18.5 MeV

B. Marianski, A. Stonert, A. Korman, J. Rondio, T. Czyzewski, Acta Phys. Pol. B26, 57 (1995).

**Nuclear Reactions:**  $^{60}\text{Ni}(n,d)$ ,  $E=18.5$  MeV; measured  $\sigma(\theta)$ , deuteron spectra.  $^{59}\text{Co}$  levels deduced L, J,  $\pi$ , spectroscopic factors. DWBA analysis.

**95Ma25** *Finite-Nuclei Properties in Relativistic Density Dependent Hartree-Fock Approach*

Z. Ma, H. Shi, B. Chen, Chin. Phys. Lett. 12, 72 (1995).

**Nuclear Structure:**  $^{16}\text{O}$ ,  $^{40}\text{Ca}$ ; calculated binding energy per nucleon, charge rms radius.

**95Ma26** *Deuteron Flow in Ultrarelativistic Heavy Ion Reactions*

R. Mattiello, A. Jahns, H. Sorge, H. Stocker, W. Greiner, Phys. Rev. Lett. 74, 2180 (1995).

**Nuclear Reactions:**  $^{197}\text{Au}(^{197}\text{Au},X)$ ,  $E=11.6$  GeV/nucleon;  $^{197}\text{Au}$ , Cu, Si(Si,X),  $E=14.5$  GeV/nucleon; analyzed deuteron, proton rapidity distribution data; deduced 'bounceoff' event shape, collective matter flow sensitivity to baryon potential interaction.

**95Ma27** *Magnetic Moment Distributions in TI Nuclei*

A. -M. Martensson-Pendrill, Phys. Rev. Lett. 74, 2184 (1995).

**Nuclear Moments:** +203},  $^{205}\text{Tl}$ ; analyzed hyperfine anomalies; deduced magnetic, electric radii relative change related features, Schiff moments implications.

**Atomic Physics:** +203},  $^{205}\text{Tl}$ ; analyzed hyperfine anomalies; deduced magnetic, electric radii relative change related features, Schiff moments implications.

**95Ma28** Resonant Rate for  $^{15}\text{O}(\alpha,\gamma)^{19}\text{Ne}$

Z. Q. Mao, H. T. Fortune, A. G. Lacaze, Phys. Rev. Lett. 74, 3760 (1995).

**Nuclear Reactions:** ICPND  $^{15}\text{N}$ ,  $^{16}\text{O}(^6\text{Li},d)$ ,  $E=22$  MeV; measured  $d$  spectra,  $\sigma(\theta)$ ; deduced  $\alpha$ -widths ratios for  $^{19}$ ,  $^{20}\text{Ne}$ ,  $^{15}\text{O}(\alpha,\gamma)$  resonant rate at astrophysically relevant temperatures.  $^{19}\text{Ne}$  level deduced  $\Gamma_\alpha$ .

**95Ma29** *Bremsstrahlung Photons as a Probe of Hot Nuclei*

G. Martinez, M. Marques, Y. Schutz, Gy. Wolf, J. Diaz, M. Franke, S. Hlavac, R. Holzmann, P. Lautridou, F. Lefevre, H. Lohner, A. Marin, T. Matulewicz, W. Mittig, R. W. Ostendorf, J. H. G. van Pol, J. Quebert, P. Roussel-Chomaz, A. Schubert, R. H. Siemssen, R. S. Simon, Z. Sujkowski, V. Wagner, H. W. Wilschut, Phys. Lett. 349B, 23 (1995).

**Nuclear Reactions:** Ni( $^{86}\text{Kr}, X$ ),  $E=60$  MeV/nucleon;  $^{197}\text{Au}(^{181}\text{Ta}, X)$ ,  $E=39.5$  MeV/nucleon;  $^{197}\text{Au}(^{208}\text{Pb}, X)$ ,  $E=20.5$  MeV/nucleon; measured hard photon spectra; deduced bremsstrahlung produced thermal hard photon production, nuclear matter incompressibility correlation. BUU theory.

**95Ma30** *Density Oscillations in Systems of Colliding Heavy Ions Observed via Hard-Photo Interferometry Measurements*

F. M. Marques, G. Martinez, Y. Schutz, J. Diaz, M. Franke, S. Hlavac, R. Holzmann, P. Lautridou, F. Lefevre, H. Lohner, A. Marin, T. Matulewicz, W. Mittig, R. W. Ostendorf, J. H. G. van Pol, J. Quebert, P. Roussel-Chomaz, A. Schubert, R. H. Siemssen, R. S. Simon, Z. Sujkowski, V. Wagner, H. W. Wilschut, Gy. Wolf, Phys. Lett. 349B, 30 (1995).

**Nuclear Reactions:** Ni( $^{86}\text{Kr}, X$ ),  $E=60$  MeV/nucleon;  $^{197}\text{Au}(^{181}\text{Ta}, X)$ ,  $E=39.5$  MeV/nucleon; analyzed hard photon production data; deduced incomplete fusion produced nuclear matter density oscillations role.

**95Ma31** *Surface Response in the Fermi-Liquid Drop and Nuclear Transport Properties*

A. G. Magnier, V. M. Kolomietz, H. Hofmann, S. Shlomo, Phys. Rev. C51, 2457 (1995).

**Nuclear Structure:**  $^{208}\text{Pb}$ ; calculated quadrupole excitations strength function. Fermi-liquid drop model, nuclear transport approach.

**95Ma32** *Elastic Scattering of Pions from  $^3\text{H}$  and  $^3\text{He}$  into the Backward Hemisphere*

S. K. Matthews, W. J. Briscoe, C. Bennhold, B. L. Berman, R. W. Caress, K. S. Dhuga, S. N. Dragic, S. S. Kamalov, N. J. Nicholas, M. F. Taragin, L. Tiator, S. J. Greene, D. B. Barlow, B. M. K. Nefkens, C. Pillai, J. W. Price, L. D. Isenhowe, M. E. Sadler, I. Slaus, I. Supek, Phys. Rev. C51, 2534 (1995).

**Nuclear Reactions:**  $^3\text{He}$ ,  $^3\text{H}(\pi^+, \pi^+)$ ,  $E=142\text{-}256$  MeV; measured  $\sigma(\theta)$ .

**95Ma33** *Mass and Charge Distributions in Fe-Induced Reactions*

H. Madani, A. C. Mignerey, A. A. Marchetti, A. P. Weston-Dawkes, W. L. Kehoe, F. Obenshain, Phys. Rev. C51, 2562 (1995).

**Nuclear Reactions:**  $^{165}\text{Ho}(^{56}\text{Fe},X)$ ,  $E=9-15$  MeV/nucleon; measured projectilelike fragment mass, charge distributions, energy; deduced neutron number, charge distributions centroids, variances, nucleon exchange mechanism features.

**95Ma34** *Color Transparency Assumptions*

D. Makovoz, G. A. Miller, Phys. Rev. C51, 2716 (1995).

**95Ma35** *Quark Exchange Model for Charmonium Dissociation in Hot Hadronic Matter*

K. Martins, D. Blaschke, E. Quack, Phys. Rev. C51, 2723 (1995).

**95Ma36**  $\gamma$  Decays of Proton Unbound Levels in  $^{37}\text{K}$

P. V. Magnus, E. G. Adelberger, N. Cabot, Phys. Rev. C51, 2806 (1995).

**Nuclear Reactions:**  $^{40}\text{Ca}(p,\alpha X)$ ,  $E=18$  MeV; measured  $E_\alpha$ ,  $\alpha(\text{fragment})\text{-coin}$ .  $^{37}\text{K}$  deduced levels,  $\Gamma_\gamma/\Gamma_p$ .

**95Ma37** *Exchange Contributions to Nucleus-Nucleus Potentials Deduced from RGM Phase Shifts Using Inversion*

R. S. Mackintosh, S. G. Cooper, Nucl. Phys. A589, 377 (1995).

**Nuclear Reactions:**  ${}^3\text{He}(\alpha,\alpha)$ ,  $E(\text{cm})=60$  MeV;  ${}^{16}\text{O}(\alpha,\alpha)$ ,  $E(\text{cm})=18$  MeV;  ${}^3\text{H}(\alpha,\alpha)$ ,  $E(\text{cm})=20$  MeV; calculated resonating group method phase shifts; deduced potentials.

**95Ma38** *Generator-Coordinate Method Study of Hexadecapole Correlations in Superdeformed  $^{194}\text{Hg}$*

P. Magierski, P. -H. Heenen, W. Nazarewicz, Phys. Rev. C51, R2880 (1995).

**Nuclear Structure:**  $^{194}\text{Hg}$ ; calculated potential energy curve, mass quadrupole moment vs ( $Q_{44}(z)$ ) moment; deduced hexadecapole correlations role in superdeformed band, rotation effect. Skyrme-HFB method, zero-range density-dependent pairing interaction.

**95Ma39** *Nuclear Structure Effects of the Nuclei  $^{152}, ^{154}, ^{156}\text{Dy}$  at High Excitation Energy and Large Angular Momentum*

V. Martin, J. L. Egidio, Phys. Rev. C51, 3084 (1995).

**Nuclear Structure:**  $^{152}, ^{154}, ^{156}\text{Dy}$ ; calculated energy gaps, moments of inertia, entropy; analyzed shapes; deduced observed structure. Cranked finite-temperature HFB theory.

**95Ma40** *Numerical Simulation of the Electromagnetic Decay of the Nuclei  $^{152}, ^{154}, ^{156}\text{Dy}$  with Self-Consistent Collective Strength Functions*

V. Martin, J. L. Egidio, T. L. Khoo, T. Lauritsen, Phys. Rev. C51, 3096 (1995).

**Nuclear Structure:**  $^{152}, ^{154}, ^{156}\text{Dy}$ ; calculated quasicontinuum associated  $\gamma$  transition probabilities. Finite temperature microscopic Hartree-Fock calculations.

**95Ma41** *Fission-Fragment Angular Distributions and Excitation Functions in Fission Following Complete Fusion and Targetlike-fragment Fission Reactions of  $^{19}\text{F} + ^{232}\text{Th}$  at Near- and Sub-Barrier Energies*

N. Majumdar, P. Bhattacharya, D. C. Biswas, R. K. Choudhury, D. M. Nadkarni, A. Saxena, Phys. Rev. C51, 3109 (1995).

**Nuclear Reactions:**  $^{232}\text{Th}(^{19}\text{F},\text{F})$ ,  $E=84.5\text{-}106.5$  MeV; measured fission  $\sigma(E)$ ,  $\sigma(\text{fragment } \theta)$ . Coupled-channels analysis.

**95Ma42** *Correlation Functions and the Disappearance of Rotational Collective Motion in Nucleus-Nucleus Collisions Below 100 MeV/Nucleon*

Y. G. Ma, W. Q. Shen, Phys. Rev. C51, 3256 (1995).

**Nuclear Reactions:**  $^{27}\text{Al}(^{40}\text{Ar},X)$ ,  $E=36\text{-}100$  MeV/nucleon; calculated azimuthal correlation function, anisotropy; deduced rotational collective motion disappearance related features. Quantum molecular dynamics approach.

**95Ma43** *Quantum Field Kinetics*

A. Makhlin, Phys. Rev. C51, 3454 (1995).

**95Ma44** *Proton Scattering by  $^{206}, ^{207}, ^{208}\text{Pb}$  at 650 MeV: Phenomenological analysis*

A. M. Mack, N. M. Hintz, D. Cook, M. A. Franey, J. Amann, M. Barlett, G. W. Hoffmann, G. Pauletta, D. Ciskowski, M. Purcell, Phys. Rev. C52, 291 (1995).

**Nuclear Reactions:**  $^{206}, ^{207}, ^{208}\text{Pb}$ (polarized p,p), (polarized p,p'), E=650 MeV; measured  $\sigma(\theta)$ , analyzing power vs  $\theta$ ; deduced model parameters.  $^{206}, ^{208}\text{Pb}$  levels deduced  $B(\lambda)$ , neutron-proton matrix element ratios. Phenomenological analysis.

**95Ma45** *Damping of the High-Spin Neutron Hole Orbitals of the  $^{207}\text{Pb}$*

R. Majumdar, Z. Phys. A351, 405 (1995).

**Nuclear Structure:**  $^{207}\text{Pb}$ ; calculated high-spin hole state neutron strength functions. Hole-core vibrational coupling scheme.

**95Ma46** *High-Spin States in  $^{159}\text{Lu}$*

Y. Ma, H. Sun, Y. Liu, S. Wen, H. Zheng, S. Li, G. Li, G. Yuan, P. Weng, C. Yang, J. Phys. (London) G21, 937 (1995).

**Nuclear Reactions:**  $^{144}\text{Sm}(^{19}\text{F},4n)$ ,  $E=105$  MeV; measured  $E\gamma$ ,  $\gamma\gamma$ -coin.  $^{159}\text{Lu}$  deduced high-spin levels,  $J$ ,  $\pi$ . Enriched targets, array of escape-suppressed spectrometers (hyperpure Ge,BGO detectors). Systematics of first  $i_{13/2}$  band-crossing frequency and signature splitting for odd-Z-even-N nuclei in  $^{159}\text{Lu}$  region discussed.

**95Ma47** *Are Pre-Equilibrium Reactions Mainly Direct ( Question )*

A. Marcinkowski, P. Demetriou, P. E. Hodgson, J. Phys. (London) G21, 1089 (1995).

**Nuclear Reactions:**  $^{49}\text{Ti}$ ,  $^{58}\text{Fe}(p,n)$ ,  $E=9.6, 14 \text{ MeV}$ ;  $^{63}\text{Cu}(p, n)$ ,  $E=14.8 \text{ MeV}$ ;  $^{169}\text{Tm}$ ,  $^{159}\text{Tb}(p,xn)$ ,  $E=18 \text{ MeV}$ ;  $^{98}\text{Mo}(p,xn)$ ,  $(p,n)$ ,  $^{100}\text{Mo}(p,n)$ ,  $E=25.6 \text{ MeV}$ ;  $^{65}\text{Cu}(p,xn)$ ,  $E=26.7 \text{ MeV}$ ; calculated  $\sigma(\theta, E_n)$ ; deduced preequilibrium process dominance over direct process conditions, model parameters. Multi-step, statistical direct reaction approaches.

**95Ma48** *Magnetic Moment of Proton Drip-Line Nucleus  ${}^9\text{C}$*

K. Matsuta, M. Fukuda, M. Tanigaki, T. Minamisono, Y. Nojiri, M. Mihara, T. Onishi, T. Yamaguchi, A. Harada, M. Sasaki, T. Miyake, S. Fukuda, K. Yoshida, A. Ozawa, T. Kobayashi, I. Tanihata, J. R. Alonso, G. F. Krebs, T. J. M. Symons, Nucl. Phys. A588, 153c (1995).

**Radioactivity:**  ${}^9\text{C}(\beta^+)$  [from  ${}^{12}\text{C}({}^{12}\text{C},\text{X})$ ,  $E=67$  MeV/nucleon]; measured  $\mu$ ; deduced spin expectation value.  $\beta$ -NMR technique, polarized radioactive beam. Model comparison.

**95Ma49** *Detailed Spectroscopy of Doubly-Magic  $^{132}\text{Sn}$  and Its Neighbours; Perspective for further studies at PIAFE*

H. Mach, B. Fogelberg, M. Hellstrom, D. Jerrestam, J. Blomqvist, A. Kerek, L. O. Norlin, J. P. Omtvedt, K. I. Erokhina, V. I. Isakov, Nucl. Phys. A588, 179c (1995).

**Radioactivity:**  $^{132}\text{In}(\beta^-)$ ;  $^{132}\text{Sn}(\beta^-)$  [from  $^{132}\text{In}(\beta^-)$ -decay];  $^{123}\text{Sb}(\beta^-)$  [from  $^{132}\text{Sn}(\beta^-)$ -decay]; analyzed  $\beta$ -decay data;  $^{132}\text{Sn}$  deduced levels, J,  $\pi$ , configuration.  $^{132}\text{Sb}$  deduced levels, J,  $\pi$ , configuration,  $\delta(E2/M1)$ ,  $B(\lambda)$ .

**95Ma50** *Radioactive Nuclei in Material Science Research*

H. -E. Mahnke, Nucl. Phys. A588, 221c (1995).

**95Ma51** *Quark and Gluon Distributions at the Earliest Stage of Heavy-Ion Collisions*

A. Makhlin, Phys. Rev. C52, 995 (1995).

**95Ma52** *Can Pions Created in High-Energy Heavy-Ion Collisions Produce a Centauro-Type Effect ( Question )*

M. Martinis, V. Mikuta-Martinis, J. Crnugelj, Phys. Rev. C52, 1073 (1995).

**95Ma53** *The  $\Delta I = 4$  Bifurcation in Superdeformed Bands*

P. Magierski, K. Burzynski, J. Dobaczewski, W. Nazarewicz, *Acta Phys. Pol.* B26, 291 (1995).

**95Ma54** *Hot Superheavy Nuclei Seen with the GDR  $\gamma$ -Decay*

A. Maj, T. S. Tveter, J. J. Gaardhoje, B. Herskind, G. Sletten, T. Ramsøy, A. Atac, W. Korten, A. Bracco, F. Camera, M. Mattiuzzi, B. Million, M. Pignanelli, J. Bacelar, A. Buda, H. van der Ploeg, W. Krolas, H. Nifenecker, F. Schussler, J. A. Pinston, A. Menthe, P. Paul, D. J. Hofman, I. Dioszegi, S. Schadmand, Acta Phys. Pol. B26, 417 (1995).

**Nuclear Reactions:**  $^{232}\text{Th}(^{40}\text{Ar},\text{F})$ ,  $E=6.8\text{-}15$  MeV/nucleon;  $^{232}\text{Th}(^{37}\text{Cl}, \text{F})$ ,  $E=7.3$  MeV/nucleon; measured fission (fragment) $\gamma$ -coin.  $^{272}108$ ,  $^{269}107$  deduced GDR  $\gamma$ -decay features. Other reaction data, aspects reviewed.

**95Ma55** *Angular Momentum Dependence of the GDR Observables of  $A = 170$  Nuclei at Finite Temperature*

M. Mattiuzzi, A. Bracco, F. Camera, B. Million, J. J. Gaardhoje, A. Maj, T. Tveter, Z. Zelazny, Acta Phys. Pol. B26, 467 (1995).

**Nuclear Reactions:**  $^{148}\text{Nd}(^{28}\text{Si}, X)$ ,  $E=147$  MeV; measured  $E_\gamma$ ,  $I_\gamma(\theta)$ , strength function.  $^{176}\text{W}$  deduced GDR observables angular momentum at finite temperature dependence.

**95Ma56** *Meson Production and Meson Nucleus Interaction Studies at COSY*

H. Machner, Acta Phys. Pol. B26, 571 (1995).

**Nuclear Structure:** A=10-45; compiled, reviewed pionic 1s-states shifts, width data, analyses.

**Atomic Physics:** esic-Atoms A=10-45; compiled, reviewed pionic 1s-states shifts, width data, analyses.

**Nuclear Reactions:**  $^1\text{H}(p,\pi^+)$ , E threshold; measured deuteron anisotropy vs pion momenta; deduced detector suitability. Germanium wall plus magnetic spectrometer, high resolution, hybrid detector.

**95Ma57** *Nuclear Reactions of Cluster Pick-Up by Complex Charged Particles in the Energy Region of 20 MeV/nucleon*

Yu. G. Mashkarov, E. I. Koshchy, Yu. M. Chuvilsky, Bull. Rus. Acad. Sci. Phys. 59, 150 (1995).

**Nuclear Reactions:**  ${}^6\text{Li}(d,d)$ ,  $E=50$  MeV;  ${}^6\text{Li}({}^3\text{He},{}^3\text{He})$ ,  $E=60$  MeV; analyzed  $\sigma(\theta)$ .  ${}^{16}\text{O}({}^3\text{He},{}^6\text{Li})$ ,  $E=30-60$  MeV;  ${}^{16}\text{O}({}^3\text{He},{}^7\text{Li})$ ,  $({}^3\text{He},{}^7\text{Be})$ ,  $E=60$  MeV; analyzed  $\sigma(\theta)$ .  ${}^{19}\text{F}$ ,  ${}^{16}\text{O}({}^3\text{He},X)$ ,  $E=60$  MeV; calculated  ${}^6$ ,  ${}^7\text{Li}$ ,  ${}^7\text{Be}$  production yields, cluster transfer absolute spectroscopic amplitudes.  ${}^9\text{Be}$ ,  ${}^{12}$ ,  ${}^{13}\text{C}({}^3\text{He},{}^6\text{Li})$ ,  $E$  not given; calculated final nuclei levels spectroscopic amplitudes.

**95Ma58** *Quark Degrees of Freedom in Nuclei*

W. -H. Ma, Nuovo Cim. 108A, 65 (1995).

**Nuclear Reactions:**  ${}^3\text{He}(e,e')$ ,  $E$  not given; calculated charge, magnetic form factors.  ${}^{18}\text{O}(\pi^+, \pi^-)$ ,  $E=164$  MeV; calculated  $\sigma(\theta)$ .  
Hybrid quark hadron model.

**Nuclear Structure:**  ${}^3\text{He}$ ; calculated charge density. Hybrid quark hadron model.

**95Ma59** *Finite-Size Effects in a Relativistic Fermi Gas Model of Quasi-Elastic Scattering*

M. Marinus, H. G. Miller, Nuovo Cim. 108A, 437 (1995).

**Nuclear Structure:**  ${}^6\text{Li}$ ,  ${}^{12}\text{C}$ ,  ${}^{24}\text{Mg}$ ,  ${}^{40}\text{Ca}$ ,  ${}^{58}\text{Ni}$ ,  ${}^{89}\text{Y}$ ,  ${}^{119}\text{Sn}$ ,  ${}^{181}\text{Ta}$ ,  ${}^{208}\text{Pb}$ ; analyzed (e,e') data; deduced Fermi momentum, mean separation energy,  $R_0(A)$ . Relativistic Fermi gas model, finite-size effects.

**Nuclear Reactions:**  ${}^{12}\text{C}$ ,  ${}^{56}\text{Fe}(e,e')$ , E not given; analyzed transverse, longitudinal response function. Relativistic Fermi gas model, finite-size effects.

**95Ma60** *The Onset of Chaos with a Quadrupole-Quadrupole Interaction*

V. R. Manfredi, L. Salasnich, Nuovo Cim. 108A, 449 (1995).

**95Ma61** *Comparison of Chiral Perturbation Theory and QCD Sum Rule Results for Pseudoscalar Isoscalar-Isovector Mixing*

K. Maltman, Phys. Lett. 351B, 56 (1995).

**95Ma62** *The Determination of Nuclear Charge Distributions using a Bayesian Maximum Entropy Method*

V. A. Macaulay, B. Buck, Nucl. Phys. A591, 85 (1995).

**Nuclear Structure:**  $^4\text{He}$ ,  $^{12}\text{C}$ ; calculated charge density, form factor. Bayesian maximum entropy method.

**95Ma63** *Constraints on  $\Sigma$ -Nucleus Dynamics from Dirac Phenomenology of  $\Sigma^-$  Atoms*

J. Mares, E. Friedman, A. Gal, B. K. Jennings, Nucl. Phys. A594, 311 (1995).

**Nuclear Structure:** Si, Ca, Pb; calculated  $\Sigma^-$ -nucleus potentials, interaction shifts, widths; deduced isovector meson-hyperon coupling, implication to  $\Sigma$ -hypernuclei. Relativistic mean field approach.

**Atomic Physics:** esic-Atoms Si, Ca, Pb; calculated  $\Sigma^-$ -nucleus potentials, interaction shifts, widths; deduced isovector meson-hyperon coupling, implication to  $\Sigma$  hypernuclei. Relativistic mean field approach.

**95Ma64** *Dimuon Production below Mass 3.1 GeV/c<sup>2</sup> in p-W and S-W Interactions at 200 GeV/c/A*

M. Masera, and the HELIOS/3 Collaboration, Nucl. Phys. A590, 93c (1995).

**Nuclear Reactions:** W(p,X), (S,X), E at 200 GeV/c/nucleon; measured vector meson production vs charged multiplicity, dimuon spectra.

**95Ma65** *First Results from NA49 on Pb + Pb Collisions at 158 GeV/Nucleon*

S. Margetis, and the NA49 Collaboration, Nucl. Phys. A590, 355c (1995).

***Nuclear Reactions:***  $^{208}\text{Pb}(\text{Pb},\text{X})$ , E at 158 GeV/c/nucleon; measured negative hadron energy flow, transverse production, rapidity density; deduced degree of nuclear stopping, energy densities related features.

**95Ma66** *Longitudinal Response Functions of  $^3\text{He}$  and  $^3\text{H}$  by Lorentz Kernel Transformations*

S. Martinelli, H. Kamada, G. Orlandini, W. Glockle, Phys. Rev. C52, 1778 (1995).

**Nuclear Structure:**  $^3\text{H}$ ,  $^3\text{He}$ ; calculated longitudinal response functions. Lorentz kernel transformations approach.

**95Ma67** *Collective Reactions to the Continuum in Neutron Scattering by Niobium*

A. Marcinkowski, B. Marianski, P. Demetriou, P. E. Hodgson, Phys. Rev. C52, 2021 (1995).

**Nuclear Reactions:**  $^{93}\text{Nb}(n,xn)$ ,  $E=14\text{-}26$  MeV; analyzed  $\sigma(\theta, E_n)$ , angle integrated  $\sigma$ . Combined multi-step direct, compound plus preequilibrium components.

**95Ma68** *Measurement of the Electric and Magnetic Polarizabilities of the Proton*

B. E. MacGibbon, G. Garino, M. A. Lucas, A. M. Nathan, G. Feldman, B. Dolbilkin, Phys. Rev. C52, 2097 (1995).

**Nuclear Reactions:**  $^1\text{H}(\gamma,\gamma)$ ,  $E=70\text{-}148$  MeV; measured Compton scattering  $\sigma(\theta)$  vs  $E$ ; deduced magnetic polarizabilities  $\alpha(\text{bar})$ ,  $\beta(\text{bar})$ . Simultaneous use of tagged, untagged beam over certain energy range.

**95Ma69** *Systematics of Low-Lying Dipole Strengths in Odd and Even Dy and Gd Isotopes*

J. Margraf, T. Eckert, M. Rittner, I. Bauske, O. Beck, U. Kneissl, H. Maser, H. H. Pitz, A. Schiller, P. von Brentano, R. Fischer, R. -D. Herzberg, N. Pietralla, A. Zilges, H. Friedrichs, Phys. Rev. C52, 2429 (1995).

**Nuclear Reactions:**  $^{160, 162, 164, 161, 163}\text{Dy}$ ,  $^{160, 156, 157, 158}\text{Gd}(\gamma, \gamma')$ , E=4 MeV bremsstrahlung; measured  $E_\gamma$ ,  $I_\gamma$ ,  $\gamma$  asymmetry in some cases.  $^{164, 162, 161, 163, 160}\text{Dy}$ ,  $^{157}\text{Gd}$  deduced levels, J,  $\pi$ , K,  $\Gamma_0$ , B( $\lambda$ ). Enriched targets.

**95Ma70** *Comment on '  $^{13}\text{C}$  NMR Study of Layered Organic Superconductors Based on BEDT-TTF Molecules '*

H. Mayaffre, P. Wzietek, D. Jerome, Phys. Rev. Lett. 75, 3586 (1995).

**Nuclear Moments:**  $+13\text{C}$ ; analyzed NMR data analysis; deduced interpretation ambiguities, possible causes. Layered organic superconductors.

**95Ma71** *Pinning Down the Glue in the Proton*

A. D. Martin, W. J. Stirling, R. G. Roberts, Phys. Lett. 354B, 155 (1995).

**Nuclear Structure:**  $^1\text{H}$ ; analyzed data; deduced  $F_2$  structure function gluon distribution.

**95Ma72** *Relativistic Effects in Simulations of the Fragmentation Process with the Microscopic Framework*

T. Maruyama, T. Maruyama, K. Niita, Phys. Lett. 358B, 34 (1995).

**Nuclear Reactions:** Ca(Ca,X),  $E=1.05$  GeV/nucleon; calculated p-,  $\alpha$ -multiplicities vs impact parameter, fragment production  $\sigma$  vs mass, relativistic effects. Statistical decay model, Lorentz covariant RQMD, noncovariant QMD approaches.

**95Ma73** *Search for Deeply-Bound Pionic States using  $(p, {}^2\text{He})$  Reactions at 390.6 MeV*

N. Matsuoka, T. Noro, K. Tamura, M. Yoshimura, M. Yosoi, A. Okihana, T. Yoshimura, Phys. Lett. 359B, 39 (1995).

**Nuclear Reactions:**  ${}^{12}\text{C}$ ,  ${}^{208}\text{Pb}(p, X)$ ,  $E=390.6$  MeV; measured  $\sigma(\theta, E({}^2\text{He}))$ ; deduced deeply-bound pionic states evidence for  ${}^{208}\text{Pb}$ .

**95Ma74** *Two Model-Independent Results for the Momentum Dependence of  $\rho$ - $\omega$  Mixing*

K. Maltman, Phys. Lett. 362B, 11 (1995).

**95Ma75** *Fast Timing Studies of the Neutron-Rich Singly-Magic  $N = 82$  Nuclei*

H. Mach, B. Fogelberg, Phys. Scr. T56, 270 (1995).

**Radioactivity:**  $^{136}\text{I}$ ,  $^{138}\text{Cs}(\beta^-)$ ; measured  $\beta\gamma\gamma(t)$ .  $^{136}\text{Xe}$ ,  $^{138}\text{Ba}$  levels deduced  $T_{1/2}$ .

**Nuclear Structure:**  $^{140}\text{Ce}$ ; analyzed data; deduced levels  $T_{1/2}$ .

**95Ma76** *Coexistence of Collective and Quasiparticle Structures in  $^{106}, ^{108}\text{Sn}$  Nuclei*

E. Makela, A. Virtanen, R. Julin, S. Juutinen, M. Piiparinen, S. Tormanen, D. Seweryniak, A. Atac, B. Cederwall, C. Fahlander, E. Ideguchi, A. Johnson, W. Karczmarczyk, J. Kownacki, S. Mitarai, L. -O. Norlin, J. Nyberg, R. Schubart, G. Sletten, Phys. Scr. T56, 280 (1995).

**Nuclear Reactions:**  $^{54}\text{Fe}(^{58}\text{Ni}, X)$ ,  $E=270$  MeV; measured (particle) $\gamma\gamma$ -coin data, DCO ratios.  $^{108}, ^{106}\text{Sn}$  deduced high-spin levels, J,  $\pi$ , collective quasiparticle structures coexistence features.

**Nuclear Structure:**  $^{104}, ^{106}, ^{108}, ^{110}, ^{112}, ^{114}, ^{116}, ^{118}\text{Sn}$ ; analyzed level systematics.

**95Ma77** *Rotation of an Odd Nucleus in the Quadratic Cranking Model*

V. V. Mazepus, *Yad. Fiz.* 58, No 5, 837 (1995); *Phys. Atomic Nuclei* 58, 774 (1995).

**95Ma78** *Excitation of Isomeric States in the Reaction  $(\gamma, n)$  for  $N = 82$  Shell Nuclei*

V. M. Mazur, V. A. Zheltonozhsky, Z. M. Bigan, *Yad. Fiz.* 58, No 6, 970 (1995); *Phys. Atomic Nuclei* 58, 898 (1995).

**Nuclear Reactions:** ICPND  $^{138}\text{Ba}$ ,  $^{142}\text{Nd}$ ,  $^{144}\text{Sm}(\gamma, n)$ ,  $E=8-18$  MeV bremsstrahlung; measured residuals isomer production  $\sigma$  vs  $E$ ; deduced isomeric yield ratios, shell effects role.

**95Ma79** *Clan Structure and Intermittency in Proton-Nucleus Interactions at High Energy*

D. K. Maity, P. K. Bandyopadhyay, D. K. Bhattacharjee, Z. Phys. C65, 75 (1995).

***Nuclear Reactions:*** Ag, Br(p,X), E at 70 GeV/c; analyzed data; deduced clan structure, intermittency features.

**95Ma80** *Hyperfine Structure of the  $3^3P$  State of  $^3\text{He}$  and Isotope Shift for the  $2^3S$ - $3^3P_0$  Transition*

F. Marin, F. Minardi, F. S. Pavone, M. Inguscio, G. W. F. Drake, Z. Phys. D32, 285 (1995).

**Nuclear Moments:**  $^3\text{He}$ ; measured hfs, isotope shift; deduced rms charge radius. High precision.

**95Ma81** A  $^{109}\text{Pd} \rightarrow ^{109\text{m}}\text{Ag}$  Generator

M. S. Mansur, A. Mushtaq, A. Muhammad, Appl. Radiat. Isot. 46, 1007 (1995).

**95Ma82** *Determination of  $^{227}\text{Ac}$  by  $\alpha$ -Particle Spectrometry*

P. Martin, G. J. Hancock, S. Paulka, R. A. Akber, *Appl. Radiat. Isot.* 46, 1065 (1995).

**Radioactivity:**  $^{227}\text{Ac}(\alpha)$ ,  $(\beta^-)$ ; measured  $\alpha$ -spectra including those of daughter nuclei. Application to environmental samples concentration determination.

**95Ma83** *Order and Chaos in Roto-Vibrational States of Atomic Nuclei*

V. R. Manfredi, L. Salasnich, Int. J. Mod. Phys. E4, 625 (1995).

**Nuclear Structure:**  $^{164}\text{Dy}$ ,  $^{166}\text{Er}$ ,  $^{160}\text{Gd}$ ,  $^{230}\text{Th}$ ,  $^{240}\text{Pu}$ ; calculated chaotic region delimiting energies, other aspects. Classical analytical criterion, Poincare sections, spectral statistics.

**95Ma84** *Thermal Fluctuation and Collisional Damping Effects in the GDR Observables in Hot Rotating  $^{176}\text{W}$  Nuclei*

M. Mattiuzzi, A. Bracco, F. Camera, B. Million, M. Pignanelli, J. J. Gaardhoje, A. Maj, T. Ramsøy, T. Tveter, Z. Zelazny, Phys. Lett. 364B, 13 (1995).

**Nuclear Reactions:**  $^{148}\text{Nd}(^{28}\text{Si}, X)$ ,  $E=147$  MeV; measured  $\gamma\gamma$ -coin,  $E_\gamma$ ,  $I_\gamma$ .  $^{176}\text{W}$  deduced GDR width, thermal fluctuation, collisional damping effects role.

**95Ma85** *Electric-Field Effects on the Neutron Emission from Pd Deuteride Samples*

C. Manduchi, S. Salviato, C. Ciricillo, E. Milli, G. Zannoni, G. Mengoli, M. Fabrizio, Nuovo Cim. 108A, 1187 (1995).

**95Ma86** *Average Trajectory Semiclassical Theory of Heavy Ion Collisions*

H. D. Marta, L. F. Canto, R. Donangelo, Int. J. Mod. Phys. E4, 153 (1995).

**Nuclear Reactions:**  $^{160}\text{Gd}(^{40}\text{Ar}, ^{40}\text{Ar}')$ ,  $E=140\text{-}180$  MeV; calculated rotational levels excitation probability vs spin, E. Average trajectory semi-classical theory, comparison to coupled-channels approach.

**95Ma87** *A Possible Microscopic Description of Nuclear Collective Rotation in Band-Crossing Region - Occurrence Mechanism of s-Band -*

T. Marumori, F. Sakata, T. Une, T. Tanaka, A. Onoda, Prog. Theor. Phys. (Kyoto) 93, 335 (1995).

**95Ma88** *Determination of the Parameters of the Quadrupole-Interaction Tensor in Cation Sites of a High-Temperature Superconductor by Emission Mossbauer Spectroscopy Using  $^{67}\text{Cu}$ ( $^{67}\text{Zn}$ ),  $^{133}\text{Ba}$ ( $^{133}\text{Cs}$ ), and  $^{155}\text{Eu}$ ( $^{155}\text{Gd}$ ) Isotopes: Comparison with the calculated tensor of the electric-field gradient*

V. F. Masterov, F. S. Nasredinov, N. P. Seregin, P. P. Seregin, *Yad. Fiz.* 58, No 9, 1554 (1995); *Phys. Atomic Nuclei* 58, 1467 (1995).

**Radioactivity:**  $^{67}\text{Cu}$ ( $\beta^-$ );  $^{133}\text{Ba}$ (EC);  $^{155}\text{Eu}$ ( $\beta^-$ ); analyzed emission Mossbauer spectra data; deduced electric field gradient tensor for  $^{67}\text{Zn}$ ,  $^{133}\text{Cs}$ ,  $^{155}\text{Gd}$ , parameters.

**95Ma89** *How Many Nucleons Are Required for Nuclear Pion Absorption ( Question )*

S. G. Mashnik, Yad. Fiz. 58, No 10, 1772 (1995); Phys. Atomic Nuclei 58, 1672 (1995).

**Nuclear Reactions:** C,  $^{27}\text{Al}$ , Ni, Ta( $\pi^+$ ,X), ( $\pi^-$ , X), E=220 MeV; analyzed proton yields data. Cu( $\pi^-$ , X), ( $\pi^+$ ,X), E at 0.6, 1 GeV/c; analyzed proton yields data; deduced dominant pion absorption mechanism. Cascade-exciton model.

**95Ma90** *Ion Transport in Xenon Gas Applications to Double Beta Decay*

T. M. Maddern, L. W. Mitchell, Nucl. Instrum. Methods Phys. Res. A359, 506 (1995)

**Radioactivity:**  $^{212}\text{Pb}(\beta^-)$ ;  $^{212}\text{Bi}(\alpha)$  [from  $^{212}\text{Pb}(\beta\text{-decay})$ ]; measured  $^{208}\text{Tl}$  ions yield vs Xe pressure at given electric field, also vs drift field at fixed pressure; deduced applications to  $2\beta\text{-decay}$  of  $^{136}\text{Xe}$ . Ion transport in Xe gas.

**95Ma91** Separation of  $^{111}\text{Ag}$  from Neutron Irradiated Natural Palladium

M. S. Mansur, A. Mustaq, A. Muhammad, Radiochim. Acta 68, 161 (1995).

**Radioactivity:**  $^{111}\text{Ag}$ ,  $^{111\text{m}}\text{Pd}(\beta^-)$  [from  $^{110}\text{Pd}(n, \gamma)$ ];  $^{111\text{m}}\text{Ag}(\text{IT})$  [from  $^{111}\text{Ag}$ ,  $^{111\text{m}}\text{Pd}(\beta\text{-decay})$ ]; measured  $^{111}\text{Ag}$  separation, recovery aspects. Cation exchanger.

**95Ma92** *Noticeable Change of p-p Spin-Orbit Interaction at Short Distance - A Possible First-Order Phase Transition Found in p-p Scattering at  $T(L) = 3 \sim 10$  GeV -*

M. Matsuda, J. Nagata, H. Yoshino, K. Harada, S. Ohara, Prog. Theor. Phys. (Kyoto) 93, 1059 (1995).

**Nuclear Reactions:**  $^1\text{H}(p,p)$ , E at 3.6-12 GeV/c; analyzed phase shifts; deduced short-range, repulsive spin-orbit interaction features.

**95Ma93** A  $^{109}\text{Cd}/^{109\text{m}}\text{Ag}$  Generator

M. S. Mansur, A. Mushtaq, A. Muhammad, J. Radioanal. Nucl. Chem. 201, 205 (1995).

**95Ma94**  $^{101}\text{Ru}$  NQR Study in Superconducting  $\text{CeRu}_2$

K. Matsuda, Y. Kohori, T. Kohara, J. Phys. Soc. Jpn. 64, 2750 (1995).

**Nuclear Moments:**  $+101\text{Ru}$ ; measured NQR; deduced electric quadrupole interaction, spin lattice relaxation rate. Superconducting  $\text{CeRu}_2$ .

**95Ma95** *The Proton Strength Distribution of the Discrete Hole States of  $^{207}\text{Tl}$*

R. Majumdar, J. Phys. Soc. Jpn. 64, 3239 (1995).

**Nuclear Structure:**  $^{207}\text{Tl}$ ; calculated levels, spectroscopic factors, hole states proton strength distribution. Hole-core vibrational scheme.

**95Ma96** *A Graphical Analysis of Decay Curves Measured by the Doppler-Shift Recoil Distance Method*

A. Makishima, T. Ishii, M. Ogawa, M. Ishii, Nucl. Instrum. Methods Phys. Res. A363, 591 (1995)

**Nuclear Reactions:**  $^{92}\text{Mo}(^{37}\text{Cl},2\text{np})$ ,  $(^{35}\text{Cl},2\text{np})$ ,  $E=145\text{ MeV}$ ;  $^{107}\text{Ag}(^{32}\text{S},2\text{np}\alpha)$ ,  $(^{32}\text{S},2\text{n}3\text{p})$ ,  $E=170\text{ MeV}$ ; measured  $\gamma$  multiplicity, decay curves.  $^{124}$ ,  $^{126}\text{Ce}$ ,  $^{132}$ ,  $^{134}\text{Nd}$  levels deduced  $T_{1/2}$ . Doppler shift recoil distance method.

**95Ma97** *Nuclear Structure Studies with (p,n) Reactions at Intermediate Energies*

J. G. Marques, J. G. Correia, A. A. Melo, M. F. da Silva, J. C. Soares, and the ISOLDE-CERN Isotope Separator, Nucl. Instrum. Methods Phys. Res. B99, 645 (1995)

**Radioactivity:**  $^{73}\text{As}(\text{EC})$ ;  $^{75}\text{Br}(\text{EC})$ , ( $\beta^+$ );  $^{111\text{m}}\text{Cd}(\text{IT})$ ; compiled, reviewed  $\gamma(e^-)(\theta, H)$  data.  $^{197\text{m}}\text{Hg}(\text{IT})$ , ( $\text{EC}$ );  $^{199\text{m}}\text{Hg}(\text{IT})$ ; measured  $\gamma(e^-)(\theta, H, t)$ ; deduced magnetic hyperfine field, electric field gradient in Co. Four detector  $\gamma(e^-)$  spectrometer, ISOLDE isotope separator.

**95Ma98** *Identification of Photons and Particles in the Segmented Electromagnetic Calorimeter TAPS*

F. M. Marques, F. Lefevre, G. Martinez, T. Matulewicz, R. W. Ostendorf, Y. Schutz, Nucl. Instrum. Methods Phys. Res. A365, 392 (1995)

**Nuclear Reactions:** Ni(<sup>86</sup>Kr,X), E=60 MeV/nucleon; <sup>197</sup>Au(<sup>181</sup>Ta, X), E=39.5 MeV/nucleon; <sup>197</sup>Au(<sup>208</sup>Pb,X), E=29 MeV/nucleon; analyzed hard photon, electron pairs invariant mass spectra. Segmented electromagnetic calorimeter TAPS.

**95Ma99** *A Large Nuclear Polarization of  $^{139}\text{La}$  in  $\text{Nd}^{3+}:\text{LaAlO}_3$  for testing the time reversal invariance*

T. Maekawa, Y. Takahashi, H. M. Shimizu, M. Inuma, A. Masaike, T. Yabuzaki, Nucl. Instrum. Methods Phys. Res. A366, 115 (1995)

**Nuclear Moments:**  $^{139}\text{La}$ ; measured NMR signal enhancement at 1.8 K temperature; deduced thermal contact between nuclear Zeeman, spin-spin interaction reservoirs role in dynamic polarization. Large  $^{139}\text{La}$  polarization in  $\text{Nd}^{3+}:\text{LaAlO}_3$ , application to time reversal invariance study.

**95MaZT** *Cascade-Exciton Model Analysis of Excitation Functions for Proton-Induced Reactions at Low and Intermediate Energies*

S. G. Mashnik, Program and Thesis, Proc. 45th Ann. Conf. Nucl. Spectrosc. Struct. At. Nuclei, St. Petersburg, p. 372 (1995).

**Nuclear Reactions:**  $^{56}\text{Fe}(p,2n)$ ,  $E=15\text{-}45$  MeV; calculated  $\sigma(E)$ . Cascade-exciton model.

**95MaZU Non-Resonant Breakup of  ${}^7\text{Li}$  at 42 MeV**

H. Mabuchi, H. Utsunomiya, K. Osada, Y. Aoki, K. Hirota, K. Ieki, Y. Iwata, K. Katori, Y. -W. Lui, Univ. Tsukuba, Tandem Accel. Center, Ann. Rept., 1994, p. 17 (1995); UTTAC-62 (1995).

**Nuclear Reactions:**  ${}^{197}\text{Au}({}^7\text{Li},\alpha t)$ ,  $E=42$  MeV: measured  $\alpha(t)$ -coin.

**95MaZV** *Asymmetry Parameter of  $^{23}\text{Mg}$  Beta Decay*

K. Matsuta, M. Fukuda, S. Fukuda, T. Minamisono, Y. Nojiri, T. Izumikawa, M. Tanigaki, M. Nakazato, M. Mihara, T. Onishi, T. Yamaguchi, T. Miyake, M. Sasaki, A. Harada, T. Ohtsubo, K. Yoshida, A. Ozawa, T. Kobayashi, I. Tanihata, J. R. Alonso, G. F. Krebs, T. J. M. Symons, RIKEN-94, p. 43 (1995).

**Radioactivity:**  $^{23}\text{Mg}(\beta^+)$  [from  $^{197}\text{Au}(^{24}\text{Mg}, ^{23}\text{Mg})$ ,  $E=91$  MeV/nucleon]; measured  $\beta$ -NMR; deduced  $\beta$ -ray asymmetry parameter. Polarized source.

**Nuclear Reactions:**  $^{197}\text{Au}(^{24}\text{Mg}, ^{23}\text{Mg})$ ,  $E=91$  MeV/nucleon; measured  $\beta$ -NMR; deduced  $\beta$ -ray asymmetry parameter. Projectile fragmentation.

**95MaZW** *Magnetic Moment of Proton Drip-Line Nucleus  ${}^9\text{C}$*

K. Matsuta, M. Fukuda, M. Tanigaki, T. Minamisono, Y. Nojiri, M. Mihara, T. Onishi, T. Yamaguchi, A. Harada, M. Sasaki, T. Miyake, S. Fukuda, K. Yoshida, A. Ozawa, T. Kobayashi, I. Tanihata, J. R. Alonso, G. F. Krebs, T. J. M. Symons, RIKEN-94, p. 40 (1995).

**Radioactivity:**  ${}^9\text{C}(\beta^+)$  [from  $\text{C}({}^{12}\text{C}, {}^9\text{C})$ ,  $E=67$  MeV/nucleon]; measured  $\beta$ -NMR.  ${}^9\text{C}$  deduced  $\mu$ . Polarized source.

**Nuclear Reactions:**  $\text{C}({}^{12}\text{C}, {}^9\text{C})$ ,  $E=67$  MeV/nucleon; measured  $\beta$ -NMR.  ${}^9\text{C}$  level deduced  $\mu$ . Projectile fragmentation.

**95MaZX** *Multifragmentation and Relativistic Effects in High Energy Heavy-Ion Reactions*

T. Maruyama, RCNP (Osaka), Ann. Rept., 1994, p. 141 (1995).

**Nuclear Reactions:**  $^{40}\text{Ca}(^{40}\text{Ca},X)$ ,  $E=1.05$  GeV/nucleon; calculated  $\sigma(\theta)$ , fragment distribution. Quantum molecular dynamical approach.

**95MaZY** *Measurements of  $^{12}\text{C}$  and  $^{208}\text{Pb}(p,^2\text{He})$  Reactions at 390.6 MeV and the Deeply-Bound Pionic States*

N. Matsuoka, T. Noro, K. Tamura, M. Yoshimura, M. Yosoi, A. Okihana, T. Yoshimura, RCNP (Osaka), Ann. Rept., 1994, p. 3 (1995).

**Nuclear Reactions:**  $^{12}\text{C}$ ,  $^{208}\text{Pb}(p,X)$ ,  $E=390.6$  MeV; measured  $^2\text{He}$  spectra.  $^{207}\text{Pb}$  deduced deeply-bound pionic states.

**95MaZZ** *Hyperfine Interaction of  $^{13}\text{O}$  and  $^{23}\text{Mg}$  Implanted in Pt*

K. Matsuta, M. Fukuda, M. Tanigaki, T. Minamisono, Y. Nojiri, M. Mihara, T. Yamaguchi, A. Harada, M. Sasaki, T. Miyake, K. Minamisono, T. Fukao, K. Sato, Y. Matsumoto, T. Ohtsubo, S. Fukuda, K. Yoshida, A. Ozawa, T. Kobayashi, I. Tanihata, J. R. Alonso, G. F. Krebs, T. J. M. Symons, Osaka Univ. Lab. Nucl. Studies, Ann. Rept., 1994, p. 43 (1995).

**Radioactivity:**  $^{13}\text{O}(\beta^+)$  [from  $^9\text{Be}(^{16}\text{O}, ^{13}\text{O})$ ,  $E=130$  MeV/nucleon];  $^{23}\text{Mg}(\beta^+)$  [from  $^{197}\text{Au}(^{24}\text{Mg}, ^{23}\text{Mg})$ ,  $E=100$  MeV/nucleon]; measured  $\beta$ -NMR; deduced relaxation time and Knight shift in Pt crystal.  $\beta$ -NMR technique, polarized sources.

**95Mc01** *Hints of a Nearside Nuclear Rainbow in Pion Scattering from  $^{208}\text{Pb}$  at 291 MeV ( Question )*

K. W. McVoy, G. R. Satchler, Nucl. Phys. A581, 665 (1995).

**Nuclear Reactions:**  $^{208}\text{Pb}(\pi^+, \pi^+)$ , E=291 MeV; calculated  $\sigma(\theta)$ ; deduced strong absorption role. Optical model.

**95Mc02** ( $\gamma, 2N$ ) Reaction in  $^{12}\text{C}$

J. C. McGeorge, I. J. D. MacGregor, S. N. Dancer, J. R. M. Annand, I. Anthony, G. I. Crawford, S. J. Hall, P. D. Harty, J. D. Kellie, G. J. Miller, R. O. Owens, P. A. Wallace, D. Branford, A. C. Shotter, B. Schoch, R. Beck, H. Schmieden, J. M. Vogt, Phys. Rev. C51, 1967 (1995).

**Nuclear Reactions:**  $^{12}\text{C}(\gamma, np)$ ,  $(\gamma, 2p)$ ,  $E=80\text{-}157$  MeV bremsstrahlung; measured  $\sigma$  vs missing energy, 2N pair momentum distributions; deduced  $(\gamma, pn)$  reaction mechanism. Tagged beam, photon tagging spectrometer.

**95Mc03** *Confined Alpha Distribution Measurements in a Deuterium-Tritium Tokamak Plasma*

G. McKee, R. Fonck, B. Stratton, R. Bell, R. Budny, C. Bush, B. Grek, D. Johnson, H. Park, A. Ramsey, E. Synakowski, G. Taylor, Phys. Rev. Lett. 75, 649 (1995).

**95Mc04** *Limits on  $\nu(\mu)(\bar{\nu}(\mu)) \rightarrow \nu(\tau)(\bar{\nu}(\tau))$  and  $\nu(\mu)(\bar{\nu}(\mu)) \rightarrow (\bar{\nu}(e))\nu(e)$  Oscillations from a Precision Measurement of Neutrino-Nucleon Neutral Current Interactions*

K. S. McFarland, D. Naples, C. G. Arroyo, P. Auchincloss, P. de Barbaro, A. O. Bazarko, R. H. Bernstein, A. Bodek, T. Bolton, H. Budd, J. Conrad, R. B. Drucker, D. A. Harris, R. A. Johnson, J. H. Kim, B. J. King, T. Kinnel, G. Koizumi, S. Koutsoliotas, M. J. Lamm, W. C. Lefmann, W. Marsh, C. McNulty, S. R. Mishra, P. Nienaber, M. Nussbaum, M. J. Oreglia, L. Perera, P. Z. Quintas, A. Romosan, W. K. Sakumoto, B. A. Schumm, F. J. Sciulli, W. G. Seligman, M. H. Shaevitz, W. H. Smith, P. Spentzouris, R. Steiner, E. G. Stern, M. Vakili, U. K. Yang, Phys. Rev. Lett. 75, 3993 (1995).

**95Mc05 PXAMS - Projectile X-Ray AMS: X-ray yields and applications**

J. E. McAninch, G. S. Bench, S. P. H. T. Freeman, M. L. Roberts, J. R. Southon, J. S. Vogel, I. D. Proctor, Nucl. Instrum. Methods Phys. Res. B99, 541 (1995)

**Nuclear Reactions:** Ca, C, O, Ti(<sup>28</sup>Si,X), E=56 MeV; Cu(<sup>56</sup>Fe, X), Zn(<sup>58</sup>Ni,X), (Ge,X), E=102 MeV; <sup>89</sup>Y(<sup>80</sup>Se, X), E=100, 102 MeV; Rh(<sup>92</sup>Mo,X), Ag(<sup>106</sup>Pd, X), E=106 MeV; measured X-ray yields.

**Atomic Physics:** a, C, O, Ti(<sup>28</sup>Si,X), E=56 MeV; Cu(<sup>56</sup>Fe, X), Zn(<sup>58</sup>Ni,X), (Ge,X), E=102 MeV; <sup>89</sup>Y(<sup>80</sup>Se, X), E=100, 102 MeV; Rh(<sup>92</sup>Mo,X), Ag(<sup>106</sup>Pd, X), E=106 MeV; measured X-ray yields.

**95Me01** *Experimental Bounds for Spin Transfer Observables in  $\pi d$  Elastic Scattering*

R. Meier, Phys. Rev. C51, 420 (1995).

**Nuclear Reactions:**  ${}^2\text{H}(\pi,\pi)$ ,  $E=134\text{-}294$  MeV; analyzed  $\sigma$ ,  $iT_{11}$ ,  $T_{20}$ ,  $\tau_{21}$ ,  $\tau_{22}$  data; deduced spin transfer observables bounds.

**95Me02** *Analyzing Powers for the  $^{12}\text{C}(^6\text{Li}(\text{pol}), \alpha)^{14}\text{N}^*$  Reaction at 33 MeV*

A. J. Mendez, K. W. Kemper, P. V. Green, P. L. Kerr, E. G. Myers, E. L. Reber, D. Robson, Phys. Rev. C51, 651 (1995).

**Nuclear Reactions:**  $^{12}\text{C}(\text{polarized } ^6\text{Li}, \alpha)$ ,  $E=33$  MeV; measured  $\sigma(\theta)$ , analyzing power vs  $\theta$ ; deduced model parameters.  $^{14}\text{N}$  levels deduced configurations, spectroscopic amplitudes. DWBA, finite-range deuteron cluster factor.

**95Me03** *Allowed-Unhindered  $\beta$  Decay of  $^{180}\text{Yb}$  and the Nuclear Structure of  $^{180}\text{Lu}$*

F. Meissner, T. Hild, V. Kunze, W. -D. Schmidt-Ott, C. Wennemann, P. C. Sood, R. Kirchner, E. Roeckl, K. Rykaczewski, Phys. Rev. C51, 1558 (1995).

**Radioactivity:**  $^{180}\text{Yb}(\beta^-)$  [from W( $^{197}\text{Au}, X$ ), Re( $^{136}\text{Xe}, X$ ), E=11 MeV/nucleon]; measured  $E_\gamma$ ,  $I_\gamma$ ,  $\beta\gamma$ -,  $\gamma\gamma$ -coin, I(ce); deduced log ft.  $^{180}\text{Lu}$  levels deduced J,  $\pi$ , configurations. Model comparison.

**Nuclear Structure:**  $^{180}\text{Yb}$ ,  $^{180}\text{Lu}$ ; calculated levels. Zero-range residual p-n interaction, two quasiparticle band-head energy calculations.

**95Me04** *Isolating Physical Effects in the Exclusive (N,N'π) Reaction*

R. Mehrem, J. T. Londergan, G. E. Walker, Phys. Rev. C51, 2031 (1995).

**Nuclear Reactions:**  $^{16}\text{O}(p,n\pi^+)$ ,  $(p,p'\pi^0)$ ,  $(p,n\pi^0)$ ,  $(p,p'\pi^-)$ , E 350-450 MeV; calculated  $\sigma(\theta(\text{pion}),\theta(\text{nucleon}),E(\text{nucleon}))$  vs E; deduced physical effects isolating possible experiments. Two-nucleon model.

**95Me05** *Quantum Correlations of Bosons and Fermions Produced in Heavy Ion Collisions*

H. Merlitz, D. Pelte, Z. Phys. A351, 187 (1995).

**95Me06** *Deep Inelastic Scattering from Polarized Deuterons*

W. Melnitchouk, G. Piller, A. W. Thomas, Phys. Lett. 346B, 165 (1995).

**Nuclear Structure:**  $^2\text{H}$ ; calculated spin-dependent structure function. Convariant framework.

**95Me07** *Quadrupole and Octupole Correlations in Normal, Superdeformed and Hyperdeformed States of  $^{194}\text{Pb}$*

J. Meyer, P. Bonche, M. S. Weiss, J. Dobaczewski, H. Flocard, P. -H. Heenen, Nucl. Phys. A588, 597 (1995).

**Nuclear Structure:**  $^{192}$ ,  $^{194}$ ,  $^{196}$ ,  $^{198}$ ,  $^{200}\text{Pb}$ ; calculated superdeformed band population evolution, spectra, energy curves vs quadrupole moment, quadrupole, octupole correlations in normal, hyperdeformed bands as well. Generator coordinate method.

**95Me08** *Superdeformed Band g-Factor in  $^{133}\text{Nd}$*

N. H. Medina, F. Brandolini, D. Bazzacco, P. Pavan, C. Rossi-Alvarez, R. Burch, S. Lunardi, R. Menegazzo, M. De Poli, G. Maron, R. V. Ribas, M. Ionescu-Bujor, Nucl. Phys. A589, 106 (1995).

**Nuclear Reactions:**  $^{104}\text{Pd}(^{32}\text{S},n2p)$ ,  $E=135$  MeV; measured  $\gamma\gamma(\theta, H)$  in polarized Gd.  $^{133}\text{Nd}$  deduced superdeformed band g-factor. Model comparison. Enriched multi-layered target.

**95Me09** *QCD Sum Rules with Finite Masses*

M. Meyer-Hermann, A. Schafer, W. Greiner, Z. Phys. A351, 345 (1995).

**95Me10** *Meson Production Near Threshold: Physics implications and new technical challenges*

H. O. Meyer, Acta Phys. Pol. B26, 553 (1995).

**Nuclear Reactions:**  $^1\text{H}(p,n\pi^+)$ , E 280-600 MeV;  $^2\text{H}(p, d\pi^0)$ ,  $^1\text{H}(p,p\pi^0)$ , E not given; compiled, reviewed  $\sigma$  data, analyses; deduced axial charge enhancement role in pion production. Other reactions, aspects included.

**95Me11** ICC Ratios of  $L_1$ ,  $L_2$ , and  $L_3$  Subshells for Some  $\gamma$ -Transitions in  $^{57}\text{Fe}$

R. Ya. Metskhvarishvili, Z. N. Miminoshvili, M. A. Elizbarashvili, L. V. Nekrasova, M. R. Metskhvarishvili, N. G. Khazaradze, Bull. Rus. Acad. Sci. Phys. 59, 13 (1995).

**Radioactivity:**  $^{57}\text{Co}(\text{EC})$ ; measured I(ce).  $^{57}\text{Fe}$  levels deduced L-subshell ICC ratios. Magnetic double-focussing sector type  $\beta$ -spectrometer.

**95Me12** *Charge Symmetry Breaking in 500 MeV Nucleon-Trinucleon Scattering*

T. Mefford, R. H. Landau, Phys. Rev. C52, 1212 (1995).

**Nuclear Structure:**  ${}^3\text{H}$ ,  ${}^3\text{He}$ ; calculated n-, p- rms matter radii. Charge symmetry, breaking included.

**Nuclear Reactions:**  ${}^3\text{H}$ ,  ${}^3\text{He}(p,p)$ ,  $(n,n)$ ,  $E=500$  MeV; calculated  $\sigma(\theta)$ . Microscopic optical potential, momentum space, charge symmetry, breaking included.

**95Me13** *Are Octupole Vibrations Harmonic ( Question )*

M. P. Metlay, J. L. Johnson, J. D. Canterbury, P. D. Cottle, C. W. Nestor, Jr., S. Raman, V. G. Zelevinsky, Phys. Rev. C52, 1801 (1995).

**Nuclear Structure:**  $A \geq 60$ ; analyzed B(E3) data; deduced octupole vibrations anharmonicity evidence. Data from (p,p'), (d,d'), ( $\alpha,\alpha'$ ) reactions.

**95Me14** *Direct Radiative Capture of p-Wave Neutrons*

A. Mengoni, T. Otsuka, M. Ishihara, Phys. Rev. C52, R2334 (1995).

**Nuclear Reactions:**  $^{12}\text{C}(n,\gamma)$ ,  $E \leq 500$  keV; calculated capture  $\sigma(E)$ . Direct capture model.

**95Me15** *Chiral Symmetry Constraints on the  $K^+$  Interaction with the Nuclear Pion Cloud*

Ulf.-G. Meissner, E. Oset, A. Pich, Phys. Lett. 353B, 161 (1995).

**95Me16** *Experimental Masses at Doubly Magic Nuclide  $^{132}\text{Sn}$*

K. A. Mezilev, Yu. N. Novikov, A. V. Popov, B. Fogelberg, L. Spanier, Phys. Scr. T56, 272 (1995).

**Nuclear Structure:**  $^{131, 132}\text{In}$ ,  $^{133, 134}\text{Sn}$ ,  $^{134}\text{Sb}$ ,  $^{134}\text{Te}$ ,  $^{134}\text{I}$ ; analyzed  $\beta$  endpoint energy data; deduced  $Q\beta$ .  $^{132, 131, 130}\text{In}$ ,  $^{130, 131, 132, 133, 134}\text{Sn}$ ,  $^{130, 131, 132, 133, 134}\text{Sb}$ ,  $^{133, 134}\text{Te}$ ; analyzed  $Q\beta$  values; deduced mass excess, proton-neutron, proton-proton, neutron-neutron interaction energies in some cases.

**95Me17**  $Q^2$  Dependence of Nuclear Shadowing

W. Melnitchouk, A. W. Thomas, Phys. Rev. C52, 3373 (1995).

**Nuclear Structure:**  $^2\text{H}$ , Ca, C; calculated structure function ratio vs  $Q^2$ .

**95Me18**  $\pi NN$  Form Factor from QCD Sum Rules

T. Meissner, Phys. Rev. C52, 3386 (1995).

**95Me19** *Meson Cloud of the Nucleon in Polarized Semi-Inclusive Deep-Inelastic Scattering*

W. Melnitchouk, A. W. Thomas, Z. Phys. A353, 311 (1995).

**Nuclear Reactions:**  $^1\text{H}(e,e'X)$ , E not given; calculated differential electroproduction  $\sigma$  for  $\Delta^{++}$ , various polarization states. Polarized target.

**95Me20** *Separation on Structure Functions in the Reaction  ${}^2\text{H}(e,e'p)n$*

Yu. P. Melnik, *Yad. Fiz.* 58, No 8, 1385 (1995); *Phys. Atomic Nuclei* 58, 1303 (1995).

***Nuclear Reactions:***  ${}^2\text{H}(e,e'p)$ , (polarized  $e,e'p$ ),  $E$  not given; analyzed structure functions, asymmetry data; deduced final state interactions, meson exchange effects role.

**95Me21** *L-Shell X-Ray Production by 2-12 MeV Carbon Ions in Fifteen Selected Elements from Copper to Lead*

R. Mehta, H. L. Sun, D. K. Marble, J. L. Duggan, F. D. McDaniel, G. Lapicki, J. Phys. (London) B28, 1187 (1995).

**Nuclear Reactions:** Cu, Ga, Ge, Br, <sup>89</sup>Y, Mo, Ag, Sn, La, Nd, Gd, Ho, Yb, <sup>197</sup>Au, Pb(C,X), E=2-12 MeV; measured L-shell X-ray production  $\sigma$ . Model comparison.

**Atomic Physics:** u, Ga, Ge, Br, Y, Mo, Ag, Sn, La, Nd, Gd, Ho, Yb, <sup>197</sup>Au, Pb(C,X), E=2-12 MeV; measured L-shell X-ray production  $\sigma$ . Model comparison.

**95Me22** *The Possibility of Measuring the DD-Fusion Cross Section at 0.2 keV*

L. I. Menshikov, L. N. Somov, *Yad. Fiz.* 58, No 9, 1727 (1995); *Phys. Atomic Nuclei* 58, 1628 (1995).

**Nuclear Reactions:**  ${}^2\text{H}(d,X)$ ,  $E = 0.2 \text{ keV}$ ; calculated fusion  $\sigma$  measuring possibility. Proposal to measure  $\text{dd}\mu$  molecule fusion rate.

**95Me23** *Studies of Deuteron Electrodisintegration in the Cumulative Region at Moderate Momentum Transfers*

Yu. P. Melnik, A. V. Shebeko, *Yad. Fiz.* 58, No 10, 1782 (1995); *Phys. Atomic Nuclei* 58, 1682 (1995).

**Nuclear Structure:**  ${}^2\text{H}(e,e'p)$ ,  $E=1, 1.4$  GeV; calculated  $\sigma(\theta(e'), E(e'), \theta p)$ , proton polarization vs  $\theta$ . Meson exchange, final state interactions.

**95MeZW** *Investigation of Absolute ICC in the  $L_1, L_2, L_3, M_1, M_2, M_3$  Subshells for Gamma-Transitions in  $^{152}\text{Sm}$  and  $^{154}\text{Gd}$*

I. R. Metskhvarishvili, M. R. Metskhvarishvili, Program and Thesis, Proc. 45th Ann. Conf. Nucl. Spectrosc. Struct. At. Nuclei, St. Petersburg, p. 72 (1995).

**Radioactivity:**  $^{152}\text{Eu}(\text{EC}), ^{154}\text{Eu}(\beta^-)$ ; measured I(ce), L-, M- subshell ratios.  $^{152}\text{Sm}, ^{154}\text{Gd}$  transitions deduced ICC,  $\gamma$ -multipolarity. Prism magnetic  $\beta$ -spectrometer.

**95MeZX** *Measurements of Neutron Spectra from Stopping-Length Targets Bombarded with Light Ions*

S. Meigo, H. Takada, H. Nakashima, T. Sasa, S. Tanaka, K. Shin, S. Ono, Japan Atomic Energy Res. Inst. Takasaki Ion Accel. for Advanced Radiat. Appl., Ann. Rept., 1994, p. 198 (1995).

**Nuclear Reactions:** ICPND C,  $^{197}\text{Au}(p,xn)$ ,  $E=67$  MeV; measured neutron yields,  $E(n)$ .

**95MeZY** *Investigation of Internal Conversion Electrons in  $^{88}\text{Sr}$*

R. Ya. Metskhvarishvili, I. R. Metskhvarishvili, M. A. Elizbarashvili, Program and Thesis, Proc. 45th Ann. Conf. Nucl. Spectrosc. Struct. At. Nuclei, St. Petersburg, p. 57 (1995).

**Nuclear Structure:**  $^{88}\text{Sr}$ ; analyzed I(ce) data; deduced ICC.

**95MeZZ**  $\beta$ -Zerfallseigenschaften Neutronenreicher Kerne in der A 100 Gegend

T. Mehren, J. Aysto, P. Dendooven, A. Honkanen, M. Huhta, P. Jauho, K. -L. Kratz, G. Lhersonneau, J. -M. Parmonen, B. Pfeiffer, A. Popov, S. Schoedder, Univ. Mainz, 1994 Ann. Rept., p. 31 (1995).

**Radioactivity:**  $^{101}, ^{102}, ^{103}\text{Y}$ ,  $^{105}, ^{106}, ^{107}, ^{108}, ^{109}\text{Nb}(\beta^-)$ ; measured  $T_{1/2}$ ,  $\beta$ -gated neutron spectra.

**95Mi01** *Bose-Stimulated Pion Production in Relativistic Nuclear Collisions*

I. N. Mishustin, L. M. Satarov, J. A. Maruhn, H. Stocker, W. Greiner, Phys. Rev. C51, 2099 (1995).

**Nuclear Reactions:**  $^{197}\text{Au}(^{197}\text{Au},\text{X})$ ,  $E=10.7$  GeV/nucleon;  $\text{S}(\text{S}, \text{X})$ ,  $^{197}\text{Au}(^{197}\text{Au},\text{X})$ ,  $E=200$  GeV/nucleon; analyzed pion production data, relativistic collisions; deduced Bose enhancement related features. Simple kinetic model, quasideuteron,  $\Delta$ -isobar mechanism.

**95Mi02** *Investigation on the  $\alpha$ -Particle Linear Chain Configuration in  $^{24}\text{Mg}$  at 46.4 MeV Excitation*

E. T. Mirgule, S. Kumar, M. A. Eswaran, D. R. Chakrabarty, V. M. Datar, N. L. Ragoowansi, H. H. Oza, U. K. Pal, Nucl. Phys. A583, 287c (1995).

**Nuclear Reactions:**  $^{12}\text{C}(^{12}\text{C},\alpha)$ ,  $(^{12}\text{C},^8\text{Be})$ ,  $E=50\text{-}70$  MeV; measured  $\alpha$ -,  $^8\text{Be}$  spectra,  $\sigma(\theta)$  vs  $E$ .  $^{24}\text{Mg}$  deduced resonance, decay features,  $\alpha$ -chain character.

**95Mi03** *Inclusive Neutrino Reactions in  $^{127}\text{I}$*

S. L. Mintz, M. Pourkaviani, Nucl. Phys. A584, 665 (1995).

**Nuclear Reactions:**  $^{127}\text{I}(\nu, e^-X)$ ,  $(\nu, X)$ ,  $E=\text{threshold to } 53 \text{ MeV}$ ; calculated  $\sigma(E)$ . Two different models, Michel spectrum neutrinos.

**95Mi04** *The  $^{16}\text{O}(\gamma,p)$  Reaction at  $E(\gamma) = 60$  and  $72$  MeV*

G. J. Miller, J. C. McGeorge, J. R. M. Annand, G. I. Crawford, V. Holliday, I. J. D. MacGregor, R. O. Owens, J. Ryckebusch, J. -O. Adler, B. -E. Andersson, L. Isaksson, B. Schroder, Nucl. Phys. A586, 125 (1995).

***Nuclear Reactions:***  $^{16}\text{O}(\gamma,p)$ ,  $E=60, 72$  MeV; measured  $\sigma(E_p, \theta_p)$ . Tagged bremsstrahlung beam. Comparison with microscopic Hartree-Fock RPA calculations.

**95Mi05** *Measurement of Quasielastic  $^3\text{He}(p(\text{pol}),pN)$  Scattering from Polarized  $^3\text{He}$  and the Three-Body Ground State Spin Structure*

M. A. Miller, K. Lee, A. Smith, J. -O. Hansen, C. Bloch, J. F. J. van den Brand, H. J. Bulten, D. DeSchepper, R. Ent, C. D. Goodman, W. W. Jacobs, C. E. Jones, W. Korsch, L. H. Kramer, M. Leuschner, W. Lorenzon, N. C. R. Makins, D. Marchlenski, H. O. Meyer, R. G. Milner, J. S. Neal, P. V. Pancella, S. F. Pate, W. K. Pitts, B. von Przewoski, T. Rinckel, G. Savopoulos, J. Sowinski, F. Sperisen, E. R. Sugarbaker, C. Tschalar, O. Unal, T. P. Welch, Z. -L. Zhou, Phys. Rev. Lett. 74, 502 (1995).

**Nuclear Reactions:**  $^3\text{He}(\text{polarized } p,2p)$ ,  $(\text{polarized } p,np)$ ,  $E=197$  MeV; measured analyzing power, spin correlations vs missing momentum, momentum transfer.  $^3\text{He}$  deduced nucleons polarizations at low missing momentum.

**95Mi06** *Hypertriton Calculations with Meson-Theoretical Hyperon-Nucleon Interactions*

K. Miyagawa, W. Glockle, Nucl. Phys. A585, 169c (1995).

**95Mi07** *Microscopic Kaonic Atom Optical Potential in Finite Nuclei with  $(\Lambda)(1405)$  and  $\Sigma(1385)$  Resonances and Kaonic Helium*

M. Mizoguchi, S. Hirenzaki, H. Toki, Nucl. Phys. A585, 349c (1995).

**Nuclear Structure:**  $Z \leq 30$ ; calculated kaonic atom level shifts, widths. Microscopic kaonic atom optical potential.

**Atomic Physics:** esic-Atoms  $Z \leq 30$ ; calculated kaonic atom level shifts, widths. Microscopic kaonic atom optical potential.

**95Mi08** *Nuclear Deformation in the  $SU(q)(2)$  Rotor Model*

N. Minkov, P. P. Raychev, R. P. Roussev, J. Phys. (London) G21, 557 (1995).

**Nuclear Structure:** A=154-238; calculated  $B(\lambda)$  vs parameter  $\tau$ ; deduced correlation. Rotational nuclei, Gd, Yb, Th, U isotopes,  $SU(q)(2)$  rotor model.

**95Mi09** *Band Staggering in Some Superdeformed States and Intrinsic Vortical Motion*

I. N. Mikhailov, P. Quentin, Phys. Rev. Lett. 74, 3336 (1995).

**95Mi10** *Some Interesting Observations Regarding Factorial Moments and Generalized Moments in Intermittency Analysis*

G. C. Mishra, B. K. Nandi, S. K. Nayak, D. P. Mahapatra, Phys. Lett. 348B, 297 (1995).

**95Mi11** *The Anti-Neutrino Reaction in  $^{127}\text{I}$*

S. L. Mintz, M. Pourkaviani, Nucl. Phys. A589, 724 (1995).

**Nuclear Reactions:**  $^{127}\text{I}(\bar{\nu}, X)$ ,  $E = \text{threshold} - 53 \text{ MeV}$ ; calculated  $\sigma$ ; deduced relation to  $\sigma$  for  $^{127}\text{I}(\nu, X)$ .

**95Mi12** *Properties of the Bound ( $\Lambda$ )( $\Sigma$ )NN System and Hyperon-Nucleon Interactions*

K. Miyagawa, H. Kamada, W. Glockle, V. Stoks, Phys. Rev. C51, 2905 (1995).

**Nuclear Structure:**  $^3\text{H}$ ;  $A=3$ ; calculated deuteron overlap functions for triton, hypertriton. Faddeev equations, realistic NN-, Nijmegen hypertriton-nucleon interactions.

**95Mi13** *A Potential Deduced from Low Energy  $^{16}\text{O}(\alpha, \alpha)$  Elastic Scattering*

F. Michel, G. Reidemeister, Y. Kondo, Phys. Rev. C51, 3290 (1995).

**Nuclear Reactions:**  $^{16}\text{O}(\alpha, \alpha)$ ,  $E=3.5-9.9$  MeV; analyzed  $\sigma(\theta)$  vs  $E$ ; deduced model parameters.  $^{20}\text{Ne}$  deduced resonances  $\Gamma$ .  
Real, energy-independent potentials.

**95Mi14** *Off-Shell  $\rho$ -(Omega) Mixing Through Quark Loops with a Nonperturbative Meson Vertex and Quark Mass Functions*

A. N. Mitra, K. -C. Yang, Phys. Rev. C51, 3404 (1995).

**95Mi15** *Toroidal Quadrupole Transitions Associated with Collective Rotational-Vibrational Motions of the Nucleus*

S. Misicu, J. Phys. (London) G21, 669 (1995).

**Nuclear Structure:**  $^{152}$ ,  $^{154}$ Sm,  $^{166}$ Er; calculated toroidal quadrupole transition moment vs rigidity parameter. Irrotational flows, rigid rotation approaches. Inelastic electron scattering.

**95Mi16** *<sup>4</sup>H Clustering in Lithium Nuclei*

D. Miljanic, S. Blagus, M. Lattuada, N. Soic, C. Spitaleri, Phys. Rev. C52, 1140 (1995).

**Nuclear Reactions:**  $^{12}\text{C}(^8\text{Li},\alpha)$ , E=14 MeV;  $^7\text{Li}(^3\text{He}, 2^3\text{He})$ ,  $^{19}\text{F}(^3\text{He}, ^7\text{Li})$ , E not given;  $^{16}\text{O}(^7\text{Li}, ^3\text{He})$ , E=24 MeV;  $^7\text{Li}(n, \alpha)$ , E=14.6 MeV;  $^6, ^7\text{Li}(^3\text{He}, ^3\text{He})$ , E not given; compiled, analyzed  $\sigma(\theta)$ , energy spectra.  $^7, ^8\text{Li}$  deduced  $^4\text{H}$  cluster evidence.

**95Mi17** *Momentum Projection of a Soliton in the Massive Gross-Neveu Model*

T. Miyakawa, Nucl. Phys. A593, 420 (1995).

**95Mi18** *The Inclusive Muon Neutrino Reaction in  $^{12}\text{C}$*

S. L. Mintz, M. Pourkaviani, Nucl. Phys. A594, 346 (1995).

**Nuclear Reactions:**  $^{12}\text{C}(\nu, \mu^- X)$ ,  $E = \text{threshold} - 300 \text{ MeV}$ ; calculated charged current inclusive  $\sigma(E)$ .

**95Mi19** *Pion-Pion Correlations in Au + Au Collisions at AGS Energy*

D. Miskowiec, and the E877 Collaboration, Nucl. Phys. A590, 473c (1995).

***Nuclear Reactions:***  $^{197}\text{Au}(^{197}\text{Au},X)$ , E at 10.8 GeV/c/nucleon; measured pion-pion correlation function; deduced source size related features.

**95Mi20** *Microscopic Structure of Octupole Correlations at High-Spin in Superdeformed Open-Shell Nuclei*

S. Mizutori, Y. R. Shimizu, K. Matsuyanagi, Phys. Scr. T56, 276 (1995).

**Nuclear Structure:**  $^{146}\text{Nd}$ ,  $^{148}\text{Sm}$ ,  $^{150}\text{Gd}$ ,  $^{152}\text{Dy}$ ,  $^{154}\text{Er}$ ; calculated octupole strength function; deduced superdeformed bands octupole softness related features.

**95Mi21** *Baryon-Antibaryon Pair Production in Time-Dependent Meson Fields*

I. N. Mishustin, L. M. Satarov, H. Stocker, W. Greiner, Phys. Rev. C52, 3315 (1995).

**Nuclear Reactions:**  $^{197}\text{Au}(^{197}\text{Au},X)$ , E=high; calculated p-bar production related features. Time-dependent meson fields.

**95Mi22** *Nature of Nuclear Collective Modes of Negative Parity*

I. N. Mikhailov, P. N. Usmanov, Ch. Briancon, *Yad. Fiz.* 58, No 8, 1371 (1995); *Phys. Atomic Nuclei* 58, 1289 (1995).

**Nuclear Structure:**  $^{220}, ^{226}\text{Ra}$ ; calculated levels,  $B(\lambda)$ . Octupole bands Coriolis coupling, phenomenological model.

**95Mi23** *Polarized and Unpolarized Inclusive Electron Scattering in Nuclei and the Inclusive Neutrino Cross-Section*

S. L. Mintz, M. Pourkaviani, Int. J. Mod. Phys. E4, 163 (1995).

**Nuclear Reactions:**  $^{12}\text{C}(e,e'X)$ , E 20-120 MeV; calculated  $\sigma(\theta)$  vs E.  $^{12}\text{C}(\text{polarized } e,e'X)$ , E 20-120 MeV; calculated parity violating asymmetry vs E,  $\theta$ ; deduced relationship to inclusive  $\sigma$  for incident  $\nu$ .

**95Mi24** *The Modified  $\sigma$ - $\omega$  Model for Relativistic Nuclear Matter*

K. Miyazaki, Prog. Theor. Phys. (Kyoto) 93, 137 (1995).

**95Mi25** *Comments on ' Liquid Xenon Ionization and Scintillation Studies for a Totally Active-Vector Electromagnetic Calorimeter '*

M. Miyajima, S. Sasaki, E. Shibamura, Nucl. Instrum. Methods Phys. Res. A352, 548 (1995)

**Radioactivity:**  $^{210}\text{Po}(\alpha)$ ;  $^{60}\text{Co}(\beta^-)$ ;  $^{207}\text{Bi}(\text{EC}, (\beta^+))$ ;  $^{113}\text{Sn}(\text{EC})$ ;  $^{63}\text{Ni}(\beta^-)$ ; analyzed W-value data for ionization in liquid Xe; deduced reasons for low value.

**95Mi26** *Monte Carlo Simulations of Low Background Detectors*

H. S. Miley, R. L. Brodzinski, W. K. Hensley, J. H. Reeves, *J. Radioanal. Nucl. Chem.* 193, 247 (1995).

**Radioactivity:**  $^{57}\text{Co}(\text{EC})$ ;  $^{60}\text{Co}(\beta^-)$ ; calculated simulated decay spectra. Monte Carlo technique, low background detectors.

**95Mi27** *Complex Harmonic-Oscillator Basis for the Relativistic Three-Body Problem*

A. N. Mitra, A. Sharma, B. Mitra-Sodermark, *Few-Body Systems* 19, 145 (1995).

**95Mi28** *Parity Violation in Charged Particle Resonances*

G. E. Mitchell, J. F. Shriner, Jr., Nucl. Instrum. Methods Phys. Res. B99, 305 (1995)

**Nuclear Reactions:**  $^{31}\text{P}$ (polarized p, $\alpha$ ), E=3.0356, 3.0341 MeV;  $^{23}\text{Na}$ ,  $^{27}\text{Al}$ ,  $^{35}\text{Cl}$ ,  $^{39}\text{K}$ (polarized p,p), (polarized p, $\alpha$ ), E not given; compiled, reviewed (analyzing power)/(parity violating interaction matrix element V) vs E; deduced local rms V for each resonance.

**95Mi29** *STAR, A Solenoid and Telescope for Astrophysical Research*

C. Michotte, J. S. Graulich, Th. Delbar, P. Leleux, P. Lipnik, Nucl. Instrum. Methods Phys. Res. A366, 155 (1995)

**Nuclear Reactions:**  $^1\text{H}(^{19}\text{Ne},\gamma)$ ,  $^2\text{H}(^{19}\text{Ne},n)$ ,  $E=19.2$  MeV; measured positrons time, momentum spectra following residual decay. Solenoid, telescope set-up.

**95Mi30** *Nuclide Production by Proton-Induced Reactions on Elements ( $6 \leq Z \leq 29$ ) in the Energy Range from 800 to 2600 MeV*

R. Michel, M. Gloris, H. -J. Lange, I. Leya, M. Lupke, U. Herpers, B. Dittrich-Hannen, R. Rosel, Th. Schiekkel, D. Filges, P. Dragovitsch, M. Suter, H. -J. Hofmann, W. Wolfli, P. W. Kubik, H. Baur, R. Wieler, Nucl. Instrum. Methods Phys. Res. B103, 183 (1995)

**95MiZS** *Elastic Scattering of Deuterons on  $\alpha$ -Cluster Nuclei*

V. P. Mikhailyuk, Program and Thesis, Proc. 45th Ann. Conf. Nucl. Spectrosc. Struct. At. Nuclei, St. Petersburg, p. 343 (1995).

**Nuclear Reactions:**  $^{12}\text{C}$ ,  $^{16}\text{O}(\text{d,d})$ ,  $E=700$  MeV; calculated  $\sigma(\theta)$ . Multiple diffraction scattering theory,  $\alpha$ -cluster model with dispersion.

**95MiZT** *Description of Rotational Bands of Odd-Odd Nuclei in Variable Moment of Inertia Model*

I. A. Mitropolsky, T. B. Podolyako, Program and Thesis, Proc. 45th Ann. Conf. Nucl. Spectrosc. Struct. At. Nuclei, St. Petersburg, p. 140 (1995).

**Nuclear Structure:**  $^{160}\text{Ho}$ ; calculated rotational bands. Variable moment of inertia model.

**95MiZU** *Anomalies of ICC of M1  $\gamma$ -Transitions in  $^{183}\text{Ta}$  Decay*

N. F. Mitrokhovich, L. P. Sidorenko, Program and Thesis, Proc. 45th Ann. Conf. Nucl. Spectrosc. Struct. At. Nuclei, St. Petersburg, p. 103 (1995).

**Radioactivity:**  $^{183}\text{Ta}(\beta^-)$ ; measured I(ce).  $^{183}\text{W}$  transitions deduced ICC,  $\delta$ , M1 penetration parameter.

**95MiZV** *Energy Dependence of Polarized Proton Elastic Scattering from  $^{27}\text{Al}$*

K. Miura, K. Hirota, K. Koyama, N. Okumura, H. Kishita, Y. Mukouhara, S. Nakagawa, M. Masaki, Y. Tagishi, Y. Aoki, Univ. Tsukuba, Tandem Accel. Center, Ann. Rept., 1994, p. 16 (1995); UTTAC-62 (1995).

**Nuclear Reactions:**  $^{27}\text{Al}(\text{polarized p,p})$ ,  $E=16.5, 18.5, 20.5, 21, 22$  MeV; measured  $\sigma(\theta)$ ,  $A(y)(\theta)$ .

**95MiZW** *Mechanism of the Reaction  $^{14}\text{N} + ^9\text{Be}$  at 40 MeV/u Leading to Large Spin-Polarization of  $^{12}\text{B}$*

S. Mitsuoka, T. Shimoda, H. Miyatake, M. Sasaki, Y. Yamamoto, H. Ueno, H. Izumi, K. Asahi, S. Morinobu, N. Ikeda, N. Takahashi, RCNP (Osaka), Ann. Rept., 1994, p. 57 (1995).

**Nuclear Reactions:**  $^9\text{Be}(^{14}\text{N}, ^{12}\text{B})$ ,  $E=39.3$  MeV/nucleon; measured  $\sigma(\theta)$ , spin-polarization of  $^{12}\text{B}$ .

**95MiZX** *Large Spin-Polarization Observed in  $^9\text{Be}(^{14}\text{N}, ^{12}\text{B})$  Reactions at 38.5 MeV/u*

S. Mitsuoka, H. Miyatake, H. Kobayashi, Y. Mizoi, M. Sasaki, T. Shirakura, H. Ueno, H. Izumi, K. Asahi, N. Takahashi, S. Morinobu, T. Shimoda, Kyushu Univ. Tandem Acc. Lab. Rept., 1993-1994, p. 59 (1995).

**Nuclear Reactions:**  $^9\text{Be}$ ,  $^{63}\text{Cu}$ ,  $^{197}\text{Au}(^{14}\text{N}, ^{12}\text{B})$ ,  $E=38.5$  MeV/nucleon; measured yield, spin polarization of  $^{12}\text{B}$ ,  $\beta$ -ray asymmetry. Tof,  $\beta$ -ray telescope.

**95MiZY** *Hyperfine Interactions of  $^8\text{Li}$  and  $^{12}\text{N}$  in ZnSe*

T. Miyake, M. Tanigaki, H. Katayama-Yoshida, T. Izumikawa, T. Yamaguchi, K. Sato, K. Minamisono, T. Ohtsubo, S. Fukuda, M. Fukuda, K. Matsuta, Y. Nojiri, T. Minamisono, Osaka Univ. Lab. Nucl. Studies, Ann. Rept., 1994, p. 31 (1995).

**Radioactivity:**  $^8\text{Li}(\beta^-)$  [from  $^7\text{Li}(d,p)$ ,  $E=3.5$  MeV];  $^{12}\text{N}(\beta^+)$  [from  $^{10}\text{B}(^3\text{He}, n)$ ,  $E=3$  MeV]; measured  $\beta$ -NMR; deduced implantation sites of  $^8\text{Li}$  and  $^{12}\text{N}$  in ZnSe crystal. Polarized sources,  $\beta$ -NMR technique.

**95MiZZ** *Mechanism of the Reaction  $^{14}\text{N} + ^9\text{Be}$  at 40 MeV/u Leading to Large Spin-Polarization of  $^{12}\text{B}$*

S. Mitsuoka, T. Shimoda, H. Miyatake, M. Sasaki, Y. Yamamoto, H. Ueno, H. Izumi, K. Asahi, S. Morinobu, N. Ikeda, N. Takahashi, Osaka Univ. Lab. Nucl. Studies, Ann. Rept., 1994, p. 27 (1995).

**Nuclear Reactions:**  $^9\text{Be}(^{14}\text{N}, ^{12}\text{B})$ ,  $E=39.3$  MeV/nucleon; measured  $\sigma(\theta)$  vs momentum.

**Radioactivity:**  $^{12}\text{B}(\beta^-)$  [from  $^9\text{Be}(^{14}\text{N}, ^{12}\text{B})$ ,  $E=39.3$  MeV/nucleon]; measured source spin polarization.  $\beta$ -NMR method.

**95Mo01** *Collectivity of Dipole Bands in  $^{196}\text{Pb}$*

E. F. Moore, M. P. Carpenter, Y. Liang, R. V. F. Janssens, I. Ahmad, I. G. Bearden, P. J. Daly, M. W. Drigert, B. Fornal, U. Garg, Z. W. Grabowski, H. L. Harrington, R. G. Henry, T. L. Khoo, T. Lauritsen, R. H. Mayer, D. Nisius, W. Reviol, M. Sferazza, Phys. Rev. C51, 115 (1995).

**Nuclear Reactions:**  $^{170}\text{Er}(^{30}\text{Si}, 4n\gamma)$ ,  $E=142$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma(\theta)$ , oriented nuclei, DSA.  $^{196}\text{Pb}$  deduced high-spin levels  $J$ ,  $\pi$ ,  $T_{1/2}$ ,  $B(\lambda)$ . Cranked shell model.

**95Mo02** *Magnetic Moment Measurements in  $^{86}\text{Zr}$*

A. W. Mountford, T. Vass, G. Kumbartzki, L. A. Bernstein, N. Benczer-Koller, R. Tanczyn, C. J. Lister, P. Chowdhury, S. J. Freeman, Phys. Rev. C51, 513 (1995).

**Nuclear Reactions:**  $^{12}\text{C}(^{77}\text{Se},3\text{n})$ ,  $E=260$  MeV; measured  $E_\gamma$ ,  $I_\gamma$ ,  $\gamma(\theta)$ ,  $\gamma\gamma$ -coin.  $^{86}\text{Zr}$  deduced high-spin levels g-factors.

**95Mo03** *Boundary and Coulomb Effects on Boson Systems in High-Energy Heavy-Ion Collisions*

M. G. -H. Mostafa, C. -Y. Wong, Phys. Rev. C51, 2135 (1995).

***Nuclear Reactions:*** S(S,X), E=200 GeV/nucleon;  $^{197}\text{Au}$ (O,X), E=200 GeV/nucleon; analyzed data; deduced boson systems' boundary, Coulomb effects role.

**95Mo04** *Level Structure of  $^{114}\text{Te}$*

C. -B. Moon, J. U. Kwon, S. J. Chae, J. C. Kim, S. H. Bhatti, C. S. Lee, T. Komatsubara, J. Mukai, T. Hayakawa, H. Kimura, J. Lu, M. Matsuda, T. Watanabe, K. Furuno, Phys. Rev. C51, 2222 (1995).

**Nuclear Reactions:**  $^{89}\text{Y}(^{28}\text{Si}, 2\text{np})$ ,  $E=106$  MeV;  $^{89}\text{Y}(^{29}\text{Si}, 3\text{np})$ ,  $E=108$  MeV; measured  $\gamma\gamma$ -, (particle) $\gamma\gamma$ -coin, DCO.  $^{114}\text{Te}$  deduced high-spin levels,  $J, \pi$ , configuration. Model comparison.

**95Mo05** *Hadrons and Nuclei Far Away from Equilibrium*

U. Mosel, Nucl. Phys. A583, 29c (1995).

**Nuclear Reactions:**  ${}^9\text{Be}(p,X)$ ,  $E=1, 2.1$  GeV;  ${}^{40}\text{Ca}({}^{40}\text{Ca}, X)$ ,  ${}^{197}\text{Au}({}^{197}\text{Au},X)$ ,  $E=1, 2$  GeV/nucleon; analyzed, reviewed dilepton invariant mass spectra.  ${}^{197}\text{Au}({}^{197}\text{Au},X)$ ,  $E=100-400$  MeV/nucleon; analyzed intermediate mass fragment production data, other reactions, aspects reviewed.

**95Mo06** *Time-Scale and Branching Ratios in Sequential Multifragmentation*

L. G. Moretto, L. Phair, K. Tso, K. Jing, G. J. Wozniak, Nucl. Phys. A583, 513c (1995).

**Nuclear Reactions:**  $^{197}\text{Au}(^{36}\text{Ar},\text{X})$ ,  $E=80, 110$  MeV/nucleon; analyzed intermediate mass fragment multiplicity distributions; deduced thermal binary events sequence evidence.

**95Mo07** *Multifragment Emission Times in Xe Induced Reactions*

A. Moroni, D. R. Bowman, M. Bruno, P. Buttazzo, L. Celano, N. Colonna, M. D'Agostino, J. D. Dinius, A. Ferrero, M. L. Fian-dri, C. K. Gelbke, T. Glasmacher, F. Gramegna, D. O. Handzy, D. Horn, W. -C. Hsi, M. Huang, I. Iori, M. Lisa, W. G. Lynch, G. V. Margagliotti, P. F. Mastinu, P. M. Milazzo, C. Montoya, G. F. Peaslee, L. Phair, F. Petruzzelli, R. Rui, R. Scardaoni, C. Schwarz, B. Tsang, G. Vannini, C. Williams, Nucl. Phys. A583, 531c (1995).

**Nuclear Reactions:** Cu( $^{129}\text{Xe}, X$ ),  $E=30, 45$  MeV/nucleon; measured intermediate mass fragment multiplicities. Statistical decay model analysis.

**95Mo08** *Decay of  $^{159}\text{Gd}$*

M. Morales, P. R. Pascholati, V. R. Vanin, O. Helene, Appl. Radiat. Isot. 46, 133 (1995).

**Radioactivity:**  $^{159}\text{Gd}(\beta^-)$ ; measured  $E_\gamma$ ,  $I_\gamma$ ,  $\gamma\gamma$ -coin.  $^{159}\text{Tb}$  deduced levels,  $\gamma$  transition related features.

**95Mo09** *Are Multifragment Emission Probabilities Reducible to an Elementary Binary Emission Probability*

L. G. Moretto, L. Phair, K. Tso, K. Jing, G. J. Wozniak, R. T. de Souza, D. R. Bowman, N. Carlin, C. K. Gelbke, W. G. Gong, Y. D. Kim, M. A. Lisa, W. G. Lynch, G. F. Peaslee, M. B. Tsang, F. Zhu, Phys. Rev. Lett. 74, 1530 (1995).

**Nuclear Reactions:**  $^{197}\text{Au}(^{36}\text{Ar},X)$ ,  $E=80, 110$  MeV/nucleon; measured intermediate mass fragment distribution multiplicity; deduced emission probability characteristics, consequences.

**95Mo10** *Comparison of  $(K^-, \pi)$  and  $(\pi, K^+)$  as a Function of Mass Number*

T. Motoba, Y. Yamamoto, Nucl. Phys. A585, 29c (1995).

**Nuclear Reactions:**  $^{10}\text{B}(\pi^+, K^+)$ , E at 1.04 GeV/c;  $^{10}\text{B}(K^-, \pi^-)$ , E at 0.75 GeV/c; calculated  $\sigma(\theta)$  vs hypernucleus excitation energy.  
 $^{16}\text{O}(K^-, \pi^0)$ , E at rest; calculated pion spectrum.

**Nuclear Structure:** A=4; A=7; A=10; A=12; calculated hypernuclei  $^{10}\text{B}$ ,  $^{12}\text{C}$  levels. Different G-matrices.

**95Mo11** *The Effect of Multiple-Scattering and Density Distribution on the Elastic Scattering of High-Energy Electrons*

S. A. Moharram, A. S. Shalaby, A. Y. Ellithi, M. Y. M. Hassan, H. M. M. Mansour, Acta Phys. Pol. B26, 43 (1995).

**Nuclear Reactions:**  $^{12}\text{C}(\text{e},\text{e})$ ,  $E=240.17\text{-}450$  MeV;  $^{16}\text{O}(\text{e},\text{e})$ ,  $E=240, 420$  MeV;  $^{40}\text{Ca}(\text{e},\text{e})$ ,  $E=183\text{-}251.5$  MeV;  $^{208}\text{Pb}(\text{e},\text{e})$ ,  $E=175$  MeV; calculated  $\sigma(\theta)$ . Multiple scattering Glauber theory, eikonal approximation.

**95Mo12** *How to Obtain a Convariant Breit Type Equation from Relativistic Constraint Theory*

J. Mourad, H. Sazdjian, J. Phys. (London) G21, 267 (1995).

**95Mo13** *Neutron Matter Equation of State and Thermal Energy of Nuclear Matter*

M. Modarres, J. Phys. (London) G21, 351 (1995).

**95Mo14** *New  $\alpha$ -Decaying Neutron Deficient Isotopes  $^{197}\text{Rn}$  and  $^{200}\text{Fr}$*

K. Morita, Y. H. Pu, J. Feng, M. G. Hies, K. O. Lee, A. Yoshida, S. C. Jeong, S. Kubono, T. Nomura, Y. Tagaya, M. Wada, M. Kurokawa, T. Motobayashi, H. Ogawa, T. Uchibori, K. Sueki, T. Ishizuka, K. Uchiyama, Y. Fujita, H. Miyatake, T. Shinozuka, H. Kudo, Y. Nagai, S. A. Shin, *Z. Phys.* A352, 7 (1995).

**Nuclear Reactions:**  $^{166}\text{Er}(^{36}\text{Ar},5n)$ ,  $E=186, 200$  MeV;  $^{169}\text{Tm}(^{36}\text{Ar}, 5n)$ ,  $E=186$  MeV; measured  $E\alpha$ ,  $I\alpha$ ; deduced evidence for  $^{197}$ ,  $^{197\text{m}}\text{Rn}$ ,  $^{200}\text{Fr}$ . Evaporation residues obtained from gas-filled recoil separator, implanted onto position sensitive solid state detector.

**Radioactivity:**  $^{197}$ ,  $^{197\text{m}}\text{Rn}(\alpha)$  [from  $^{166}\text{Er}(^{36}\text{Ar}, 5n)$ ,  $E=186, 200$  MeV];  $^{200}\text{Fr}(\alpha)$  [from  $^{169}\text{Tm}(^{36}\text{Ar}, 5n)$ ,  $E=186$  MeV];  $^{193}$ ,  $^{193\text{m}}\text{Po}(\alpha)$  [from  $^{197}$ ,  $^{197\text{m}}\text{Rn}(\alpha\text{-decay})$ ];  $^{196}\text{Rn}(\alpha)$  [from  $^{166}\text{Er}(^{36}\text{Ar},6n)$ ];  $^{192}\text{Po}(\alpha)$  [from  $^{196}\text{Rn}(\alpha\text{-decay})$ ];  $^{200}\text{Fr}(\alpha)$  [from  $^{169}\text{Tm}(^{36}\text{Ar},5n)$ ,  $E=186$  MeV];  $^{196}\text{At}(\alpha)$  [from  $^{200}\text{Fr}(\alpha\text{-decay})$ ]; measured  $E\alpha$ ,  $I\alpha$ ,  $T_{1/2}$ ,  $\alpha\alpha$ -energy correlations. Evaporation residues obtained from gas-filled recoil separator, implanted onto position sensitive solid state detector.

**95Mo15** *Transition State Rates and Complex Fragment Decay Widths*

L. G. Moretto, K. X. Jing, G. J. Wozniak, Phys. Rev. Lett. 74, 3557 (1995).

**Nuclear Reactions:**  $^{82}\text{Kr}(^{12}\text{C},\text{X})$ , E 70-140 MeV; analyzed  $\sigma(\text{fragment Z})$  vs E; deduced energy level parameter.

**Nuclear Structure:**  $^{75}\text{Br}$ ,  $^{90}$ ,  $^{94}\text{Mo}$ ,  $^{110}$ ,  $^{112}\text{In}$ ; analyzed mass asymmetric fission rate vs square root of (intrinsic excitation energy) $^{1/2}$ ; deduced transition state predictions validity.

**95Mo16** *Large Deformation of the Very Neutron-Rich Nucleus  $^{32}\text{Mg}$  from Intermediate-Energy Coulomb Excitation*

T. Motobayashi, Y. Ikeda, Y. Ando, K. Ieki, M. Inoue, N. Iwasa, T. Kikuchi, M. Kurokawa, S. Moriya, S. Ogawa, H. Murakami, S. Shimoura, Y. Yanagisawa, T. Nakamura, Y. Watanabe, M. Ishihara, T. Teranishi, H. Okuno, R. F. Casten, Phys. Lett. 346B, 9 (1995).

**Nuclear Reactions:**  $^{208}\text{Pb}(^{32}\text{Mg}, ^{32}\text{Mg}')$ ,  $E=49.2$  MeV/nucleon; measured  $E_\gamma$ ,  $I_\gamma$  following Coulomb excitation.  $^{32}\text{Mg}$  level deduced B(E2), deformation features. Coupled-channels approach.

**95Mo17** *The 17 keV Neutrino and the Search for Anomalous  $\gamma$  Rays in  $^{35}\text{S}$  Decay*

S. Moriyama, M. Minowa, Phys. Lett. 347B, 152 (1995).

**Radioactivity:**  $^{35}\text{S}(\beta^-)$ ; measured  $E_\gamma$ ,  $I_\gamma$ ; deduced external, internal bremsstrahlung role, proposed 17 keV neutrino hypothesis exclusion.

**95Mo18**  $^{12}\text{C}(\gamma, p(0+1))^{11}\text{B}$  Cross Section from 44 to 98 MeV

K. Mori, P. D. Harty, Y. Fujii, O. Konno, K. Maeda, I. Nomura, G. J. O'Keefe, J. Ryckebusch, T. Suda, T. Terasawa, M. N. Thompson, Y. Torizuka, Phys. Rev. C51, 2611 (1995).

**Nuclear Reactions:**  $^{12}\text{C}(\gamma, p)$ , E=44-98 MeV bremsstrahlung; measured  $\sigma(\theta)$  vs E; calculated  $\sigma(\theta)$  vs E. Direct knockout, meson exchange effects, RPA formalism.

**95Mo19** *Electromagnetic Corrections to the Threshold Pion-Pion Charge Exchange Amplitude and the Lifetime of Pionium*

U. Moor, G. Rasche, W. S. Woolcock, Nucl. Phys. A587, 747 (1995).

**95Mo20** *On the Role of Dissipation in the Early Stages of Relativistic Heavy Ion Collisions*

L. Mornas, U. Ornik, Nucl. Phys. A587, 828 (1995).

**95Mo21** *Threshold Production Cross Section of the  $pp \rightarrow pp(\eta)$  Reaction in a Nonrelativistic OBE Model*

A. Moalem, E. Gedalin, L. Razdolskaja, Z. Shorer, Nucl. Phys. A589, 649 (1995).

**Nuclear Reactions:**  ${}^1\text{H}(p,X)$ ,  $E=\text{threshold}$ ; calculated eta production  $\sigma$ . Nonrelativistic one-boson exchange model.

**95Mo22** *Resolution of the Anomalous Fission Fragment Anisotropies for the  $^{16}\text{O} + ^{208}\text{Pb}$  Reaction*

C. R. Morton, D. J. Hinde, J. R. Leigh, J. P. Lestone, M. Dasgupta, J. C. Mein, J. O. Newton, H. Timmers, Phys. Rev. C52, 243 (1995).

**Nuclear Reactions:** ICPND  $^{208}\text{Pb}(^{16}\text{O},\text{X})$ ,  $(^{16}\text{O},\text{F})$ ,  $E(\text{cm})=71\text{-}85$  MeV; measured evaporation residue, fission  $\sigma$ , fission fragment anisotropies,  $E\alpha$ ,  $l\alpha$ ; deduced fusion barrier distribution,  $\sigma(E)$ . Transition state model.

**95Mo23** *Hadron Dominance Revisited*

P. Moseley, G. Shaw, J. Phys. (London) G21, 1043 (1995).

**95Mo24** *Rotational Bands in  $^{115}\text{Sb}$*

C. -B. Moon, S. J. Chae, J. H. Ha, T. Komatsubara, J. Lu, T. Hayakawa, K. Furuno, Z. Phys. A352, 245 (1995).

**Nuclear Reactions:**  $^{89}\text{Y}(^{29}\text{Si},n2p)$ ,  $E=108$  MeV; measured  $\gamma\gamma$ -coin, DCO, oriented nuclei.  $^{115}\text{Sb}$  deduced high-spin levels, band structure,  $\gamma$ -multipolarity, configuration.

**95Mo25** *In-Medium Relativistic Kinetic Theory and Nucleon-Meson Systems*

K. Morawetz, D. Kremp, Z. Phys. A352, 265 (1995).

**95Mo26** *Production and Decay of Heavy Proton Drip-Line Nuclei*

D. J. Morrissey, and the A1200 Group, Nucl. Phys. A588, 203c (1995).

**Nuclear Reactions:** Ni( $^{106}\text{Cd}, X$ ) $^{88}\text{Ru}/^{90}\text{Rh}/^{91}\text{Rh}/^{92}\text{Rh}/^{93}\text{Rh}/^{92}\text{Pd}/^{93}\text{Pd}/^{94}\text{Ag}/^{95}\text{Ag}$ , E=60 MeV/nucleon; compiled, reviewed residuals production rates. Other data also included.

**95Mo27** *Coulomb Dissociation of  $^8\text{B}$  and Solar Neutrino Problem*

T. Motobayashi, Nucl. Phys. A588, 319c (1995).

**Nuclear Reactions:** ICPND  $^{208}\text{Pb}(^8\text{B},\text{p}^7\text{Be})$ ,  $E=46.5$  MeV/ nucleon; measured Coulomb dissociation relative energy spectrum,  $\sigma(\theta,E)$ ; deduced  $^7\text{Be}(\text{p},\gamma)$  reaction  $\sigma(E)$ , astrophysical S-factor vs E.

**95Mo28** *Separation of Refractive and Diffractive Contributions to Cross Sections for Inelastic Scattering of Light Ions with  $E \geq 20$  MeV/nucleon*

A. S. Molev, Bull. Rus. Acad. Sci. Phys. 59, 86 (1995).

**Nuclear Reactions:**  $^{12}\text{C}(^6\text{Li},^6\text{Li})$ ,  $(^6\text{Li},^6\text{Li}')$ ,  $E=210$  MeV;  $^{40}\text{Ca}(\alpha,\alpha)$ ,  $(\alpha,\alpha')$ ,  $E=100$  MeV; analyzed  $\sigma(\theta)$ ; deduced reaction mechanisms, refractive, diffractive contributions separation.

**95Mo29** *Nuclear Ground-State Masses and Deformations*

P. Moller, J. R. Nix, W. D. Myers, W. J. Swiatecki, *At. Data Nucl. Data Tables* 59, 185 (1995).

***Nuclear Structure:*** A=16-339; calculated mass excess, ground state deformations. Finite-range droplet macroscopic, folded-Yukawa single particle microscopic models.

**95Mo30** *Coulomb Excitation of  $^{174}\text{Hf}$  K-Isomer.  $\gamma$ -Ray Spectroscopy with High-Spin Isomer Beam*

T. Morikawa, Y. Gono, K. Morita, T. Kishida, T. Murakami, E. Ideguchi, H. Kumagai, G. H. Liu, A. Ferragut, A. Yoshida, Y. H. Zhang, M. Oshima, M. Sugawara, H. Kusakari, M. Ogawa, M. Nakajima, H. Tsuchida, S. Mitarai, A. Odahara, M. Kidera, M. Shibata, J. C. Kim, S. J. Chae, Y. Hatsukawa, M. Ishihara, Phys. Lett. 350B, 169 (1995).

**Nuclear Reactions:**  $^{208}\text{Pb}(^{174}\text{Hf}, ^{174}\text{Hf}')$ , E not given; measured  $E_\gamma$ ,  $I_\gamma$  following projectile isomer Coulomb excitation,  $\gamma$  yield.  $^{174}\text{Hf}$  deduced isomer excitation, transition B(E2). High-spin isomer beam from  $^9\text{Be}(^{170}\text{Er}, 5n)$  reaction.

**95Mo31** *Temperature and Excitation Energy Determination in  $^{208}\text{Pb} + ^{197}\text{Au}$  Reactions at 29 MeV/u*

M. Morjean, C. Lebrun, D. Ardouin, A. Chbihi, H. Dabrowski, B. Erazmus, P. Eudes, J. Galin, D. Guerreau, F. Guilbault, C. Ghisalberti, D. Jacquet, P. Lautridou, R. Lednicky, A. Peghaire, Y. Perier, J. Pluta, J. Quebert, A. Rahmani, T. Reposeur, L. Sezac, R. H. Siemssen, Nucl. Phys. A591, 371 (1995).

**Nuclear Reactions:**  $^{197}\text{Au}(^{208}\text{Pb},\text{X})$ ,  $E=6032$  MeV; measured  $E_\alpha$ , neutron multiplicity; deduced projectile-like fragments excitation energy, temperature. Model comparison.

**95Mo32** *Proposal to Search for a Monochromatic Component of Solar Axions using  $^{57}\text{Fe}$*

S. Moriyama, Phys. Rev. Lett. 75, 3222 (1995).

**Nuclear Structure:**  $^{57}\text{Fe}$ ; calculated thermal excitation rate; deduced possible detection by bolometric techniques, solar axions implications.

**95Mo33** *Scaling Laws, Shell Effects, and Transient Times in Fission Probabilities*

L. G. Moretto, K. X. Jing, R. Gatti, G. J. Wozniak, R. P. Schmitt, Phys. Rev. Lett. 75, 4186 (1995).

**Nuclear Structure:**  $^{186, 187, 188}\text{Os}$ ,  $^{201}\text{Tl}$ ,  $^{203, 204, 205, 206, 208}\text{Pb}$ ,  $^{208, 210, 211, 212}\text{Po}$ ,  $^{213}\text{At}$ ; analyzed ( $\alpha, F$ ) reaction fission  $\sigma(E)$  data; deduced effective barriers, shell effects, scaling laws related features.

**95Mo34** *Saturation of Deposition Energy in Relativistic  $^3\text{He}$ -Induced Reactions*

K. B. Morley, K. Kwiatkowski, D. S. Bracken, H. Breuer, J. Brzychczyk, R. G. Korteling, R. Legrain, E. C. Pollacco, E. Renshaw Foxford, V. Viola, C. Volant, L. W. Woo, N. R. Yoder, Phys. Lett. 355B, 52 (1995).

***Nuclear Reactions:*** Hg,  $^{197}\text{Au}(^3\text{He},X)$ ,  $E=1.8-4.8$  GeV; measured intermediate mass fragment, light charged particle production, multiplicities; deduced deposition energy saturation features. Intranuclear cascade model predictions.

**95Mo35** *The Influence of the Nuclear Medium on the Baryon Resonance Excitation*

V. I. Mokeev, E. Santopinto, M. M. Giannini, G. Ricco, Int. J. Mod. Phys. E4, 607 (1995).

**Nuclear Reactions:**  $^1\text{H}(\gamma, X)$ , E 0.5-4 GeV;  $^2\text{H}(\gamma, X)$ , E 1.05-2 GeV; calculated photoabsorption  $\sigma(E)$ .  $^9\text{Be}$ ,  $^{12}\text{C}(\gamma, X)$ , E=0.2-1.6 GeV; calculated per nucleon photoabsorption  $\sigma(E)$ ; deduced nuclear medium role.

**95Mo36** *The Light Yield Response of NE213 Organic Scintillators to Charged Particles Resulting from Neutron Interactions*

S. Mouatassim, G. J. Costa, G. Guillaume, B. Heusch, A. Huck, M. Moszynski, Nucl. Instrum. Methods Phys. Res. A359, 530 (1995)

**Nuclear Reactions:**  $^{12}\text{C}(n,p)$ , E 12-19 MeV; measured proton spectra; deduced proton, other particle light yields of detector. Organic NE213 scintillators, liquid NE213 cell,  $n\gamma$ -discrimination by charge integration method.

**95Mo37** *p(t) and x(F) Dependence of the Polarization of  $\Sigma^+$  Hyperons Produced by 800 GeV/c Protons*

A. Morelos, and the E761 Collaboration, Phys. Rev. D52, 3777 (1995).

**Nuclear Reactions:** Cu(p,X), E at 800 GeV/c; measured  $\Sigma^+$  polarization; deduced p(t), x(F) dependence.

**95Mo38** *The Spin-Dependent Gluon Distribution in a Proton*

T. Morii, S. -C. Tanaka, T. Yamanishi, Prog. Theor. Phys. (Kyoto), Suppl. 120, 231 (1995)

**Nuclear Structure:**  $^1\text{H}$ ; calculated polarized gluon distribution vs  $x$ .

**95Mo39** *Search for the Two-Phonon Octupole Vibrational State in  $^{208}\text{Pb}$*

E. F. Moore, W. Henning, R. V. F. Janssens, T. L. Khoo, S. J. Sanders, I. Ahmad, H. Amro, D. Blumenthal, M. P. Carpenter, B. Crowell, M. W. Drigert, D. Gassmann, R. G. Henry, T. Lauritsen, C. J. Lister, D. Nisius, Nucl. Instrum. Methods Phys. Res. B99, 308 (1995)

**Nuclear Reactions:**  $^{208}\text{Pb}$ ,  $^{209}\text{Bi}$ ,  $^{58}\text{Ni}$ ,  $^{64}\text{Ni}$ ,  $^{160}\text{Gd}$ ( $^{208}\text{Pb}$ ,  $^{208}\text{Pb}'$ ),  $E=1305$  MeV; measured  $\gamma\gamma$ -coin,  $E_\gamma$ ,  $I_\gamma$  following projectile excitation.  $^{208}\text{Pb}$  deduced no evidence for two-phonon octupole vibrational state.

**95MoZW** *High Spin States in  $^{112}\text{Sb}$*

C. -B. Moon, J. U. Kwon, S. J. Chae, J. C. Kim, C. S. Lee, T. Komatsubara, T. Saitoh, N. Hashimoto, J. Lu, H. Kimura, T. Hayakawa, K. Furuno, Univ. Tsukuba, Tandem Accel. Center, Ann. Rept., 1994, p. 36 (1995); UTTAC-62 (1995).

**Nuclear Reactions:**  $^{89}\text{Y}(^{29}\text{Si}, 2n\alpha)$ ,  $E=108$  MeV;  $^{88}\text{Sr}(^{28}\text{Si}, 3np)$ ,  $E=120$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -,  $\gamma\gamma$ -coin, DCO ratios.  $^{112}\text{Sb}$  deduced levels,  $J$ ,  $\pi$ , high-spin bands. BGO suppressed hyperpure Ge detector.

**95MoZX** *Coulomb Excitation of  $^{174}\text{Hf}$  K-Isomer:  $\gamma$ -Ray spectroscopy with high-spin isomer beam*

T. Morikawa, Y. Gono, K. Morita, T. Kishida, T. Murakami, E. Ideguchi, H. Kumagai, G. Liu, A. Ferragut, A. Yoshida, Y. Zhang, M. Oshima, M. Sugawara, H. Kusakari, M. Ogawa, M. Nakajima, H. Tsuchida, S. Mitarai, A. Odahara, M. Kidera, M. Shibata, J. C. Kim, S. -J. Chae, Y. Hatsukawa, M. Ishihara, RIKEN-94, p. 51 (1995).

**Nuclear Reactions:**  $^{208}\text{Pb}(^{174}\text{Hf}, ^{174}\text{Hf}')$ , E not given; measured  $E_\gamma$ .  $^{174}\text{Hf}$  deduced levels, J,  $\pi$ , B(E2). Projectile Coulomb excitation, high-spin isomer-beam technique,  $^{174}\text{Hf}$  isomer excitation by  $^9\text{Be}(^{170}\text{Er}, 5n)$  reaction.

**95MoZY Coulomb Excitation of  $^{32}\text{Mg}$**

T. Motobayashi, Y. Ikeda, Y. Ando, K. Ieki, M. Inoue, N. Iwasa, T. Kikuchi, M. Kurokawa, S. Moriya, S. Ogawa, H. Murakami, S. Shimoura, Y. Yanagisawa, T. Nakamura, Y. Watanabe, M. Ishihara, T. Teranishi, H. Okuno, R. F. Casten, RIKEN-94, p. 37 (1995).

**Nuclear Reactions:**  $^{208}\text{Pb}(^{32}\text{Mg}, ^{32}\text{Mg}')$ ,  $E=49.2$  MeV/nucleon; measured  $E_\gamma$  following Coulomb excitation, effective  $\sigma$ .  $^{32}\text{Mg}$  deduced deformation parameter,  $B(E2)$ . Radioactive beams.

**95MoZZ** *Coulomb Excitation of  $^{174}\text{Hf}$  K-Isomer -  $\gamma$ -Ray Spectroscopy with High-Spin Isomer Beam*

T. Morikawa, Y. Gono, K. Morita, T. Kishida, T. Murakami, E. Ideguchi, H. Kumagai, G. H. Liu, A. Ferragut, A. Yoshida, Y. H. Zhang, M. Oshima, M. Sugawara, H. Kusakari, M. Ogawa, M. Nakajima, H. Tsuchida, S. Mitarai, A. Odahara, M. Kidera, M. Shibata, J. C. Kim, S. J. Chae, Y. Hatsukawa, M. Ishihara, Kyushu Univ. Tandem Acc. Lab. Rept., 1993-1994, p. 75 (1995).

**Nuclear Reactions:**  $^{174}\text{Hf}(^{170}\text{Er}, ^{170}\text{Er}')$ ,  $E=7.0$  MeV/nucleon; measured  $E_\gamma$ ,  $I_\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma(\theta)$  following high-spin isomer Coulomb excitation.  $^{174}\text{Hf}$  deduced levels,  $J$ ,  $\pi$ ,  $B(E2)$ . High-spin isomer beam technique.

**95Mr01** *Sum Rule of the Correlation Function*

S. Mrowczynski, Phys. Lett. 345B, 393 (1995).

**95Mr02** *Reheating After Supercooling in the Chiral Phase Transition*

S. Mrowczynski, B. Muller, Phys. Lett. 363B, 1 (1995).

**95Mu01** *Inelastic Scattering in the  ${}^6\text{Li} + {}^9\text{Be}$  System Leading to Unbound Excited States of Either Nucleus*

E. Muskat, J. Carter, R. W. Fearick, V. Hnizdo, Nucl. Phys. A581, 42 (1995).

**Nuclear Reactions:**  ${}^9\text{Be}({}^6\text{Li}, {}^6\text{Li})$ ,  $({}^6\text{Li}, {}^6\text{Li}')$ ,  $E(\text{cm})=7, 10, 12$  MeV; measured  $\sigma(\theta)$  vs  $E$ .  ${}^9\text{Be}$  levels deduced deformation lengths. Coupled-channels, double-folded real potential. Compound-nucleus calculations, triton-cluster transfers, finite-range DWBA.

**95Mu02** *Long-Range Correlations in Closed-Shell Nuclei*

H. Muther, L. D. Skouras, Nucl. Phys. A581, 247 (1995).

**Nuclear Structure:**  $^{16}\text{O}$ ,  $^{40}\text{Ca}$ ; calculated binding energy/nucleon. Large model space, long range correlations.

**95Mu03** Evidence for  $^{16}\text{O} + ^{12}\text{C}$  Cluster Structure in  $^{28}\text{Si}$

J. T. Murgatroyd, S. J. Bennett, B. R. Fulton, J. S. Pople, N. S. Jarvis, D. L. Watson, W. D. M. Rae, Y. Chan, D. DiGregorio, J. Scarpaci, J. Suro Perez, R. G. Stokstad, Phys. Rev. C51, 2230 (1995).

**Nuclear Reactions:**  $^{12}\text{C}(^{20}\text{Ne}, ^{12}\text{C}^{16}\text{O})$ ,  $E=160$  MeV; measured  $(^{12}\text{C})(^{16}\text{O})$ -coin total energy spectra.  $^{28}\text{Si}$  levels deduced  $^{12}\text{C} + ^{16}\text{O}$  cluster structure, shape features.

**95Mu04** *Termination of the  $^{12}\text{C}$ - $^{12}\text{C}$  Cluster States Revealed in the  $^{12}\text{C}(^{20}\text{Ne}, ^{12}\text{C}^{12}\text{C})^8\text{Be}$  Breakup Reaction*

J. T. Murgatroyd, S. J. Bennett, N. M. Clarke, B. R. Fulton, G. J. Gyapong, C. D. Jones, D. L. Watson, T. M. Cormier, H. Dejbakhsh, A. Szanto de Toledo, N. Carlin, Nucl. Phys. A587, 367 (1995).

**Nuclear Reactions:**  $^{12}\text{C}(^{20}\text{Ne}, 2^{12}\text{C})$ ,  $E=300$  MeV; measured  $(^{12}\text{C})(^{12}\text{C})$ -coin.  $^{24}\text{Mg}$  deduced energies of breakup states.

**95Mu05** *Role of Meson-Meson Correlation Effects in the  $(N\text{-Bar})N \rightarrow \rho\pi$  Annihilation Process*

V. Mull, G. Janssen, J. Speth, K. Holinde, Phys. Lett. 347B, 193 (1995).

**Nuclear Reactions:**  $^1\text{H}(\bar{p}, X)$ ,  $E$  at  $\leq 800$  MeV/c; calculated  $\rho\pi$  production vs momentum following annihilation; deduced meson-meson correlations role.

**95Mu06** *Combined Description of (N-Bar)N Scattering and Annihilation with a Hadronic Model*

V. Mull, K. Holinde, Phys. Rev. C51, 2360 (1995).

**Nuclear Reactions:**  $^1\text{H}(\bar{p},\bar{p})$ ,  $(\bar{p},X)$ , E at 100-783 MeV/ c; analyzed annihilation, total, elastic, charge exchange  $\sigma$ , polarization observables data. Meson-baryon dynamics based model.

**95Mu07** *Isobaric Ratios of Fragments Emitted in Incomplete Fusion Reactions*

Yu. Murin, V. Avdeychikov, A. Bogdanov, O. Lozhkin, M. Zubkov, M. Berg, L. Carlen, R. Elmer, R. Ghetti, J. Helgesson, B. Jakobsson, B. Noren, J. Nyberg, L. Westerberg, K. Nybo, E. Olberg, T. -F. Thorsteinsen, M. Guttormsen, G. Lovhoiden, J. Bondorf, K. Sneppen, St. Mrowczynski, and the CHIC Collaboration, Phys. Rev. C51, 2794 (1995).

**Nuclear Reactions:**  $^{112, 124}\text{Sn}$ ,  $^{197}\text{Au}(^{14}\text{N}, X)$ ,  $E=14, 32$  MeV/nucleon; measured fragments yield,  $Z=1-5$ ; deduced ratios of  $^3\text{He}/t$ ,  $^6\text{He}/^6\text{Li}$  yields, Coulomb barriers. Statistical models.

**95Mu08** *Evolution of the Spin of the Nucleon*

P. J. Mulders, S. J. Pollock, Nucl. Phys. A588, 876 (1995).

**95Mu09** *Momentum and Energy Distributions of Nucleons in Finite Nuclei Due to Short-Range Correlations*

H. Muther, A. Polls, W. H. Dickhoff, Phys. Rev. C51, 3040 (1995).

***Nuclear Structure:***  $^{16}\text{O}$ ; calculated nucleon momentum, energy distributions. Short range correlations, realistic meson-exchange potential.

**95Mu10** *Possibility to Determine the Astrophysical S Factor for the  ${}^7\text{Be}(p,\gamma){}^8\text{B}$  Radiative Capture from Analysis of the  ${}^7\text{Be}({}^3\text{He},d){}^8\text{B}$  Reaction*

A. M. Mukhamedzhanov, R. E. Tribble, N. K. Timofeyuk, Phys. Rev. C51, 3472 (1995).

**Nuclear Reactions:**  ${}^7\text{Be}({}^3\text{He},d)$ ,  $E=21\text{-}45$  MeV; calculated  $\sigma(\theta)$ ; deduced relevance to  ${}^7\text{Be}(p,\gamma)$  reaction astrophysical S-factor absolute value definition. Optical model.

**95Mu11** *Strong Population of a Superdeformed Band in  $^{142}\text{Eu}$*

S. M. Mullins, S. Flibotte, G. Hackman, J. L. Rodriguez, J. C. Waddington, A. V. Afanasjev, I. Ragnarsson, H. R. Andrews, A. Galindo-Uribarri, V. P. Janzen, D. C. Radford, D. Ward, M. Cromaz, J. DeGraaf, T. E. Drake, S. Pilotte, Phys. Rev. C52, 99 (1995).

**Nuclear Reactions:**  $^{120}\text{Sn}(^{27}\text{Al},5n)$ ,  $E=152$  MeV; measured  $\gamma\gamma$ -coin,  $E\gamma$ ,  $I\gamma$ .  $^{142}\text{Eu}$  deduced levels, J,  $\pi$ , superdeformed band.

**95Mu12** *Properties of High-Energy Pions Emitted from Heavy-Ion Collisions at 1 GeV/nucleon*

C. Muntz, P. Baltes, H. Oeschler, A. Sartorius, A. Wagner, W. Ahner, R. Barth, M. Cieslak, M. Debowski, E. Grosse, W. Henning, P. Koczon, D. Miskowiec, R. Schicker, P. Senger, C. Bormann, D. Brill, Y. Shin, J. Stein, R. Stock, H. Strobele, B. Kohlmeyer, H. Poppl, F. Puhlhofer, J. Speer, K. Volkel, W. Walus, Z. Phys. A352, 175 (1995).

**Nuclear Reactions:**  $^{23}\text{Na}$ ,  $^{19}\text{F}(\text{Ne},\text{X})$ ,  $^{197}\text{Au}(^{197}\text{Au}, \text{X})$ ,  $E=1$  GeV/nucleon; measured pion, proton production  $\sigma(\theta)$  vs momentum; deduced resonance decay kinematics role.

**95Mu13** *Pre-Equilibrium Nucleon and Alpha-Particle Emission in the Alpha-Particle-Induced Reactions on Heavy Nuclei*

S. Mukherjee, N. L. Singh, Nuovo Cim. 108A, 269 (1995).

**Nuclear Reactions:** ICPND  $^{197}\text{Au}(\alpha, n)$ ,  $(\alpha, 2n)$ ,  $(\alpha, 3n)$ ,  $(\alpha, n2p)$ ,  $(\alpha, n\alpha)$ ,  $(\alpha, 2n\alpha)$ ,  $(\alpha, 3n\alpha)$ ,  $E=30-75$  MeV; measured  $\sigma(E)$ . Pre-equilibrium hybrid model analysis.

**95Mu14** *Chaotic Dynamics of Single Particles in Axially Symmetric Nuclear Shapes*

T. Mukhopadhyay, S. Pal, Nucl. Phys. A592, 291 (1995); Erratum Nucl. Phys. A596, 713 (1996).

**95Mu15** *Quark Matter '95: Where are we and what needs to be done ( Question )*

B. Muller, Nucl. Phys. A590, 3c (1995).

**95Mu16** *Phase Transitions in Warm, Asymmetric Nuclear Matter*

H. Muller, B. D. Serot, Phys. Rev. C52, 2072 (1995).

**95Mu17** *Electromagnetic Meson Form Factors in a Covariant Salpeter Model*

C. R. Munz, J. Resag, B. C. Metsch, H. R. Petry, Phys. Rev. C52, 2110 (1995).

**95Mu18** *Photoproduction of  $\psi$  Mesons Near Threshold*

N. C. Mukhopadhyay, J. -F. Zhang, M. Benmerrouche, Phys. Rev. Lett. 75, 3022 (1995).

***Nuclear Reactions:***  $^1\text{H}(\gamma, X)$ , E threshold; analyzed  $\psi$  production data; deduced baryon resonance electrostrong property related parameter.

**95Mu19** *Momentum Distribution in Nuclear Matter and Finite Nuclei*

H. Muther, G. Knehr, A. Polls, Phys. Rev. C52, 2955 (1995).

**95Mu20** *Semiclassical and Quantum Mechanical Analysis of the Excitation Function for the  $^{130}\text{Te}(p,n)^{130}\text{I}$  Reaction*

M. M. Musthafa, B. P. Singh, M. G. V. Sankaracharyulu, H. D. Bhardwaj, R. Prasad, Phys. Rev. C52, 3174 (1995).

**Nuclear Reactions:** ICPND  $^{130}\text{Te}(p,n)$ , E=4-18 MeV; measured  $\sigma(E)$ ,  $\gamma$ -branching ratio. Enriched target, stacked foil, activation analysis, Ge(Li) detector.

**95Mu21** *Astrophysical Factor for the Radiative Capture Reaction  $\alpha + d \rightarrow {}^6\text{Li} + \gamma$*

A. M. Mukhamedzhanov, R. P. Schmitt, R. E. Tribble, A. Sattarov, Phys. Rev. C52, 3483 (1995).

**Nuclear Reactions:** ICPND  ${}^2\text{H}(\alpha, \gamma)$ ,  $E(\text{cm}) \leq 600$  keV; calculated astrophysical S-factor vs E; deduced reaction rate. Both E1, E2 contributions included.

**95Mu22** *Intermediate Mass Fragment Production in ( $\alpha + {}^{27}\text{Al}$ ) Reaction at Low Energies*

R. N. Mukherjee, T. K. De, B. B. Baliga, Z. Phys. A352, 417 (1995).

**Nuclear Reactions:**  ${}^{27}\text{Al}(\alpha, {}^{12}\text{C})$ ,  $(\alpha, {}^{16}\text{O})$ ,  $E=50, 60$  MeV; measured ejectile spectra; deduced moving source model parameters, fragment emission mechanism.

**95Mu23** *Hadron Production in Proton-Proton Interactions at Medium Energies*

R. Muller, Z. Phys. A353, 103 (1995).

***Nuclear Reactions:***  $^1\text{H}(p,X)$ ,  $E$  5-10 GeV; analyzed various particle production  $\sigma(E)$ , missing mass spectra collision model, partonic structure of hadrons based empirical matrix element.

**95Mu24** *Hadron Production in pBe Interactions at 14.6 GeV/c*

H. Muller, Z. Phys. A353, 237 (1995).

**Nuclear Reactions:**  ${}^9\text{Be}(p,X)$ , E at 14.6 GeV/c; calculated invariant production  $\sigma$  for  $\pi^+$ ,  $\pi^-$ ,  $K^+$ ,  $K^-$ , p, d production. Rossendorf collision model.

**95Mu25** *Perturbation Theory for Quasistationary States*

V. D. Mur, V. S. Popov, *Yad. Fiz.* 58, No 8, 1413 (1995); *Phys. Atomic Nuclei* 58, 1329 (1995).

**95Mu26** *Two- and Three-Particle Correlations in Gold-Emulsion Interactions at 10.6A GeV*

A. Mukhopadhyay, P. L. Jain, G. Singh, Nuovo Cim. 108, 775 (1995).

**95Mu27** *Extraction of the Ratio of the  $N^*(1535)$  Electromagnetic Helicity Amplitudes from Eta Photoproduction Off Neutrons and Protons*

N. C. Mukhopadhyay, J. -F. Zhang, M. Benmerrouche, Phys. Lett. 364B, 1 (1995).

**Nuclear Reactions:**  $^1_0^1\text{H}(\gamma, X)$ ,  $E=716, 775$  MeV; analyzed  $\psi$  production associated  $\sigma(\theta)$ ; deduced helicity amplitudes ratio  $A_{1/2}(n)/A_{1/2}(p)$ .

**95Mu28** *Glow Curves of Lithium Fluoride Dosimeters (TLD-600) Irradiated with Alpha Particles from an  $^{241}\text{Am}$  Source*

B. Mukherjee, W. Clerke, Nucl. Instrum. Methods Phys. Res. A361, 395 (1995)

**Radioactivity:**  $^{241}\text{Am}(\alpha)$ ; measured dosimeters glow curves; deduced glow peak area,  $\alpha$ -particles LET relationship. Lithium fluoride thermoluminescent dosimeter chips.

**95Mu29** *Discovery, Synthesis and Nuclear Properties of the Heaviest Elements*

G. Munzenberg, *Radiochim. Acta* 70/71, 193 (1995).

***Nuclear Structure:*** Z 90-110; compiled, reviewed even-even isotopes microscopic corrections, fission barrier, heavy element production  $\sigma$  data, analyses.

### 95MuZT Level Structure of $^{78}\text{Rb}$

J. Mukai, N. Hashimoto, T. Saitoh, T. Watanabe, M. Matsuda, T. Hayakawa, J. Lu, T. Komatsubara, K. Furuno, S. Suematsu, Univ. Tsukuba, Tandem Accel. Center, Ann. Rept., 1994, p. 24 (1995); UTTAC-62 (1995).

**Nuclear Reactions:**  $^{54}\text{Fe}(^{28}\text{Si}, n3p)$ ,  $E=110$  MeV; measured  $E_\gamma$ ,  $I_\gamma$ ,  $\gamma\gamma(\text{particles})\text{-coin}$ .  $^{78}\text{Rb}$  deduced high-spin levels,  $J$ ,  $\pi$ ,  $T_{1/2}$ , band structure.

**Radioactivity:**  $^{78}\text{Rb}(\beta^+)$  [from  $^{54}\text{Fe}(^{28}\text{Si}, n3p)$ ,  $E=110$  MeV]; measured  $E_\gamma$ , K X-rays,  $\gamma\gamma\text{-coin}$ ; deduced levels,  $J$ ,  $\pi$ ,  $T_{1/2}$ .

**95MuZU** *Incomplete Fusion of the  $^{141}\text{Pr}$  Induced by 38-95 MeV/u  $^{40}\text{Ar}$  Ions*

K. Mukai, A. Yokoyama, T. Saito, H. Baba, Y. Ohkubo, A. Shinohara, M. Furukawa, RIKEN-94, p. 100 (1995).

**Nuclear Reactions:**  $^{141}\text{Pr}(^{40}\text{Ar},X)$ ,  $E=38, 59, 95$  MeV/nucleon; measured products  $E_\gamma$ ; deduced mean projectile recoil ranges, products recoil velocities, linear momentum transfers, incomplete fusion mechanism.

**95MuZV** *Deformed Woods-Saxon Potential Approach to the Structure of  $^{11}\text{Be}$*

A. Muta, T. Otsuka, RIKEN-94, p. 13 (1995).

**Nuclear Structure:**  $^{11}\text{Be}$ ; calculated rms radii, density; deduced halo, cluster structures. Deformed Woods-Saxon potential, square well potential.

**95MuZW** *Deformed Woods-Saxon Potential Approach to the Structure of  $^{11}\text{Be}$*

A. Muta, T. Otsuka, RCNP (Osaka), Ann. Rept., 1994, p. 125 (1995).

**Nuclear Structure:**  $^{11}\text{Be}$ ; calculated  $\text{dB}(E1)/\text{dE}$  for spherical and deformed Woods-Saxon potentials; deduced neutron halo effect on photodisintegration.

**95MuZX** *Determination of the Change of Nuclear Charge Radius in the 81 keV Transition of  $^{133}\text{Cs}$  using  $^{133}\text{Xe}$ -Implanted Sources*

H. Muramatsu, H. Ito, M. Misawa, T. Miura, M. Koizumi, A. Osa, T. Sekine, M. Yanaga, Y. Fujita, K. Endo, H. Nakahara, M. Fujioka, Japan Atomic Energy Res. Inst. Takasaki Ion Accel. for Advanced Radiat. Appl., Ann. Rept., 1994, p. 190 (1995).

**Radioactivity:**  $^{133}\text{Xe}(\beta^-)$ ; measured E(ce), I(ce), Mossbauer isomer shift.  $^{133}\text{Cs}$  deduced change of nuclear charge radius. Ion implantation technique.

**95MuZY** *Determination of the Change of the Nuclear Charge Radius During the 81 keV Transition of  $^{133}\text{Cs}$*

H. Muramatsu, H. Ito, M. Misawa, T. Miura, T. Sekine, M. Koizumi, A. Osa, M. Yanaga, K. Omata, Y. Fujita, Inst. Nucl. Study, Univ. Tokyo, Ann. Rept., 1994, p. 16 (1995).

**Radioactivity:**  $^{133}\text{Xe}(\beta^-)$ ; measured Mossbauer spectra, (ce).  $^{133}\text{Cs}$  deduced nuclear charge radius. Iron-free double-focusing  $\beta$ -ray spectrometer.

**95MuZZ** *The Interaction of  $^{14}, ^{15}\text{N} + ^{165}\text{Ho}, ^{40}\text{Ar}, ^{14}\text{N} + ^{141}\text{Pr}$  at the Intermediate Energy*

K. Mukai, A. Yokoyama, T. Saito, H. Baba, Y. Ohkubo, S. Kiryu, C. Murata, T. Muroyama, A. Shinohara, M. Furukawa, Osaka Univ. Lab. Nucl. Studies, Ann. Rept., 1994, p. 109 (1995).

**Nuclear Reactions:**  $^{165}\text{Ho}(^{14}\text{N},\text{X}), (^{15}\text{N},\text{X}), E=35, 70 \text{ MeV/nucleon}$ ; measured  $\sigma(\theta)$  for fragments; deduced longitudinal momentum transfer, complete and incomplete fusion mechanisms.

**95My01** *The Compressibility of Finite Nuclei*

W. D. Myers, W. J. Swiatecki, Nucl. Phys. A587, 92 (1995).

**Nuclear Structure:** A=10-260; calculated compressibilities for N=Z nuclei. Universal scaling dependence approach.

**95My02** *The Nuclear Thomas-Fermi Model*

W. D. Myers, W. J. Swiatecki, Acta Phys. Pol. B26, 111 (1995).

**Nuclear Structure:** Z=70-108; N=96-156; calculated deformation energies vs constraint parameter. Z=71-98; calculated fission barrier heights.  $^{82}$ ,  $^{120}$ ,  $^{170}$ Sn; calculated nucleon density distributions. Statistical Thomas-Fermi model, other nuclei, other aspects studied.

