

### **Curriculum Vitae**

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Personal information				
Surname(s) / First name(s) Address(es) Telephone(s) Fax(es) E-mail(s)	LAZANU lonel Str. Pascani 3, Bucharest, Romar +40214574949/145 +40214574521 lonel.lazanu@g.unibuc.ro, ionel.la	nia azanu@cern.ch		
Nationality(-ies) Date of birth	Romanian 24.05.1957			
Workplace / Occupational field	University of Bucharest, Faculty of Physics, Romania / Physics Teching and research. Research interests: Interactions of radiation in matter and detection techniques; Particle physics and cosmological aspects: Neutrino physics			
	International Collaborations: DU Team, NP02/DP (WA-105) Collal (approved); LAGUNA-LBNO (mer 2008-2011), CBM (Compressed E (Radiation hard semiconductor de Dubna – Torino (Interactions of pi	JNE Collaboration, - Fermilab, leade boration, deputy leader of the Romar mber, FP-7 project, 2011-2014), <i>LAG</i> Baryonic Matter) experiment at FAIR evices for very high luminosity collide ons with light nuclei, using streamer	r of the University of Bucharest hian Team, CERN Project, GUNA (member, FP-7 project, (since 2005), CERN-RD50 rs, since 2002); Bucharest – chambers, member, 1985 - 1992).	
Work experience				
Dates	2003 – present	1997 – 2003	1995 – 1997	
Occupation or position held	Professor	Reader	Lecturer	
Main activities and responsibilities	Teaching and research (experiment and phenomenology) in Nuclear and Particle Physics, Cosmology	Teaching and research (experiment and phenomenology) in Nuclear and Particle Physics, Cosmology	Teaching and research (experiment and phenomenology) in Nuclear and Particle Physics, Cosmology	
Name and address of employer	Faculty of Physics Physics, Str. Atomistilor 405, Magurele	Faculty of Physics Physics, Str. Atomistilor 405, Magurele	Faculty of Physics Physics, Str. Atomistilor 405, Magurele	
Dates	1993-1995	1984 – 1993	1981 – 1984	
Occupation or position held	Assistent Professor	Physicist and researcher	Teacher (Physics)	
Main activities and responsibilities	Teaching and research Nuclear and Particle Physics, Cosmology	Research in Nuclear and Atomic Physics (1990-1992 - JINR Dubna)	Teaching physics	

Name and address of employer	Faculty of Physics Physics, Str. Atomistilor 405, Magurele	National Institute of Physics and Nuclear Engineering , Str. Atomistilor 407, Magurele	
Education and training			
Dates	1985-1992		
Name and type of organisation providing education and training	University of Bucharest, Faculty of Physics		
Title of qualification awarded	PhD		
Principal subjects/occupational skills covered	PhD in Radiation Physics; Thesis title: 'Pions Absorption in He-3' Supervisor: Professor Alexandru Mihul		
Dates	1980 – 1981		
Name and type of organisation providing education and training	University of Bucharest, Faculty of Physics		
Title of qualification awarded	MSc (Thesis: Baryon Spectroscopy in Quark Model)		
Principal subjects/occupational skills covered	Atomic, Nuclear and Elementary Particle Physics		
Dates	1976 – 1980		
Name and type of organisation providing education and training	University of Bucharest, Faculty of Physics		
Title of qualification awarded	Bachelor of Science (Thesis: Qua	rkonium)	
Principal subjects/occupational skills covered	Physics		
Personal skills and competences			
Mother tongue	Romanian		

Other language(s) Self-assessment European level (\*)

English

French

Understanding		Speaking		
Listening	Reading	Spoken interaction	Spoken production	Writing
Independent User	Independent User	Independent User	Independent User	Independent User
Independent User	Independent User	Independent User	Independent User	Independent User

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(\*) Common European Framework of Reference (CEF) level

List of research grant as project coordinator/ responsible partner team - RO-DUNE (modul 5.2 RO\_CERN) 2019

- NEPHYLAro (modul 5.2 RO\_CERN) 2017. - Dubna contracts 2014, 2015, 2016, 2017, 2018

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	- Detection systems for cosmic radiation using new technologies (DETCOS) PNCDI II, Partnership 82- 104/2008.
	- GRID techniques in astrophysics with applications to modelling and processing space data, (GRAPH), PNCDI II, Partnership UB 82-077/2008.
	<ul> <li>Advanced studies for obtaining semiconductor detectors able to operate in intense hadron and lepton fields, with energies up to hundreds of TeV, PNCDI I/ CERES 69/2004.</li> </ul>
	<ul> <li>Modelling and engineering of defects in semiconductors, for obtaining radiation hard detectors for applications in the physics of particles and heavy ions produced in accelerators or by astrophysical sources, and industrial applications, PNCDI I/ MATNANTECH 219 (404)/2004, UB 219(404)/2004.</li> <li>Kinetics of defects induced in semiconductors by irradiation with particles and ions of intermediate and high energies, PNCDI I /CERES 17/2001.</li> </ul>
Other projects	<ul> <li>LAGUNA (proiect FP 7: Grant Agreement No. 212343): Design of a pan European infrastructure for Large Apparatus for Grand Unification and Neutrino Astrophysics; 2008-2011.</li> <li>LAGUNA-LBNO (proiect FP 7): Design of a pan-European Infrastructure for Large Apparatus studying Crand Unification Neutrino Astrophysics and Large Reacting Neutrino Cognitations; 2011 2014.</li> </ul>
Co-Coordinator for study	Grand Onlineation, Neutrino Astrophysics and Long Baseline Neutrino Oscillations, 2011-2014.
programs	<ul> <li>Interactii atomice, nucleare, particule elementare, astrofizica si aplicatii, IANPEAA (master, 2008-2013).</li> <li>Fizica atomului, nucleului, particule elementare, astrofizica si aplicatii, FANPEAA (master, since academic year 2013-2014) (In the re-accreditation process)</li> <li>Fizica (since academic year 2016-2017)</li> </ul>
Organisational skills and	
competences	Elected Head of the Atomic and Nuclear Physics Chair (2008-2011) Elected member of the Council of the Faculty (2000-2011, 2015- present) Elected Member of the Dissemination Board WA105 Collaboration
	Member of the Romanian Physics Society, Secretary of the Section: Nuclear Physics, Elementary Particles, Astrophysics, Cosmology (2009-2013) and President of the Section (after 2018) Member of the European Physics Society

## **Papers**

#### Books

Ionel Lazanu, Sorina Lazanu, Chapter 7: Silicon Detectors for High Energy Physics: Physical Models and Predictions for Degradation in Radiation Fields; **pp. 261-305**, in Trends in Experimental High Energy Physics, Editors: Stevens, Jacob R., Nova Publishers NY., 2005, ISBN: 1-59454-350-X

#### **Teaching publications**

Ionel Lazanu, Introducere in fizica acceleratorilor de particule (Note de curs), Ed. Univ. din Bucuresti, ISBN-973-575-185-2, 1997, 118 pagini

Ionel Lazanu, Spectroscopia hadronilor (note de curs) ), Ed. Univ. din Bucuresti, ISBN-973-575-282-4, 1998, 145 pagini Ionel Lazanu, Cosmologie si particule elementare, Ed. Univ. din Bucuresti, ISBN-973-575-364-2, 1999, 165 pagini Ionel Lazanu, Alexandru Mihul, Particule elementare (partea I) Ed. Univ. din Bucuresti, ISBN-973-575-528-9, 2001, 222 pagini

Ionel Lazanu, Particule elementare – probleme rezolvate, Ed. Univ. din Bucuresti, ISBN-973-575-677-3, 2002, 201 pagini

#### Papers in Web of Science

1. Some considerations about cosmogenic production of radioactive isotopes in Ar as target for the next neutrino experiments Mihaela Pârvu, Ana Chiriacescu, I. Lazanu Published in Radiat.Phys.Chem. 152 (2018) 129

2. A 4 tonne demonstrator for large-scale dual-phase liquid argon time projection chambers
B. Aimard (Annecy, LAPP) et al.. Jun 8, 2018. 61 pp.
Published in JINST 13 (2018) no.11, P11003

3. Challenges in QCD matter physics -The scientific programme of the Compressed Baryonic Matter experiment at FAIR Ablyazimov, T.; Abuhoza, A.; Adak, R. P.; et al. EUROPEAN PHYSICAL JOURNAL A Vol. 53, Issue: 3, Article number: 60, 2017

4. Contribution of the electron-phonon interaction to Lindhard energy partition at low energy in Ge and Si detectors for astroparticle physics applications Lazanu Ionel, Lazanu, Sorina ASTROPARTICLE PHYSICS Vol. 75 Pages: 44-54, 2016

5. MODEL OF ENERGY EXCHANGE THROUGH ELECTRON-PHONON COUPLING DURING TRANSIENT PHENOMENA IN MATERIALS FOR DETECTORS Lazanu, S.; Lazanu Ionel ROMANIAN REPORTS IN PHYSICS Vol. 68 Issue: 3 Pages: 1015-1023, 2016

6. HYDRODYNAMIC FLOW AND PHASE TRANSITIONS IN RELATIVISTIC NUCLEAR COLLISIONS REFLECTED BY HUBBLE TYPE FIREBALL EVOLUTION Ristea, C.; Jipa, A.; Ristea, O.; et al. ROMANIAN REPORTS IN PHYSICS Vol. 68 Issue: 3 Pages: 1060-1068, 2016

7. MODIFICATION OF LINDHARD ENERGY PARTITION FOR LOW ENERGY RECOILS IN GERMANIUM AND SILICON FOR DETECTORS DUE TO ELECTRON PHONON COUPLING Lazanu, S.; Lazanu I.. ROMANIAN REPORTS IN PHYSICS Vol. 68 Issue: 2 Pages: 594-603, 2016

8. The mass-hierarchy and CP-violation discovery reach of the LBNO long-baseline neutrino experiment Agarwalla, S. K.; Agostino, L.; Aittola, M.; et al. Group Author(s): LAGUNA-LBNO Collaboration JOURNAL OF HIGH ENERGY PHYSICS Issue: 5 Article Num.: 094, 2014

9. THERMAL EFFECTS PRODUCED AT CRYOGENIC TEMPERATURES IN MATERIALS USED AS BOLOMETRIC DETECTORS FOR DARK MATTER Lazanu, I.; Lazanu, S. ROMANIAN REPORTS IN PHYSICS Vol. 66 Issue: 4 Pages: 963-972, 2014 2

10. Studies of radio emission from neutrino induced showers generated in rock salt Saftoiu, A.; Sima, O.; Rebel, H.; et al. ASTROPARTICLE PHYSICS Volume: 46 Pages: 1-13, 2013

11. Analysis of defect formation in semiconductor cryogenic bolometric detectors created by heavy dark matter Lazanu, Ionel; Ciurea, Magdalena Lidia; Lazanu, Sorina ASTROPARTICLE PHYSICS Volume: 44 Pages: 9-14, 2013

12. FROM LITTLE BANGS TO BIG BANG Ristea, C.; Jipa, A.; Lazanu, I.; et al. ROMANIAN REPORTS IN PHYSICS Vol. 65 Issue: 4 Pag.: 1321-1327, 2013

13. The next-generation liquid-scintillator neutrino observatory LENA Wurm, Michael; Beacom, John F.; Bezrukov, Leonid B.; et al. ASTROPARTICLE PHYSICS Volume: 35 Issue: 11 Pages: 685-732, 2012

14. Interactions of exotic particles with ordinary matter Lazanu, Ionel; Lazanu, Sorina NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS Volume: 278 Pages: 70-77, 2012 15. SUPERHEATED DROPLET DETECTORS: THEORETICAL MODEL AND TESTS TO NEUTRON FIELD Lazanu, Ionel; Chilug, Alexandra ROMANIAN REPORTS IN PHYSICS Vol. 64 Issue: 4 Pages: 977-985, 2012

16. PRELIMINARY RESULTS OF NEUTRINO INTERACTIONS STUDY USING GENIE EVENT GENERATOR Chesneanu, D.; Jipa, A.; Lazanu, I.; et al. ROMANIAN REPORTS IN PHYSICS Vol. 64 Issue: 3 Pages: 695-701, 2012

17. ON THE PARTICLE CORRELATIONS IN RELATIVISTIC NUCLEAR COLLISIONS Velica, Stefania; Jipa, A.; Besliu, C.; et al. ROMANIAN REPORTS IN PHYSICS Vol. 64 Issue: 3 Pages: 702-714, 2012

18. CONSIDERATIONS ON A LARGE SCALE NEUTRINO DETECTOR IN A SALT DOME Badescu, A. M.; Petrescu, T.; Saftoiu, A.; et al. ROMANIAN REPORTS IN PHYSICS Vol.64 Issue: 3 Pages: 815-824, 2012

19. THE STUDY OF NEUTRINO-NUCLEUS INTERACTIONS USING A MONTE CARLO EVENT GENERATOR Chesneanu, Daniela; Jipa, Alexandru; Lazanu, Ionel UNIVERSITY POLITEHNICA OF BUCHAREST SCIENTIFIC BULLETIN-SERIES A-APPLIED MATHEMATICS AND PHYSICS Vol.74 Issue: 2 Pages: 161-167, 2012

20. ABOUT THE POSSIBILITY TO MEASURE SOME STANDARD MODEL PARAMETERS AND SEARCH FOR NEW PHYSICS WITH LOW ENERGY NEUTRINOS Lazanu, I.; Apostu, A.; Brancus, I.; et al. ROMANIAN REPORTS IN PHYSICS Vol. 64 Issue: 1 Pages: 24-32, 2012

21. RADIO TECHNIQUE FOR INVESTIGATING HIGH ENERGY COSMIC NEUTRINOS Badescu, A. M.; Saftoiu, A.; Fratu, O.; et al. ROMANIAN REPORTS IN PHYSICS Volume: 64 Issue: 1 Pages: 281-293 Published: 2012

22. SIMULATION OF ELECTROMAGNETIC SHOWERS IN SALT PERFORMED WITH GEANT4 Saftoiu, A.; Sima, O.; Lazanu, I.; et al. ROMANIAN REPORTS IN PHYSICS Vol.64 Issue: 1 Pages: 314-324, 2012

23. Silicon detectors for the sLHC Affolder, A.; Aleev, A.; Allport, P. P.; et al. NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT Volume: 658 Issue: 1 Pages: 11-16, 2011

24. A mobile detector for measurements of the atmospheric muon flux in underground sites
Mitrica, Bogdan; Margineanu, Romul; Stoica, Sabin; et al.
NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS
DETECTORS AND ASSOCIATED EQUIPMENT Volume: 654 Issue: 1 Pages: 176-183, 2011
25. Transient thermal effects in solid noble gases as materials for the detection of Dark Matter
Lazanu Ionel, Lazanu Sorina,
JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS Issue: 7 Article Number: 013 Published: JUL 2011

26. Modelling the transient processes produced under heavy particle irradiation Lazanu, Sorina; Lazanu, Ionel; Ciobanu, Gheorghe NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS Volume: 269 Issue: 4 Pages: 498-503, 2011

27. MODELLING TRANSIENT PROCESSES IN THE COMPETITIVE PHENOMENA INDUCED BY HEAVY PROJECTILES IN MATERIALS FOR DETECTORS Lazanu, Ionel; Lazanu, Sorina ROMANIAN REPORTS IN PHYSICS Volume: 63 Issue: 3 Pages: 707-716 Published: 2011 28. RESULTS OF UNDERGROUND DOSE RATES USING TL DETECTORS AND PRELIMINARY TL CHARACTERISTICS OF IRRADIATED SALT ROCK Apostu, Ana Maria; Chirosca, A. L.; Gomoiu, Claudia; et al. ROMANIAN REPORTS IN PHYSICS Vol. 63 Issue: 1 Pages: 220-225, 2011

29. Common ways in the description of the "classical" plasma and quark-gluon plasma Jipa, Alexandru; Covlea, Vania; Besliu, Calin; et al. INDIAN JOURNAL OF PHYSICS Volume: 85 Issue: 1 Pages: 167-175, 2011

30. TRANSVERSE MOMENTUM-LONGITUDINAL MOMENTUM CORRELATIONS, THERMALIZATION AND HYDRODYNAMIC FLOW IN RELATIVISTIC NUCLEAR COLLISIONS Jipa, Alexandru; Grigorie, Claudian; Besliu, Calin; et al. ROMANIAN REPORTS IN PHYSICS Volume: 63 Supplement: S Pages: 1215-1235, 2011

31. Transient processes induced by heavy projectiles in silicon Lazanu, Ionel; Lazanu, Sorina NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS Volume: 268 Issue: 13 Pages: 2241-2245, 2010

32. ROLE OF PHASE AND GROUP VELOCITIES IN CERENKOV RADIATION AND APPLICATIONS IN HEP EXPERIMENTS Badea, Madalina; Lazanu, Ionel ROMANIAN REPORTS IN PHYSICS Volume: 62 Issue: 2 Pages: 298-308, 2010

33. KINETICS OF DEFECTS IN LOW TEMPERATURE SEMICONDUCTOR DETECTORS AND DIRECT DARK MATTER SEARCH Lazanu, Ionel; Lazanu, Sorina ROMANIAN REPORTS IN PHYSICS Volume: 62 Issue: 2 Pages: 309-318 Published: 2010

34. STUDIES OF THE HIGH ENERGY MUON FLUX IN UNIREA SALT MINE FROM SLANIC PRAHOVA Mitrica, B.; Margineanu, R.; Brancus, I. M.; et al. ROMANIAN REPORTS IN PHYSICS Vol. 62 Issue: 4 Pages: 750-757, 2010

35. Semiconductor detectors for high radiation fields: microscopic processes in materials and the control of device parameters Lazanu, S.; Ciurea, M. L.; Lazanu, I. JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS Volume: 11 Issue: 12 Pages: 2150-2154, 2009

36. FROM NUCLEAR MATTER TO STRANGE QUARK MATTER - SOME CHARACTERISTICS OF THE INTERACTIONS IN ORDINARY MATTER Lazanu, I.; Chera, M.; Iordanescu, R.; et al. ROMANIAN REPORTS IN PHYSICS Vol. 61 Issue: 2 Pages: 215-221, 2009

37. ENERGY DEPOSITED BY RADIATION IN SOLIDS: REGISTRATION PHYSICS Lazanu, I.; Lazanu, S. ROMANIAN REPORTS IN PHYSICS Vol.61 Issue: 4 Pages: 689-699, 2009

38. Analytical approximations of the NIEL in semiconductor detectors for HEP Lazanu, I.; Lazanu, S. ROMANIAN REPORTS IN PHYSICS Vol.60 Issue: 1 Pages: 71-78, 2008

39. Correlation between ionization and displacement damage in silicon detectors for energies of interest in astroparticle and particle physics applications
 Lazanu, I.; Lazanu, S.
 ROMANIAN REPORTS IN PHYSICS Vol. 60 Issue: 2 Pages: 381-387, 2008

40. Modelling spatial distribution of defects and estimation of electrical degradation of silicon detectors in radiation fields at high luminosity Lazanu, S.; Lazanu, I. NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT Volume: 583 Issue: 1 Special Issue: SI Pages: 165-168, 2007 41. Correlation between radiation processes in silicon and long-time degradation of detectors for high-energy physics experiments Lazanu, Sorina; Lazanu, Ionel

NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT Volume: 580 Issue: 1 Pages: 46-49, 2007

42. New aspects of the contribution of primary defects of silicon to long-time degradation of detectors operating in high fields of radiation Lazanu, S.; Lazanu, I. JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS Volume: 9 Issue: 6 Pages: 1839-1842, 2007

43. Primary defects in silicon: existence, characteristics, and their role after high fluence irradiation Lazanu, S.; Lazanu, I.; Ciupina, V.; et al. JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS Volume: 9 Issue: 4 Pages: 814-817, 2007

44. Silicon detectors: Damage, modelling and expected long-time behaviour in physics experiments at ultra high energy Lazanu, Ionel; Lazanu, Sorina NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT Volume: 572 Issue: 1 Pages: 297-299, 2007

45. The role of primary point defects in the degradation of silicon detectors due to hadron and lepton irradiation Lazanu, I.; Lazanu, S. PHYSICA SCRIPTA Volume: 74 Issue: 2 Pages: 201-207 Published: AUG 2006

46. Recent advancements in the development of radiation hard semiconductor detectors for S-LHC Fretwurst, E; Adey, J; Al-Ajili, A; et al. NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT Volume: 552 Issue: 1-2 Pages: 7-19, 2005

47. Development of radiation tolerant semiconductor detectors for the Super-LHC Moll, M; Adey, J; Al-Ajili, A; et al. NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT Volume: 546 Issue: 1-2 Pages: 99-107, 2005

48. Radiation-hard semiconductor detectors for SuperLHC Bruzzi, M; Adey, J; Al-Ajili, A; et al. NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT Volume: 541 Issue: 1-2 Pages: 189-201, 2005

49. Scenarios about the long-time damage of silicon as material and detectors operating beyond LHC collider conditions Lazanu, I; Lazanu, S PHYSICA SCRIPTA Volume: 71 Issue: 1 Pages: 31-38, 2005

50. Systematic study related to the role of initial impurities and irradiation rates in the formation and evolution of complex defects in silicon for detectors in HEP experiments Lazanu, S; Lazanu, I PHYSICA SCRIPTA Volume: 69 Issue: 5 Pages: 376-384, 2004

51. Microscopic modelling of defects production and their annealing after irradiation in silicon for HEP particle detectors Lazanu, S; Lazanu, I; Bruzzi, M NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT Volume: 514 Issue: 1-3 Pages: 9-17, 2003

52. Role of oxygen and carbon impurities in the radiation resistance of silicon detectors Lazanu, S; Lazanu, I JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS Volume: 5 Issue: 3 Pages: 647-652, 2003 53. Long-term damage induced by hadrons in silicon detectors for uses at the LHC-accelerator and in space missions Lazanu, I; Lazanu, S PHYSICA SCRIPTA Volume: 67 Issue: 5 Pages: 388-394, 2003

54. The influence of initial impurities and irradiation conditions on defect production and annealing in silicon for particle detectors Lazanu, I; Lazanu, S NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS Volume: 201 Issue: 3 Pages: 491-502, 2003

55. Radiation defects in silicon due to hadrons and leptons, their annealing and influence on detector performance Lazanu, I; Lazanu, S PHYSICA SCRIPTA Volume: 66 Issue: 2 Pages: 125-132, 2002

56. Theoretical calculations of the primary defects induced by pions and protons in SiC Lazanu, S; Lazanu, I; Borchi, E; et al. NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT Volume: 485 Issue: 3 Pages: 768-773 Article Number: PII S0168-9002(01)02147-7, 2002

57. Annealing of radiation-induced defects in silicon in a simplified phenomenological model Lazanu, S; Lazanu, I NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS Volume: 183 Issue: 3-4 Pages: 383-390, 2001

58. Analytical approximations of the Lindhard equations describing radiation effects Lazanu, S; Lazanu, I NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT Volume: 462 Issue: 3 Pages: 530-535, 2001

59. Comparative energy dependence of proton and pion degradation in diamond Lazanu, I; Lazanu, S NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT Volume: 432 Issue: 2-3 Pages: 374-378, 1999

60. Diamond degradation in hadron fields Lazanu, S; Lazanu, I; Borchi, E NUCLEAR PHYSICS B-PROCEEDINGS SUPPLEMENTS Volume: 78 Pages: 683-688, 1999

61. Si, GaAs and diamond damage in pion fields with application to LHC Lazanu, S; Lazanu, I NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT Volume: 419 Issue: 2-3 Pages: 570-576, 1998

62. Theoretical study of pion damage in A(3)B(5) compounds Lazanu, S; Lazanu, I; Biggeri, U; et al. NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT Volume: 413 Issue: 2-3 Pages: 242-248, 1998

63. Theoretical calculation of diamond damage by pi(+)/pi(-) mesons in the Delta(33) resonance energy range Lazanu, I; Lazanu, S; Borchi, E; et al. NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT Volume: 406 Issue: 2 Pages: 259-266, 1998

64. Non-ionising energy deposition of pions in GaAs and Si for radiation damage studies Lazanu, S; Lazanu, I; Biggeri, U; et al. NUCLEAR PHYSICS B Supplement: 61B Pages: 409-414, 1998 65. Model predictions for the NIEL of high energy pions in Si and GaAs Lazanu, S; Lazanu, I; Biggeri, U; et al. NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT Volume: 394 Issue: 1-2 Pages: 232-234, 1997

66. Non-ionising energy loss of pions in thin silicon samples Lazanu, I; Lazanu, S; Biggeri, U; et al. NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT Volume: 388 Issue: 3 Pages: 370-374, 1997

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70. PION ABSORPTION IN HE-3 AT 100, 120, AND 145MEV ANGELESCU, T; MIHUL, A; PASCU, L; et al. NUOVO CIMENTO DELLA SOCIETA ITALIANA DI FISICA A-NUCLEI PARTICLES AND FIELDS Volume: 103 Issue: 1 Pages: 93-104, 1990

71. INELASTIC PI-HE-3 INTERACTION AT 180 MEV ANGELESCU, T; MIHUL, A; PASCU, L; et al. NUOVO CIMENTO DELLA SOCIETA ITALIANA DI FISICA A-NUCLEI PARTICLES AND FIELDS Volume: 100 Issue: 3 Pages: 381-395, 1988

72. PION ABSORPTION ON LIGHT-NUCLEI MIHUL, A; ANGELESCU, T; PREDA, T; et al. REVUE ROUMAINE DE PHYSIQUE Volume: 33 Issue: 4-6 Pages: 751-755, 1988

73. GEOMETRICAL RECONSTRUCTION AND SELECTION CRITERIA OF PI-3 HE INELASTIC EVENTS DETECTED IN A HIGH-PRESSURE STREAMER CHAMBER ANGELESCU, T; MIHUL, A; PASCU, L; et al. REVUE ROUMAINE DE PHYSIQUE Volume: 31 Issue: 2 Pages: 125-137, 1986

74. INELASTIC PHI-+ HE-3 INTERACTION AT 145 MEV ANGELESCU, T; LAZANU, I; MIHUL, A; et al. NUOVO CIMENTO DELLA SOCIETA ITALIANA DI FISICA A-NUCLEI PARTICLES AND FIELDS Volume: 89 Issue: 2 Pages: 162-176, 1985

#### Proceedings

1) New results on Coulomb interaction effects in relativistic heavy ion collisions O. Ristea, C. Ristea, A. Jipa, I. Lazanu, T. Esanu, et al. (Mar, 2019), Published in: Nuovo Cim.C 42 (2019) 2-3-3, 84 2) Muon induced radioactivity in the next generation of neutrino experiments Mihaela Parvu, Ana Chiriacescu, Ionel Lazanu, Alexandru Jipa, Oana Ristea, Marius Calin. 2019. AIP Conf.Proc. 2075 (2019) no.1, 090010

3) New informations on the dynamics of relativitic nucleus-nucleus collisins
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