7.1 PUBLICATIONS

JOURNALS

Experimental Researches

1. *S. Adler, M.S. Atiya, I-H. Chiang, M.V. Diwan, J.S. Frank, J.S. Haggerty, S.H. Kettell, T.F. Kycia, K.K. Li, L.S. Littenberg, C. Ng, A. Sambamurti, A. Stevens, R.C. Strand, C. Witzig, T.K. Komatsubara, M. Kuriki, N. Muramatsu, S. Sugimoto, T. Inagaki, S. Kabe, M. Kobayashi, Y. Kuno, T. Sato, T. Shinkawa, Y. Yoshimura, Y. Kishi, T. Nakano, M. Ardebili, A.O. Bazarko, M.R. Convery, M.M. Ito, D.R. Marlow, R.A. McPherson, P.D. Meyers, F.C. Shoemaker, A.J.S. Smith, J.R. Stone, M. Aoki, E.W. Blackmore, P.C. Bergbusch, D.A. Bryman, A. Konaka, J.A. Macdonald, T. Numao, P. Padley, J-M. Poutissou, R. Poutissou, J. Roy, A.S. Turcot, P. Kitching and R. Soluk*
   Phys. Rev. Lett. **79** (1997) 2204-2207
   Evidence for the Decay $K^+ \to \pi^+ \nu \bar{\nu}$

2. *S. Adler, M.S. Atiya, I-H. Chiang, J.S. Frank, J.S. Haggerty, T.F. Kycia, K.K. Li, L.S. Littenberg, A. Sambamurti, A. Stevens, R.C. Strand, C. Witzig, W.C. Louis, D.S. Akerib, M. Ardebili, M. Convery, M.M. Ito, D.R. Marlow, R.A. McPherson, P.D. Meyers, M.A. Selen, F.C. Shoemaker, A.J.S. Smith, E.W. Blackmore, D.A. Bryman, L. Felawka, A. Konaka, Y. Kuno, J.A. Macdonald, T. Numao, P. Padley, J.-M. Poutissou, R. Poutissou, J. Roy, A.S. Turcot, P. Kitching, T. Nakano, M. Rozon and R. Soluk*
   Phys. Rev. Lett. **79** (1997) 4756–4759
   Observation of the Decay $K^+ \to \pi^+ \mu^+ \mu^-$

3. *S. Ajimura, M. Ishikawa, K. Ikeda, T. Kishimoto, A. Okusu, N. Shinkai, Y. Tanaka, H. Ejiri, T. Nakano, T. Nagae, H. Noumi, K. Manabe, M. Sekimoto, T. Shibata, O. Hashimoto, K. Maeda, T. Takahashi, T. Hasegawa, H. Bhang, H. Park, Y. Kim, M. Youn, T. Motoba and K. Itonaga*
   Phys. Rev. Lett. **80** (1998) 3471-3474
   Polarization of ${}^{5}_{\Lambda}$He Produced by the (π^+, K^+) Reaction

4. *K. Anami, H. Yoshida, D. Konishi, H. Murohka, Y. Uozumi, G. Wakabayashi, A. Nohtomi, T. Sakae, M. Matoba, T. Maki and N. Koori*
   Nucl. Instr. Meth. A **404** (1998) 327-333
   Light Output Response of GSO(Ce) and NaI(Tl) to Protons up to 160 MeV

5. *I.G. Bearden, J. Dodd, H. Bøggild, J. Boissevain, M. Cherney, B. Erazmus, S. Esumi, C.W. Fabjan, D. Ferenc, D.E. Fields, A. Franz, J.J. Gaardhøje, O. Hansen, D. Hardtke, E.B. Holzer, T. Humanic, B.V. Jacak, R. Jayanti, H. Kalechofsky, R. Kvatadze, P. Lautridou, Y.Y. Lee, M. Leltchouk, A. Ljubicic, B. Lörstad, N. Maeda, A. Medvedev, A. Miyabayashi, M. Murray, S. Nishimura, E. Noteboom, G. Paic, S.U. Pandey, F. Piuz, J. Pluta, V. Polychronakos, M. Potekhin, G. Poulard, A. Rahmani, A. Sakaguchi, J. Simon-Gillo, W. Sondheim, J. Schmidt-Sørensen, M. Spegel, T. Sugitate, J.P. Sullivan, Y. Sumi, H. van Hecke, G. Vilkelis, W.J. Willis, K. Wolf and N. Xu*

Phys. Rev. **C57** (1998) 837-846
Proton and Anti-Proton Distributions at Midrapidity in Proton Nucleus and Sulphur-Nucleus Collisions

6. *I. Daito, H. Akimune, S.M. Austin, D. Bazin, G.P.A. Berg, J.A. Brown, B.S. Davids, Y. Fujita, H. Fujimura, M. Fujiwara, R. Hazama, T. Inomata, K. Ishibashi, J. Jañecke, S. Nakayama, K. Pham, D.A. Roberts, B.M. Sherrill, M. Steiner, A. Tamii, M. Tanaka, H. Toyokawa and M. Yosoi*
   Phys. Lett. **B418** (1998) 27-33
   Gamow-Teller strengths from (t,^{3}He) charge-exchange reactions on light nuclei

7. *I. Daito, H. Akimune, S.M. Austin, D. Bazin, G.P.A. Berg, J.A. Brown, Y. Fujita, H. Fujimura, M. Fujiwara, R. azama, T. Inomata, K. Ishibashi, J. Jañecke, S. Nakayama, K. Pham, D.A. Roberts, B.M. Sherrill, M. Steiner, A. Tamii, M. Tanaka, H. Toyokawa, and M. Yosoi*
   Nucl. Instr. Meth. A **397** (1997) 465-471
   (t,^{3}He) Reaction; New Tool for Studying Spin-Isospin Excitations in Neutron Rich Nuclei

8. *B.F. Davis, U. Garg, W. Reviol, M.N. Harakeh, A. Bacher, G.P.A. Berg, C.C. Foster, E.J. Stephenson, Y. Wang, J. Jänecke, K. Pham, W. Reviol, D. Roberts, H. Akimune, M. Fujiwara and J. Lissanti*
   Phys. Rev. Lett. **79** (1997) 609-612
   Evidence for the Isoscalar Giant Dipole Resonance in ^{208}Pb Using Inelastic α Scattering at 0°

9. *R. De Leo, H. Akimune, N. Blasi, I. Daito, Y. Fujita, M. Fujiwara, S.I. Hayakawa, S. Hatori, H. Ikegami, T. Inomata, I. Katayama, K. Katori, L. Lagamba, S. Micheletti, S. Morinobu, R. Perrino, M. Pignanelli, H. Sakamoto, J. Takamatsu and M. Tosaki*
   Phys. Rev. **C57** (1998) 1604-1616
   Low-lying states of ^{56}Fe

10. *H. Ejiri*
    International Journal of Modern Physics **E6** (1997) 1-43
    Nuclear Spin Responses for Neutrinos in Astroparticle Physics

11. *H. Ejiri*
    Acta Physica Polonica **29** (1998) 47
    Neutrinos and Symmetries Studied by Nuclear Double Beta and Rare Decays

12. *H. Ejiri*
    Nucl. Phys. **A629** (1998) 487c-495c
    Neutrino Nuclear Responses and Neutrino Masses in Inverse Beta and Double Beta Decays

13. *Y. Fujita, K. Hatanaka, G.P.A. Berg, K. Hosono, N. Matsuoka, S. Morinobu, T. Noro, M. Sato, K. Tamura and H. Ueno*
    Nucl. Instrum. Methods Phys. Res. B **126** (1997) 274-278
    Matching of a Beam Line and a Spectrometer –New Beam Line Project at RCNP–

14. *Y. Fujita, H. Akimune, I. Daito, M. Fujiwara, M. N. Harakeh, T. Inomata, J. Jänecke, K. Katori, C. Lüttge, S. Nakayama, P. von Neumann-Cosel, A. Richter, A. Tamii,*

M. Tanaka, H. Ueno and M. Yosoi
Nucl. Instrum. Methods Phys. Res. A **402** (1998) 371-377
Mesonic Effects Deduced from Good-Resolution (^{3}He,t) Reaction in Comparison with Inelastic Scatterrings

15. *M. Fujiwara, I. Daito, H. Fujimura, H. Akimune, T. Inomata, F. Ihara, K. Ishibashi*
Acta Physica Polonica B **29** (1998) 179-196
Spin-isospin giant resonances by charge exchange reactions

16. *M. Fujiwara, T. Hotta, T. Kinashi, K. Takanashi, T. Nakano, Y. Ohashi, S. Daté, H. Okuma and N. Kumagai*
Acta Physica Polonica B **29** (1998) 141-156
Physics with polarized photons at SPring-8

17. *S. Fukushima, S. Ozeki, J-T. Tang, M. Koizumi, S. Matsumura, Ta. Inoue, To. Inoue, H. Yamazaki, S. Murayama, K. Hatanaka, H. Ejiri and K. Kasai*
Oncology Reports **4** (1997) 481-484
Induction of p53 protein by carbon ion and proton beam irradiation in two close human lymphoblastoid cell lines with different p53 status

18. *T. Itahashi, K. Takahisa, N. Kudomi, T. Iki, S. Yoshida, H. Toki, H. Ejiri, H. Ohsumi and M. Komori*
Rev. Sci. Instrum. **69** (1998) 1032-1034
High brightness ^{3}He ion source and plasma target for nuclear astrophysical applications

19. *K. Kaimi, H. Bøggild, J. Boissevain, M. Cherney, J. Dodd, S. Esumi, C.W. Fabjan, D.E. Fields, A. Franz, B. Holzer, T.J. Humanic, B. Jacak, R. Jayanti, H. Kalechofsky, T. Kobayashi, Y.Y. Lee, M. Leltchouk, B. Lörstad, N. Maeda, A. Medvedev, A. Miyabayashi, M. Murray, S. Nishimura, E. Noteboom, S.U. Pandey, F. Piuz, V. Polychronakos, M. Potekhin, G. Poulard, A. Sakaguchi, J. Schmidt-Sørensen, J. Simon-Gillo, W. Sondheim, T. Sugitate, J.P. Sullivan, Y. Sumi, H. van Hecke, W.J. Willis, K. Wolf and N. Xu*
Z. Phys. **C75** (1997) 619-625
Multiplicity Dependence of the Pion Source in S+A Collisions at the CERN SPS

20. *M. Kaneta, I.G. Bearden, H. Bøggild, J. Boissevain, J. Dodd, B. Erazmus, S. Esumi, C.W. Fabjan, D. Ferenc, D.E. Fields, A. Franz, J.J. Gaardhøje, A.G. Hansen, O. Hansen, D. Hardtke, H. van Hecke, E.B. Holzer, T.J. Humanic, P. Hummel, B.V. Jacak, R. Jayanti, M. Kopytine, M. Leltchouk, A. Ljubicic, B. Lörstad, N. Maeda, A. Medvedev, M. Murray, S. Nishimura, H. Ohnishi, G. Paic, S.U. Pandey, F. Piuz, J. Pluta, V. Polychronakos, M. Potekhin, G. Poulard, D. Reichhold, A. Sakaguchi, J. Simon-Gillo, J. Schmidt-Sørensen, W. Sondheim, M. Spegel, T. Sugitate, J.P. Sullivan, Y. Sumi, W.J. Willis, K. Wolf, N. Xu and D.S. Zachary*
J. Phys. **G23** (1997) 1865-1871
Particle Ratios from Central Pb+Pb Collisions at the CERN SPS

21. *P. Kitching, T. Nakano, M. Rozon, R. Soluk, S. Adler, M.S. Atiya, I-H. Chiang, J.S. Frank, J.S. Haggerty, T.F. Kycia, K.K. Li, L.S. Littenberg, A. Sambamurti, A. Stevens, R.C. Strand, C. Witzig, W.C. Louis, D.S. Akerib, M. Ardebili, M. Convery, M.M. Ito, D.R. Marlow, R.A. McPherson, P.D. Meyers, M.A. Selen, F.C. Shoemaker,*

A.J.S. Smith, E.W. Blackmore, D.A. Bryman, L. Felawka, A. Konaka, Y. Kuno, J.A. Macdonald, T. Numao, P. Padley, J.-M. Poutissou, R. Poutissou, J. Roy and A.S. Turcot
Phys. Rev. Lett. **79** (1997) 4079–4082
Observation of the Decay $K^+ \to \pi^+\gamma\gamma$

22. *N. Kudomi, H. Ejiri, K. Fushimi, K. Hayashi, R. Hazama, T. Kishimoto, M. Komori, K. Kume, G. Kunitomi, K. Matsuoka, H. Miyawaki, K. Nagata, H. Ohsumi,K. Okada, T. Shima, S. Shiomi, K. Takahisa, J. Tanaka, K. Tasaka and T. Watanabe*
Nucl. Phys. **A629** (1998) 527c-530c
Double Beta Decays and ELEGANT V and VI at Oto Cosmo Obsevatory

23. *M. Matoba, K. Yamaguchi, K. Kurohmaru, O. Iwamoto, Susilo Widodo, A. Nohtomi, Y. Uozumi, T. Sakae, N. Koori, T. Maki and M. Nakano*
Phys. Rev. **C55** (1997) 3152-3154
Depletion of the $2f_{7/2}$ Neutron Hole State in ^{207}Pb

24. *Y. Mizuno*
Nucl. Phys. **A629** (1998) 55c-59c
Effect of non-perturbative QCD in the structure functions at small x and at large x in all Q^2

25. *Y. Muraki, Y. Matsubara, I. Imaida, T. Koi, T. Murata, A. Okada, S. Sakakibara, T. Sako, H. Tsuchiya, Y. Munakata, S. Shibata, R. Tatsuoka, H. Sakai, T. Nonaka, T. Ohnishi, T. Wakasa, K. Hatanaka and Y. Ishida,*
Nuclear Physics **B60** (1998) 3-11
Solar Flare and Neutron Telescope

26. *H. Murohka, H. Yoshida, Y. Uozumi, A. Nohtomi, T. Sakae, M. Matoba, O. Iwamoto, T. Maki and N. Koori*
J. Nucl. Sci. Technol. **34** (1997) 708-713
Application of Tail Subtraction Technique with Particle Identification to a Stacked Spectrometer for Intermediate Energy Protons

27. *H. Murohka, K. Anami, G. Wakabayashi, H. Yoshida, A. Nohtomi, Y. Uozumi, T. Sakae, M. Matoba, T. Maki and N. Koori*
IEEE Trans. on Nucl. Sci. **44** (1997) 484-488
Response Function of a Stacked GSO(Ce) Spectrometer to Cosmic-rays

28. *T. Nagae, T. Miyachi, T. Fukuda, H. Outa, T. Tamagawa, J. Nakano, R.S. Hayano, H. Tamura, Y. Shimizu, K. Kubota, R.E. Chrien, R. Sutter, A. Rusek, W.J. Briscoe, R. Sawafta, E.V. Hungerford, A. Empl, W. Naing, C. Neerman, K. Johnston and M. Planinic*
Phys. Rev. Lett. **80** (1998) 1605-1609
Observation of a ${}^{4}_{\Sigma}He$ Bound State in the ^{4}He(K^-,π^-) Reaction at 600 MeV/c

29. *T. Nakano, H. Ejiri, M. Fujiwara, T. Hotta, K. Takanashi, H. Toki, S. Hasegawa, T. Iwata, K. Okamoto, T. Murakami, J. Tamii, K. Imai, K. Maeda, K. Maruyama, S. Daté, M.M. Obuti, Y. Ohashi, H. Okamura and N. Kumagai*
Nucl. Phys. **A629** (1998) 559c-566c
New projects at SPring-8 with multi-GeV polarized photons

30. *S. Nakayama, H. Akimune, I. Daito, H. Fujimura, Y. Fujita, M. Fujiwara, K. Fushimi, T. Inomata, K. Ishibashi, H. Kohri, N. Koori, K. Takahisa, A. Tamii, M. Tanaka, H. Toyokawa and T. Yamagata*
Nucl. Instr. and Methods **A402** (1998) 367-370
The (^{7}Li,^{7}Be) reaction as a spin-probe for isovector excitations

31. *S. Nakayama, K. Fushimi, H. Kohri, H. Akimune, I. Daito, H. Fujimura, Y. Fujita, M. Fujiwara, T. Inomata, K. Ishibashi, T. Iwawaki, N. Koori, K. Takahisa, A. Tamii, M. Tanaka, H. Toyokawa and T. Yamagata*
Nucl. Instr. and Methods **A404** (1998) 34-40
GSO-detector system "NYMPHS" for (^{7}Li,^{7}Be-γ) reaction at intemediate energies

32. *M. Nomachi, T. Hotta, M. Kato, M. Kawabata, Y. Maeda, N. Matsuoka, Y. Mizuno, T. Noro, Y. Sugaya, K. Takahisa, K. Takanashi, K. Tamura, H. Toki, K. Yasuda, H. Yoshida, M. Yoshimura, Y. Yuasa, K. Imai, T. Murakami, J. Murata I. Nakagawa, T. Tamae, H. Tsubota and H. Akiyoshi*
Nucl. Phys. **A629** (1998) 213c-217c
First Experiment at RCNP on pp-Bremsstrahlung at 400 MeV

33. *T. Noro, T. Baba, K. Hatanaka, M. Ito, M. Kawabata, N. Matsuoka, Y. Mizuno, S. Morinobu, M. Nakamura, A. Okihana, K. Sagara, H. Sakaguchi, K. Takahisa, H. Takeda, A. Tamii, K. Tamura, M. Tanaka, S. Toyama, H. Yamazaki, H. Yoshida, M. Yosoi and Y. Yuasa*
Nucl. Phys. **A629** (1998) 324c-333c
A Study of Nucleon Properties in Nuclei through $(p, 2p)$ Reactions

34. *H. Ogawa, N. Sakamoto, I. Katayama, Y. Haruyama, M. Saito, K. Yoshida, M. Tosaki, Y. Susuki and K. Kimura*
Nucl. Instr. and Meth. **B132** (1997) 36-40
Energy Loss of 10 MeV/amu Atomic Helium in Carbon

35. *H. Sakaguchi, H. Takeda, S. Toyama, M. Itoh, A. Yamagoshi, A. Tamii, M. Yosoi, H. Akimune, I. Daito, T. Inomata, T. Noro and Y. Hosono*
Phys. Rev. **C57** (1998) 1749-1755
Elastic scattering of polarized protons from ^{58}Ni at $E_p = 192$, 295, and 400 MeV

36. *C. Samanta, Y. Sakuragi, M. Ito and M. Fujiwara*
Jour. Phys. G: Nucl. and Part. **23** (1997) 1697-1705
Energy dependence in ^{6}Li-nucleus interactions at intermediate energies

37. *N. Takahashi*
Acta Physica Polonica **B28** (1997) 41-46
Condensed-Matter Nuclear Physics with Radioactive Beams Snowballs in Superfluid Helium

38. *T. Takeuchi, T. Yamagata, K. Yonehara, Y. Arimoto and M. Tanaka*
Rev. Sci. Instr. **69** (1998) 412-417
Ion Optics for Multiple Charge Exchange Collisions Determined by Means of Monte Carlo Simulation

39. *M. Tanaka*
Nucl. Instrum. & Methods **A402** (1998) 492-498
Review from Experimentalists: The Role of Polarized ^{3}He in the Next Century

40. *J-T. Tang, To. Inoue, Ta. Inoue, H. Yamazaki, S. Fukushima, M. Koizumi, S. Ozeki, and K. Hatanaka*
Brit. J. Cancer. **76** (1997) 220-225
Comparisons of radiobiological effectiveness at different depth in 65 MeV modulated proton beams

41. *J-T. Tang, To. Inoue, Ta. Inoue, S. Matsumura, S. Fukushima, M. Koizumi, S. Ozeki, and K. Hatanaka*
Oncology Reports **4** (1997) 407-412
Differences in repair of potentially lethal damage in chinese hamster ovary cells exposed to 65 MeV proton beams and ^{137}Cesium γ rays

42. *T. Wakasa, H. Sakai, H. Okamura, H. Otsu, S. Fujita, S. Ishida, N. Sakamoto, T. Uesaka, Y. Satou, M.B. Greenfield and K. Hatanaka*
Phys. Rev. **C55** (1997) 2909-2922
Gamow-Teller strength of ^{90}Nb in the continuum studied via multipole decomposition analysis of the ^{90}Zr(p,n) reaction at 295 MeV

43. *T. Wakasa, H. Sakai, H. Okamura, H. Otsu, S. Fujita, S. Ishida, N. Sakamoto, T. Uesaka, Y. Satou, T. Nonaka, T. Ohnishi, M.B. Greenfield and K. Hatanaka*
Nucl. Instrum. Methods Phys. Res. **A404** (1998) 355-372
Performance of the neutron polarimeter NPOL2 for $(\vec{p},\vec{n})$ polarization transfer measurements

44. *T. Yamagata, M. Tanaka, K. Yonehara, Y. Arimoto, T. Takeuchi, M. Fujiwara, Yu.A. Plis, L.W. Anderson and R. Morgenstrn*
Nucl. Instruments and Method in Physics Research **A402** (1998) 199-204
Development of RCNP polarized ^{3}He ion source based on electron pumping

Theoretical Researches

1. *V.N. Fomenko, S. Marcos, P. Ring and L.N. Savushkin*
Phys. At. Nucl. **60** (1997) 1967-1978
Application of the effective gauge invariant nuclear Lagrangian to nuclear matter and finite nuclei

2. *M. Fukushima, H. Suganuma, A. Tanaka, H. Toki and S. Sasaki*
Nucl. Phys. **B** (Proc. Suppl.) **63A-C** (1998) 513-515
Confinement Properties in the Multi-Instanton System

3. *M. Fukushima*
Soryushiron Kenkyu (Kyoto) **96** (1997) 34-77 (in Japanese)
Monopole Condensation and Color Confinement in Multi-Instanton System

4. *D. Hirata, K. Sumiyoshi, I. Tanihata, Y. Sugahara, T. Tachibana and H. Toki,*
Nucl. Phys. **A616** (1997) 438c-445c
A systematic study of even-even nuclei up to the drip lines within the relativistic mean field framework

5. *H. Ichie, A. Tanaka and H. Suganuma*
Nucl. Phys. **B** (Proc. Suppl.) **63A-C** (1998) 468-470
The Role of Monopoles for Color Confinement

6. *H. Ichie, H. Suganuma and A. Tanaka*
Nucl. Phys. **A629** (1998) 82c-88c
Monopole Current Dynamics and Color Confinement

7. *T.-S.H. Lee*
Nucl. Phys. **A629** (1998) 180c-189c
Chiral constituent quark model predictions of electroproduction of the Δ on the nucleon and ^{3}He

8. *Z. Ma, H. Toki, B. Chen and N.V. Giai*
Prog. Theor. Phys. **98** (1997) 917-926
The giant dipole resonance in Ar-isotopes in the relativistic RPA

9. *Z. Ma, H. Toki and N.V. Giai*
Nucl. Phys. **A627** (1997) 1-13
Giant resonances in the relativistic RPA with non-linear interactions

10. *M. Matsuo, T. Døssing, E. Vigezzi and K Yoshida*
Nucl. Phys. **A617**(1997) 1-32
Shell Model for Warm Rotating Nuclei

11. *H. Monden, H. Ichie, H. Suganuma and H. Toki*
Phys.Rev. **C57** (1998) 2564-2575
Surface Tension in the QCD Phase Transition in the Dual Ginzburg-Landau Theory

12. *T. Sakai, J. Mori, A.J. Buchmann, K. Shimizu and K. Yazaki*
Nucl. Phys. **A625** (1997) 192-206
The interaction between H-dibaryons

13. *T. Sakai and H. Suganuma*
Phys. Lett. **B430** (1998) 168-173
H-dibaryon matter in the Skyrme model on a hypersphere

14. *S. Sasaki, H. Suganuma and H. Toki*
Prog. Theor. Phys. Suppl. **129** (1998) 227-230
Confinement Mechanism and Chiral Phase Transition in the Non-Perturbative Vacuum of QCD

15. *H. Suganuma, M. Fukushima, H. Ichie and A. Tanaka*
Nucl. Phys. **B** (Proc. Suppl.) **65** (1998) 29-33
Instanton, Monopole Condensation and Confinement

16. *H. Toki and K.-I. Kubo*
Nucl. Instrum. & Methods **A402** (1998) 294-297
Spin Observables in High Energy Hadron-Hadron Collisions within the Relativistic Recombination Model

17. *H. Toki, H. Suganuma, H. Ichie, H. Monden, S. Umisedo, A. Tanaka, M. Fukushima, F. Araki and S. Sasaki*

Nucl. Phys. **A629** (1998) 63c-71c
The Dual Ginzburg-Landau Theory and Quark Nuclear Physics

18. *H. Toki and L.-A. Wu*
Phys. Rev. Lett. **79** (1997) 2006-2009
$\Delta I = 4$ bifurcation in ground bands of even-even nuclei and the success of interacting boson model

19. *H. Toki and L.-A. Wu*
Prog. Theor. Phys. **98** (1997) 745-748
$\Delta I = 2$ staggering in ground rotational bands and DA=2 mass staggering in the deformed nuclei

20. *S. Umisedo, H. Suganuma and H. Toki*
Phys. Rev. **D57** (1998) 1605-1614
Correlation between confinement and chiral-symmetry breaking in the dual Higgs theroy

21. *E. Vigezzi, T. Døssing, M. Matsuo, K. Yoshida, P. Bosetti, A. Bracco, S. Frattini, B. Herskind and S. Leoni*
Z.Phys. **A358** (1997) 207-211
From discrete rotational bands to damped rotational motion

22. *L.-A. Wu and H. Toki*
Phys. Rev. **C56** (1997) 1821-1830
Evidence on $\Delta I = 4$ bifurcation in ground bands of even-even nuclei and the theoretical explanation with the interacting boson model

23. *L.-A. Wu and H. Toki*
Phys. Lett. **B407** (1997) 201-211
Anomalous staggering in the masses of the rotational nuclei in the actinide region

24. *Y. Yamamoto, K.-I. Kubo and H. Toki*
Prog. Theor. Phys. **98** (1997) 95-128
Quark recombination spin polarization in high energy inclusive hadron reactions

25. *K. Yoshida and M. Matsuo*
Nucl. Phys. **A612** (1997) 26-52
Onset of Rotational Damping in Superdeformed Nuclei

Scientific Collaborators

1. *Y. Fujiwara, T. Fujita, C. Nakamoto and Y. Suzuki*
Nucl. Phys. **A629** (1998) 190c-196c
Unified description of NN and YN interaction in the SU_6 quark model

2. *M. Hirai, S. Kumano and M. Miyama*
Comput. Phys. Commun. **108** (1998) 38
Numerical solution of Q^2 evolution equations for polarized structure functions

3. *M. Imachi, T. Kakitsuka, N. Tsuzuki and H. Yoneyama*
Prog.Theor.Phys. **97**(1997) 791–808

Renormalization Group Analysis of U(2) Gauge Theory with theta-Term in 2 Dimensions

4. *Y. Kanada-En'yo and H. Horiuchi*
   Phys. Rev. **C55**(1997) 2860-2865
   Opposite deformations between protons and neutrons in proton-rich C isotopes

5. *N. I. Kochelev, T. Morii and T. Yamanishi*
   Phys. Lett. **B405** (1997) 168-172
   Semi–inclusive Λ_c^+ leptoproductions and polarized gluon distributions

6. *S. Kumano and M. Miyama*
   Phys. Rev. **D56** (1997) 2504-2508
   Two-loop anomalous dimensions for the structure function h_1

7. *K. Kume, K. Sato and Y. Umemoto*
   Phys. Rev. **C55** (1997) 2866-2871
   Calculation of excited-state properties with an auxiliary-field Monte Calro method

8. *H. Madokoro and M. Matsuzaki*
   Phys. Rev. **C56** (1997) R2934-R2937
   General Relativistic Mean Field Theory for Rotating Nuclei

9. *T. Morii, D. Roy, K. Sudoh, Z.-X. Sun, S. Tanaka and T. Yamanishi*
   Nucl. Phys. **A629** (1998) 282c-285c
   Color-octet mechanism in low-p_T ψ'-productions

10. *T. Morii, D. Roy, K. Sudoh, Zuxun Sun, S. Tanaka and T. Yamanishi*
    Phys. Rev. **D57** (1998) 4487-4490
    ψ' production as a test of the color–octet mechanism

11. *N. Nose-Togawa, S. Hirenzaki and K. Kume*
    Nucl. Phys. **A623** (1997) 548-558
    Nuclear quadrupole effects in deeply bound pionic atoms

12. *S. Sasaki and O. Miyamura*
    Nucl. Phys. **B**(Proc.Suppl.) **63A-C** (1998) 507-509
    Existence of Chiral-Asymmetric Zero Modes in the Background of QCD-Monopoles

13. *Y. Suzuki, J. Usukura and K. Varga*
    J. Phys. B: At. mol. Opt. Phys. **31** (1998) 31-48
    New Description of Orbital Motion with Arbotrary Angular Momenta

14. *K. Varga, J. Usukura and Y. Suzuki*
    Phys. Rev. Lett. **80** (1998) 1876-1879
    Second Bound State of the Positronium Molecule and Biexcitons

15. *T. Yamanishi, T. Morii, D. Roy, K. Sudoh and S. Tanaka*
    Nucl. Instrum. & Methods **A402** (1998) 291-293
    Hard Process with Spin-Dependent Parton Distributions

JOURNALS — In press, submited and preprints —

Experimental Researches

1. *A.A. Cowley, G.J. Arendse, R.F. Visser, G.F. Steyn, S.V. Förtsch, J.J. Lawrie, J.V. Pilcher, T. Noro, T. Baba, K. Hatanaka, M. Kawabata, N. Matsuoka, Y. Mizuno, M. Nomachi, K. Takahisa, K. Tamura, Y. Yuasa, H. Sakaguchi, M. Itoh, H. Takeda and Y. Watanabe*
   Phys. Rev. **C57** (1998)
   Rescattering in knockout reactions as manifested in ^{40}Ca$(p,p'p'')$ at an incident energy of 392 MeV

2. *H. Ejiri, et al.*
   submitted to Phys. Lett. (1998)
   Spin Isospin Responses of ^{71}Ga for Solar Neutrinos Studied by ^{71}Ga(^{3}He,tγ)^{71}Ge Reaction

3. *K. Ikematsu, Y. Iwata, K. Kaimi, M. Kaneta, T. Kohama, N. Maeda, K. Matsukado, H. Ohnishi, K. Ono, A. Sakaguchi, T. Sugitate, Y. Sumi, Y. Takata, M. Tanabe and A. Yokoro*
   submitted; preprint, physics/9802024 (1998)
   A Start Timing Detector for the Collider Experiment PHENIX at RHIC-BNL

4. *T. Inomata, H. Akimune, I. Daito, H. Ejiri, H. Fujimura, M. Fujiwara, M.N. Harakeh, K. Ishibashi, H. Kohri, N. Matsuoka, S. Nakayama, A. Tamii, M. Tanaka, H. Toyokawa, M. Yoshimura and M. Yosoi*
   Phys. Rev. **C57** (1998)
   Particle decays from ^{12}B and ^{12}N mirror nuclei

5. *M. Fujiwara et al.*
   Nucl. Instrum. Methods Phys. Res., in press
   Magnetic Spectrometer "Grand Raiden"

6. *T. Wakasa, H. Sakai, H. Okamura, H. Otsu, S. Fujita, S. Ishida, N. Sakamoto, T. Uesaka, Y. Satou, M.B. Greenfield and K. Hatanaka*
   submitted
   Strength observed in Gamow-Teller resonance plus continuum in the ^{27}Al$(\vec{p},\vec{n})$ reaction at 295 MeV

7. *T. Wakasa, H. Sakai, H. Okamura, H. Otsu, T. Nonaka, T. Ohnishi, K. Yako, K. Sekiguchi, S. Fujita, T. Uesaka, Y. Satou, S. Ishida, N. Sakamoto, M.B. Greenfield and K. Hatanaka*
   submitted
   Total Spin Transfer and Parity Decomposition in the Continuum for the ^{90}Zr(p,n) Reaction at 295 MeV

8. *H. Yoshida, D. Konishi, K. Anami, H. Murohka, Y. Uozumi, S. Aoki, T. Yamamoto, G. Wakabayashi, A. Nohtomi, T. Sakae, M. Matoba, T. Maki and N. Koori*
   Nucl. Inst. Meth. A, in printing
   Absolute Efficiency of a Stacked GSO(Ce) spectrometer for Intermediate Energy Protons

Theoretical Researches

1. *D. Hirata, K. Sumiyoshi, I. Tanihata, Y. Sugahara and H. Toki,*
   submitted to Atomic Data and Nuclear Data Tables
   Systematic study of even-even mass nuclei up to the drip lines in terms of the relativistic mean field theory

2. *C. Nakamoto and H. Toki*
   submitted
   One and Two Baryon Systems in the Chiral Constituent Quark Model

3. *R. Niembro, V.N. Fomenko, L.N. Savushkin, M.L. Quelle, S. Marcos and P. Bernardos*
   submitted
   Nuclear matter description in a relativistic chiral model with mixed ps-pv pion nucleon coupling in the RHF approach.

4. *K. Oyamatsu, I. Tanihata, Y. Sugahara, K. Sumiyoshi and H. Toki*
   submitted
   Can the equation of state of asymmetric matter be studied using unstable nuclei?

5. *E. Di Salvo and M. Musakhanov*
   Europ.Phys.J. **C** (1998) (DOI 10.1007/s100529800869 Online publication: March 10, 1998)
   Axial anomaly and low energy tests for instanton vacuum models in QCD

6. *H. Shen, H. Toki, K. Oyamatsu and K. Sumiyoshi,*
   submitted
   Relativistic equation of state of nuclear matter for supernova and neutron star

7. *H. Suganuma, H. Ichie, A. Tanaka and K. Amemiya*
   Prog. Theor. Phys. Suppl. (1998)
   Instantons and Monopoles in the Nonperturbative QCD

8. *T. Sugihara*
   preprint hep-th/9711129; to appear in Phys. Rev. D, June 15 (1998)
   Variational Calculation of the Effective Action

9. *I.S. Towner,*
   submitted to Phys. Rev. C (1998)
   Radiative Corrections in Neutrino-Deuterium Scattering

10. *K. Yoshida and M. Matsuo*
    preprint: nucl-th/9802065 (1998); to be published in Nuclear Physics A
    Shell Effects on Rotational Damping in Superdeformed Nuclei

Scientific Collaborators

1. *T. Fujita, Y. Fujiwara, C. Nakamoto and Y. Suzuki*
   submitted; preprint, KUNS-1489/January,1998
   Scattering Observables of the NN and YN Interactions in the SU_6 Quark Model

2. *H. Madokoro and M. Matsuzaki*
   submitted; preprint, nucl-th/9803058 (1998)

Relativistic and Non-Relativistic Mean Field Investigation of the Superdeformed Bands in Neutron-Deficient Zn Isotopes

3. *O. Miyamura*
   Prog. Theor. Phys. Suppl. (1998) to appear
   Hadrons and Topological Charge from Magnetic Currents

4. *K. Sumiyoshi, J. M. Ibanez and J. V. Romero,*
   submitted
   Thermal history and structure of rotating proto-neutron stars with relativistic equation of state

5. *K. Sumiyoshi and T. Ebisuzaki*
   Parallel Computing, in press
   Performance of parallel solution of a block-tridiagonal linear system on Fujitsu VPP500

6. *K. Sumiyoshi, S. Yamada, H. Suzuki and W. Hillebrandt*
   Astronomy and Astrophysics, 334 (1998), in press
   The fate of a neutron star just below the minimum mass: does it explode?

7. *Y. Suzuki, H. Nemura, C. Nakamoto and Y. Fujiwara,*
   submitted
   Quark Pauli Effects on the Binding Energies of s-Shell Λ Hypernuclei

8. *K. Varga, Y. Suzuki and J. Usukura*
   Few-Body Systems, to be published
   Global Vector Representation of the Angular Motion of Few-Particle Systems