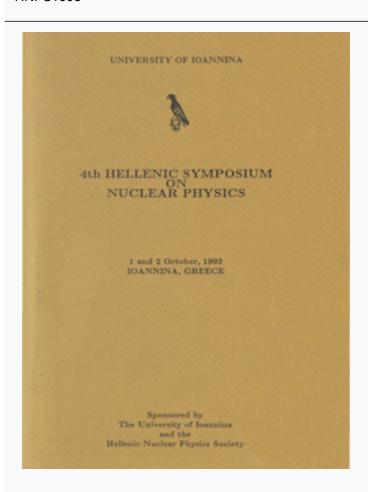




HNPS Advances in Nuclear Physics

Vol 4 (1993)

HNPS1993



Editorial Comments and Symposium Info

/ Editorial Comments

doi: 10.12681/hnps.2868

To cite this article:

Editorial Comments, /. (2020). Editorial Comments and Symposium Info. *HNPS Advances in Nuclear Physics*, 4, i-v. https://doi.org/10.12681/hnps.2868

4th HELLENIC SYMPOSIUM ON NUCLEAR PHYSICS

1 and 2 October 1993 IOANNINA, GREECE

The University of Ioannina University Campus

Organizing Committee

X.A. Aslanoglou (U. of Ioannina) T.S Kosmas (U. of Ioannina) G. Pantis (U. of Ioannina)

Sponsored by
The University of Ioannina
and the
Hellenic Nuclear Physics Society

Edited by:

X.A. Aslanoglou, T.S Kosmas and G. Pantis

Published by:

The University of Ioannina Press, GR-451 10, Ioannina, Greece

Copies available from:

X.A. Aslanoglou, T.S Kosmas, G. Pantis
Department of Physics
The University of Ioannina
GR-451 10, Ioannina, Greece
E-Mail: xaslanog@cc.uoi.gr or hkosmas@cc.uoi.gr

CONTENTS

Preface V Session I T. Paradellis: Big Bang Theory: New findings and considerations. S. Harissopulos, S. Kossionides, G. Galios and T. Paradellis: 1 "PTOLEMEOS"; A 4π γ -detection system for Nuclear Astrophysics. G. Galios, G. Doukelis, S. Kossionides and T. Paradellis: 13 Total cross section of the $n + {}^{11}B$ reaction. E. Adamides, C. T. Papadopoulos, R. Vlastou, E. N. Gazis, A. A. Pakou, P. A. Assimakopoulos, G. Doukelis, C. A. Kalfas 21 and A. C. Xenoulis: On some interesting aspects of heavy ion reactions studied with 7Li+11B and 9Be+9Be. Session II S.E Massen, V.P. Garistov and M.E. Grypeos: 26 The dependence of the nuclear charge form factor on short range correlations and surface fluctuation effects. M.E. Grypeos. C.G. Koutroulos and G.J. Papadopoulos: 41 Approximate treatment of the Dirac equation with scalar and vector potentials of rectangular shapes.

^{*} Presented but not included in the Proceedings.

T. Liolios and M. Grypeos: Application of the Hypervirial - Theorem scheme to the potential $\frac{-D}{\cosh^2(r/R)}$.	51
T. Petridou: Strong interaction effects in Σ^- atoms.	59
B.A. Kotsos and M.E. Grypeos: Parametrization of the effective potential on Sodium clusters.	75
G.A. Lalazissis and C.P. Panos: Phenomenological Nuclear Density Distributions.	85
K.N. Ypsilantis and M.E. Grypeos: The nucleon momentum distribution in light nuclei.	99
Session III	
D. Bonatsos and C. Daskaloyannis: Vibrational molecular and nuclear spectra in terms of Quantum Algebras.	121
D. Bonatsos, C. Daskaloyannis and P. Kolokotronis: Generalized deformed $SU(2)$ Algebras in Nuclear Physics.	141
D. Bonatsos, C. Daskalogannis, P. Kolokotronis and D. Lenis: Symmetry algebra of the planar anisotropic quantum harmonic oscilator with rational ratio of frequencies.	153

Session IV

K. Zamani-Valassiadou: $\textit{Multifragment emission in 84 Kr on Ag and Au reactions. }$

D. Sampsonides, B.A. Kulakov, M.I. Krivopustov and V.S. Butsev and M. Zamani: Projectile fragmentation of ¹⁶ O and ³² S beams from Dubna LHE Synchrophasotron.	163	
N. Fotiades, S. Harissopulos, C.A. Kalfas, S. Kossionides, C.T. Papadopoulos, R. Vlastou, M. Serris, J.F. Sharpey-Schafer, M.J. Joyce, C.W.Beausang, P.J. Dagnall, P.D. Forsyth, S.J. Gale, P.M. Jones, E.S. Paul, P.J. Twin, D.M. Cullen P. Fallon, M.A. Riley and J. Simpson: High spin study of 193 Hg.	170	
M. Seris: High spin structure of ¹⁵⁵ Dy and ¹²² Xe.	*	
A. Savidou, C. Raptis and P. Kritidis: A study of Greek building materials as indoor Radon sources.	180	
N.G. Nicolis, J.L. Barreto, D.G. Sarantites, R.J. Charity, L.G. Sobotka, D.W. Stracener, D.C. Hansley, J.R. Beene, M. Halbert, C. Baktash and M. Thoennessen: The decay of 164 Yb* formed in asymmetric and nearly symmetric fusion actions	186 n re-	
X. Aslanoglou: Heavy ion RBS in materials science.	*	
Session V		
C. Syros: Local theories and Bohmian mechanics.	196	
E. Mavrommatis, S. Perris, K.A. Gernoth and J.W. Clark: Nuclear phenomenology with neural nets: halflives.	201	

G. Pantis and S. Das Gupta: Azimuthal Distributions in Heavy Ion collisions.	202
T.S Kosmas, A. Faessler, F. Simkovic and J.D. Vergados: Nuclear structure dependence of the coherent (μ^-, e^-) conversion matrix elements.	215

PREFACE

The fourth Hellenic symposium on Nuclear Physics was held at the University of Ioannina from Oct. 1st to Oct.2, 1993. The main goal of this series of symposia is to provide a periodic meeting place for researchers in nuclear physics in order to stimulate the exchange of information and the establishment of collaboration links leading to an overall enhancement of the activities in this field.

Previous workshops were held at the University of Thessaloniki in 1990, at the NRC-Demokritos in 1991 and at the Technical University of Athens in 1992. In the present one a special effort has been made to broad the scope of the symposium beyond its local context and achieve international participation and to include more contributions both from experimental Nuclear Physics as well as high energy physics.

The scientific program follows the guidlines of the previous meetings. It covers a broad scope of topics within nuclear physics and this interdisciplinary character at the symposium has been emphasized by separating the contributed papers according to their specific subjects.

The present volume includes all contributed papers accepted for presentation which have been reproduced photostatically from the originals. The responsibility for the contents and for the form of these papers rests entirely with their authors. In a few particular cases where the originals did not comply with the format established for these proceedings, somehow improved versions have been used.

Finally, special thanks are due to all the institutions and individual persons who have made this workshop possible through their financial support as well as through their untiring collaboration.

The Organozing Commettee