

## Publications in Refereed Journals

1. Chiral Uncertainties in *ab initio* elastic nucleon-nucleus scattering, R.B. Baker, M. Burrows, Ch. Elster, K.D. Launey, P. Maris, G. Popa, S.P. Weppner, to appear in *Frontiers in Physics*.
2. Perspectives on few-body cluster structures in exotic nuclei, D. Bazin, K. Becker, F. Bonaiti, Ch. Elster, K. Fosse, T. Frederico, A. Gnech, C. Hebborn, M. Higgins, L. Hlophe, B. Kay, S. König, K. Kravvaris, J. Lubian, A. Macchiavelli, F. Nunes, L. Platter, G. Potel, X. Zhang, [arxiv.org/abs/2211.06281](https://arxiv.org/abs/2211.06281), submitted to Few-Body Systems.
3. Optical Potentials for the rare-isotope beam era, C. Hebborn, F.M. Nunes, G. Potel, W.H. Dickhoff, J.W. Holt, M.C. Atkinson, R.B. Baker, C. Barbieri, G. Blanchon, M. Burrows, R. Capote, P. Danielewicz, M. Dupuis, Ch. Elster, J.E. Escher, L. Hlope, A. Idini, H. Jayatissa, B.P. Kay, K. Kravvaris, J. Manfredi, A. Mercenne, B. Morillon, G. Perdikakis, C.D. Pruitt, G.H. Sargsyan, I.J. Thompson, M. Vorabbi, T.R. Whitehead, [arXiv:2210.07293](https://arxiv.org/abs/2210.07293), submitted to Journal of Physics G.
4. *Ab initio* nucleon-nucleus elastic scattering with chiral effective field theory uncertainties, R.B. Baker, B. McClung, Ch. Elster, P. Maris, S.P. Weppner, M. Burrows, G. Popa, [arXiv:2112.02442](https://arxiv.org/abs/2112.02442), Phys. Rev. **C106**, 064605 (2022)
5. Nonlocal structure of leading order *ab initio* effective potentials for proton elastic scattering from light nuclei, Ch. Elster, M. Burrows, R.B. Baker, S.P. Weppner, K.D. Launey, P. Maris, G. Popa, Few-Body Systems **63**, 1 (2022). DOI:10.1007/s00601-021-01702-4.
6. Nuclear spin features relevant to *ab initio* nucleon-nucleus elastic scattering, R.B. Baker, M. Burrows, Ch. Elster, K.D. Launey, P. Maris, G. Popa, S.P. Weppner, Phys. Rev. **C103**, 054314 (2021).
7. *Ab initio* Leading Order Effective Potentials for Elastic Nucleon-Nucleus Scattering, M. Burrows, R.B. Baker, Ch. Elster, S.P. Weppner, K.D. Launey, P. Maris, G. Popa, Phys. Rev. **C102**, 034606 (2020).
8. From Bound States to the Continuum, C.W. Johnson, K.D. Launey, N. Auerbach, S. Bacca, B.R. Barrett, C. Brune, M.A. Caprio, P. Descouvemont, W.H. Dickhoff, Ch. Elster, P.J. Fasano, K. Fosse, H. Hergert, M. Hjorth-Jensen, L. Hlophe, B. Hu, R.M. Id Betan, A. Idini, S. König, K. Kravvaris, D. Lee, Jin Lei, P. Maris, A. Mercenne, K. Minomo, R. Navarro Perez, W. Nazarewicz, F.M. Nunes, M. Ploszajczak, S. Quaglioni, J. Rotureau, G. Rupak, A.M. Shirokov, I. Thompson, J.P. Vary, A. Volya, Furong Xu, V. Zelevinsky, X. Zhang, J. Phys. **G47**, 123001 (2020).

9. Deuteron-alpha scattering: separable vs nonseparable Faddeev approach, L. Hlophe, Jin Lei, Ch. Elster, A. Nogga, F.M. Nunes, D. Jurciukonis, A. Deltuva, Phys. Rev. **C100**, 034609 (2019).
10. *Ab initio* Folding Potentials for Nucleon-Nucleus Scattering based on NCSM One-Body Densities, M. Burrows, Ch. Elster, S.P. Weppner, K.D. Launey, P. Maris, A. Nogga, G. Popa, Phys. Rev. **C99**, 004603 (2019).
11. Few-body universality in the deuteron-alpha system, Jin Lei, L. Hlophe, Ch. Elster, A. Nogga, F.M. Nunes, D.R. Phillips, Phys. Rev. **C98**, 051001(R) (2018).
12. *Ab initio* Translationally Invariant Nonlocal One-body Densities from No-core Shell-model Theory, M. Burrows, Ch. Elster, G. Popa, K.D. Launey, A. Nogga, P. Maris, Phys. Rev. **C97**, 024325 (2018).
13.  ${}^6\text{Li}$  in a Three-Body Model with Realistic Forces: Separable vs. Non-Separable Approach, L. Hlophe, Jin Lei, Ch. Elster, A. Nogga, F.M. Nunes, Phys. Rev. **C96**, 064003 (2017).
14. Separable Representation of Multichannel Nucleon-Nucleus Optical Potentials, L. Hlophe and Ch. Elster, Phys. Rev. **C95**, 054617 (2017).
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17. Coulomb Wave Functions in Momentum Space, V. Eremenko, N.J. Upadhyay, I.J. Thompson, Ch. Elster, F.M. Nunes, G. Arbanas, J.E. Escher, L. Hlophe, Comp. Phys. Comm. **187**, 195 (2015).
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19. The Relativistic Bound State in a 3D Formulation, M.R. Hadizadeh, Ch. Elster, W.N. Polyzou, Phys. Rev. **C90**, 054002 (2014).
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25. Separable Representation of Phenomenological Optical Potentials of Woods-Saxon Type, L. Hlophe, Ch. Elster, R.C. Johnson, N.J Upadhyay, F.M. Nunes, G. Arbanas, V. Eremenko, J.E. Escher, I.J. Thompson, *Phys. Rev. C* **88**, 064608 (2013).
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42. A New Approach to the 3D Faddeev Equation for Three-Body Scattering, Ch. Elster, W. Glöckle, H. Witala, Few Body Syst. **45** 1, (2009).
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79. Two-Body T-Matrices without Angular Momentum Decomposition: Energy and Momentum Dependencies, Ch. Elster, J.H. Thomas, and W. Glöckle, Few-Body Systems **24**, 55 (1998).
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**Contributed Papers to Conferences,  
Invited Talks and Oral Presentations at Professional Meetings**

1. 2022 Fall Meeting of the APS Division of Nuclear Physics, October 28-30, 2022, New Orleans, LA, ‘Nucleon-nucleus elastic scattering from a symmetry-adapted framework.’, R.B. Baker, Ch. Elster, K.D. Launey, G. Popa.
2. 2022 Fall Meeting of the APS Division of Nuclear Physics, October 28-30, 2022, New Orleans, LA, ‘*Ab initio* elastic scattering from light nuclei based on different chiral two-nucleon forces.’, Ch. Elster, R.B. Baker, P. Maris, G. Popa, S.P. Weppner, M. Burrows.
3. 2022 FRIB-TA Topical Program on Few-Body cluster structure in exotic nuclei and their role in FRIB experiments, August 15-26, 2022, Michigan State University, Inv. Talk ‘Extending the leading order Watson optical potential to incorporate a cluster structure’, Ch. Elster
4. Sixth Conference on Nuclei and Mesoscopic Physics (NMP22), May 23-27, 2022, Michigan State University, ‘Elastic scattering observables using realistic NN interactions for Carbon isotopes’, G. Popa, R.B. Baker, M. Burrows, Ch. Elster, K.D. Launey, P. Maris, S.P. Weppner
5. 2022 FRIB-TA Topical Program on Optical Potentials, March 22 - April 1, 2022, Michigan State University, Inv. Talk ‘*Ab initio* effective interaction for elastic nucleon-nucleus scattering in a multiple scattering approach’, Ch. Elster, R.B. Baker, M. Burrows, P. Maris, S.P. Weppner, K.D. Launey, G. Popa
6. 2022 Spring Meeting of the APS Eastern Great Lakes Section, April 1-2, 2022, Youngstown State University, ‘Elastic scattering observables using realistic NN interactions in Carbon-12’, G. Popa, R.B. Baker, Ch. Elster, M. Burrows, P. Maris, K.D. Launey, S.P. Weppner
7. 2021 Conference on Information and Statistics in Nuclear Experiment and Theory (ISNET 8), December 13-16, 2021, NSCL/FRIB, Michigan State University, ‘Quantifying truncation error of chiral effective field theory in *ab initio* nucleon-nucleus elastic scattering’, R.B. Baker, Ch. Elster, B. McClung, G. Popa, P. Maris, S.P. Weppner, M. Burrows.

8. 2021 Fall Meeting of the APS Division of Nuclear Physics, October 11-14, 2021, (online) ‘*Ab initio* elastic scattering with chiral NN forces up to NNLO (I):  $p+^{16}\text{O}$ ’, R.B. Baker, Ch. Elster, B. McClung, P. Maris, S.P. Weppner, M. Burrows, K.D. Launey, G. Popa.
9. 2021 Fall Meeting of the APS Division of Nuclear Physics, October 11-14, 2021, (online) ‘*Ab initio* elastic scattering with chiral NN forces up to NNLO (II):  $n+^{12}\text{C}$ ’, Ch. Elster, R.B. Baker, B. McClung, P. Maris, S.P. Weppner, M. Burrows, K.D. Launey, G. Popa.
10. Spring 2021 Meeting of the APS Ohio-Region Section, online, April 9-10, 2021, ‘Carbon isotopes viewed from *ab initio* structure and elastic scattering’, G. Popa, Ch. Elster, M. Burrows, R. B. Baker, P. Maris, S. P. Weppner, K. D. Launey.
11. The 8th Asia-Pacific Conference on Few-Body Problems in Physics (APFB2020), February 28 - March 5, 2021, Kanazawa, Japan, ‘Leading Order *ab initio* Effective Potentials for Proton Elastic Scattering from Light Nuclei’, Ch. Elster, M. Burrows, R.B. Baker, S.P. Weppner, K. Launey, P. Maris, G. Popa.
12. 2020 Fall Meeting of the APS Division of Nuclear Physics, October 29 - November 1, 2020, Online, Inv. Talk, ‘Structure, Reactions, and Effective Interactions’.
13. 2020 Fall Meeting of the APS Division of Nuclear Physics, October 29 - November 1, 2020, Online, ‘*Ab initio* Effective Potentials for Nucleon-Nucleus Elastic Scattering on Light Nuclei’, M. Burrows, R.B. Baker, Ch. Elster, S.P. Weppner, K.D. Launey, P. Maris, G. Popa
14. 2020 Fall Meeting of the APS Division of Nuclear Physics, October 29 - November 1, 2020, Online, ‘Spin structure of light nuclei related to nucleon-nucleus elastic scattering’, R.B. Baker, M. Burrows, Ch. Elster, G. Popa, K.D. Launey, P. Maris, S.P. Weppner
15. 2019 Fall Meeting of the APS Division of Nuclear Physics, October 13-17, 2019, Crystal City, VA, ‘Deuteron-alpha scattering: separable vs nonseparable Faddeev approach’, L. Hlophe, Jin Lei, Ch. Elster, A. Nogga, F.M. Nunes, D. Jurciukonis, A. Deltuva.
16. 2019 Fall Meeting of the APS Division of Nuclear Physics, October 13-17, 2019, Crystal City, VA, ‘*Ab initio* NCSM One-Body Densities as Input to Effective Potentials for Nucleon-Nucleus Elastic Scattering’, M. Burrows, Ch. Elster, G. Popa, K. Launey, P. Maris, S. Weppner.
17. Fall 2019 Meeting of the Ohio-Region Section and Michigan Section of the American Association of Physics Teachers, October 11-12, 2019, Flint, MI, ‘Effect of Nonlocality in Nuclear Potentials on Nuclear Observables and Scattering Wave Functions’, G. Tupper, Jin Lei, Ch. Elster.

18. 24th European Conference on Few-Body Problems in Physics (EFB24), September 1-6, Surrey, Guildford, UK, ‘Deuteron-Alpha Scattering in a Three-Body Approach’, Ch. Elster, L. Hlophe, Jin Lei, F. Nunes, A. Nogga, A. Deltuva.
19. 38th Int. Workshop on Nuclear Theory (IWNT38), June 23-29, 2019, Borovetz, Rila, Bulgaria, ‘*Ab initio* nonlocal NCSM one-body densities as input to folding potentials for proton-nucleus scattering’, G. Popa, M. Burrows, Ch. Elster, K.D. Launey, P. Maris, S.P. Weppner; Proceedings: ‘Spin dependent *ab initio* nonlocal No-Core Shell-Model One-Body Densities’, Nuclear Theory, Vol 38 (2019), ISSN 1313-2822, and <http://arxiv.org/abs/arXiv:1910.00683>
20. Annual Spring Meeting of the APS Ohio-Region Section, March 29-30, 2019, Wooster, OH, ‘Spin-dependent nonlocal translational invariant one-body densities from No-Core Shell Model’, G. Popa, M. Burrows, Ch. Elster, K. Launey, P. Maris, S.P. Weppner, A. Nogga
21. Workshop on Progress in *Ab Initio* Techniques in Nuclear Physics, Feb. 26 - March 1, 2019, TRIUMF, Vancouver, BC Canada, Inv. Talk, ‘Ab initio effective potentials for NA scattering based on NCSM one-body densities’, Ch. Elster, M. Burrows, S.P. Weppner, K. Launey, P. Maris, A. Nogga, G. Popa.
22. International Conference on Nuclear Theory in the Supercomputing Era NTSE-2018, Oct. 29 - Nov. 2, 2018, Daejeon, Republic of Korea, Inv. Talk, ‘Nucleon-Nucleus elastic scattering using *ab initio* folding potentials based on NCSM nonlocal one-body densities’, Ch. Elster
23. International Workshop on Compound-Nuclear Reactins and Related Topics, CNR\*18, Sept. 24-18, 2018, LBNL, Berkely, CA, Inv. Talk, ‘Faddeev Approach to (d,p) Reactions as Tool to Study Exotic Nuclei’, Ch. Elster, L. Hlophe, Jin Lei, A. Nogga, F. Nunes.
24. 22nd International Conference on Few-Body Problems in Physics FB22, July 9-13, 2018, Caen, France, ‘*Ab initio* folding potentials for proton-nucleus scattering based on NCSM nonlocal one-body densities’, Ch. Elster, M. Burrows, S.P. Weppner, K.D. Launey, P. Maris, G. Popa. Proceedings: ‘*Ab initio* folding potentials for proton-nucleus scattering with NCSM nonlocal one-body densities’, Ch. Elster, M. Burrows, S.P. Weppner, K. Launey, P. Maris, G. Popa, CNUM: C18-07-09.8, [fb22-caen.sciencesconf.org](http://fb22-caen.sciencesconf.org)
25. 22nd International Conference on Few-Body Problems in Physics FB22, July 9-13, 2018, Caen, France, ‘Three-Body approach to deuteron-alpha scattering and bound state using realistic forces in a separable or non-separable representation.’, L. Hlophe, J. Lei, Ch. Elster, A. Nogga, F.M. Nunes.

26. Topical Meeting on ‘Nuclear Structure and Reactions for the 2020s’, GANIL, Caen, France, July 2-6, 2018, Inv. Talk, ‘*Ab initio* folding potentials for proton-nucleus scattering based on NCSM nonlocal one-body densities’, Ch. Elster, M. Burrows, S.P. Weppner, K.D. Launey, P. Maris, G. Popa.
27. FRIB Theory Alliance Workshop on Connecting Bound States to the Continuum, June 10-22, 2018, FRIB MSU, East Lansing, MI, Inv. Talk, ‘*Ab initio* folding potentials for proton-nucleus scattering based on NCSM nonlocal one-body densities’, Ch. Elster
28. CUSTIPEN Workshop on the Theory of Rare Nuclear Decays, May 14-19, 2018, Chengdu, China, Inv. Talk, ‘Faddeev Approach to (d,p) Reactions as Tool to Study Exotic Nuclei’, Ch. Elster, L. Hlophe, J. Lei, A. Nogga, F. Nunes.
29. APS April Meeting 2018, April 14-17, 2018, Columbus, OH, ‘Microscopic folding potentials based on NCSM nonlocal densities’. M. Burrows, Ch. Elster, G. Popa, S.P. Weppner, K. Launey, P. Maris, A. Nogga.
30. APS April Meeting 2018, April 14-17, 2018, Columbus, OH, ‘Momentum Space Faddeev Calculations of  $d + \alpha$  Scattering’, J. Lei, L. Hlophe, A. Nogga, F. Nunes.
31. 2017 Fall Meeting of the APS Division of Nuclear Physics, October 25-28, 2017, Pittsburgh, PA, ‘ ${}^6\text{Li}$  and  $d + \alpha$  scattering in a three-body momentum space Faddeev model (I)’, Jin Lei, L. Hlophe, Ch. Elster, A. Nogga, F.M. Nunes.
32. 2017 Fall Meeting of the APS Division of Nuclear Physics, October 25-28, 2017, Pittsburgh, PA, ‘ ${}^6\text{Li}$  and  $d + \alpha$  scattering in a three-body momentum space Faddeev model (II)’, L. Hlophe, Jin Lei, Ch. Elster, A. Nogga, F.M. Nunes.
33. 2017 Fall Meeting of the APS Division of Nuclear Physics, October 25-28, 2017, Pittsburgh, PA, ‘Non-Local Translationally Invariant *ab initio* One-Body Density Matrices’, M. Burrows, Ch. Elster, G. Popa, A. Nogga, K. Launey, P. Maris.
34. International Workshop on Hadrons and Their Properties as a Problem in Strong QCD, October 12-13, 2017, Peking University, Beijing, China, Inv. Talk, ‘Light Nuclei as Few-Body Bound States’, Ch. Elster
35. 16th International Symposium on Capture Gamma-Ray Spectroscopy and Related Topics (CGS16), September 18-22, 2017, Shanghai Jiao Tong University, China, ‘New Developments in Reaction Theory: Preparing for FRIB’, F.M. Nunes, P.C. Capel, Ch. Elster, L. Hlophe, Jin Lei, Weichuan Li, A.E. Lovell, G. Potel, J. Rotureau, and T. Poxon-Pearson. Published in EPJ Web of Conferences **178**, 03001 (2018).

36. 2016 Fall Meeting of the APS Division of Nuclear Physics, October 13-16, 2016, Vancouver, Canada, ‘Separable Multichannel Momentum Space Potentials for Nuclear Reactions’, L. Hlophe, Ch. Elster.
37. Fall 2016 Meeting of the APS Ohio Section, October 7-8, 2016, Bowling Green, OH, ‘Translationally Invariant Local One-Body Densities for  ${}^6\text{He}$ ’, M. Burrows, Ch. Elster, G. Popa.
38. International Conference ‘Nuclear Theory in the Supercomputing Era - 2016 (NTSE-2016)’, Pacific National University, Khabarovsk, Russia, September 19-23, 2016, Inv. Talk: ‘Reactions with Light Nuclei’, Ch. Elster  
Proceedings: ‘Energy Dependent Separable Optical Potentials’, L. Hlophe and Ch. Elster, *arXiv:1612.08710*.
39. ECT\* Workshop ‘Towards consistent approaches for nuclear structure and reactions’, June 6-10, 2016, Trento, Italy, Inv. Talk: ‘Separable Representation for Single and Multi-Channel Optical Potentials’, Ch. Elster.
40. International Workshop on ‘Rare Isotope Science’, December 17-19, 2015, Seoul, S. Korea, Inv. Talk: ‘Theory Challenges for describing Nuclear Reactions’, Ch. Elster.
41. 2015 Fall Meeting of the APS Division of Nuclear Physics, October 20-31, 2015, Santa Fe, NM, ‘Separable coupled-channels momentum space potentials for nuclear reactions’, L. Hlophe, V. Eremenko, Ch. Elster, F. Nunes, G. Arbanas, J. Escher, I. Thompson.
42. 21st International School on Nuclear Physics, Neutron Physics and Applications and International Symposium on Exotic Nuclei (ISEN-2015), September 9-11, 2015, Varna, Bulgaria, ‘Separable Potentials for (d,p) Reaction Calculations’, Inv. Talk, Ch. Elster, Proceedings: Ch. Elster, L. Hlophe, V. Eremenko, F.M. Nunes, I.J. Thompson, G. Arbanas, J.E. Escher, Journal of Physics Conference Series 724, 012014 (2016).
43. 14th International Conference on Nuclear Reaction Mechanisms, June 15-19, 2015, Varenna, Italy, ‘A model of neutron capture and deuteron stripping on deformed nuclei’, G. Arbanas, I.J. Thompson, J.E. Escher, Ch. Elster, F.M. Nunes, CERN-Proceedings-2015-001, Edited by F. Cerutti, M. Chadwick, A. Ferrari, T. Kawano, and P. Schoofs, p. 171 (2016), <https://cds.cern.ch/record/2114737>.
44. 14th International Conference on Nuclear Reaction Mechanisms, June 15-19, 2015, Varenna, Italy, ‘One-nucleon Transfers to Resonance States’, I.J. Thompson, J.E. Escher, G. Arbanas, Ch. Elster, V. Eremenko, L. Hlophe, F.M. Nunes, CERN-Proceedings-2015-001, Edited by F. Cerutti, M. Chadwick, A. Ferrari, T. Kawano, and P. Schoofs, p. 147 (2016), <https://cds.cern.ch/record/2114737>.

45. The 21th International Conference on Few-Body Problems in Physics, May 18-22, 2015, Chicago, USA, ‘Towards a Faddeev-AGS description of  $(d, p)$  reactions with heavy nuclei: Regularizing integrals with Coulomb functions’, V. Eremenko, L. Hlophe, Ch. Elster, F.M. Nunes, I.J. Thompson, G. Arbanas, J.E. Escher, Proceedings: EPJ Web of Conferences **113**, 03016 (2016).
46. The 21th International Conference on Few-Body Problems in Physics, May 18-22, 2015, Chicago, USA, ‘The Relativistic Three-Nucleon Bound State in Three Dimensions’, M.R. Hadizadeh, Ch. Elster, W. N. Polyzou, Proceedings: EPJ Web of Conferences **113**, 03010 (2016).
47. The 21th International Conference on Few-Body Problems in Physics, May 18-22, 2015, Chicago, USA, ‘Three Dimensional SRG Evolution of the NN Interactions Using Picard Iteration’, M.R. Hadizadeh, K.A. Wendt, Ch. Elster, Proceedings: EPJ Web of Conferences **113**, 08008 (2016).
48. The 21th International Conference on Few-Body Problems in Physics, May 18-22, 2015, Chicago, USA, ‘Separable Forces for  $(d, p)$  Reactions in Momentum Space’, L. Hlophe, Ch. Elster, V. Eremenko, F. M. Nunes, I. J. Thompson, G. Arbanas, J. Escher, Proceedings: EPJ Web of Conferences **113**, 08010 (2016).
49. INT workshop on ‘Reactions and Structure of Exotic Nuclei’, March 2-13, 2015, Seattle, WA, USA, Inv. Talk: ‘Microscopic Folding Potentials and Connections to Structure Description’, Ch. Elster.
50. Fourth Joint Meeting of the Nuclear Physics Division (DNP) of the APS and the Physical Society of Japan, October 7-11, 2014, Hawaii, ‘Coulomb distorted T-Matrix Elements in Momentum Space’, V. Eremenko, L. Hlophe, N.J. Upadhyay, Ch. Elster, F.M. Nunes, I.J. Thompson, G. Arbanas, J.E. Escher.
51. Fourth Joint Meeting of the Nuclear Physics Division (DNP) of the APS and the Physical Society of Japan, October 7-11, 2014, Hawaii, ‘Using R-matrix ideas to describe one-nucleon transfers to resonance states’, J.E. Escher, I.J. Thompson, G. Arbanas, Ch. Elster, V. Eremenko, L. Hlophe, F.M. Nunes.
52. Fourth Joint Meeting of the Nuclear Physics Division (DNP) of the APS and the Physical Society of Japan, October 7-11, 2014, Hawaii, ‘Coupled-Channel Computation of Direct Neutron Capture on Non-Spherical Nuclei’, G. Arbanas, I.J. Thompson, J.E. Escher, F.M. Nunes, Ch. Elster, S-S. Zhang.
53. Fourth Joint Meeting of the Nuclear Physics Division (DNP) of the APS and the Physical Society of Japan, October 7-11, 2014, Hawaii, ‘Poincaré Invariant Calculation of the Three-Body Bound State Energy and Wave Function’, M.R. Hadizadeh, Ch. Elster, W.N. Polyzou.

54. Fourth Joint Meeting of the Nuclear Physics Division (DNP) of the APS and the Physical Society of Japan, October 7-11, 2014, Hawaii, ‘Three Dimensional SRG Evolution of the NN Interaction Using Piccard Iteration’, M.R. Hadizadeh, K.A. Wendt, Ch. Elster.
55. ‘Nuclear Theory in the Supercomputing-Era (NTSE-2014), June 23-27, 2014, Khabarovsk, Russia, Inv. Talk: ‘Separable Optical Potentials for (d,p) Reactions’, Ch. Elster, Proceedings: *arXiv:1410.1227v1*.
56. INT workshop on ‘Few-Body Universality in Atomic and Nuclear Physics: Recent Experimental and Theoretical Advances’, May 12-14, 2014, Seattle, WA, USA, Inv. Talk: ‘The Coulomb Problem in Momentum Space without Screening’, Ch. Elster
57. Annual Meeting of the Division of Nuclear Physics (DNP), October 24-26, 2013, Newport News, VA, ‘Coulomb distorted nuclear matrix elements in momentum space: I. Formal aspects’, Ch. Elster, N.J. Upadhyay, V. Eremenko, L. Hlophe, F.M. Nunes.
58. Annual Meeting of the Division of Nuclear Physics (DNP), October 24-26, 2013, Newport News, VA, Coulomb distorted nuclear matrix elements in momentum space: II. Computational Aspect, V. Eremenko, N.J. Upadhyay, L. Hlophe, Ch. Elster, F.M. Nunes.
59. Annual Meeting of the Division of Nuclear Physics (DNP), October 24-26, 2013, Newport News, VA, ‘The Similarity Renormalization Group for the Three-Body Bound State: A Three-Dimensional Approach’, M. Hadizadeh, K. A. Wendt, Ch. Elster.
60. The 22nd European Conference on Few-Body Problems in Physics, September 9-13, 2013, Krakow, Poland, ‘Momentum Space Coulomb Distorted Matrix Elements for Heavy Nuclei’, Ch. Elster, V. Eremenko, N.J. Upadhyay, L. Hlophe, F.M. Nunes, G. Arbanas, J.E. Escher, I.J. Thompson.
61. 26th Midwest Nuclear Theory Get-Together, Sept. 6-7, 2013, Argonne, IL, ‘Momentum Space Coulomb Distorted Matrix Elements for Heavy Nuclei’, V. Eremenko, N.J. Upadhyay, F.M. Nunes, Ch. Elster, L. Hlophe, G. Arbanas, J.E. Escher, I.J. Thompson (The TORUS Collaboration).
62. International Workshop on Nuclear Dynamics with Effective Field Theories, July 1-3. 2013, Bochum, Germany, Inv. Talk: ‘Towards (d,p) Reactions with Heavy Nuclei in a Faddeev Description’, Ch. Elster, Proceedings *arXiv:1309.5820 [nucl-th]*.
63. APS April Meeting 2013, April 13-16, Denver, CO, ‘Microscopic Optical Potential for Scattering of  ${}^6\text{He}$  and  ${}^8\text{He}$  off Protons, Ch. Elster, A. Orazbayev, S.P. Weppner.

64. Spring 2013 Meeting of the APS Ohio-Region Section, March 29-30, Athens, Ohio, 'Effect of varying charge and matter radii on observables in  ${}^6\text{He}$  and  ${}^8\text{He}$ ', A. Orazbayev, Ch. Elster, S.P. Weppner.
65. Spring 2013 Meeting of the APS Ohio-Region Section, March 29-30, Athens, Ohio, 'Separabilization of Optical Potentials in Momentum space', L. Hlophe, Ch. Elster.
66. INT workshop on 'Structure of Light Nuclei', October 7-12, 2012, Seattle, WA, Inv. Talk: 'Spin phenomena is elastic scattering of Helium-6 off protons', Ch. Elster
67. 25th Midwest Nuclear Theory Get-Together, Sept. 7-8, 2012, Argonne, IL, 'Towards a Faddeev Description of (d,p) Reactions: Separabilization of Optical Potentials', Ch. Elster, L. Hlophe
68. The 20th International IUPAP Conference on Few-Body Problems in Physics, August 20-25, 2012, Fukuoka, Japan, 'Microscopic Optical Potentials for Helium-6 scattering off Protons', Ch. Elster, A. Orazbayev, S.P. Weppner
69. The 20th International IUPAP Conference on Few-Body Problems in Physics, August 20-25, 2012, Fukuoka, Japan, 'Momentum Space NN Scattering without Partial Waves using the Argonne V18 Interaction', S. Veerasamy, Ch. Elster, W.N. Polyzou
70. Horizons of Innovative Theories, Experiments, and Supercomputing in Nuclear Physics (HITES 2012), June 4-7, 2012, New Orleans, LA, Inv. Talk: 'Nuclear Reactions: A Challenge for Few- and Many Body Theories', Ch. Elster, arXiv:1209.0838 [nucl-th], Ch. Elster and L. Hlophe, J. Phys.: Conf. Ser.**403** 012025 (2012).
71. 11th Conference on the Intersections of Particle and Nuclear Physics (CIPANP) 2012, May 29 - June 3, 2012, St Petersburg, FL, 'Theoretical considerations of internal spin for elastic nucleon-nucleus scattering of  ${}^6\text{He}$ ', S.P. Weppner, A. Orazbayev, and Ch. Elster.
72. Annual Meeting of the Ohio Section of APS (OSS12), April 13-14, 2012, Columbus, OH, 'Polarization Phenomena in the Reaction  ${}^6\text{He}(p,p){}^6\text{He}$ ', A. Orazbayev, S.P. Weppner, Ch. Elster.
73. Mini-workshop on 'Polarization Phenomena in Proton Elastic Scattering from Unstable Nuclei', December 21, 2011, RIKEN, Tokyo, Japan, Inv. Talk: 'Microscopic Optical Potentials for the Reaction Helium-6 (p,p) Helium-6', Ch. Elster
74. Annual Meeting of the Division of Nuclear Physics, October 26-29, 2011, East Lansing, MI, 'Elastic Scattering of  ${}^6\text{He}$  based on a Cluster Description', S.P. Weppner, Ch. Elster.



75. Annual Meeting of the Division of Nuclear Physics, October 26-29, 2011, East Lansing, MI, ‘Vector variable solution of the N-N scattering problem using the momentum space Argonne V18 interaction’, S.Veerasingam, W. Polyzou, Ch. Elster.
76. Annual Meeting of the Division of Nuclear Physics, October 26-29, 2011, East Lansing, MI, ‘Effective field theory for the Helium-6 halo nucleus’, Chen Ji, D.R. Phillips, Ch. Elster.
77. INT workshop on ‘Interfaces between Nuclear Reactions and Structure’, August 8 - September 11, 2011, Seattle, WA, Inv. Talk: ‘Application of Three-Body Methods in Nuclear Reactions:  ${}^6\text{He}(p,p)$ ’, Ch. Elster
78. Workshop on ‘NN Interaction & the Nuclear Many-Body Problem’, November 18-27, 2010, Mumbai, India, Inv. Talk: ‘Few-Body Calculations in Three Dimensions’, Ch. Elster
79. Annual Meeting of the Division of Nuclear Physics, November 2-6, 2010, Santa Fe, NM, Inv. Talk: ‘Nuclear Reactions: Challenge and Opportunity for Few- and Many-Body Theory’, Ch. Elster
80. 12th International Conference on Meson-Nucleon Physics and the Structure of the Nucleon, May 31 - June 4, 2010, Williamsburg, VA, ‘The NN System in a 3D Formulation’, Ch. Elster
81. INT Workshop on ‘Simulations and Symmetries: Cold Atoms, QCD and Few-Hadron Systems, March 15 - May 21, 2010, Seattle, WA, Inv. Talk: ‘The NN System in Three Dimensions’, Ch. Elster
82. ECT\* Workshop on ‘Relativistic Description of Two- and Three-body Systems in Nuclear Physics’, Trento, Italy, October 19-23, 2009, Inv. Talk: ‘A New Approach to the 3D Faddeev Equations for Three-Body Scattering’, Ch. Elster
83. 19th International IUPAP Conference on Few-Body Problems in Physics, Bonn, Germany, August 31 - September 5, 2009, Inv. Talk: ‘Poincaré Invariant Three-Body Scattering at Intermediate Energies’, Ch. Elster, T. Lin, W.N. Polyzou, W. Glöckle, EPJ Web of Conferences **3**, 05005 (2010).
84. 19th International IUPAP Conference on Few-Body Problems in Physics, Bonn, Germany, August 31 - September 5, 2009, ‘Treatment of Two Nucleons in Three Dimension’, I. Fachruddin, Ch. Elster, J. Golak, R. Skibiński, W. Glöckle, EPJ Web of Conferences **3**, 05021 (2010).
85. 19th International IUPAP Conference on Few-Body Problems in Physics, Bonn, Germany, August 31 - September 5, 2009, ‘Calculations of the Triton Binding Energy with a Lorentz Boosted Nucleon-Nucleon Potential’, H. Kamada, W. Glöckle, H.

- Witała, J. Golak, R. Skibiński, W. N. Polyzou, Ch. Elster, EPJ Web of Conferences **3**, 050025 (2010).
86. 6th International Workshop on Chiral Dynamics, CD09, Bern, Switzerland, July 6-10, 2009, ‘Subtractive renormalization of chiral effective theory NN potentials up to next-to-next-to-leading order’, C.J. Yang, Ch. Elster, D.R. Phillips, arXiv:0910.1177 [nucl-th], PoS(CD09), 064.
  87. Symposium *Frontiers in Nuclear Physics*, Inv. Talk: ‘Faddeev Calculations in Three Dimensions’, Bad Honnef, Germany, June 18-20, 2009, Ch. Elster
  88. INT Workshop ‘Effective Field Theories and the Many-Body Problem’, U. Washington, Seattle, March 23 - June 5, 2009, Inv. Talk: ”Can EFT help p+A Scattering?”, Ch. Elster
  89. American Physical Society meeting, May 1-5, 2009, ‘Subtractive Renormalization of the chiral potentials up to next-to-next-to-leading order I: Higher NN partial waves.’, C.J. Yang, Ch. Elster, D.R. Phillips, *Bull. Amer. Phys. Soc.* **54**, 127 (2009).
  90. American Physical Society meeting, May 1-5, 2009, ‘Subtractive Renormalization of the chiral potentials up to next-to-next-to-leading order II: S-waves.’, C.J. Yang, Ch. Elster, D.R. Phillips, *Bull. Amer. Phys. Soc.* **54**, 127 (2009).
  91. Annual Meeting of the Division of Nuclear Physics, October 23-26, 2008, Oakland, CA, ‘Faddeev and Glauber Calculations at Intermediate Energies in a Model for n+d Scattering’, Ch. Elster, T. Lin, W. Glöckle, S. Jeschonnek.
  92. Workshop on ‘Critical Stability’, Oct. 13-17, 2008, Ettore Majorana Centre, Erice, Italy, Inv. Talk: ‘Poincaré Invariant Three-Body Scattering’, Ch. Elster, T. Lin, W.N. Polyzou, W. Glöckle, arXiv:0812.1834 [nucl-th].
  93. The 4th Asia-Pacific Conference on Few-Body Problems in Physics, August 19-13, 2008, Depok, Indonesia, ‘Lorentz Boosted Nucleon-Nucleon T-Matrix and the Triton Binding Energy’, H. Kamada, W. Glöckle, H. Witała, J. Golak, R. Skibiński, W. Polyzou, Ch. Elster, arXiv:0810.2148 [nucl-th].
  94. Gordon Conference on Photonuclear Reactions, August 10-15, 2008, Tilton School, NH, ‘Poincaré Invariant Three-Nucleon Scattering’, T. Lin, Ch. Elster W. Polyzou, W. Glöckle, H. Witała.
  95. Light Cone 2008, Relativistic Nuclear and Particle Physics, Mulhouse, France, July 7-11, 2008, ‘A Poincaré invariant treatment of the three-nucleon problem’, W. Polyzou, M. Tucker, S. Veerasamy, Ch. Elster, T. Lin, W. Glöckle, H. Witała, J. Golak, R. Skibiński, H. Kamada, B. Keister, **PoS LC2008**: 039, 2008; and arXiv:0812.2204 [nucl-th].

96. 2008 Jefferson Lab Users Group Meeting, June 16-19, 2008, Newport News, VA, Inv. Talk: ‘Relativity and Three-Body Systems’, Ch. Elster
97. Annual Meeting of the Division of Nuclear Physics, October 25-28, 2007, Newport News, VA, ‘Poincaré Invariant Three-Body Scattering’, T. Lin, Ch. Elster, W. Polyzou, W. Glöckle.
98. 20th Midwest Nuclear Theory Get-Together, Oct. 5-6, 2007, Argonne, IL, Poincaré Invariant Three-Body Scattering’, T. Lin, Ch. Elster, W. Polyzou, W. Glöckle.
99. 20th European Conference on Few-Body Problems in Physics, September 10-14, 2007, Pisa, Italy, Three Body Scattering in ‘Poincaré Invariant Quantum Mechanics’, W. Polyzou, T. Lin, Ch. Elster, W. Glöckle, *nucl-th/0711.1635*.
100. Gordon Conference on Nuclear Physics, July 15-20, 2007, Salve Regina University, Newport, RI, ‘Relativistic Three-Body Scattering’, Ch. Elster, T. Lin, W. Polyzou, W. Glöckle.
101. International Nuclear Physics Conference INPC2007, June 3-8, 2007, Tokyo, Japan, ‘Relativistic Three-Body Scattering in First Order Faddeev Formulation’, Ch. Elster, T. Lin, W. Polyzou, W. Glöckle, *arXiv:0708.3868 [nucl-th]*.
102. International Mini-Workshop on “Nuclear Reactions from Few to Many Body Systems”, June 2, 2007, U. Tokyo, Inv. Talk: ‘First Order Poincaré-Invariant Faddeev Calculations’, Ch. Elster.
103. INT Program 07-1, Fundamental Neutron Physics, March 19 - June 8, 2007, Seattle, WA, Inv. Talk: ‘First Order Relativistic Three-Body Scattering’, Ch. Elster.
104. Annual Meeting of the Division of Nuclear Physics, October 25-28, 2006, Nashville, TN, ‘Relativistic Effects in First Order Three-Body Calculations’, T. Lin, Ch. Elster, W. Polyzou, W. Glöckle.
105. 18th International IUPAP Conference on Few-Body Problems in Physics, Santos, Brazil, Aug. 21-26, 2006, ‘Three-Body Elastic and Inelastic Scattering at Intermediate Energies’, Ch. Elster, H. Liu, W. Glöckle.
106. American Physical Society Meeting, April 2006, Dallas TX, ‘Influence of the  $N^*1440$  and  $N^*1535$  Resonances in Intermediate Energy pp and np Scattering’, Ch. Elster, A. Pricking, A. Gardestig, and the EDDA Collaboration.
107. 3rd Asia-Pacific Conference on Few-Body Problems in Physics, July 26-30, 2005, Nakhon Ratchasima, Thailand, ‘Three-Nucleon Scattering at Intermediate Energies’, I. Fachruddin, Ch. Elster, W. Glöckle, *nucl-th/0708.135*.

108. 2004 Fall Meeting of the Division of Nuclear Physics, October 28-30, Chicago IL, 'Three-Body Scattering without Partial Waves', Ch. Elster, H. Liu, W. Glöckle.
109. 2004 Fall Meeting of the Division of Nuclear Physics, October 28-30, Chicago IL, 'Three-Body Break-Up Processes at Higher Energies', H. Liu, Ch. Elster, W. Glöckle.
110. 19<sup>th</sup> European Conference on Few-Body Problems in Physics, August 23-27, 2004, Groningen NL, 'Three-Body Scattering without Partial Waves', Ch. Elster, H. Liu, W. Glöckle, AIP Conference Proceedings Vol. 768, Edts N. Kalantar-Nayestanak, R.G.E. Timmermans, B.L.G. Bakker, New York 2005, p. 430.
111. American Physical Society, Ohio Section, April 2004, 'Three-Body Scattering without Partial Waves', H. Liu, Ch. Elster, W. Glöckle.
112. American Physical Society, Ohio Section, April 2004, 'A complex energy method for two-body scattering', T. Lin, Ch. Elster.
113. INT Program 03-3, Theories of Nuclear Forces and Nuclear Systems, September 29 - December 5, 2003, Seattle, WA, Inv. Talk, 'Towards 3N Calculations at Higher Energies', Ch. Elster.
114. 2003 Fall Meeting of the Division of Nuclear Physics, October 30 - November 1, 2003, Tucson, AZ, 'The Nd Break-Up Process in Leading Order in a Three-Dimensional Approach', Ch. Elster, I. Fachruddin, W. Glöckle, *Bull. Amer. Phys. Soc.* **48**, 26 (2003).
115. 16th Midwest Nuclear Theory Get-Together, Oct. 10-11, 2003, Argonne, IL, 'The Nd Break-Up Process in Leading Order in a Three-Dimensional Approach - Application to the (p,n) Charge Exchange Reaction', Ch. Elster, I. Fachruddin, W. Glöckle.
116. X. International Conference on Hadron Spectroscopy, August 31 - September 6, 2003, Aschaffenburg, Germany, 'Photoproduction of  $\eta'$ -mesons from the Proton', Ch. Elster, A. Sibirtsev, S. Krewald, J. Speth. *Hadron Spectroscopy*, Edts. E. Klempt, H. Koch, H. Orth, AIP Conference Proceedings **717**, AIP, Melville, NY, 2004, p. 837
117. Workshop on Hadron Physics at COSY, July 7-10, 2003, Bad Honnef, Germany, Inv. Talk, 'Question and Problems in Few-Body Reactions', Ch. Elster, I. Fachruddin, W. Glöckle
118. 17th International IUPAP Conference on Few-Body Problems in Physics, June 5-11, 2003, Durham, NC, 'Photoproduction of  $\eta'$  Mesons from the Proton', Ch. Elster, A. Sibirtsev, S. Krewald, J. Speth, *Few Body Problems in Physics*, Edited by W. Glöckle and W. Tornow, 2004 Elsevier, NL, p. S161.

119. 17th International IUPAP Conference on Few-Body Problems in Physics, June 5-11, 2003, Durham, NC, ‘Effect of a Lorentz Boosted Potential in the Three-Nucleon Bound State’, H. Kamada, W. Glöckle, J. Golak, Ch. Elster, Few Body Problems in Physics, Edited by W. Glöckle and W. Tornow, 2004 Elsevier, NL, p. S263.
120. 15th Midwest Nuclear Theory Get-Together, Oct. 25-25, 2002, Argonne National Laboratory, ‘Lorentz Boosted NN Potentials for Few-Body Systems’, Ch. Elster, H. Kamada, W. Glöckle, J. Golak.
121. 16th Particles and Nuclei International Conference PANIC, Sept. 30 - Oct. 4, 2002, Osaka, Japan, ‘Incoherent Photoproduction of  $\eta$ -mesons from the Deuteron near Threshold’, J. Haidenbauer, A. Sibirtsev, S. Schneider, S. Krewald, J. Speth.
122. Second Asia Pacific Conference on Few-Body Problems in Physics, August 27-30, 2002, Shanghai, China, ‘Lorentz Boosted NN Potentials for Few-Body Systems: Application to the three-nucleon bound state’, H. Kamada, W. Glöckle, J. Golak, Ch. Elster, Mod. Phys. Lett. **A18**, 124-127 (2003).
123. Second Asia Pacific Conference on Few-Body Problems in Physics, August 27-30, 2002, Shanghai, China, ‘The Proton-Deuteron Break-Up Process in a Three-Dimensional Approach’, I. Fachruddin, Ch. Elster, W. Glöckle, *nucl-th/0211069*, Mod. Phys. Lett. **A18**, 452-455 (2003).
124. QNP2002, International Conference on Quark Nuclear Physics, June 9-14, 2002, Jülich, Germany; ‘ $\eta N$  Final State Interaction in incoherent Photoproduction of  $\eta$ -mesons from the Deuteron near Threshold’, S. Schneider, A. Sibirtsev, Ch. Elster, J. Haidenbauer, S. Krewald, J. Speth.
125. Mesons 2002, 7th International Workshop on Meson Production, Properties and Interaction, May 24-28 2002, Krakow, Poland; Inv. Talk, ‘Photoproduction of the  $\eta$  Meson from the Deuteron Near Threshold’, Ch. Elster, A. Sibirtsev, S. Schneider, J. Haidenbauer, S. Krewald, J. Speth, published in ‘Mesons 2002: Production, Properties and Interactions of Mesons’, Eds. L. Jarczyk, A. Magiera, C. Guaraldo, H. Machner, World Scientific Publishing Co. 2003, p. 245-256.
126. American Physics Society Meeting, April 2002, Albuquerque, NM; ‘Three Body Bound State Calculations with Two and Three Body Forces without Partial Wave Decomposition, H. Liu, Ch. Elster, W. Glöckle *Bull. Amer. Phys. Soc.* **47**, 165 (2002).
127. 19. Cooler Synchrotron (COSY) Workshop, Bad Honnef, Germany, December 2001, Inv. Talk, ‘Incoherent Photoproduction of  $\eta$ -Mesons from the Deuteron near Threshold’, Ch. Elster

128. 14th Midwest Nuclear Theory Get-Together, Argonne National Laboratory, October 2001, ‘Incoherent Photoproduction of  $\eta$  mesons from Deuterium near Threshold’, Ch. Elster
129. Conference on ‘Mesons and Light Nuclei’, Prague, July 2001; ‘Chiral Dynamics in Few-Nucleon Systems’, E. Epelbaum, U.G. Meißner, W. Glöckle, Ch. Elster, H. Kamada, A. Nogga, H. Witala; published in: Mesons and Light Nuclei: 8th Conference, edited by J. Adam, P. Bydzovsky, J. Mares, AIP Conf. Proc. No. 603, p.17 (AIP, Melville, NY, 2001).
130. Europhysics Conference on Computational Physics, Sept. 5-8, 2001, Aachen, Germany; ‘Three Body Bound State Calculations with Three Body Forces without Angular Momentum Decomposition’, Ch. Elster, H. Liu, W. Glöckle, Book of Abstracts, NIC Series Vol. 8, F. Hossfeld, K. Binder (Edts), p. A22.
131. American Physics Society Meeting, April 2001, Washington DC; ‘Three Dimensional Calculations of the NN System’, Ch. Elster, I. Fachruddin, W. Glöckle, *Bulletin J15.013*.
132. International Symposium on Nuclear Physics, Bhabha Atomic Research Centre, Trombay, Mumbai, Dec. 18-22, 2000, India; Inv. Talk ‘NN Systems in Three Dimensions’, Ch. Elster
133. Workshop on Computational Methods for Few-Body Dynamical Systems, NIST Gaithersburg, MD, Nov. 15-17, 2000; Inv. Talk ‘Faddeev Calculations in Nuclear Physics’, Ch. Elster
134. XVII European Conference on Few-Body Problems in Physics, 11-16 Sept. 2000, Evora, Portugal, ‘Nucleon-Nucleon Scattering in a Three-Dimensional Approach’, I. Fachruddin, Ch. Elster, W. Glöckle.
135. 2000 Meeting of the Scientific Advisory Council of the Institute of Nuclear Physics and COSY, May 8-9, 2000, Forschungszentrum Jülich, Inv. Talk ‘Report on Workshop on Physics at the Spectrometer Big Karl at COSY.’, Ch. Elster
136. 20th COSY-PAC Meeting, May 5-6, 2000, Forschungszentrum Jülich, Inv. Talk ‘Physics at the Spectrometer Big Karl at COSY’, Ch. Elster
137. 64. Physikertagung of the German Physical Society (DPG), March 20-24, 2000, Dresden, ‘Few-Body Calculations - An Approach without Partial Waves.’ Ch. Elster, W. Schadow, W. Glöckle, Verhandl. DPG(VI) 35, 208 (2000).
138. Workshop ‘Towards a Solution for  $^4\text{He}$ ’, Graduiertenkolleg Erlangen-Regensburg, January 19, 2000, Erlangen, Inv. Talk ‘Faddeev Calculations without Partial Wave Decomposition’, Ch. Elster

139. COSY-Arbeitsgemeinschaft Nordrhein-Westfälischer Universitäten (CANU) Workshop, December 20-21, 1999, Bad Honnef, Inv. Talk, 'Dreikörper-Rechnungen ohne Partialwellenzerlegung', Ch. Elster
140. Supercomputing 1999, November 13-19, 1999, Portland, code calculating a three-boson bound state (authors Schadow, Elster) showcased for performance on a SGI Pentium III Xeon Linux cluster by the Ohio Supercomputer Center (OSC).
141. Gordon Research Conference on 'Dynamics of Simple Systems in Chemistry and Physics', July 11-16, 1999, Newport, RI, Inv. Talk, 'Three Body States: An Approach Without Partial Waves'. Ch. Elster
142. Workshop on 'The Nuclear Interaction: Modern Developments', Trento, IT, 6/28 - 7/8 1999, Inv. Talk, 'Few Body Calculations: An Approach without Partial Waves'. Ch. Elster
143. Symposium on Current Topics in the Field of Light Nuclei, Kracow, PL, June 21-25, 1999, Inv. Talk, 'Three Body States: an Approach Without Angular Momentum Decomposition.' Ch. Elster
144. American Physical Society meeting, April 1999, 'Three-Body Scattering Calculations without Partial Wave Decomposition.' W. Schadow, Ch. Elster, W. Glöckle, Atlanta, [www.aps.org/meet/CENT99/BAPS/abs/S5405004.html](http://www.aps.org/meet/CENT99/BAPS/abs/S5405004.html)
145. American Physical Society meeting, April 1998, 'Three Nucleon Bound States Calculated without Partial Wave Decomposition.' W. Schadow, Ch. Elster, A. Nogga, W. Glöckle, *Bull. Amer. Phys. Soc.* **43**, 1075 (1998).
146. American Physical Society meeting, April 1998, 'Total cross sections for neutron scattering from few nucleon systems. I. Measurements.', W.P. Abfalterer, F.B. Bateman, F.S. Dietrich, Ch. Elster, R.W. Finlay, W. Glöckle, J. Golak, R.C. Haight, D. Hüber, G.L. Morgan, H. Witala, *Bull. Amer. Phys. Soc.* **43**, 1075 (1998).
147. American Physical Society meeting, April 1998, 'Total cross sections for neutron scattering from few nucleon systems. II. Theoretical Considerations.' Ch. Elster, W.P. Abfalterer, F.B. Bateman, F.S. Dietrich, R.W. Finlay, W. Glöckle, J. Golak, R.C. Haight, D. Hüber, G.L. Morgan, H. Witala, *Bull. Amer. Phys. Soc.* **43**, 1075 (1998).
148. American Physical Society meeting, April 1998, 'Sensitivity of Nucleon-Nucleus Scattering Observables to the Energy Dependence of realistic NN t-matrices.' S.P. Weppner, Ch. Elster, *Bull. Amer. Phys. Soc.* **43**, 1178 (1998).
149. National Institute for Nuclear Theory, Seattle, Program on 'Numerical Methods for Strongly Interacting Quantum Systems', November 1997; Inv. Talk 'Application of Multiple Scattering Theory to Elastic Nucleon-Nucleus Scattering.'

150. Supercomputing 1997, San Jose, CA, 'Two-Body Transition Amplitudes without Angular Momentum Decomposition', contributed animation, J.H. Thomas and Ch. Elster, [http://www.osc.edu/research/SC97/Elster\\_SC97.html](http://www.osc.edu/research/SC97/Elster_SC97.html).
151. 15th Int. Conf. on Few Body Problems in Physics, Groningen, NL, July 1997: 'Two-Body T-matrices for Local Potentials in Three Dimensions: Energy and Momentum Dependencies.' Ch. Elster, J.H. Thomas, X.D. Zhang, W. Glöckle.
152. American Physical Society meeting, April 1997, 'Sensitivity of Nucleon-Nucleus Scattering Observables to the Off-Shell Behavior of Realistic NN Potentials.' S.P. Weppner, Ch. Elster, *Bull. Amer. Phys. Soc.* **42**, 925 (1997).
153. 'Parallel Computing: The T3D and Beyond', Conference sponsored by the Pittsburgh Supercomputing Center, Arctic Region Supercomputing Center, Ohio Supercomputer Center, Columbus, April 2-3, 1997, Inv. Talk 'Nuclear Scattering Calculations on the T3D', with S.P. Weppner
154. Specialists' Meeting on the Nucleon-Nucleus Optical Model up to 200 MeV, Bruyeres-le-Chatel, France, 13.-15. November 1996, Inv. Talk, 'Microscopic Optical Potentials for Elastic Nucleon-Nucleus Scattering', Ch. Elster, <http://db.nea.fr/science/om200>
155. American Physical Society, Ohio Section, November 1996, 'Sensitivity of Nucleon-Nucleus Scattering Observables to the Off-Shell Behavior of realistic NN Potentials.' S.P. Weppner, Ch. Elster.
156. American Physical Society, Ohio Section, November 1996, 'Potential Scattering without Partial Wave Decomposition', J.H. Thomas, Ch. Elster.
157. American Physical Society meeting, Division of Nuclear Physics, October 1996, Inv. Talk, 'Application of Multiple Scattering Theory to Elastic Nucleon-Nucleus Scattering.', Ch. Elster, *Bull. Amer. Phys. Soc.* **41**, 1262 (1996).
158. International Workshop on Nucleon-Nucleon Interaction, Sept. 16-18, 1996, Bad Honnef, Germany, Inv. Talk, 'Meson Exchange Potentials for the Nucleon-Nucleon Interaction: Successes and Difficulties'. Ch. Elster.
159. International Workshop on Nucleon-Nucleon Interaction, Sept. 16-18, 1996, Bad Honnef, Germany, Inv. Talk, 'Scattering without Partial Wave Decomposition'. Ch. Elster.
160. XIV International Conference on Particles and Nuclei, PANIC96, May 22-28, 1996, Williamsburg, USA, 'Microscopic Optical Potentials for Nucleon-Nucleus Elastic Scattering.', Ch. Elster, S.P. Weppner, C.R. Chinn, R.M. Thaler, Proceedings of the 14th International Conference on Particles and Nuclei, Editors C.E. Carlson and J.J. Domingo, p. 707, World Scientific 1997.



161. American Physical Society meeting, May 1996, 'Full-Folding Optical Potentials and their Application in Elastic Nucleon-Nucleus Scattering.' S.P. Weppner, Ch. Elster, C.R. Chinn, R.M. Thaler, *Bull. Amer. Phys. Soc.* **41**, 877 (1996).
162. American Physical Society meeting, Division of Nuclear Physics, October 1995, 'Measurement of the Neutron-Proton Elastic Scattering Angular Distribution at  $E_n=10$  MeV.' R.C. Haight, F.B. Bateman, C.E. Brient, A.D. Carlson, S.M. Grimes, T.N. Massey, O.A. Wasson, H. Zhou, and Ch. Elster, *Bull. Amer. Phys. Soc.* **40**, 1614 (1995).
163. Physics Computing 1995, June 1995, 'Generalized Full-Folding Calculations in Elastic Nucleon-Nucleus Reactions.' S.P. Weppner, C.R. Chinn, Ch. Elster, R.M. Thaler, *Bull. Amer. Phys. Soc.* **40**, 1358 (1995).
164. American Physical Society meeting, April 1995, 'Consistent Microscopic Calculation of Nucleon-Nucleus Elastic Scattering within the Spectator Expansion.' Ch. Elster, C.R. Chinn, R.M. Thaler and S.P. Weppner, *Bull. Amer. Phys. Soc.* **40**, 922 (1995).
165. NSAC/DNP Nuclear Theory Town Meeting, ANL, Jan. 29-30, 1995, 'Application of Many-Body Scattering Theory to Nuclear Systems.'
166. American Physical Society meeting, Division of Nuclear Physics, October 1994, 'Low Energy Behavior of Energy Dependent One-Boson-Exchange Nucleon-Nucleon Interactions, Ch. Elster and L. Wang, *Bull. Amer. Phys. Soc.* **39**, 1425 (1994).
167. American Physical Society meeting, Division of Nuclear Physics, October 1994, 'The NN Interaction within a Finite Nuclear Medium', S.P. Weppner, C.R. Chinn, Ch. Elster, R.M. Thaler, *Bull. Amer. Phys. Soc.* **39**, 1425 (1994).
168. 'Visualization of Nucleon Nucleon Scattering Amplitudes' Ch. Elster in 'Visions', Fall 1994, Publication of the Ohio Supercomputer Center.
169. Spin '94, Eighth Intern. Symposium on Polarization Phenomena in Nuclear Physics, Sept. 15-22, 1994, Bloomington, IN, 'Application of Multiple Scattering Theory to Lower Energy Elastic Nucleon-Nucleus Scattering.', Ch. Elster, C.R. Chinn, R.M. Thaler.
170. Argonne Workshop on Correlations and Reactions in Nuclei, August 8-12, 1994, Inv. Talk, 'Microscopic Description of Nuclear Medium Contributions in Elastic Nucleon-Nucleus Scattering.', Ch. Elster.
171. 14th Int. Conf. on Few Body Problems in Physics, Williamsburg, USA, May 26-31, 1994: 'The NP Differential Cross Section at Backward Angles and its Implication for the Long Range Part of the NN Interaction', Bryan E. Barmore, Ch. Elster.

172. American Physical Society meeting, Division of Nuclear Physics, October 1993, 'Optical Model Predictions for Total Cross Sections for Scattering of Neutrons from  $^{40}\text{Ca}$ .' with C.R. Chinn, Ch. Elster, R.M. Thaler, *Bull. Amer. Phys. Soc.* **38**, 1834 (1993).
173. American Physical Society meeting, Division of Nuclear Physics, October 1993, 'The Pion-Nucleon Coupling Constant and its Sensitivity to the Backward Angle n-p Differential Cross Section.' Ch. Elster, B. Barmore, A.E. Feldman and J. Rapaport, *Bull. Amer. Phys. Soc.* **38**, 1835 (1993).
174. 'n-p Differential Cross Sections at Backward Angles and the  $\pi\text{NN}$  Coupling Constant.' Inv. Talk at the Theory Workshop on Meson-Nucleus Dynamics at Intermediate and High Energies, Argonne, IL, August 2-6, 1993.
175. Physics Computing 1993, May 31 - June 4, 1993, 'Scattering in Three Dimensions', R.A. Rice and Ch. Elster, *Bull. Amer. Phys. Soc.* **38**, 1449 (1993).
176. American Physical Society meeting, April 1993, 'Medium Corrections within a Multiple Scattering Theory.', C.R. Chinn, Ch. Elster, R.M. Thaler, *Bull. Amer. Phys. Soc.* **38**, 1052 (1993).
177. American Physical Society meeting, April 1993, 'Backward angle n-p differential cross sections for  $65 \leq E_n \leq 250$  MeV' A. E. Feldman, J. Rapaport, B. Barmore, F. P. Brady, Ch. Elster, G. Fink, C. R. Howell, A. Ling, B.K. Park, J.L. Romero, D. Sorenson, W. Tornow, J. L. Ullmann, X. Yang, *Bull. Amer. Phys. Soc.* **38**, 1062 (1993).
178. 'Microscopic Calculations of Nuclear Scattering' Ch. Elster in 'Visions', Fall 1992, Publication of the Ohio Supercomputer Center.
179. 'Is there any additional Information in elastic Neutron-Nucleus Scattering?' Inv. Talk at the NN and N-Nucleus Workshop, Los Alamos, NM, January 13-14, 1992.
180. 'Present Status of Proton-Nucleus Scattering. Future Questions.' Inv. Talk at the Proton-Nucleus Mini Workshop, Los Alamos, NM, July 8-12, 1991.
181. 'First Order Optical Potentials in Elastic Proton Nucleus Scattering'. Inv. Talk at the Tamura Workshop on Nuclear Reaction Dynamics, Austin, TX, November 15-17, 1990.
182. American Physical Society meeting, Division of Nuclear Physics, October 1990, 'Coulomb Effects in Proton-Nucleus Scattering', with C. R. Chinn, Ch. Elster, R. M. Thaler.
183. American Physical Society meeting, April 1990, 'Ambiguities of Full-folding Optical Potentials in Elastic Proton Nucleus Scattering'.

184. American Physical Society meeting, Division of Nuclear Physics, October 1989, 'Nuclear Target Penetration Constructed from Elastic Scattering Wave Functions', Ch. Elster, R. M. Thaler.
185. 'Nucleon-Nucleon Interaction at Intermediate Energies and Related Nuclear Processes', Inv. Talk at the 12th International Conference Few Body Problems in Physics, Vancouver, B.C. Canada, July 2-8, 1989.
186. American Physical Society meeting, May 1989, 'Calculation of Full Folding Optical Potentials and their Application in Elastic Proton-Nucleus Scattering', Ch. Elster, E. F. Redish and P. C. Tandy.
187. 'Meson Exchange Interactions and Off-Shell Effects in Proton-Nucleus Elastic Scattering', Ch. Elster, P.C. Tandy, Inv. Talk, Proceedings of the workshop 'Relativistic Nuclear Many-Body Physics', held at the Ohio State University June 6-9, 1988, Editors, B.C. Clark, R.J. Perry and J.P. Vary, World Scientific Publishing Co., 1989, p. 512.
188. American Physical Society meeting, April 1988, 'Effective Mass of the Nucleon at Intermediate Energies', T. Cheon and Ch. Elster.
189. American Physical Society meeting, April 1988, 'Nucleon-Nucleon Off-Shell Scattering Amplitudes from Various Potential Models', Ch. Elster, P. C. Tandy, E. F. Redish, and M. H. MacFarlane.
190. American Physical Society meeting, April 1988, 'The Off-Shell Behavior of the Bonn Potential and its approximations', with E.F. Redish, Ch. Elster, and K.L. Warman.
191. American Physical Society meeting, March 1987, 'The Bonn Meson Exchange Potential above Pion Production Threshold', Ch. Elster, K. Holinde, D. Schütte and R. Machleidt.
192. 'Extension of the Bonn Meson Exchange NN-Potential above the Pion Production Threshold', Ch. Elster, K. Holinde, D. D. Schütte, R. Machleidt, Eleventh International IUPAP Conference on Few Body Systems in Particle and Nuclear Physics, Book of Contributions, Edited by T. Sasakawa, K. Nisimura, S. Oryu, S. Ishikawa, Tohoko Univ., Vol 19 (1986), p. 308.
193. German Physical Society (DPG) meeting, Heidelberg (W.-Germany), March 1986, 'NN Scattering up to 1 GeV and Nucleon Renormalization', Ch. Elster, W. Ferchländer, K. Holinde and D. Schütte.
194. XXIV Int. Winterschool for Nucl. Physics, Schladming (Austria), Febr. 1985, Inv. Talk, 'A Consistent Meson Exchange Model for the NN Interaction'.

195. 'NN-Observables derived from the Bonn-Potential', C. Hamburger, Ch. Elster, K. Holinde, R. Machleidt, PANIC Particles and Nuclei Tenth International Conference, Book of Abstracts, Vol. I, C28, Heidelberg (1984).
196. 'Quark Gluon versus Meson Exchange II: NN-Interaction', Ch. Elster and K. Holinde, PANIC Particles and Nuclei Tenth International Conference, Book of Abstracts, Vol. I, B35, Heidelberg (1984).
197. 'Quark Gluon versus Meson Exchange I: NN-Interaction', Ch. Elster and K. Holinde, PANIC Particles and Nuclei Tenth International Conference, Book of Abstracts, Vol. I, B34, Heidelberg (1984).
198. German Physical Society (DPG) meeting, Innsbruck (Austria), March 1984 'Extended Meson Exchange Model for the NN Interaction', Ch. Elster, K. Holinde, R. Machleidt.

## Colloquia and Seminars

Kent State University, Kent, OH, December 2020:

‘Nuclear Reactions in the Laboratory and the Cosmos: A Few-Body Perspective’

IBS Center for Exotic Nuclear Studies, Daejeon, South Korea, October 2020:

‘*Ab initio* leading-order effective interactions for elastic scattering of nucleons from light nuclei’.

Reaction Seminar, organized by Jin Lei (INFN Pisa), Mario Gomez (TU Darmstadt), Kaitlin Cook (MSU), Jesus Casal (U. Padua), online, June 16, 2020:

‘*Ab initio* leading-order effective interactions for elastic scattering of nucleons from light nuclei’.

Notre Dame University, South Bend, IN, September 2019:

‘Nuclear Reactions in the Laboratory and the Cosmos: A Few-Body Perspective’

Instituto Nazionale di Fisica Nucleare, Pisa, Italy, March 2019:

‘*Ab Initio Folding* Potentials for Proton-Nucleus Scattering based on NCSM One-Body Densities’

Temple University, Philadelphia, PA , February 2019:

‘Let’s go Skating ... and do some Physics on the Ice!’

Ohio University, Athens, OH, November, 2018:

‘Nuclear Reactions in the Laboratory and the Cosmos: A Few-Body Perspective’

Louisiana State University, Baton Rouge, LA, October, 2018:

‘Nuclear Reactions in the Laboratory and the Cosmos: A Few-Body Perspective’

Central China Normal University, Wuhan, PR China, May 22, 2018:

‘*Ab initio* Folding Potentials for Proton-Nucleus Scattering based on NCSM Nonlocal One-Body Densities’.

Peking University, Beijing, PR China, May 11, 2018:

‘*Ab initio* Folding Potentials for Proton-Nucleus Scattering based on NCSM Nonlocal One-Body Densities’.

FRIB-NSCL, Michigan State University, East Lansing MI, December 11, 2017:

‘Multiple Scattering Content of First Order Folding Potentials’.

RISP, Daejeon, Republic of Korea, July 14 , 2017:

‘Nuclear Reactions: A Challenge for Few- and Many-Body Theory’.

RISP, Daejeon, Republic of Korea, July 4-14, 2017:

Six invited Lectures on the two and three-body problem at the 2nd RISP Intensive Program on ”Rare Isotope Physics”

TRIUMF, Canada, August 2015:

‘Towards *ab-initio* optical potentials for elastic scattering of  ${}^6\text{He}$  off protons’

Louisiana State University, Baton Rouge, LA, September 2014:

‘Nuclear Reactions: A Challenge for Few- and Many-Body Theory’

Pacific University, Khabarovsk, Russia, June 2014:

‘Spin Phenomena in Elastic Scattering of Helium-6 and Helium-8 off Protons’

Indiana University, January 2014:

‘Let’s go Skating ... and do some Physics on the Ice!’

Notre Dame University, IN, November 2013:

‘Spin Phenomena in Elastic Scattering of Helium-6 and Helium-8 off Protons’

Notre Dame University, IN, November 2013:

‘Let’s go Skating ... and do some Physics on the Ice!’

NSCL, Michigan State University, November 2013:

‘Separable Optical Potentials for (d,p) Reaction Calculations’

Iowa State University, Ames, IA, October 2013:

‘Spin Phenomena in Elastic Scattering of Helium-6 and Helium-8 off Protons’

The Ohio State University, Columbus, OH, February 2013:

‘Spin Phenomena in Elastic Scattering of Helium-6 and Helium-8 off Protons’

Livermore National Laboratory, Livermore, CA, December 2012:

‘Spin Phenomena in Elastic Scattering of Helium-6 and Helium-8 off Protons’

Ohio University, OH, November 2012:

‘Let’s go Skating ... and do some Physics on the Ice!’

Oak Ridge National Laboratory, November 2012:

‘Spin Phenomena in Elastic Scattering of Helium-6 and Helium-8 off Protons’

University of Tennessee, TN, November 2012:

‘Let’s go Skating ... and do some Physics on the Ice!’

UC Davis, Davis, CA, April 2012:

‘The Nuclear Force Through the Decades’

RIKEN Nishina Center, RIKEN, Japan, December 2011:

‘Microscopic Optical Potentials for the Reaction Helium-6 (p,p) Helium-6’

Livermore National Laboratory, Livermore, CA, December 2010:

‘Microscopic Optical Potentials in Nucleon-Nucleus Scattering’

U. Iowa, Iowa City, IA, October 2010:  
'Let's go Skating ... and do some Physics on the Ice!'

Miami University, Oxford, OH, March 2010:  
'Let's go Skating ... and do some Physics on the Ice!'

University of Kentucky, Lexington, KY, December 2009:  
'Let's go Skating ... and do some Physics on the Ice!'

University of Kentucky, Lexington, KY, December 2009:  
'Poincaré Invariant Three-Body Scattering at Intermediate Energies'

Ohio State University, Columbus, OH, November 2009:  
'Let's go Skating ... and do some Physics on the Ice!'

Kent State University, Kent, OH, May 2009:  
'Poincaré Invariant Three-Body Scattering at Intermediate Energies'

University of Wisconsin, Madison, WI, April 2009:  
'Let's go Skating ... and do some Physics on the Ice!'

University of Wisconsin, Madison, WI, April 2009:  
'Poincaré Invariant Three-Body Scattering at Intermediate Energies'

Jefferson Laboratory, Newport News, VA, April 2009:  
'Poincaré Invariant Three-Body Scattering at Intermediate Energies'

Ohio Supercomputer Center (OSC), Columbus, OH, November 2008:  
'Challenges in Three-Nucleon Physics'

RIKEN Nishina Center, RIKEN, Japan, July 2008:  
'Challenges for the Nucleon-Nucleon Force in the Second Resonance Region'

Hosei University, Tokyo, Japan, July 2008:  
'Challenges for the Nucleon-Nucleon Force in the Second Resonance Region'

Kochi University of Technology, Kochi, Japan, July 2008:  
'Challenges in Few Nucleon Physics'

RIKEN Nishina Center, RIKEN, Japan, July 2008:  
'Faddeev and Glauber Calculations for  $n+d$  Scattering at Intermediate Energies'

Center for Nuclear Science, U. Tokyo, Japan, June 2008:  
'Poincaré Invariant Three-Body Scattering at Intermediate Energies'

RIKEN Nishina Center, RIKEN, Japan, June 2008:  
'Poincaré Invariant Three-Body Scattering'

Centro de Física Nuclear, University of Lisbon, Portugal, May 2008:  
'Faddeev and Glauber Calculations for  $n+d$  Scattering at Intermediate Energies'

Centro de Física das Interações Fundamentais, University Lisbon, Portugal, April 2008:  
'Poincaré Invariant Three-Body Scattering'

The Ohio-State University, Columbus, OH, March 2008: 'Poincaré Invariant Three-Body Scattering at Intermediate Energies'

University of Iowa, Iowa City, IA, November 2007: 'Poincaré Invariant Three-Body Scattering at Intermediate Energies'

Argonne National Laboratory (ANL), Argonne, IL, November 2007: 'Poincaré Invariant Three-Body Scattering'

Institute of High Energy Physics (IHEP), Beijing, China, September 2007: 'Challenges for the Nucleon-Nucleon Force in the Second Resonance Region'

Institute of Theoretical Physics, Shanghai Jiao Tong University, Shanghai, China, September 2007: 'Poincaré Invariant Three-Body Scattering at Intermediate Energies'

Institute of Modern Physics (IMP), Chinese Academy of Science, Lanzhou, China, September 2007: 'Poincaré Invariant Three-Body Scattering at Intermediate Energies'

Institute of Modern Physics (IMP), Chinese Academy of Science, Lanzhou, China, September 2007: 'Questions and Challenges in Few-Body Reactions'

Institute of Modern Physics (IMP), Chinese Academy of Science, Lanzhou, China, September 2007: 'Nucleon-Nucleon Forces above Pion Production Threshold'

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Jefferson National Laboratory, Newport News, VA, January 2007:  
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Argonne National Laboratory, Argonne, IL, November 2006:  
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Ohio Wesleyan University, Science Lecture Series, October 1998:  
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Physics Division, Livermore National Laboratory, May 1998:  
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Dept. of Physics, Kent State University, November 1997:  
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Dept. of Physics and Astronomy, Ohio University, March 1992: 'Dibaryons - Myth and Reality.'

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Dept. of Physics, Univ. of Erlangen-Nürnberg (W-Germany), Jan. 1988: 'A field-theoretical Model for Pion Nucleon Scattering.'

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'The Dynamo Earth'.

Atomist. Institute, Univ. of Vienna (Austria), May 1985:  
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