



Curriculum Vita
December 2025

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EDUCATION

PhD., [University of Bonn](#), 1987 (*Summa Cum Laude*)

TEACHING EXPERIENCE

Spring 1980	Introductory Physics I	Physics for Engineers -- <i>Mechanics</i> -- UFRJ*
Fall 1980	Introductory Physics I	Physics for Engineers -- <i>Mechanics</i> -- UFRJ
Spring 1981	Introductory Phys III	Physics for Engineers -- <i>EM & Optics</i> -- UFRJ
Fall 1981	Introductory Phys III	Physics for Engineers -- <i>EM & Optics</i> -- UFRJ
Spring 1982	Introductory Phys II	Physics for Engineers -- <i>Fluids/ Thermo</i> -- UFRJ
Fall 1982	Introductory Phys II	Physics for Engineers -- <i>Fluids/ Thermo</i> -- UFRJ
Spring 1983	Introductory Phys IV	Physics for Engineers -- <i>Modern Phys</i> -- UFRJ
Fall 1987	Quantum Mechanics I	QM for Physics students -- UFRJ
Spring 1988	Nuclear Physics I	Nuclear Physics (graduate students) -- UFRJ
Fall 1988	Nuclear Physics I	Nuclear Physics (for graduate students) -- UFRJ
Spring 1989	Class. Electrodyn. I	Electrodynamics (graduate students) -- UFRJ
Fall 1989	Class. Electrodyn. I	Electrodynamics (graduate students) -- UFRJ
Spring 1990	Nuclear Reactions	Nuclear Reactions (graduate students) -- UFRJ
Fall 1990	Nuclear Reactions	Nuclear Reactions (graduate students) -- UFRJ
Spring 1991	Computational Physics	Computational Physics - Graduate -- UFRJ
Spring 1993	PHY208	Phys for Biology University Wisconsin, Madison
Summer 1994		Radioactive Beams -- GSI/Darmstadt/Germany**
Fall 1994	Quantum Mechanics	Modern Physics -- UFRJ
Spring 1995	Quantum Mechanics	Modern Physics -- UFRJ
Fall 1995	Classical Mechanics III	Classical Mechanics -- UFRJ
Spring 1996	Classical Mechanics III	Classical Mechanics -- UFRJ
Fall 1996	Physics for Biology I	Physics for Biology -- UFRJ

Spring 1997	Physics for Biology I	Physics for Biology -- UFRJ
Fall 1997	Quantum Mechanics II	Quantum Mechanics - Graduate -- UFRJ
Spring 1998	Quantum Mechanics II	Quantum Mechanics - Graduate -- UFRJ
Fall 1998	Hadron Physics	Topics in Hadron Physics - Graduate -- UFRJ
Spring 1999	Hadron Physics	Topics in Hadron Physics - Graduate -- UFRJ
Spring 2002	PHY982	Nuclear Reactions - Michigan State U (MSU)***
Fall 2002	PHY232	<i>Electromagnetism</i> – Michigan State University
Spring 2003	PHY184	<i>Mechanics</i> -- Michigan State University
Fall 2003	PHY184	<i>Mechanics</i> -- Michigan State University
Spring 2004	PHY982	Nuclear Reactions – Michigan State University
Fall 2004	PHYS 102	Introductory Phys I (Non-calculus) – U Arizona
Fall 2005	PHYS 241	Electromagnetism – Univ. of Arizona
Spring 2006	PHYS 142	Thermodynamics/Optics – Univ. of Arizona
Fall 2007	PHYS 111 and 111Lab	Mechanics/Thermodynamics/Waves – TAMUC
Fall 2007	PHYS 497	Nuclear Astrophysics - Graduate - TAMUC
Fall 2007	PHYS 597	Nuclear Astrophysics - Graduate - TAMUC
Spring 2008	PHYS 512	Classical EM - Graduate - TAMUC
Spring 2008	PHYS 112/112Lab	Thermodynamics/Waves/Optics - TAMUC
Fall 2008	PHYS 411	Classical Mechanics - Graduate - TAMUC
Fall 2008	PHYS 517	Mathematical Methods - Graduate - TAMUC
Spring 2009	PHYS 211/211Lab	Introductory Physics I - Mechanics - TAMUC
Spring 2009	PHYS 526	Modern Physics II - Graduate - TAMUC
Fall 2009	PHYS 497/PHYS 550	Nuclear Astrophysics - Graduate - TAMUC
Fall 2009	PHYS 520	Quantum Mechanics - Graduate - TAMUC
Spring 2010	PHYS 512	Classical EM - Graduate - TAMUC
Spring 2010	PHYS 514	Statistical Physics - Graduate - TAMUC
Fall 2010	PHYS 517	Mathematical Physics I - Graduate - TAMUC
Fall 2010	PHYS 526	Modern Physics I - Graduate - TAMUC
Spring 2011	PHYS 2426	University Physics II - Undergraduate - TAMUC
Spring 2011	PHYS 141	Musical Acoustics - Undergraduate - TAMUC
Fall 2011	PHYS 597	Nuclear Astrophysics - Graduate - TAMUC
Fall 2011	PHYS 520	Quantum Mechanics - Graduate - TAMUC
Spring 2012	PHYS 412/512	Electrodynamics - Graduate - TAMUC
Spring 2012	PHYS 141	Musical Acoustics - Undergraduate - TAMUC
Fall 2012	PHYS 2426	University Physics II - Undergraduate - TAMUC
Fall 2012	PHYS526	Atomic Physics - Graduate - TAMUC
Spring 2013	PHYS 520	Quantum Mechanics - Graduate - TAMUC
Spring 2013	PHYS 141	Musical Acoustics - Undergraduate - TAMUC
Fall 2013	PHYS 450	Nuclear Astrophysics - Graduate - TAMUC
Fall 2013	PHYS 411	Classical Mechanics - Undergraduate - TAMUC
Spring 2014	PHYS512	Classical EM - Graduate - TAMUC
Spring 2014	PHYS 211	Physics I - Mechanics - Undergraduate - TAMUC
Fall 2014	PHYS 520	Quantum Mechanics - Graduate - TAMUC
Fall 2014	PHYS 317	Mathematical Methods - TAMUC
Spring 2015	PHYS 141	Musical Acoustics - Undergraduate - TAMUC
Spring 2015	PHYS 514	Statistical Physics - Graduate - TAMUC

Fall 2015	PHYS 511	Classical Mechanics - Graduate - TAMUC
Fall 2015	PHYS 420	Quantum Mechanics - Undergraduate - TAMUC
Spring 2016	PHYS 512	Classical Electrodynamics - Graduate - TAMUC
Spring 2016	PHYS 311	Musical Acoustics - Undergraduate - TAMUC
Fall 2016	PHYS 512	Classical Electromagnetism - Graduate - TAMUC
Fall 2016	PHYS 411	Classical Mechanics - Undergraduate - TAMUC
Spring 2017	PHYS 131	Musical Acoustics - Undergraduate - TAMUC
Spring 2017	PHYS 550	Nuclear Astrophysics - Graduate - TAMUC
Fall 2017	PHYS 411	Advanced Mechanics - Undergraduate - TAMUC
Fall 2017	PHYS 511	Classical Mechanics - Graduate - TAMUC
Spring 2018	PHYS 414	Thermo & Statistics - Undergraduate - TAMUC
Spring 2018	PHYS 512	Classical Electrodynamics - Graduate - TAMUC
Fall 2018	PHYS 411	Classical Mechanics - Undergraduate - TAMUC
Fall 2018	PHYS 520	Quantum Mechanics - Graduate - TAMUC
Spring 2019	PHYS 412	Classical EM - Undergraduate - TAMUC
Spring 2019	PHYS 1401	College Physics - Undergraduate - TAMUC
Fall 2019	PHYS 511	Classical Mechanics - Graduate - TAMUC
Fall 2019	IS 1315	Integrated Science I - undergraduate - TAMUC
Spring 2020	PHYS 512	Electromagnetism - Graduate - TAMUC
Spring 2020	PHYS 412	Thermodynamics - Undergraduate - TAMUC
Fall 2020	PHYS 520	Quantum Mechanics - Graduate - TAMUC
Fall 2020	PHYS 411	Classical Mechanics - Undergraduate - TAMUC
Spring 2021	PHYS 412	Electromagnetism - Undergraduate - TAMUC
Spring 2021	IS 1315	Integrated Science I - Undergraduate - TAMUC
Spring 2022	PHYS 512	Classical Electrodynamics - Graduate - TAMUC
Spring 2022	PHYS 414	Thermo & Statistics - Undergraduate - TAMUC
Fall 2022	PHYS 411	Classical Mechanics - Undergraduate - TAMUC
Fall 2022	PHYS 520	Quantum Mechanics - Graduate - TAMUC
Spring 2023	PHYS 412	Electromagnetism - Undergraduate - TAMUC
Spring 2023	PHYS 514	Statistical Physics - Graduate - TAMUC
Fall 2023	PHYS 511	Classical Mechanics - Graduate - TAMUC
Fall 2023	IS 1315	Integrated Science I - Undergraduate - TAMUC
Spring 2024	PHYS 512	Electromagnetism - Graduate - TAMUC
Spring 2024	IS 1317	Integrated Science II - Undergraduate - TAMUC
Fall 2024	IS 1315	Integrated Science I - Undergraduate - ETAMU
Fall 2024	PHYS 411	Classical Mechanics - Undergraduate - ETAMU
Fall 2024	PHYS 501	P&A Colloquium Series - Graduate - ETAMU
Spring 2025	IS 1317	Integrated Science II - Undergraduate - ETAMU
Spring 2025	IS 1315	Integrated Science I - Undergraduate - ETAMU
Spring 2025	PHYS 501	P&A Colloquium Series - Graduate - ETAMU
Fall 2025	IS 1317	Integrated Science II - Undergraduate - ETAMU
Fall 2025	IS 1315	Integrated Science I - Undergraduate - ETAMU
Fall 2025	PHYS 501	P&A Colloquium Series - Graduate - ETAMU

PUBLICATIONS

1. [Quantum Physics of Stars](#), M. Wiescher, C.A. Bertulani, C.R. Brune, R. de Boer, A. Diaz-Torres, L.R. Gasques, K.H. Langanke, et al., *Reviews of Modern Physics* 97, 025003 (2025). (88 pages)
2. [Nuclear Fragmentation at the Future Electron-Ion Collider](#), C.A. Bertulani, Y. Kucuk, F. Navarra, *Nuclear Physics A* 1059, 123093 (2025). (7 pages)
3. [Solar fusion III: New data and theory for hydrogen-burning stars](#), B. Acharya, M. Aliotta, A.B. Balantekin, D. Bemmerer, C.A. Bertulani, et al., *Reviews of Modern Physics*, 97, 035002 (2025). (74 pages)
4. [Indirect methods with transfer reactions: The Trojan Horse method and the Asymptotic Normalization Coefficient](#), A. Tumino, C.A. Bertulani, S. Cherubini, G.F. D'Agata, ... H. Yamaguchi, *Progress in Particle and Nuclear Physics* 143, 104164 (2025). (40 pages)
5. [Strong Electromagnetic Fields in Heavy Ion Collisions](#), C.A. Bertulani, *EPJ Conferences* 333, 01001 (2025). (12 pages)
6. [Photonuclear Tomography in Ultraperipheral Heavy-Ion Collisions](#), J.D. Baker, C.A. Bertulani, Victor P. Goncalves, *Phys. Rev. C* 112, 034911 (2025). (9 pages)
7. [Direct Reactions and Spectroscopy with Hydrogen Targets at the RIBF](#), Carlos A. Bertulani, Pieter Doornenbal, Alexandre Obertelli, and Tomohiro Uesaka, *Progress in Particle and Nuclear Physics*, <https://doi.org/10.1093/ptep/ptaf091> (2025). (20 pages)
8. [Particle production by gamma-gamma interactions in future electron-ion colliders](#), Carlos A. Bertulani, Reinaldo Francener, Victor P. Goncalves, and Juciene T. de Souza, *Phys. Rev. C* 111, 025201 (2025). (6 pages)
9. [Precise measurement of nuclear interaction cross sections towards neutron-skin determination with R3B](#), L. Ponnath, T. Aumann, C.A. Bertulani, ..., F. Wamers, *Nucl. Phys. A* 1056 (2025) 123022 (2025). (5 pages)
10. [Novel aspects of particle production in ultra-peripheral collisions](#), F. C. Sobrinho, I. Danhoni, C. A. Bertulani, L. M. Abreu, F. S. Navarra, *Phys. Proc. Ultra-Peripheral Collisions* 1, 019 (2024). (8 pages)
11. [Unveiling the properties of the dimuonium at the energies available at the Large Hadron Collider at CERN](#), C.A. Bertulani, D. Bhandari, F.S. Navarra, *Eur. Phys. J. A* 60, 43 (2024). (6 pages)
12. [Production of meson molecules in ultra-peripheral heavy ion collisions](#), F. C. Sobrinho, L. M. Abreu, C.A. Bertulani, F. S. Navarra, *Phys. Rev. D* 110, 034037 (2024). (10 pages)
13. [Primordial Nucleosynthesis with Non-Extensive Statistics](#), C.A. Bertulani and Shubhchintak, *Eur. Phys. J.* <https://doi.org/10.1140/epjs/s11734-024-01216-0>. (2024) (12 pages)
14. [Nuclear-structure opportunities with GeV radioactive beams at FAIR](#), T. Aumann, C. A. Bertulani, M. Duer, T. Galatyuk, A. Obertelli, V. Panin, J. L. Rodriguez-Sanchez, R. Roth and J. Stroth, *Phil. Trans. R. Soc. A* 382, 20230121 (2024). (45 pages)
15. [Measurement of Nuclear Interaction Cross Sections towards Neutron-Skin Thickness Determination](#), Lukas Ponnath, et al., *Phys. Lett. B* 855 (2024) 138780. (6 pages).

16. [New insight into knockout reactions from the two-proton halo nucleus \$^{17}\text{Ne}\$](#) , F. Wamers, et al., Phys. Rev. C109, 054602 (2024).
17. [Remarks on charmonium production in ultra-peripheral collisions](#), R. Fariello, F.S. Navarra, C.A. Bertulani, D. Bhandari, Nucl. Part. Phys. Proc. 343,28 (2024). (4 pages)
18. [A multichannel algebraic scattering approach to astrophysical reactions](#), P. Fraser, K. Amos, C.A. Bertulani, L. Canton, S. Karataglidis, R. Moss and K. Murulane, EPJ Web Conf. 292, 04005 (2024). (6 pages)
19. [Relativistic Coulomb Excitation of \$^{124}\text{Sn}\$](#) , I. Lihtar, et al., Acta Physica Polonica B Proc. Sup. 17, 3, A17 (2024). (6 pages)
20. [Thermonuclear \$^{28}\text{P}\(p,\gamma\)^{29}\text{S}\$ reaction rate and astrophysical implication in ONe nova explosion](#), J.B. Liu, J. José, S.Q. Hou, 5, M. Pignatari, T. C. L. Trueman R. Longland, J.G. Li, C. Bertulani, and X.X. Xu, Astronomy & Astrophysics 687, A199 (2024). (10 pages)
21. [Historical introduction to ultra peripheral collisions](#), C.A. Bertulani, Phys. Proc. Ultra-Peripheral Collisions 1, 001 (2024) 1. (8 pages)
22. [Core destruction in knockout reactions](#), C.A. Bertulani, Phys. Lett. B 846, 138250 (2023). (5 pages)
23. [How to extract the electromagnetic response of \$^6\text{He}\$ in relativistic collisions](#), C.A. Bertulani, Phys. Rev. C 108, 054602 (2023). (12 pages)
24. [Coulomb-free \$pp\$ scattering length from the quasi-free \$p + d \rightarrow p + p + n\$ reaction](#), A. Tumino, G.G. Rapisarda, M. La Cognata, A. Oliva, A. Kievsky, C.A. Bertulani, et al., Nature Comm. Phys. 6, 106 (2023). (9 pages)
25. [Probing the size and binding energy of the hypertriton in heavy ion collisions](#), C.A. Bertulani, Phys. Lett. B 837, 137639 (2023). (6 pages).
26. [Two- and three-photon fusion into charmonium in ultraperipheral nuclear collisions](#), R. Fariello, D. Bhandari, C. A. Bertulani and F. S. Navarra, Phys. Rev. C 108, 044901 (2023). (6 pages)
27. [New \$^{26}\text{P}\(p,\gamma\)^{27}\text{S}\$ thermonuclear reaction rate and its astrophysical implication in rp-process](#), S. Hou, J. B. Liu, T. C. L. Trueman, Jianguo Li, M. Pignatari, C. A. Bertulani and X. X. Xu, Astrophys. J. 950, 133 (2023). (8 pages)
28. [Bayesian Exploration of Phenomenological EoS of Neutron/Hybrid Stars with Recent Observations](#), Emanuel V. Chimanski, Ronaldo V. Lobato, Andre R. Goncalves, Carlos A. Bertulani, Particles 6, 198 (2023). (19 pages)
29. [Big Bang nucleosynthesis as a probe of new physics](#), Carlos A. Bertulani, Francis W. Hall, and Benjamin I. Santoyo, EPJ Web of Conferences 275, 01003 (2023). (9 pages)
30. [Diverse mechanisms in proton stripping from the Borromean nucleus \$^{17}\text{Ne}\$](#) , F. Wamers, C. Lehr, J. Marganec-Galazka, F. Aksouh, Yu. Aksyutina, H. Alvarez-Pol, L. Atar, T. Aumann, S. Beceiro-Novo, C. A. Bertulani et al., Eur. J. Phys. 59, 154 (2023). (7 pages)
31. [Nuclear physics midterm plan at Legnaro National Laboratories \(LNL\)](#), M. Ballan et al., Eur. Phys. J. Plus 138, 709 (2023). (79 pages)
32. [Coulomb dissociation of \$^{16}\text{O}\$ into \$4\text{He}\$ and \$^{12}\text{C}\$](#) , Lukas Thomas Bott et al., EPJ Web of Conf. 279, 04003 (2023). (8 pages)

33. [Fission of relativistic nuclei with electromagnetic excitation](#), Y. Kucuk and C.A. Bertulani, *Acta Physica Polonica B* 16, 2 (2023). (6 pages)
34. [Ultra-peripheral heavy ion collisions](#), C.A. Bertulani, *J. Phys. Conf. Series* 2619, 012003 (2023). (10 pages)
35. [The case for an EIC Theory Alliance: Theoretical Challenges of the EIC](#), Raktim Abir et al., arXiv:2305.14572 (2023). (49 pages)
36. [Nuclear-structure experiments at iThemba LABS to investigate discrepancies between \(p, p'\) and \(gamma, xn\) data](#), L M Donaldson, P Adsley, A Banu, S Bassauer, B Bastin, C A Bertulani et al., *J. Phys. Conf. Series* 2586 012068 (2023). (6 pages)
37. [Direct Nuclear Reactions](#), C.A. Bertulani and A. Bonaccorso, Book Chapter, *Handbook of Nuclear Physics*, Springer, pp. 1-35 (2022). (35 pages)
38. [Unsupervised machine learning correlations in EoS of neutron stars](#), Ronaldo V. Lobato, Emanuel V. Chimanski and Carlos A. Bertulani, *J. Phys. Conf.* 408, 0062 (2022). (9 pages)
39. [Nuclear fragmentation reactions as a probe of neutron skins in nuclei](#), E. A. Teixeira, T. Aumann, C.A. Bertulani, and B.V. Carlson, *Eur. Phys. J. A* 58, 205 (2022). (16 pages)
40. [Observation of a correlated free four-neutron system](#), M. Duer, T. Aumann, R. Gernhaeuser, V. Panin, S. Paschalis, D. M. Rossi, N. L. Achouri, D. Ahn, H. Baba, C. A. Bertulani, et al., *Nature* 606, 678 (2022). (5 pages)
41. [Nuclear Spectroscopy with Heavy Ion Nucleon Knockout and \(p,2p\) Reactions](#), Jianguo Li, Carlos A. Bertulani and Furong Xu, *Physical Review C* 105, 024613 (2022). (9 pages)
42. [Isotopic cross sections of fragmentation residues produced in reactions induced by light projectiles on carbon around 400A MeV](#), J. M. Boillos, et al., *Phys. Rev. C* 105, 014611 (2022). (13 pages)
43. [Unveiling the Two-Proton Halo Character of \$^{17}\text{Ne}\$: Exclusive Measurement of Quasi-free Proton-Knockout Reactions](#), C. Lehr, F. Wamers, F. Aksouh, Yu. Aksyutina, H. Alvarez-Pol, L. Atar, T. Aumann, S. Beceiro-Novo, C. A. Bertulani, et al., *Phys. Lett. B* 827, 136957 (2022). (6 pages) - [Supplemental material](#) (6 pages)
44. [Re-writing Nuclear Physics textbooks: Recent advances in nuclear physics applications](#), Nicolas Alamanos, Carlos Bertulani, Angela Bonaccorso, Angela Bracco, David M. Brink, Giovanni Casini, Maria Agnese Ciocci, Valeria Rosso and Michele Viviani, *Eur. Phys. J. A Plus* 137, 350 (2022). (150 pages)
45. [Cluster Structures with Machine Learning Support in Neutron Star M-R relations](#), Ronaldo V. Lobato, Emanuel V. Chimanski and Carlos A. Bertulani, *J. Phys. Conf.* 2340, 012014 (2022). (7 pages)
46. [Silicon tracker array for RIB experiments at SAMURAI](#), A. Stefanescu et al., *Eur. Phys. J. A* 58, 223 (2022). (9 pages).
47. [Neutron diffusion in magnetars as a source of astrophysical bursts](#), C.A. Bertulani and R.V. Lobato, *J. Phys. Conf.* 2340, 012028 (2022). (10 pages)

48. [Examination of the sensitivity of quasi-free reactions on details of the bound-state overlap functions](#), C.A. Bertulani, A. Idini and C. Barbieri, Phys. Rev. C Letter 104, L061602 (2021). (6 pages)
49. [Neutron tunneling: A new mechanism to power explosive phenomena in neutron stars, magnetars, and neutron star mergers](#), C.A. Bertulani and R. Lobato, Astrophys. J. 912, 105 (2021). (8 pages)
50. [The Trojan Horse Method: a Nuclear Physics Tool for Astrophysics](#), A. Tumino, C. A. Bertulani, M. La Cognata, L. Lamia, R. G. Pizzone, S. Romano, S. Typel, Annu. Rev. Nucl. Part. Sci. 71, 345 (2021). (31 pages)
51. [Neutron-neutron scattering length from the \$6\text{He}\(p,p\ \alpha\)nn\$ reaction](#), Matthias Göbel, Thomas Aumann, Carlos A. Bertulani, Tobias Frederico, Hans-Werner Hammer, Daniel R. Phillips, Phys. Rev. C 104, 024001 (2021). (16 pages)
52. [Neutron stars in \$f\(R,L_m\)\$ gravity with realistic equations of state: joint-constraints with GW170817, massive pulsars, and the PSR J0030+0451 mass-radius from NICER data](#), R. V. Lobato, G. A. Carvalho, C. A. Bertulani, Eur. Phys. J. C 81, 1013 (2021). (7 pages)
53. [New Thermonuclear Rate of \$7\text{Li}\(d,n\)^{24}\text{He}\$ relevant to the Cosmological Lithium Problem](#), S. Q. Hou, T. Kajino, T. C. L. Trueman, M. Pignatari, Y. D. Luo, C. A. Bertulani, Astrophysical J. 920, 145 (2021). (10 pages)
54. [Unperturbed inverse kinematics nucleon knockout measurements with a 48 GeV/c carbon beam](#), M. Patsyuk, et al., Nature Physics 17, 693 (2021). (19 pages)
55. [Neutron capture cross sections of radioactive nuclei](#), C.A. Bertulani and B.V. Carlson, Braz. J. Phys. 51, 212 (2021). (11 pages)
56. [Final state interaction in the \$pn\$ and \$nn\$ decay channels of \$4\text{He}\(\Lambda\)\$](#) , C.A. Bertulani and R. Lobato, Eur. J. Phys. A 57, 67 (2021). (10 pages)
57. [Quenching of single-particle strength from direct reactions with stable and rare-isotope beams](#), T. Aumann, C. Barbieri, D. Bazin, C. A. Bertulani, et al., Progress in Particle and Nuclear Physics 118, 103847 (2021). (88 pages)
58. [The \$3\text{He}+5\text{He} \rightarrow \alpha + \alpha\$ reaction below the Coulomb barrier via the Trojan Horse Method](#), C. Spitaleri, S. Typel, C.A. Bertulani, et al., Eur. Phys. J. A 57, 20 (2021). (15 pages)
59. [Quasi-free scattering in inverse kinematics as a tool to unveil the structure of nuclei](#), V. Panin, T. Aumann, C.A. Bertulani, Eur. Phys. J. A 57, 103 (2021). (13 pages)
60. [Topical issue on cluster structure and dynamics of nuclei](#), Nicolas Alamanos, Carlos Bertulani, Valdir Guimaraes, editors, Eur. Phys. J. A 57, 196 (2021). (87 pages)
61. [Special Volume of Brazilian Journal of Physics - A tribute to Mahir Hussein](#) (2021). (178 pages)
62. [Fission of relativistic nuclei with fragment excitation and reorientation](#), Carlos A. Bertulani, Yasemin Kucuk, and Radomira Lozeva, Phys. Rev. Lett. 124, 132301 (2020). (6 pages)
63. [Eikonal method for charge-exchange reactions at intermediate energies](#), J. J. Li, C. A. Bertulani, Y. Liu, J. L. Lou, D. Y. Pang, X. H. Sun, B. Yang, X. F. Yang, and Y. L. Ye, Phys. Rev. C 102, 064601 (2020). (9 pages).

64. [Clusters and their fundamental role for Trojan Horse Method](#), R. G. Pizzone, C. A. Bertulani, L. Lamia, M. La Cognata, M. L. Sergi, R. Sparta', A. Tumino, *Eur. Phys. J. A* 56, 283 (2020). (11 pages)
65. [Indirect methods in nuclear astrophysics with relativistic radioactive beams](#), Thomas Aumann and Carlos A. Bertulani, *Progress in Particle and Nuclear Physics* 112, 103753 (2020). (89 pages)
66. [Nuclear medium effect on neutron capture reactions during neutron star mergers](#), K. Ogata and C.A. Bertulani, *J. Phys. G: Nucl. Part. Phys.* 47, 095101 (2020). (9 pages)
67. [Evolution of the dipole polarizability in the stable tin isotope chain](#), S. Bassauer et al., *Phys. Lett. B* 810, 135804 (2020). (7 pages)
68. [Post-formation in alpha emission from nuclei](#), J. Tanaka, C.A. Bertulani and S. Typel, *Eur. Phys. J. Conf.* 227, 01001 (2020). (8 pages)
69. [Topology of nuclear reaction networks of interest for astrophysics](#), C.A. Bertulani, *Science China-Phys. Mech. Astron.* 63, 112063 (2020). (2 pages)
70. [Inclusive Breakup Reaction of a Two-Cluster Projectile on a Two-Fragment Target: A Genuine Four-Body Problem](#), M. S. Hussein, C. A. Bertulani, B. V. Carlson and T. Frederico, *Recent Progress in Few-Body Physics*, Springer, 238, 201 (2020). (8 pages)
71. [Fine structure of the isovector giant dipole resonance in \$^{142-150}\text{Nd}\$ and \$^{152}\text{Sm}\$](#) , L. M. Donaldson, et al, *Phys. Rev. C* 102, 064327 (2020). (17 pages)
72. [The \$^7\text{Be}\(n,\gamma\)^4\text{He}\$ Reaction Studied via THM for the Cosmological Li-Problem](#), S. Hayakawa, L. Lamia, C. Spitaleri, C. A. Bertulani, S. Q. Hou, M. La Cognata, M. Mazzocco, R. G. Pizzone, D. Pierrotsakou, S. Romano, M. L. Sergi and A. Tumino, *JPS Conf. Proc.*, 010058 (2020). (5 pages)
73. [Electric and magnetic dipole strength in \$^{112,114,116,118,120,124}\text{Sn}\$](#) , S. Bassauer, et al., *Phys. Rev. C* 102, 034327 (2020). (23 pages)
74. [Systematic Investigation of Nucleon Knockout around \$^{132}\text{Sn}\$](#) , J. Benlliure, et al., *JPS Conf. Proc.* 010048 (2020). (4 pages).
75. [Probing the \$Z = 6\$ spin-orbit shell gap with \$\(p,2p\)\$ quasi-free scattering reactions](#), I. Syndikus, M. Petri, A. O. Macchiavelli, S. Paschalis, C. A. Bertulani, et al., *Phys. Lett. B* 809, 135748 (2020). (9 pages)
76. [Direct and indirect measurements for a better understanding of the Primordial Nucleosynthesis](#), R. G. Pizzone, R. Sparta', C. A. Bertulani, S. Hou, L. Lamia, A. Tumino, *Frontiers in Astronomy and Space Sciences*, 7, 560149. (2020). (13 pages)
77. [Systematic reduction of the proton-removal cross section in neutron-rich medium-mass nuclei](#), J. Diaz-Cortes, et al., *Phys. Lett. B* 811, 135962 (2020). (6 pages)
78. [Prominence of pairing in inclusive \$\(p,2p\)\$ and \$\(p,pn\)\$ cross sections from neutron-rich nuclei](#), N. Paul, A. Obertelli, C. Bertulani, et al., *Phys. Rev. Lett.* 122, 162503 (2019). (7 pages)
79. [How Robust is the \$N = 34\$ Subshell Closure? First Spectroscopy of \$^{52}\text{Ar}\$](#) , H. N. Liu, A. Obertelli, P. Doornenbal, C. A. Bertulani, et al., *Phys. Rev. Lett.* 122, 072502 (2019). (7 pages)

80. [Quasi-free proton knockout from \$^{12}\text{C}\$ on carbon target at 398 MeV/u](#), V. Panin et al., Phys. Lett. B, 797, 134802 (2019).
81. [Quasi-free neutron and proton knockout reactions from light nuclei in a wide neutron-to-proton asymmetry range](#), M. Holl et al., Phys. Lett. B 795, 682 (2019). (7 pages)
82. Book: Focus Point on Rewriting Nuclear Physics textbooks: Basic nuclear interactions and their link to nuclear processes in the Cosmos and on Earth, Nicolas Alamanos, Carlos Bertulani, Angela Bonaccorso, Angela Bracco, David M. Brink, Giovanni Casini, and Mauro Taiuti, [Preface](#): Eur. Phys. J. Plus (2019) 134: 183.
83. [Wide Energy Range Cross Section Measurement of the Cosmologically Relevant \$^7\text{Be}\(n,\alpha\)^4\text{He}\$ Reaction in a Single Experiment](#), L. Lamia et al., Astrop. J. 879, 23 (2019). (8 pages)
84. [The neutron within the deuteron as a surrogate for neutron-induced reactions](#), C. A. Bertulani, L. F. Canto, M. S. Hussein, Shubhchintak, Viet Nhan Hao Tran, Int. J. Mod. Phys. E28, 1950109 (2019). (27 pages)
85. [Neutron skins as laboratory constraints on properties of neutron stars and on what we can learn from heavy ion fragmentation reactions](#), C.A. Bertulani and J. Valencia, Phys. Rev. C 100, 015802 (2019). (10 pages)
86. [Potential model for nuclear astrophysical fusion reactions with a square-well potential](#), R. Ogura, K. Hagino, C.A. Bertulani, Phys. Rev. C 99, 065808 (2019). (4 pages)
87. [Fixing the big bang cosmological problem](#), C.A. Bertulani, AIP Conf. Proc. 2076, 030003 (2019). (7 pages)
88. [Pygmy resonances and symmetry energy](#), C.A. Bertulani, Eur. Phys. J. A 55, 240 (2019). (9 pages)
89. [Big Bang Nucleosynthesis and the Lithium Problem](#), C.A. Bertulani, Journal of Physics Conf. 1291, 012002 (2019). (9 pages)
90. [The Cosmologically Relevant \$^7\text{Be}\(n,\alpha\)^4\text{He}\$ Reaction in View of the Recent THM Investigations](#), Lamia et al, Nuclei in the Cosmos XV. Springer Proceedings in Physics 219, 53 (2019) Springer, Cham. (4 pages)
91. [Non-extensive Solution to Cosmological Lithium Problem](#), S. Q. Hou, J. J. He, A. Parikh, D. Kahl, C. A. Bertulani, Toshitaka Kajino, Grant J. Mathews and G. Zhao, Nuclei in the Cosmos XV. Springer Proceedings in Physics 219, 39 (2019) Springer, Cham. (5 pages)
92. [Recent THM investigations of the \$^7\text{Be}\(n,\alpha\)^4\text{He}\$ reaction in the BBN scenario](#), L. Lamia et al., Il Nuovo Cimento 42 C, 119 (2019).
93. [Core longitudinal momentum distributions in the stripping reactions of two-neutron halo nuclei](#), L.A. Souza, T. Frederico, C.A. Bertulani J. Phys. Conference Series 1291 (1), 012039 (2019). (4 pages)
94. [In Memoriam: Mahir Saleh Hussein \(1944–2019\)](#), B. Balantekin, C. Bertulani, V. Zelevinsky Nuclear Physics News 29 (3), 36 (2019).

95. [Impact of the \$7\text{Be}\(\alpha,\gamma\)11\text{C}\$ Reaction on the Primordial Abundance of \$7\text{Li}\$](#) , M. Hartos, C. A. Bertulani, Shubhchintak, A. M. Mukhamedzhanov, and S. Hou, *Astrophys. J.* 862, 62 (2018). (6 pages)
96. [Possible determination of high-lying single particle components with \(p,d\) reactions](#), Y. P. Xu, D. Y. Pang, X. Y. Yun, S. Kubono, C. A. Bertulani, and C. X. Yuan, *Phys. Rev. C* 98, 044622 (2018). (6 pages)
97. [Assessing the foundation of the Trojan Horse Method](#), C.A. Bertulani, M.S. Hussein and S. Typel, *Phys. Lett. B* 776, 217 (2018). (5 pages)
98. [Maris polarization in neutron-rich nuclei](#), Shubhchintak, C.A. Bertulani and T. Aumann, *Phys. Lett. B* 778, 30 (2018). (5 pages)
99. [Strong neutron pairing in core+4n nuclei](#), A. Revel et al., *Phys. Rev. Lett.* 120, 152504 (2018). (6 pages)
100. [Structure of \$13\text{Be}\$ studied in proton knockout from \$14\text{B}\$](#) , G. Ribeiro et al., *Phys. Rev. C* 98, 024603 (2018). (9 pages)
101. [Quasi-free \(p,2p\) reactions on oxygen isotopes: Observation of isospin independence of the reduced single-particle strength](#), Leyla Atar, S. Paschalis, C. Barbieri, C.A. Bertulani, et al., *Phys. Rev. Lett.* 120, 052501 (2018). (7 pages)
102. [Comparison of electromagnetic and nuclear dissociation of \$17\text{Ne}\$](#) , F. Wamers et al., *Phys. Rev. C* 97, 034612 (2018). (8 pages)
103. [Quasi-free \(p,pN\) scattering of light neutron-rich nuclei around \$N = 14\$](#) , P. Diaz Fernandez, et al., *Phys. Rev. C* 97, 024311 (2018). (13 pages)
104. [Cosmological lithium problems](#), C.A. Bertulani, Shubhchintak, A.M. Mukhamedzhanov, *EPJ Web of Conferences* 184, 01002 (2018). (9 pages)
105. [Probing the Early Universe through nuclear physics](#), R.G. Pizzone, R. Sparta, C.A. Bertulani, M. La Cognata, L. Lamia, C. Spitaleri, A. Tumino, *J. Phys. Conf. Ser.* 1078, 012017 (2018). (6 pages)
106. [Peeling off neutron skins from neutron-rich nuclei: Constraints on the symmetry energy from neutron-removal cross sections](#), T. Aumann, C.A. Bertulani, F. Schindler, S. Typel, *Phys. Rev. Lett.* 119, 262501 (2017). (5 pages)
107. [On the existence of Rydberg nuclear molecules](#), C. A. Bertulani, T. Frederico and M. S. Hussein, *Phys. Letters B* 774, 247 (2017). (5 pages)
108. [Test of the Brink-Axel Hypothesis for the Pygmy Dipole Resonance](#), D. Martin, P. von Neumann-Cosel, A. Tamii, N. Aoi, S. Bassauer, C. A. Bertulani, et al., *Phys. Rev. Lett.* 119, 182503 (2017). (5 pages)
109. [On the determination of the \$7\text{Be}\(n,\alpha\)\$ \$4\text{He}\$ reaction cross section at Big Bang Nucleosynthesis energies](#), L. Lamia, C. Spitaleri, C. A. Bertulani, S.Q. Hou, M. La Cognata, R.G. Pizzone, S. Romano, M.L. Sergi, A. Tumino, *Astrophys. J.* 850, 175 (2017). (5 pages)
110. [Neutron removal from the deformed halo nucleus \$31\text{Ne}\$](#) , Juhee Hong, C. A. Bertulani, and A. T. Kruppa, *Phys. Rev. C* 96, 064603 (2017). (11 pages)
111. [The dominance of the \$n\(0d5/2\)^2\$ configuration in the \$N = 8\$ shell in \$12\text{Be}\$ from the breakup reaction on a proton target at intermediate energy](#), Le Xuan Chung, Carlos A. Bertulani, Peter Egelhof, Stoyanka Ilieva, Dao T. Khoa, Oleg A. Kiselev, *Phys. Letters B* 774, 559 (2017). (5 pages)
112. [Effective proton-neutron interaction near the drip line from unbound states in \$^{25,26}\text{F}\$](#) , M. Vandebrouck et al., *Phys. Rev. C* 96, 054305 (2017). (13 pages)

113. [Relativistic effects in Coulomb scattering of heavy ions](#), Ravinder Kumar, C.A. Bertulani and G. Robinson, Phys. Rev. C 96, 034605 (2017). (6 pages)
114. [Knockout and fragmentation reactions using a broad range of tin isotopes](#), J. L. Rodríguez-Sánchez, J. Benlliure, C. A. Bertulani, et al., Phys. Rev. C 96, 034303 (2017). (9 pages)
115. [Subthreshold resonances and resonances in the R-matrix method for binary reactions and in the Trojan horse method](#), A. M. Mukhamedzhanov, Shubhchintak, and C. A. Bertulani, Phys. Rev. C 96, 024623 (2017). (10 pages)
116. [Electric dipole polarizability of \$^{48}\text{Ca}\$ and implications for the neutron skin](#), J. Birkhan, M. Miorelli, S. Bacca, S. Bassauer, C. A. Bertulani, et al., Phys. Rev. Lett. 118, 252501 (2017). (6 pages)
117. [Non-extensive Statistics Solution to the Cosmological Lithium Problem](#), S.Q. Hou, J.J. He, A. Parikh, D. Kahl, C.A. Bertulani, T. Kajino, G.J. Mathews and G. Zhao, Astrop. J. 834, 165 (2017). (5 pages). This paper is cited as a [Research Highlight](#) by the American Astronomical Society.
118. [Measurement of the Neutron-Capture Rate of \$^{17}\text{C}\$ for the R-process Nucleosynthesis](#), M. Heine, S. Typel, M.-R. Wu, T. Adachi, Y. Aksyutina, J. Alcantara, S. Altstadt, et al., Phys. Rev. C 95, 014613 (2017). (9 pages)
119. [Internal and external radiative widths in the combined R-matrix and potential model formalism](#), A. M. Mukhamedzhanov, Shubhchintak, C. A. Bertulani, T. V. Nhan Hao, Phys. Rev. C 95, 024616 (2017). (8 pages)
120. [Production of exotic charmonium in ultra-peripheral heavy ion collisions](#), C.A. Bertulani, V. P. Goncalves, B.D. Moreira, F. S. Navarra, Eur. Phys. J. 137, 06019 (2017). (6 pages)
121. [Deformation dependence of the isovector giant dipole resonance: The neodymium isotopic chain revisited](#), L.M. Donaldson, C.A. Bertulani, J. Carter, V.O. Nesterenko, P. von Neumann-Cosel, et al., Phys. Lett. B 776, 133 (2017).
122. [Trojan Horse cross section measurements and their impact on primordial nucleosynthesis](#), R.G. Pizzone, R. Sparta, C. Bertulani, C. Spitaleri, M. La Cognata, L. Lamia, A. Mukhamedzhanov, A. Tumino, J. Phys.: Conf. Series 940, 012017 (2017). (4 pages).
123. [Nuclear clustering and the electron screening puzzle](#), C.A. Bertulani and C. Spitaleri, Eur. Phys. J., 165, 02002 (2017). (6 pages)
124. [Production of exotic charmonium in gamma-gamma interactions at hadronic colliders](#), B. D. Moreira, C. A. Bertulani, V. P. Goncalves, F. S. Navarra, Phys. Rev. D 94, 094024 (2016). (6 pages)
125. [Radiative nucleon capture with quasi-separable potentials](#), Shubhchintak, C. A. Bertulani, A. M. Mukhamedzhanov, A. T. Kruppa, J. Phys. G 43, 125203 (2016). (11 pages)
126. [Four neutrons together momentarily](#), C.A. Bertulani and V. Zelevinsky, Nature 532, 448 (2016). (2 pages)
127. [Frontiers in Nuclear Astrophysics](#), C.A. Bertulani and T. Kajino, Prog. Part. Nucl. Phys. 89, 56 (2016). (45 pages)

128. [Dynamical Coupling of Pygmy and Giant Resonances in Relativistic Coulomb Excitation](#), N.S. Brady, T. Aumann, C.A. Bertulani, and J.O. Thomas, Phys. Lett. B 757, 553 (2016). (5 pages)
129. [The electron screening puzzle and nuclear clustering](#), C. Spitaleri, C.A. Bertulani, L. Fortunato, A. Vitturi, Phys. Lett. B 755, 275 (2016). (4 pages).
130. [Book: Rewriting Nuclear Physics textbooks: 30 years with radioactive ion beam physics](#), Eur. Phys. J. Plus, Eds. N. Alamanos, C. Bertulani, A. Bracco, A. Bonaccorso. D. Brink, G. Casini (2016). ISSN: 2190-5444 (online)
131. [Primordial \$\alpha + d \rightarrow 6\text{Li} + \gamma\$ reaction and second lithium puzzle](#), A. M. Mukhamedzhanov, Shubhchintak, and C.A. Bertulani, Phys. Rev. C 93, 045805 (2016). (13 pages)
132. [Experimental Study of knockout reaction mechanism using \$^{14}\text{O}\$ at 60 MeV/nucleon](#), Y. L. Sun et al., Phys. Rev. C 93, 044607 (2016). (8 pages)
133. [Exclusive quasi-free proton scattering reactions in inverse and complete kinematics: A novel technique for probing neutron-proton asymmetric nuclei](#), V. Panin, et al., Phys. Lett. B 753, 204 (2016). (7 pages)
134. [Systematic investigation of projectile fragmentation using beams of unstable B and C isotopes](#), R. Thies, et al., Phys. Rev. C 93, 054601 (2016). (9 pages)
135. [Coulomb and nuclear excitations of narrow resonances in \$^{17}\text{Ne}\$](#) , J. Marganec et al., Phys. Lett. B 759, 200 (2016). (6 pages)
136. [Cosmological and Particle Physics Constraints on a New Non-Abelian SU\(3\) Gauge Model for Ordinary/Dark Matter Interaction](#), O. Oliveira, C. A. Bertulani, M. S. Hussein, W. de Paula, T. Frederico, Braz. J. Phys. 46, 721 (2016). (9 pages)
137. [Indirect methods in nuclear astrophysics](#), C.A. Bertulani, Shubchintak A. Mukhamedzhanov, A. S. Kadyrov, A. Kruppa, and D. Y. Pang, J. Phys. Conf. S. 703, 012007 (2016). (9 pages)
138. [Primordial nucleosynthesis revisited via Trojan Horse Results](#), R.G. Pizzone, R. Sparta, C.A. Bertulani, C. Spitaleri, M. La Cognata, L. Lamia, A. Mukhamedzhanov and A. Tumino, Eur. Phys. J. 117, 09010 (2016). (6 pages).
139. [Experimental study of the \$^{15}\text{O}\(2p,\gamma\)^{17}\text{Ne}\$ cross section by Coulomb Dissociation for the rp-process](#), J Marganec et al., Journal of Physics: Conf. Series 665, 012046 (2016). (7 pages)
140. [Trojan Horse measurement of the \$^{18}\text{F}\(p,\alpha\)^{15}\text{O}\$ astrophysical S\(E\)-factor](#), R.G. Pizzone et al., Eur. J. Phys. A 52, 24 (2016). (9 pages)
141. [Coulomb dissociation of \$^{20,21}\text{N}\$](#) , Marko Roeder et al., Phys. Rev. C 93, 065807 (2016). (11 pages).
142. [Nuclear astrophysics with radioactive ions at FAIR](#), R. Reifarth et al., J. Phys. Conf. Series 665, 012044 (2016). (12 pages).
143. [The Cosmological Lithium Puzzle Revisited](#), C.A. Bertulani, A. Mukhamedzhanov, and Shubhchintak, AIP Conf. Proc. 1753, 040001 (2016); doi: 10.1063/1.4955357 (9 pages)
144. [Evidence of sub-nucleonic degrees of freedom in J \$\Psi\$ photoproduction in ultraperipheral collisions at the CERN Large Hadron Collider](#), E. Andrade-II and I.

- Gonzalez and A. Deppman and C. A. Bertulani, *Phys. Rev. C* 92, 064903 (2015). (6 pages)
145. [First-order neutron-deuteron scattering in a three-dimensional approach](#), K. Topolnicki, J. Golak, R. Skibinski, H. Witała, C. A. Bertulani, *Eur. Phys. J. A* 51, 132 (2015). (14 pages)
 146. [Current Status of Nuclear Physics Research](#), C.A. Bertulani and M.S. Hussein, *Braz. J. Phys.* 45, 730 (2015). (26 pages)
 147. [Relativistic Coulomb excitation within Time Dependent Superfluid Local Density Approximation](#), I. Stetcu, C. Bertulani, A. Bulgac, P. Magierski, and K.J. Roche, *Phys. Rev. Lett.* 114, 012701 (2015). (5 pages) [Supplemental Material](#). (18 pages)
 148. [Tunneling of atoms, nuclei and molecules](#), C.A. Bertulani, *Few-Body Sys.* 56, 727 (2015). (10 pages)
 149. [Odd-even mass staggering with Skyrme-Hartree-Fock-Bogoliubov theory](#), W. J. Chen, C. A. Bertulani, F. R. Xu and Y. N. Zhang, *Phys. Rev. C* 91, 047303 (2015). (4 pages)
 150. [Low-energy electric dipole response in \$^{120}\text{Sn}\$](#) , A.M. Krumbholz, P. von Neumann-Cosel, T. Hashimoto, A. Tamii, T. Adachi, C.A. Bertulani, et al., *Phys. Lett. B* 744, 7 (2015).
 151. [Dipole Polarizability of \$^{120}\text{Sn}\$ and Nuclear Energy Density Functionals](#), T. Hashimoto, A.M. Krumbholz, P.-G. Reinhard, A. Tamii, P. von Neumann-Cosel, T. Adachi, N. Aoi, C. A. Bertulani, et al., *Phys. Rev. C* 92, 031305 (R) (2015). (4 pages)
 152. [Trojan Horse particle invariance in fusion reactions](#), R.G. Pizzone, C. Spitaleri, C. Bertulani, A. Mukhamedzhanov, L. Blokhintsev, M. La Cognata, L. Lamia, R. Spartá, and A. Tumino, *Eur. Phys. J.* 86, 00034 (2015). (4 pages)
 153. [And there was light](#), C.A. Bertulani, *AIP* 1645, 121 (2015). (11 pages)
 154. [Surface-integral formalism of deuteron stripping](#), A. M. Mukhamedzhanov, D. Y. Pang, C. A. Bertulani, and A. S. Kadyrov, *Phys. Rev. C* 90, 034604 (2014). (22 pages)
 155. [Neutron occupancy of the \$0d_{5/2}\$ orbital and the \$N = 16\$ shell closure in \$^{24}\text{O}\$](#) , K. Tshoo, Y. Satou, C.A. Bertulani, et al., *Phys. Lett. B* 739, 19 (2014). (4 pages)
 156. [Stellar oscillations induced by the passage of a fast stellar object](#), C.A. Bertulani, M. Naizer, and W. Newton, *Int. J. Mod. Phys. D* 23, 1450084 (2014). (9 pages)
 157. [Indirect techniques in nuclear astrophysics](#), by Robert Tribble, Carlos Bertulani, Marco La Cognata, Akram Mukhamedzhanov, and Claudio Spitaleri, *Rep. Prog. Phys.* 77 (2014) 106901. (50 pages)
 158. [Astronuclear physics with short-lived isotopes](#), C.A. Bertulani, *PoS (X LASNPA)* 007 (2014). (10 pages)
 159. [\$^{13,14}\text{B}\(n, \gamma\)\$ via Coulomb Dissociation for Nucleosynthesis towards the r-Process](#), S.G. Altstadt et al., *Nucl. Data Sheets* 120, 197 (2014). (4 pages)
 160. [Big Bang nucleosynthesis revisited via Trojan Horse Method measurements](#), R.G. Pizzone, R. Sparta, C. Bertulani, C. Spitaleri, M. La

- Cognata, J. Lalansingh, L. Lamia, A. Mukhamedzhanov, A. Tumino, *Astrophys. J.* 786, 112 (2014). (9 pages)
161. [Study of the \$^{15}\text{O}\(2p,\gamma\)^{17}\text{Ne}\$ cross section by Coulomb dissociation of \$^{17}\text{Ne}\$ for the \$rp\$ process of nucleosynthesis](#), J. Marganec, et. al., *Act. Phys. Pol. B* 45, 229 (2014). (6 pages)
 162. [Exclusive measurements of nuclear breakup reactions of \$^{17}\text{Ne}\$](#) , F. Wamers, et. al., *Eur. Phys. J.* 66, 03094 (2014). (4 pages)
 163. [Trojan Horse Particle Invariance: An Extensive Study](#), R. G. Pizzone, C. Spitaleri, M. L. Sergi, L. Lamia, A. Tumino, C. A. Bertulani, L. Blokhintsev, V. Burjan, V. Kroha, M. La Cognata, J. Mrazek, A. M. Mukhamedzhanov, R. Spartá, *Few Body Systems* 0177, 7963 (2014). (4 pages)
 164. [Computer code for double beta decay QRPA based calculations](#), C.A. Barbero, F. Krmpotic, A. Mariano, A.R. Samana, V. dos Santos Ferreira and C.A. Bertulani, *AIP* 1625, 169 (2014). (6 pages)
 165. [Trojan Horse Particle Invariance for \$2\text{H}\(d,p\)^3\text{H}\$ reaction: A Detailed Study](#), R. G. Pizzone, C. Spitaleri, C. A. Bertulani, A. M. Mukhamedzhanov, L. Blokhintsev, M. La Cognata, L. Lamia, A. Rinollo, R. Spartá, A. Tumino, *Eur. Phys. J.* 66, 07021 (2014). (4 pages)
 166. [Trojan Horse particle invariance: the impact on nuclear astrophysics](#), R. G. Pizzone, C. Spitaleri, C. A. Bertulani, A. M. Mukhamedzhanov, L. Blokhintsev, M. La Cognata, L. Lamia, A. Rinollo, R. Spartá, A. Tumino, *Origin of Matter and Evolution of Galaxies*, AIP 1594, 210 (2014). (5 pages)
 167. [Statistical Theory of Breakup Reactions](#), Carlos A. Bertulani, Pierre Descouvemont and Mahir S. Hussein, *Eur. Phys. J.* 69, 00020 (2014). (13 pages)
 168. [Determining the \$^7\text{Li}\(n,\gamma\)\$ cross section via Coulomb dissociation of \$^8\text{Li}\$](#) , R. Izsak, A. Horvath, A. Kiss, Z. Seres, A. Galonsky, C. A. Bertulani, et al., *Phys. Rev. C* 88, 065808 (2013). (8 pages)
 169. [Quasi-free \$\(p,2p\)\$ and \$\(p,pn\)\$ reactions with unstable nuclei](#), T. Aumann, C.A. Bertulani and J. Ryckebusch, *Phys. Rev. C* 88, 064610 (2013). (15 pages)
 170. Book Chapter: Nuclear Reactions, C.A. Bertulani, "Wiley Encyclopedia of Nuclear Physics and its Applications", Ed. Reinhard Stock, 729 pages, Wiley - VCH, Germany, p. 45 (2013). (49 pages)
 171. [Role of pairing in the description of Giant Monopole Resonances](#), Paolo Avogadro and Carlos A. Bertulani, *Phys. Rev C* 88, 044319 (2013). (14 pages)
 172. [Recent Results for the Effects of Distortion in the Inter-Cluster Motion in Light Nuclei and Application to Nuclear Astrophysics](#), R. G. Pizzone, L. Lamia, A. M. Mukhamedzhanov, L. D. Blokhintsev, C. A. Bertulani, B. F. Irgaziev, M. La Cognata, C. Spitaleri, *Few-Body Syst.* 54, 1577 (2013). (5 pages)
 173. [Microscopic in-medium nucleon-nucleon cross sections with improved Pauli blocking effects](#), B. Chen, F. Sammarruca and C.A. Bertulani, *Phys. Rev. C* 87, 054616 (2013). (7 pages)
 174. [Big bang nucleosynthesis with a non-Maxwellian distribution](#), C.A. Bertulani, J. Fuqua and M.S. Hussein, *Astrophys. J.* 767, 67 (2013). (11 pages)
 175. [Direct Reactions for Nuclear Astrophysics](#), C.A. Bertulani, *Proc. of Science, Bormio* (2013). (21 pages)

176. [Nuclear Astrophysics from View Point of Few-Body Problems](#), A. Tumino, C. Spitaleri, C. Bertulani and A. M. Mukhamedzhanov, Few Body Systems 54, 869 (2013). (7 pages)
177. [Coulomb distortion and medium corrections in nucleon-removal reactions](#), Mesut Karakoc, A. Banu, C.A. Bertulani, L. Trache, Phys. Rev. C 87 024607 (2013). (11 pages)
178. [Updated evidences of the Trojan Horse particle invariance for \$2H\(d,p\)3H\$ reaction](#), R.G. Pizzone, C. Spitaleri, C.A. Bertulani, A.M. Mukhamedzhanov, L. Blokhintsev, M. La Cognata, L. Lamia, A. Rinollo, R. Spartá, A. Tumino, Phys. Rev. C 87, 025805 (2013). (5 pages)
179. [Medium effects in direct reactions](#), M. Karakoc and C.A. Bertulani, J. Phys. 420, 012074 (2013). (10 pages)
180. [Dark/Visible Parallel Universes and Big Bang Nucleosynthesis](#), C.A. Bertulani, T. Frederico, J. Fuqua, M.S. Hussein, O. Oliveira, W. de Paula, AIP, Vol. 1498, 134 (2013). (9 pages)
181. [Beyond the Neutron Drip-Line: The Unbound Oxygen Isotopes \$^{25}O\$ and \$^{26}O\$](#) , C. Caesar et al., Phys. Rev. C 88, 034313 (2013). (8 pages)
182. [Nuclear Astrophysics: what direct reactions can do for it?](#), C.A. Bertulani, Acta Phys. Pol. 44, 531 (2013). (11 pages)
183. [Nuclear effects in photoproduction of heavy quarks and vector mesons in ultraperipheral PbPb and pPb collisions at energies available at the CERN Large Hadron Collider](#), Adeola Adeluyi, C. A. Bertulani, and M. J. Murray, Phys. Rev. C 86, 047901 (2012). (4 pages)
184. [Pygmy dipole resonance in \$^{208}Pb\$](#) , I. Poltoratska et al., Phys. Rev. C 85, 041304 (2012) (Rapid Communication). (5 pages)
185. [Constraining Gluon Shadowing Using Photoproduction in Ultraperipheral pA and AA Collisions](#), Adeola Adeluyi and Carlos A. Bertulani, Phys. Rev. C 85, 044904 (2012). (13 pages)
186. [Global investigation of odd-even mass differences and radii with isospin dependent pairing interactions](#), C.A. Bertulani, Hongliang Liu and H. Sagawa, Phys. Rev. C 85, 014321 (2012). (8 pages)
187. [Extending the Kawai-Kerman-McVoy Statistical Theory of Nuclear Reactions to Intermediate Structure via Doorways](#), G. Arbanas, C.A. Bertulani, D.J. Dean, A.K. Kerman, and K.J. Roche, Eur. Phys. J. 21, 07002 (2012). (7 pages)
188. [Tunneling, Diffusion and Dissociation of Feshbach Molecules in Optical Lattices](#), Taylor Bailey, Carlos A. Bertulani and Eddy Timmermans, Phys. Rev. A 85, 033627 (2012). (6 pages)
189. [Complete Electric Dipole Response in \$^{208}Pb\$](#) , A. Tamii et al., Phys. Rev. Lett. 107, 062502 (2011). (5 pages)
190. [Fusion 11](#), C.A. Bertulani, Eur. Phys. J. 17, 15001 (2011). (8 pages)
191. [Gluon distributions in nuclei probed at the CERN Large Hadron Collider](#), Adeola Adeluyi and Carlos A. Bertulani, Phys. Rev. C 84, 024916 (2011). (9 pages)
192. [Electric dipole response in \$^{120}Sn\$](#) , Anna Maria Heilmann et al., J. Phys. 312, 092029 (2011). (6 pages)

193. [Neutrino and antineutrino cross sections in \$^{12}\text{C}\$](#) , A. R. Samana, F. Krmpotic, N. Paar, and C. A. Bertulani, J. Phys. 312 (2011) 072009. (6 pages)
194. [On the occurrence of extreme K-isomers in neutron-rich Hf nuclei](#), H.L. Liu, F.R. Xu, P.M. Walker, and C.A. Bertulani, Phys. Rev. C, 83, 067303 (2011). (4 pages)
195. [The nucleus-nucleus interaction between boosted nuclei](#), Wen-Hui Long and C.A. Bertulani, Phys. Rev. C 83, 024907 (2011). (6 pages)
196. [Status of breakup reaction theory](#), K. Ogata et al, J. Phys. 312 082008 (2011). (10 pages)
197. [Distortion Effects on Trojan Horse Applications](#), R.G. Pizzone et al, Few Body Systems 50, 319 (2011). (3 pages)
198. [Solar fusion cross sections II: the pp chain and CNO cycles](#), E.G. Adelberger et al., Rev. Mod. Phys. 83, 195 (2011). (51 pages)
199. [Trojan horse particle invariance studied with the \$^6\text{Li}\(d, \alpha\)^4\text{He}\$ and \$^7\text{Li}\(p, \alpha\)^4\text{He}\$ reactions](#), R. G. Pizzone et al, Phys. Rev. 83, 045801 (2011). (8 pages)
200. [The electron-ion scattering experiment ELISE at the International Facility for Antiproton and Ion Research \(FAIR\)](#), A.N. Antonov et al., Nuc. Inst. Meth. Phys. Res. A 637, 60 (2011). (18 pages)
201. [Effects of order deformation on superheavy high-K isomers](#), H.L. Liu, F.R. Xu, P.M. Walker, C.A. Bertulani, Phys. Rev. C 83, 011303 (2011) (RC). (4 pages)
202. [Electron screening and its effects on Big-Bang nucleosynthesis](#), Biao Wang, C.A. Bertulani and A.B. Balantekin, Phys. Rev. C 83, 018801 (2011). (4 pages)
203. [Neutrino and antineutrino charge-exchange reactions on \$^{12}\text{C}\$](#) , A.R. Samana, F. Krmpotic, N. Paar and C.A. Bertulani, Phys. Rev. C 83, 024303 (2011). (19 pages)
204. [Nuclear astrophysics with radioactive beams](#), C.A. Bertulani and A. Gade, Physics Reports 485, 195 (2010). (65 pages)
205. [Pauli blocking and medium effects in nucleon knockout reactions](#), C.A. Bertulani and C. De Conti, Phys. Rev. C 81, 064603 (2010). (8 pages)
206. [Production of exotic atoms at the CERN Large Hadron Collider](#), C.A. Bertulani and M. Ellermann, Phys. Rev. C 81, 044910 (2010). (6 pages)
207. [Light radioactive nuclei capture reactions with phenomenological potential models](#), V. Guimaraes and C. A Bertulani, AIP 1245, 30 (2010). (9 pages)
208. [Dynamical relativistic effects in breakup processes of halo nuclei](#), K. Ogata and C.A. Bertulani, Prog. Theor. Phys. 123, 701 (2010). (18 pages)
209. [Nuclear halo structure and pseudospin symmetry](#), WenHui Long, Peter Ring, Jie Meng, Nguyen Van Giai, and Carlos A. Bertulani, Phys. Rev. C81, 031302 (2010) (RC). (5 pages)
210. [QRAP: a numerical code for projected \(Q\)uasi-particle \(R\)andom \(P\)hase approximation](#), A. Samana, F. Krmpotic and C.A. Bertulani, Comp. Phys. Comm. 181, 1123 (2010). (13 pages)
211. [Nuclear astrophysics in rare isotope facilities](#), C.A. Bertulani, Nucl. Phys. A 834, 643 (2010). (4 pages)

212. [Radiative capture of protons and neutrons at astrophysical energies with single-particle models](#), Juntong Huang, C.A. Bertulani and V. Guimaraes, Atomic Data and Nuclear Data Tables 96, 824 (2010). (24 pages)
213. [Nuclear reactions](#) (book chapter), C.A. Bertulani, Wiley Encyclopedia of Physics, ISBN-13: 978-3-527-40691-3-Wiley-VCH, Berlin, 2009. [arXiv:0908.3275](#) (45 pages)
214. [Odd-even mass difference and isospin dependent pairing interaction](#), C.A. Bertulani, Hongfeng Lu, H. Sagawa, Phys. Rev. C 80, 027303 (2009). (4 pages)
215. [Probing two-photon decay widths of mesons at energies available at the CERN Large Hadron Collider \(LHC\)](#), C.A. Bertulani, Phys. Rev. C 79, 047901 (2009). (4 pages)
216. [Effects of distortion on the intercluster motion in \$2\text{H}\$, \$3\text{He}\$, \$3\text{H}\$, \$6\text{Li}\$ and \$9\text{Be}\$ on Trojan horse applications](#), R. G. Pizzone, C. Spitaleri, A. M. Mukhamedzhanov, L. D. Blokhintsev, C. A. Bertulani, B. F. Irgaziev, M. La Cognata, L. Lamia, and S. Romano, Phys. Rev. C 80, 025807 (2009). (10 pages)
217. [Non-inertial effects in fusion reactions of astrophysical interest](#), C.A. Bertulani, Jun-Ting Huang and Plamen Krastev, Mod. Phys. Lett. A 24, 1109 (2009). (12 pages)
218. [Odd-even mass differences from self-consistent mean field theory](#), G.F. Bertsch, C.A. Bertulani, W. Nazarewicz, N. Schunck and M.V. Stoitsov, Phys. Rev. C 79, 0343306 (2009). (12 pages)
219. [Dissociation of relativistic projectiles with the continuum-discretized coupled-channels method](#), K. Ogata and C.A. Bertulani, Prog. Theor. Phys. (Letter) 121 (2009), 1399. (8 pages)
220. [The \$9\text{Be}\(8\text{Li},9\text{Be}\)8\text{Li}\$ elastic-transfer reaction](#), O. Camargo et al., Phys. Rev. C 78, 034605 (2008). (8 pages)
221. [Nuclear astrophysics from direct reactions](#), C.A. Bertulani, Rev. Mex. Phys. 53, 11 (2008). (8 pages)
222. [Detection of supernovae neutrinos with neutrino-iron scattering](#), A.R. Samana and C.A. Bertulani, Phys. Rev. C 78, 024312 (2008). (5 pages)
223. [Blurred femtoscopy in two-proton decay](#), C.A. Bertulani, M.S. Hussein and G. Verde, Phys. Lett. B 666, 86 (2008). (5 pages)
224. [Geometry of halo nuclei](#), C.A. Bertulani and M.S. Hussein, Phys. Rev. C 76, 051602 (2008) (RC). (4 pages)
225. [Tunneling of a composite particle: Effects of intrinsic structure](#), C.A. Bertulani, V.V. Flambaum and V.G. Zelevinsky, Journal of Physics G 34 (2007) 2289. (7 pages)
226. [Electro-disintegration following beta-decay](#), C.A. Bertulani, Phys. Rev. C 75, 057602 (2007). (3 pages)
227. [Nuclear astrophysics with unstable nuclei](#), C.A. Bertulani, Nucl. Phys. A 790, 467 (2007). (5 pages)
228. [Pygmy resonances probed with electron scattering](#), C.A. Bertulani, Nucl. Phys. A 788, 366 (2007). (6 pages)
229. [Coulomb excitation of unstable nuclei at intermediate energies](#), C.A. Bertulani, G. Cardella, M. De Napoli, G. Raciti, and E. Rapisarda, Phys. Lett. B. 650 (2007) 233. (6 pages)

230. [7Be\(p,gamma\)8B S-factor from ab initio wave functions](#), P. Navrátil, C.A. Bertulani, and E. Caurier, Nucl. Phys. A787 (2007) 539. (8 pages)
231. [Excitation of soft dipole modes in electron scattering](#), C.A. Bertulani, Phys. Rev. C 75, 024606 (2007). (9 pages)
232. [Direct reactions in/for astrophysics](#), PoS (online at: <http://pos.sissa.it/index.html>), 2007. (11 pages)
233. [Probing nuclear skins and halos with elastic electron scattering](#), C.A. Bertulani, J. Phys. G 34 (2006) 315. (9 pages)
234. [Short-range correlations in two-nucleon knockout reactions](#), C.A. Bertulani, Nucl. Phys. A 767, 155 (2006). (16 pages)
235. [7Be\(p,gamma\)8B S-factor from ab-initio wave functions](#), P. Navrátil, C.A. Bertulani, and E. Caurier, Phys. Lett. B 634 (2006) 191. (4 pages)
236. [7Be\(p,gamma\)8B S-factor from ab-initio No-Core Shell Model \(NSCM\) wave functions](#), P. Navratil, C.A. Bertulani, and E. Caurier, Phys. Rev. C73 (2006) 065801. (20 pages)
237. [MOMDIS: a Glauber model computer code for knockout reactions](#), C.A. Bertulani and A. Gade, Comp. Phys. Comm. 175 (2006) 372. (9 pages)
238. [Nuclear Physics from Scratch](#), W.E. Ormand, P. Navratil, C. Foerresen and C.A. Bertulani, Acta Phys. Hung. (Heavy Ion Phys.) 25 (2006) 187. (8 pages)
239. [Can the neutron capture cross sections be measured with Coulomb dissociation?](#), Á. Horvath, C.A. Bertulani, et al., Eur. Phys. J. A 27, Supp. 1 (2006) 217. (4 pages)
240. [Electron scattering on halo nuclei](#), C.A. Bertulani, Phys. Lett. B 624 (2005) 203. (7 pages)
241. [Knockout from 46Ar: l=3 removal and deviations from the regional theory](#), A. Gade, D.A. Bazin, C.A. Bertulani, B.A. Brown, C.M. Campbell, D.C. Dinca et al., Phys. Rev. C 71, 051301(RC) (2005). (5 pages)
242. [New 32Cl\(p,gamma\)33Ar reaction rate for astrophysical rp-process calculations](#), H. Schatz, C.A. Bertulani, A.B. Brown, R. R. C. Clement, A.A. Sakharuk, and B. Sherrill, Phys. Rev. C 72, 065804 (2005). (7 pages)
243. [Physics of ultraperipheral relativistic nuclear collisions](#), C.A. Bertulani, S. Klein and J. Nystrand, Ann. Rev. Nuc. Part. Sci. 55 (2005) 271. (41 pages)
244. [Relativistic continuum-continuum coupling in reactions with halo nuclei](#), C.A. Bertulani, Phys. Rev. Lett. 94, 072701 (2005). (4 pages)
245. [Momentum distributions in stripping reactions of radioactive projectiles at intermediate energies](#), C.A. Bertulani and P.G. Hansen, Phys. Rev. C70, 034609 (2004). (13 pages)
246. [Electronic stopping in astrophysical fusion reactions](#), C.A. Bertulani, Phys. Lett. B 585 (2004) 35. (7 pages)
247. [Proton-tetraneutron elastic scattering](#), B. Sherrill and C.A. Bertulani, Phys. Rev. C 69, 027601 (2004). (2 pages)
248. [The stopping of low energy ions in reactions of astrophysical interest](#), C.A. Bertulani, Prog. Theo. Phys. Suppl. 154, 325 (2004). (8 pages)
249. [Proton vs. neutron halo breakup](#), A. Bonaccorso, D. Brink and C.A. Bertulani, Phys. Rev. C 69, 024615 (2004). (7 pages)

250. [Nuclear astrophysics in rare isotope facilities](#), C.A. Bertulani, Acta Phys. Hung. (Heavy Ion Phys.) 21, 307 (2004). (8 pages)
251. [RADCAP: A potential model tool for radiative capture reactions](#), C.A. Bertulani, Comput. Phys. Commun. 156 (2003) 123. (19 pages)
252. [Intermediate Coulomb excitation as a probe of nuclear structure at radioactive beam facilities](#), C.A. Bertulani, A. Stuchbery, T. Mertzimekis and A. Davies, Phys. Rev. C 68, 044609 (2003). (10 pages)
253. [Two-phonon giant resonances in \$^{136}\text{Xe}\$, \$^{208}\text{Pb}\$, and \$^{238}\text{U}\$](#) , K. Boretzky, A. Grünschoß, S. Ilievski, P. Adrich, T. Aumann, C. A. Bertulani, et al., Phys. Rev. C 68, 024317 (2003). (17 pages)
254. [Entangled states in reactions with rare isotopes and the EPR paradox](#), C.A Bertulani, J. Phys. G29 (2003) 769. (7 pages)
255. [Tetraneutron as a dineutron-dineutron molecule](#), C.A. Bertulani and V.G. Zelevinsky, J. Phys. G 29 (2003) 2431. (7 pages)
256. [Breakup of the weakly bound \$^{17}\text{F}\$ nucleus](#), C.A. Bertulani and P. Danielewicz, Nucl. Phys. A717 (2003) 199. (15 pages)
257. [Photon exchange in nucleus-nucleus collisions: Topic Review](#), C.A. Bertulani, Int. Journ. Mod. Phys. A18 (2003) 685. (51 pages)
258. [DWEIKO: A computer program for nuclear scattering at intermediate and high energies](#), C.A. Bertulani, C.M. Campbell, and T. Glasmacher, Comput. Phys. Commun. 152 (2003) 317. (24 pages)
259. [Coupling of giant resonances to soft E1 and E2 modes in boron-8](#), C.A. Bertulani, Phys. Lett. B 3 (2002) 205. (5 pages)
260. [Effective field theory for halo nuclei](#), C.A. Bertulani, H.-W. Hammer and U. van Kolck, Nucl. Phys. A 712 (2002) 37. (22 pages)
261. [One- and two-photon physics with relativistic heavy ions](#), C.A. Bertulani, Acta Phys. Hung. (Heavy Ion Phys.) 15 (2002) 359. (8 pages)
262. [Peripheral heavy ion collisions as a probe of the nuclear gluon distribution](#), V.P. Goncalves and C.A. Bertulani, Phys. Rev. C 65, 054905 (2002). (8 pages)
263. [Multipole expansion in relativistic Coulomb excitation](#), H. Esbensen and C.A. Bertulani, Phys. Rev. C 65 (2002) 024605. (7 pages)
264. [Two- and three-photon fusion in relativistic heavy ion collisions](#), C.A. Bertulani and F. Navarra, Nucl. Phys. A703 (2002) 861. (15 pages)
265. [Description of double giant dipole resonance within the phonon damping mode](#), C.A. Bertulani, P.F. Bortignon, V.Yu. Ponomarev, V.V. Voronov, Phys. Rev. Lett. 87 (2001) 269201. (1 page)
266. [Peripheral Collisions of Relativistic Heavy Ions](#), C.A. Bertulani, Acta Phys. Hung. (Heavy Ion Phys.) 14 (2001) 51. (6 pages)
267. [Density dependence of in-medium nucleon-nucleon cross sections](#), C.A. Bertulani, J. Phys. G 27 (2001) L67. (5 pages)
268. [The electromagnetic interaction of relativistic heavy ions](#), C.A. Bertulani, Phys. Rev. A 63 (2001) 062706. (4 pages)
269. [Pair production with capture in peripheral collisions with heavy ions](#), C.A. Bertulani and D. Dolci, Nucl. Phys. A 683 (2001) 635. (14 pages)

270. [The stopping of swift protons in matter and its implication for nuclear astrophysics](#), C.A. Bertulani and D.T. de Paula, Phys. Rev. C 62, 045802 (2000). (5 pages)
271. [Influence of damping on the excitation of the double giant resonance](#), G. Baur, C.A. Bertulani and D. Dolci, Eur. Phys. J. A7 (2000) 55. (4 pages)
272. [Charge exchange in relativistic heavy ion collisions](#), C.A. Bertulani and D. Dolci, Nucl. Phys. A 674 (2000) 527. (12 pages)
273. [Impact parameter dependence of giant resonance excitations in relativistic heavy ion collisions](#), A. Grünschloss et al., LAND collaboration, and C.A. Bertulani, Phys. Rev. C60, 051601 (1999). (4 pages)
274. [Measurement of the Coulomb dissociation of \$^8\text{B}\$ at 254 MeV/nucleon and the \$^8\text{B}\$ solar neutrino flux](#), N. Iwasa, et al., Phys. Rev. Lett. 83 (1999) 2910. (4 pages)
275. [Microscopic studies of the double giant resonance](#), C.A. Bertulani and V. Ponomarev, Phys. Reports 321 (1999) 139. (113 pages)
276. [Bremsstrahlung radiation by a tunneling particle](#), C.A. Bertulani, D. T. de Paula, and V.G. Zelevinsky, Phys. Rev. C 60, 031602 (1999). (4 pages)
277. [Isospin structure of one- and two-phonon GDR excitations](#), A.F.R. de Toledo Piza, M.S. Hussein, B. V. Carlson, C.A. Bertulani, L.F. Canto and S. Cruz-Barrios, Phys. Rev. C 59 (1999) 3093. (6 pages)
278. [The astrophysical reaction \$^8\text{Li} \(n, \gamma\) ^9\text{Li}\$ from measurements by reverse kinematics](#), C.A. Bertulani, J. Phys. G 25 (1999) 1959. (5 pages)
279. [RELEX: A computer program for relativistic multiple Coulomb and nuclear Excitation](#), C.A. Bertulani, Computer Physics Communications 116 (1999) 345. (8 pages)
280. [Double giant resonances in deformed nuclei](#), V.Yu. Ponomarev, C.A. Bertulani, and A.V. Sushkov, Phys. Rev. C 58 (1998) 2750. (4 pages)
281. [Transitions between complex configurations in the excitation of the double giant resonance](#), V.Yu. Ponomarev and C.A. Bertulani, Phys. Rev. C 57 (1998) 3476. (4 pages)
282. [A study of the Coulomb dissociation of \$^8\text{B}\$ and the \$^7\text{Be}\(p, \gamma\) ^8\text{B}\$ reaction](#), C.A. Bertulani and M. Gai, Nucl. Phys. A636 (1998) 227. (13 pages)
283. [Multiphonon giant resonances, "Topic Review"](#), C.A. Bertulani, J. Phys. G 24 (1998) 1. (15 pages)
284. [Theoretical calculation of antihydrogen production and accuracy of the equivalent photon approximation](#), C.A. Bertulani and G. Baur, Phys. Rev. D58: 034005, 1998. (9 pages)
285. [Energy dependence of effective interactions in the breakup of halo nuclei](#), C.A. Bertulani, P. Lotti and H. Sagawa, Phys. Rev. C 57 (1998) 217. (6 pages)
286. [Gravity effects on nuclear reactions at low energies](#), M.S. Hussein, R. Lichtenthäler F., M.P. Pato and C.A. Bertulani, Braz. Jour. Phys. 27 (1997) 464. (11 pages)
287. [Two-phonon background for the double giant resonance](#), V.Yu. Ponomarev and C.A. Bertulani, Phys. Rev. Lett. 79 (1997) 3853. (4 pages)
288. [Small effects in astrophysical fusion reactions](#), A. B. Balantekin, C. A. Bertulani, M. S. Hussein, Nucl. Phys. A 627 (1997) 324. (10 pages)

289. [Nuclear astrophysics in storage rings](#), C.A. Bertulani, Nucl. Phys. A 626 (1997) 187-198. (12 pages)
290. [Fermi and Gamow-Teller strength in charge exchange with radioactive beams](#), C. A. Bertulani and P. Lotti, Phys. Lett. B 402 (1997) 237. (6 pages)
291. [Elastic and inelastic scattering of exotic nuclei](#), A.A. Korshennikov, E.A. Kuzmin, E.Yu. Nikolskii, C.A. Bertulani, et al., Nucl. Phys. A 616 (1997) 189c. (12 pages)
292. [A Quantum-mechanical equivalent-photon spectrum for heavy-ion physics: comment](#), G. Baur and C.A. Bertulani, Phys. Rev. C 56 (1997) 581. (2 pages)
293. [Scattering of radioactive nuclei \$^6\text{He}\$ and \$^3\text{H}\$ by protons. Effects of neutron skin and halo in \$^6\text{He}\$, \$^8\text{He}\$, and \$^{11}\text{Li}\$](#) , A.A. Korshennikov, E.Yu. Nikolskii, C.A. Bertulani, et al, Nucl. Phys. A617 (1997) 45. (12 pages)
294. [First study of heavy-ion mirror charge-exchange: errata](#), M. Steiner, S. M. Austin, D. Bazin, W. Benenson, C. A. Bertulani, et al., Phys. Rev. Lett. 76 (1996) 3042. (1 page)
295. [Electromagnetic excitation of unstable nuclei](#), C. A. Bertulani, Braz. J. Phys. 26 (1996) 618-627. (10 pages)
296. [Excitation of the two-phonon giant dipole resonance in \$^{238}\text{U}\$ studied via inclusive measurements of neutron-removal cross sections](#), T. Aumann, K. Suemmerer, C.A. Bertulani, J.V. Kratz, Nucl. Phys. A599 (1996) 321. (6 pages)
297. [Multipole excitations in light neutron-rich nuclei](#), H. Sagawa and C.A. Bertulani, Prog. Theo. Phys. Supp. 124 (1996) 143. (11 pages)
298. [\$^7\text{Be}\(p, \gamma\)^8\text{B}\$ revisited](#), C.A. Bertulani, Z. Phys. A356 (1996) 293. (5 pages)
299. [Quenching of \$1+\$ excitations in the double giant resonance](#), C.A. Bertulani, V. Ponomarev, and V. Voronov, Phys. Lett. B388 (1996) 457. (5 pages)
300. [First study of heavy-ion mirror charge-exchange](#), M. Steiner, S. M. Austin, D. Bazin, W. Benenson, C. A. Bertulani, et al., Phys. Rev. Lett. 76 (1996) 26. (4 pages)
301. [Theory of multiphonon excitation in heavy-ion collisions](#), C.A. Bertulani, L.F. Canto, M.S. Hussein and A.F.R. de Toledo Piza, Phys. Rev. C 53 (1996) 334. (13 pages)
302. [A coupled-channels study of Coulomb excitation of \$^{11}\text{Be}\$ projectiles](#), C.A. Bertulani, L.F. Canto and M.S. Hussein, Phys. Lett. B353 (1995) 413. (4 pages)
303. [Momentum distributions of \$^9\text{Li}\$ fragments from the break-up of \$^{11}\text{Li}\$ and the neutron halo](#), N.A. Orr, N. Anantaraman, S.A. Austin, C.A. Bertulani, et al., Phys. Rev. C 51 (1995) 3116. (11 pages)
304. [Probing the ground-state and transition densities of halo nuclei](#), C.A. Bertulani and H. Sagawa, Nucl. Phys. A588 (1995) 667. (26 pages)
305. [Fusion of Halo Nuclei](#), M.S. Hussein, C.A. Bertulani, L.F. Canto, R. Donangelo, M.P. Pato and A.F.R. de Toledo Piza, Nucl. Phys. A 588 (1995) 85c. (5 pages)
306. Solar Neutrinos (in Portuguese), C.A. Bertulani, Ciência Hoje 18 (1995) 52. (6 pages)

307. [Comment: On the E2 contribution to the \$8\text{B} \rightarrow p + 7\text{Be}\$ Coulomb dissociation cross section](#), M. Gai and C.A. Bertulani, Phys. Rev. C 52 (1995) 1706. (3 pages)
308. [Neutron removal in peripheral heavy ion collisions](#), T. Aumann, C.A. Bertulani and K. Suemmerer, Phys. Rev. C 51 (1995) 416. (4 pages)
309. [The photodissociation of \$8\text{B}\$ and the solar neutrino problem](#), C.A. Bertulani, Nucl. Phys. A 587 (1995) 318. (21 pages)
310. [Higher-order dynamical effects in Coulomb dissociation](#), H. Esbensen, G.F. Bertsch and C.A. Bertulani, Nucl. Phys. A 581 (1995) 107. (12 pages)
311. [Neutron halo effects in proton elastic scattering](#), L.V. Chulkov, C.A. Bertulani and A.A. Korshennikov, Nucl. Phys. A 587 (1995) 291. (10 pages)
312. [Coulomb reacceleration as a clock for nuclear reactions - A two-dimensional model](#), C.A. Bertulani and G.F. Bertsch, Phys. Rev. C 49 (1994) 2834. (4 pages)
313. [Mott scattering as a probe of long range QCD effects](#), C.A. Bertulani, A.B. Balantekin, and E. Ditzel, Phys. Rev. C 50 (1994) 1104. (6 pages)
314. [Relativistic heavy ion physics without nuclear contact](#), C.A. Bertulani and G. Baur, Physics Today, March 1994, p. 22. This article was [cover](#) of Physics Today. Cover [caption](#). (6 pages)
315. [The astrophysical reactions \$^{12}\text{C}\(\alpha, \gamma\)^{16}\text{O}\$ and \$^7\text{Be}\(p, \gamma\)^8\text{B}\$ and Coulomb dissociation experiments](#), C.A. Bertulani, Phys. Rev. C 49 (1994) 2688. (7 pages)
316. [Excitation of multiphonon resonances in relativistic heavy ion collisions](#), C.A. Bertulani and V. Zelevinsky, Nucl. Phys. A568 (1994) 931. (22 pages)
317. [Relativistic Coulomb excitation by a deformed projectile](#), C.A. Bertulani, Phys. Lett. B 319 (1993) 421. (4 pages)
318. [Multiphonon resonances in heavy ion scattering](#), C.A. Bertulani and V. Zelevinsky, Phys. Rev. Lett. 71 (1993) 967. (4 pages)
319. [Electromagnetic excitation of \$^{11}\text{Li}\$](#) , D. Sackett, K. Ieki, A. Galonsky, C.A. Bertulani, et al., Phys. Rev. C 48 (1993) 118. (18 pages)
320. [Momentum fluctuations in reactions with neutron rich nuclei](#), C.A. Bertulani and K.W. McVoy, Phys. Rev. C 48 (1993) 2534. (3 pages)
321. [Molecular bonding effects in the fusion of halo nuclei](#), C.A. Bertulani and A.B. Balantekin, Phys. Lett. B 314 (1993) 275. (4 pages)
322. [Heavy Ion Excitation of Giant Resonances: A Bridge from the Elastic Scattering to the Inelastic Data](#), A.N.F. Aleixo, C.A. Bertulani and M.S. Hussein, Mod. Phys. Lett. A8 (1993) 997. (12 pages)
323. [Coulomb reacceleration as a clock for nuclear reactions](#), G.F. Bertsch and C.A. Bertulani, Nucl. Phys. A 556 (1993) 136. (11 pages)
324. [Differential cross sections of soft multipole states](#), C.A. Bertulani and H. Sagawa, Phys. Lett. B 300 (1993) 205. (5 pages)
325. [Coulomb dissociation of \$^{11}\text{Li}\$](#) , K. Ieki, D. Sackett, A. Galonsky, C.A. Bertulani, et al., Phys. Rev. Lett. 70 (1993) 730. (4 pages)

326. [Excitation and gamma-decay of giant resonances in high-energy collisions](#), C.A. Bertulani and A.M. Nathan, Nucl. Phys. A 554 (1993) 158. (15 pages)
327. [The structure and reactions of neutron-rich nuclei](#), C.A. Bertulani, L.F. Canto and M.S. Hussein, Physics Reports 226 (1993) 281. (96 pages)
328. [Charge-exchange reactions in high-energy heavy ion collisions](#), C.A. Bertulani, Nucl. Phys. A 554 (1993) 493. (16 pages)
329. [Momentum distributions of \$^9\text{Li}\$ fragments following the break-up of \$^{11}\text{Li}\$](#) , N.A. Orr, N. Anantaraman, S.A. Austin, C.A. Bertulani, et al., Phys. Rev. Lett. 69 (1992) 2050. (4 pages)
330. [Multipole response of \$^{11}\text{Li}\$](#) , C.A. Bertulani and A. Sustich, Phys. Rev. C 46 (1992) 2340. (4 pages)
331. [Momentum distributions in radioactive beam interactions](#), C.A. Bertulani and K.W. McVoy, Phys. Rev. C 46 (1992) 2638. (4 pages)
332. [Closed form theory of the elastic breakup reactions and applications to heavy-ions](#), C.A. Bertulani, L.F. Canto and M.S. Hussein, Phys. Rev. C 45 (1992) 2995. (5 pages)
333. [Nucleon-nucleon correlation effects in the elastic scattering of \$\alpha\$ -particles from \$^{11}\text{Li}\$ at 26 MeV/nucleon](#), A.N.F. Aleixo, C.A. Bertulani and M.S. Hussein, Phys. Rev. C 45 (1992) 2403. (6 pages)
334. [Semiclassical calculation of Coulomb break-up of weakly-bound nuclei](#), C.A. Bertulani and L.F. Canto, Nucl. Phys. A 539 (1992) 163. (14 pages)
335. [Direct vs. statistical breakup in the \$^{16}\text{O} + ^{27}\text{Al}\$, \$^{28}\text{Si}\$ reactions at \$E/A \approx 4\$ MeV](#), N. Added, R.M. dos Anjos, N. Carlin, L. Fante Jr., M.C.S. Figueira, R. Matheus, E.M. Szanto, A. Szanto de Toledo, M.S. Hussein, C.A. Bertulani and L.F. Canto, Nucl. Phys. A 540 (1992) 328. (13 pages)
336. [Higher-order electromagnetic processes in the dissociation of fast particles](#), G. Baur, C.A. Bertulani and D.M. Kalassa, Nucl. Phys. A 550 (1992) 527. (13 pages)
337. [Low energy behavior of \$^{11}\text{Li}\$ dissociation cross sections](#), M.S. Hussein, M.P. Pato and C.A. Bertulani, Phys. Rev. C 44 (1991) R2219. (3 pages)
338. [RPA-cluster model for the strength function of \$^{11}\text{Li}\$](#) , N. Teruya, C.A. Bertulani, S. Krewald, H. Dias and M. S. Hussein, Phys. Rev. C 43 (1991) 2049. (3 pages)
339. [The elastic scattering of protons from \$^{11}\text{Li}\$ and the neutron halo](#), A.N.F. Aleixo, C.A. Bertulani and M. S. Hussein, Phys. Rev. C 43 (1991) 2722. (6 pages)
340. [Heavy ion excitation of giant resonances at intermediate energies](#), A.N.F. Aleixo and C. A. Bertulani, Nucl. Phys. A 528 (1991) 436. (11 pages)
341. [Two-neutron removal cross sections of \$^{11}\text{Li}\$ projectiles](#), C. A. Bertulani, G. Baur and M. S. Hussein, Nucl. Phys. 526 (1991) 751. (11 pages)
342. [Direct breakup of weakly-bound projectiles and its relation to astrophysical reactions](#), C.A. Bertulani and M.S. Hussein, Nucl. Phys. 524 (1991) 306. (15 pages)

343. [Microscopic multiple scattering theory of the heavy ion total reaction cross section and applications to stable and exotic nuclei](#), M.S. Hussein, R.A. Rego and C.A. Bertulani, *Physics Reports* 201 (1991) 279. (56 pages)
344. [Relativistic Coulomb excitation of giant resonances in the hydrodynamical model](#), A.C. Vasconcellos-Gomes and C.A. Bertulani, *Nucl. Phys. A* 517 (1990) 639. (20 pages)
345. [Elastic Coulomb scattering of heavy ions at intermediate energies](#), C.E. Aguiar, A.N.F. Aleixo and C.A. Bertulani, *Phys. Rev. C* 42 (1990) 2180. (7 pages)
346. *Reactions with Exotic Nuclei (in Portuguese)*, C.A. Bertulani, *Ciência Hoje* 11 (1990) 60. (6 pages)
347. [Color Van der Waals force acting in heavy ion scattering at low energies](#), M.S. Hussein, C.L. Lima, M.P. Pato and C.A. Bertulani, *Phys. Rev. Lett.* 65 (1990) 839. (4 pages)
348. [Direct versus sequential fragmentation of neutron rich nuclei](#), C.A. Bertulani and M.S. Hussein, *Phys. Rev. Lett.* 64 (1990) 1099. (4 pages)
349. [Electromagnetic physics at relativistic heavy ion colliders: for worse and for better](#), G. Baur and C.A. Bertulani, *Nucl. Phys. A* 505 (1989) 835.
350. [Coulomb excitation in intermediate energy collisions](#), A.N.F. Aleixo and C.A. Bertulani, *Nucl. Phys. A* 505 (1989) 448. (14 pages)
351. [Short Range Correlations and Nucleon Emission in Relativistic Heavy Ion Collisions](#), C.A. Bertulani, L.F. Canto, R. Donangelo and J.O. Rasmussen, *Mod. Phys. Lett. A* 4 (1989) 1315. (8 pages)
352. *Matéria Supercomprimida e Superaquecida*, C.A. Bertulani, *Ciência Hoje* 8 (1988) 48 [in Portuguese] . (8 pages)
353. [Pair production with atomic shell capture in relativistic heavy ion collisions](#), C.A. Bertulani and G. Baur, *Braz. J. Phys.* 18 (1988) 559. (15 pages)
354. [Electromagnetic production of lepton pairs in relativistic heavy ion collisions](#), C.A. Bertulani and G. Baur, *Braz. J. Phys.* 18 (1988) 525. (16 pages)
355. [Electromagnetic excitation of one- and multiphonon giant resonance states with relativistic heavy ions](#), G. Baur and C.A. Bertulani, *Nucl. Phys. A* 482 (1988) 313c. (16 pages)
356. [Electromagnetic processes in relativistic heavy ion collisions](#), C.A. Bertulani and G. Baur, *Phys. Reports* 163 (1988) 299. (110 pages)
357. [Coincidence cross-sections for the dissociation of light ions in high-energy collisions](#), C.A. Bertulani and G. Baur, *Nucl. Phys. A* 480 (1988) 615. (14 pages)
358. [Gamma-gamma physics with relativistic heavy ions](#), G. Baur and C.A. Bertulani, *Z. Phys. A* 330 (1988) 77. (5 pages)
359. [Electromagnetic production of heavy leptons in relativistic heavy ion collisions](#), G. Baur and C.A. Bertulani, *Phys. Rev. C* 35 (1987) 836. (2 pages)
360. [Multistep fragmentation of heavy ions in peripheral collisions at relativistic energies](#), G. Baur and C.A. Bertulani, *Phys. Rev. C* 34 (1986) 1654. (9 pages)
361. [Multiple electromagnetic excitations of giant dipole phonons in relativistic heavy ion collisions](#), G. Baur and C.A. Bertulani, *Phys. Lett. B* 174 (1986) 23. (4 pages)

362. [Coulomb dissociation as a source of information on radioactive capture processes of astrophysical interest](#), G. Baur, C.A. Bertulani and H. Rebel, Nucl. Phys. A458 (1986) 188. (17 pages)
363. [Electromagnetic processes in relativistic heavy ion collisions](#), C.A. Bertulani and G. Baur, Nucl. Phys. A 458 (1986) 725. (20 pages)
364. [Heavy Ion Reaction Cross-sections](#), C.A. Bertulani, Braz. J. Phys. 16 (1986) 380. (12 pages)
365. [Quantal and semiclassical methods in relativistic electromagnetic excitation](#), C.A. Bertulani and G. Baur, Phys. Rev. C 33 (1986) 910. (5 pages)
366. [Relativistic Coulomb collisions](#), C.A. Bertulani and G. Baur, Nucl. Phys. A 442 (1985) 739. (14 pages)

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