

CONTENTS

Preface	v
Organizing Committees	vii
Patronages and Sponsorships	ix
Group Photo	xii
Conference Program	xiii
Thematic Melodies of Twentieth Century Theoretical Physics: Quantization, Symmetry and Phase Factor <i>Chen Ning Yang</i>	1
FEW-NUCLEON SYSTEMS: THREE-BODY FORCES AND FEW-NUCLEON DYNAMICS	
Analyticity in Two- and Three-Body Coulomb Scattering in Momentum Space <i>S. Oryu & S. Nishinohara</i>	11
Four-Body Bound State Formulation in Three-Dimensional Approach (Without Angular Momentum Decomposition) <i>M. R. Hadizadeh & S. Bayegan</i>	16
Momentum-Space Treatment of Coulomb Interaction in Three-Nucleon Breakup Reactions <i>A. Deluva, A. C. Fonseca & P. U. Sauer</i>	20
Quasilinear and WKB Solutions in Quantum Mechanics <i>R. Krivec, V. B. Mandelzawieg & F. Tabakin</i>	24
Scaling in Few-Body Nuclear Physics <i>L. Tomio, T. Frederico, V. Timóteo, M. T. Yamashita & A. Delfino</i>	28

Spin Correlation Parameter C_{yy} of $p + {}^3\text{He}$ Elastic Backward Scattering at Intermediate Energy	33
<i>Y. Shimizu, K. Hatanaka, A. P. Kobushkin, T. Adachi, K. Fujita, K. Itoh, T. Kawabata, T. Kudoh, H. Matsubara, H. Ohira, H. Okamura, K. Sagara, Y. Sakemi, Y. Sasamoto, Y. Shimbara, H. P. Yoshida, K. Suda, Y. Tameshige, A. Tamii, M. Tomiyama, M. Uchida, T. Uesaka, T. Wakasa & T. Wakui</i>	
Study of Four-Nucleon Systems by Four-Body Faddeev-Yakubovsky Equations	37
<i>E. Uzu, Y. Koike, H. Kamada & M. Yamaguchi</i>	
The Treatment of Coulomb Interaction in the Description of Three-Nucleon Reactions with Two Protons	41
<i>A. Deltuva, A. C. Fonseca & P. U. Sauer</i>	
Three-Nucleon Force Effects in Observables for $\vec{d}p$ Breakup at 130 MeV	46
<i>A. Biegun, B. KŁos, A. Micherdzińska, E. Stephan, W. Zipper, K. Bodek, J. Golak, St. Kistryn, J. Kuroś-Żołnierczuk, R. Skibiński, R. Sworst, H. WitaŁa, J. Zejma, A. Kozela, K. Ermisch, N. Kalantar-Nayestanaki, M. Kiš, M. Mahjour-Shafiei W. Glöckle, H. Kamada, E. Epelbaum, A. Nogga, P. Sauer & A. Deltuva</i>	
Three-Nucleon Force Effects in Nucleon-Deuteron Elastic and Breakup Reactions	50
<i>S. Ishikawa</i>	
Use of the AMD Method Employing Realistic NN Potentials for Few Nucleon Systems	55
<i>T. Watanabe & S. Oryu</i>	
Anomalies in pd Radiative Capture and pd Breakup Reactions	59
<i>K. Sagara, T. Kudoh, M. Tomiyama, H. Ohira, S. Shimomoto, T. Yagita, K. Hatanaka, Y. Tameshige, A. Tamii, Y. Shimizu, J. Kamiya, H. Kamada & H. Witala</i>	
Experimental Investigations of Three-Body Systems at KVI	64
<i>N. Kalantar-Nayestanaki</i>	
Relativistic Effects in Neutron-Deuteron Elastic Scattering	69
<i>H. Witala, J. Golak, W. Glöckle & H. Kamada</i>	
Three-Nucleon Scattering at Intermediate Energies	74
<i>I. Fachruddin, Ch. Elster & W. Glöckle</i>	
Three-Body Decay of Nuclear Resonances	79
<i>A. S. Jensen, D. V. Fedorov, H. O. U. Fynbo & E. Garrido</i>	

HADRON STRUCTURE AND QCD

Baryon Spectroscopy and the Constituent Quark Model <i>A. W. Thomas & R. D. Young</i>	87
A Theoretical Study on the Spin Dependent Structure Functions of the Nucleon <i>F. Bissey, F.-G. Cao & A. I. Signal</i>	95
Proton Form Factor Measurements at Jefferson Lab <i>C. F. Perdrisat, E. J. Brash, M. K. Jones, L. Pentchev, V. Punjabi & F. R. Wesselmann</i>	99
Photoproduction of ϕ Mesons with Linearly Polarized Photons at LEPS/SPring-8 Experiment <i>W. C. Chang</i>	104
Search for Narrow Dibaryon Resonances via the $p + d$ Scattering <i>H. Kuboki, A. Tamii, H. Sakai, K. Yako, M. Hatano, T. Saito, M. Sasano, K. Hatanaka, Y. Sakemi, Y. Shimizu, K. Fujita, Y. Tameshige, J. Kamiya, T. Uesaka, Y. Maeda, K. Sekiguchi, K. Sagara, T. Wakasa, T. Kudoh, M. Shiota & S. Shimomoto</i>	109
Spectroscopy of Pentaquark Baryons <i>M. Oka</i>	113
Two-Photon Exchange Contribution to the Elastic e-p Scattering at Large Momentum Transfer within a Partonic Approach <i>Y. C. Chen & M. Vanderhaeghen</i>	119
Probing the Magnetic Dipole Moment of the $\Delta^+(1232)$ via $\gamma p \rightarrow \gamma \pi^0 p$ Reaction <i>W. T. Chiang, S. N. Yang, M. Vanderhaeghen & D. Drechsel</i>	124
Baryon-Meson Interactions in Chiral Quark Model <i>F. Huang, Z. Y. Zhang & Y. W. Yu</i>	129
The Few-Body Physics of Heavy Quark Systems <i>Kamal K. Seth</i>	134
The Perturbative Chiral Quark Model and Hadron Properties <i>A. Faessler</i>	147
Multi-Quark Study <i>F. Wang & J. Ping</i>	156

EXOTIC HADRONS AND ATOMS

- 1^{-+} Exotic on the Lattice with FLIC Fermions 163
*J. N. Hedditch, B. G. Lasscock, D. B. Leinweber, A. G. Williams,
 W. Kamleh & J. M. Zanotti*
- Accurate Evaluation of $\bar{p}D$ Atoms 167
Y. Yan, C. Kobdaj & P. Suebka
- Cascade Calculation of Kaonic Nitrogen Atoms Involving the Electron Refilling Process 171
T. Koike
- B Decays into $\pi\pi K$ and $K\bar{K}K$: Long Distance and Final-State Effects 175
B. Loiseau, A. Furman, R. Kamiński & L. Leśniak
- The Search for the Pentaquark 180
W. Eyrich
- From Spectroscopy of Mesonic Atoms to a Search for Deeply Bound Kaonic States 185
M. Iwasaki
- Search for the Θ^+ in Photoproduction on the Deuteron 190
K. H. Hicks

EFFECTIVE FIELD THEORY IN FEW-BODY PHYSICS

- Bose-Einstein Condensation in Neutron Stars 197
D. Bandyopadhyay
- Elastic Properties of Argon under High Pressure 203
S. Gupta, D. Gupta, P. Gupta & S. C. Goyal
- Electroweak Processes of the Deuteron in Effective Field Theory 209
S. Ando
- Nuclear Forces and Chiral Symmetry 214
R. Higa, M. R. Robilotta & C. A. da Rocha

ELECTROMAGNETIC AND WEAK PROCESSES IN FEW-BODY SYSTEMS

- A Practical Method to Solve the Cut-Off Coulomb Problem in the Lippmann-Schwinger RGM Formalism 221
Y. Fujiwara

Deuteron Spin Observables from Electron Scattering at Intermediate Energies <i>R. Alarcon</i>	226
Isobar Model for Photoproduction of $K^+\Sigma^0$ and $K^0\Sigma^+$ on the Proton <i>T. Mart</i>	230
New Few-Body Model for α -Decay and Cluster Radioactivity <i>Z. Ren & C. Xu</i>	235
Nucleon Strange Form Factors from Parity Violation Experiments at JLab <i>S. Kox</i>	240
Parity Violation in pp Scattering and Vector-Meson Weak-Coupling Constants <i>C. H. Hyun, C.-P. Liu & B. Desplanques</i>	245
The Electromagnetic Potential of the Neutron and its Applications <i>M. Nowakowski, N. G. Kelkar & T. Mart</i>	249
The Charge Form Factor of the Neutron at Low Q^2 <i>M. Kohl, R. Milner, V. Ziskin, R. Alarcon & E. Geis</i>	253
Photo- and Electro-Productions of the Nucleon Resonances in the Point Form Relativistic Quantum Mechanics <i>Y. B. Dong</i>	258
Energy-Dependent Phase-Shift Analyses for Elastic pp Scattering in COSY-Data Region <i>J. Nagata, H. Yoshino & M. Matsuda</i>	263
Studying $\gamma^*N \rightarrow \Delta \rightarrow \pi N$ with Cross Sections and Polarization Observables <i>S. Gilad</i>	267
Parity Violating Electron Scattering at the MAMI Facility in Mainz <i>F. E. Mass</i>	272
FEW-BODY DYNAMICS IN ATOMS, MOLECULES, BOSE-EINSTEIN CONDENSATES AND QUANTUM DOTS	
Four-Body Faddeev-Watson Series Description of Proton-Helium Charge Transfer Process <i>E. Ghanbari Adivi & M. A. Bolorizadeh</i>	279
Unified Theory of Scattering for Arbitrary Potentials <i>A. S. Kadyrov, I. Bray, A. M. Mukhamedzhanov & A. T. Stelbovics</i>	283

- Application of Few-Body Technique for Spinor Bose-Einstein Condensates 287
C. G. Bao & Z. B. Li

**FEW-BODY APPROACHES TO UNSTABLE NUCLEI,
 NUCLEAR ASTROPHYSICS AND NUCLEAR
 CLUSTERING ASPECTS**

- Structure of Oxygen Isotopes Studied with Antisymmetrized Molecular Dynamics 297
N. Furutachi & S. Oryu

- Faddeev Three-Cluster Calculation of the Helium Isotopes Including with Core Excitation 301
M. Yamaguchi, Y. Koike, H. Kamada & E. Uzu

- Isotopic Composition as a Signature for Different Processes Leading to Fragment Production in Midperipheral Ni + Al, Ni, Ag Collisions at 30 MeV/Nucleon 305
P. M. Milazzo, G. V. Margagliotti, R. Rui, G. Vannini, N. Colonna, F. Gramegna, P. F. Mastinu, C. Agodi, R. Alba, G. Bellia, R. Coniglione, A. Del Zoppo, P. Finocchiaro, C. Maiolino, E. Migneco, P. Piattelli, D. Santonocito, P. Sapienza, I. Iori & A. Moroni

- Quasibound States of Eta-Mesic Deuteron and ^3He 310
N. G. Kelkar, K. P. Khemchandani & B. K. Jain

- The Resonances of n, α, α - System at Astrophysical Energy Region 315
N. Takibayev

**HYPERNUCLEAR PHYSICS: HADRON-HYPERON,
 HYPERON-HYPERON INTERACTIONS**

- Full Coupling Dynamics of Doubly Strange Hypernuclei 323
H. Nemura

- Isoscalar and Isovector Parts of the Σ Single Particle Potential from SCDW Analysis of (π^-, K^+) Inclusive Spectra 327
M. Kohno

- Signatures of the Three Body Process in the Weak Decay of Λ Hypernuclei 332
H. Bhang

- The Physics of the Hypertriton 337
I. R. Afnan

Few-Body Aspects of Strangeness Nuclear Physics <i>E. Hiyama</i>	342
OTHERS	
Form Factors in Relativistic Quantum Mechanics Approaches and Space-Time Translation Invariance <i>B. Desplanques</i>	349
Dalitz-esque Treatment of New Heavy Particle Pair Production at the LHC <i>M. Bisset</i>	353
Relativistic Mean Field Models at High Densities <i>A. Sulaksono, P. T. P. Hutaeruk, C. K. Williams & T. Mart</i>	360
Transport Model Analysis of Fluctuations: Baryon-Strangeness Correlations and the Cumulant Method for Elliptic Flow Calculations <i>S. Haussler, X. Zhu & M. Bleicher</i>	364
Some Interesting Features of Particles Produced at High Energy Heavy Ion Collisions <i>M. Abdusalam Nasr & S. Aboazoom</i>	369
Concluding Remarks <i>B. F. Gibson</i>	374
List of Participants	383
Author Index	391