Curriculum Vitae
Anna Maria Simon

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Education

Ph.D. in Physics — June 2010
Jagiellonian University, Kraków, Poland
- Ph. D. Dissertation: *Correlated Radiative Electron Capture in Ion-Atom Collisions* (arXiv: 1008.5317)

M.Sc. in Physics — June 2006
Jagiellonian University, Kraków, Poland
- Master's Thesis: *Interactions of Heavy Ions Produced in Penning Source with Gas Targets*

Appointments

Assistant Professor — July 2014 - present
Department of Physics, University of Notre Dame, IN, USA

Postdoctoral Researcher — Sep. 2013 - July 2014
Department of Physics, Gottwald Center for the Sciences, University of Richmond, VA, USA

Research Associate — Oct. 2010 - Aug. 2013
National Superconducting Cyclotron Laboratory, Michigan State University, East Lansing, MI, USA

Distinctions, Honors and Awards

- 2016 Ralph E. Powe Junior Faculty Enhancement Award - $10,000

Refereed publications

Note: Underlined are the members of my research group.

[1] **A. Simon**, F.Naqvi, *Indirect determination of neutron-capture cross sections on Sm isotopes*, Physical Review C 101 (2020) 014619 Impact factor: 3.146
Contributions: I developed a method to calculated neutron-capture cross sections with uncertainties obtained from a Monte Carlo method. For the purpose of these calculations, I modified a statistical model code to include functionality required for this work. The calculations are based on the statistical properties of Sm nuclei that I measured in my previous work. Farheen, former postdoc in my group (now an assistant professor, University of Delhi) provided insight to the method and details for the input parameters and their uncertainties.

[2] R. Kelmar@, **A Simon**, O. Olivas-Gomez@, P. Millican*, C. S. Reingold@, E. Churchman*, A. M. Clark@, S. L. Henderson@, S. E. Kelly*, D. Robertson, E. Stech, W. P. Tan, *Searching for (γ,α)/(γ,n) branching points in the γ-process path around A=100*,
Physical Review C 101 (2020) 015801 Impact factor: 3.146
Contributions: designed, setup and performed the experiment, wrote data analysis software, mentored and trained the lead author and students involved. Majority of the authors are graduate and undergraduate students that are members of my research group. They all

participated in setting up the experiment, conducting the experiment and contributed towards the analysis led by Rebeka Kelmar.

[3] E. Lamere@, M. Couder, M. Beard, **A. Simon**, A. Simonetti, M. Skulski@, G. Seymour@, P. Huestis@, K. Manukyan, Z. Meisel+, L. Morales@, M. Moran@, S. Moylan@, C. Seymour@, and E. Stech*, Proton-induced reactions on molybdenum*
Phys. Rev. C 100, (2019)034614 Impact factor: 3.146

Contributions: I provided training and mentoring of the first author in Hauser-Feshbach calculations using the statistical model code Talys.

[4] E. Churchman*, **A. Simon**, R. Kelmar@, O. Olivas-Gomez@, C. Reingold@, S. Kelly*, *Using HECTOR for Cross Section Measurements of $^{102}Pd(p,\gamma)^{103}Ag$*, Journal of Undergraduate Reports in Physics 27 (2019) 17
Contributions: Emily Churchman was an REU student that worked with me in the summer 2018. She participated in the experiment and completed the analysis of one of the reactions that we measured that summer at NSL. She was invited to submit a paper on her work to JURP and presented her work during the Conference Experience for Undergraduates at the ASP DNP Meeting in October 2018.

[5] S.L. Henderson@, T. Ahn, M.A. Caprio, P.J. Fasano@, **A. Simon**, W. Tan, P. O'Malley, J. Allen@, D.W. Bardayan, D. Blankstein@, B. Frentz@, M.R. Hall@, J.J. Kolata, A.E. McCoy+, S. Moylan@, C.S. Reingold@, S.Y. Strauss@, and R.O. Torres-Isea, *First measurement of the B(E2;3/2−→1/2−) transition strength in 7Be: Testing ab-initio predictions for A=7 nuclei,*
Physical Review C 99 (2019) 064320 Impact factor: 3.146
Contributions: designed, setup and performed the experiment, wrote data analysis software, mentored and trained the lead author and students involved.

[6] F Naqvi+, **A Simon**, M Guttormsen, R Schwengner, S Frauendorf, CS Reingold@, JT Burke, N Cooper+, RO Hughes, S Ota+, A Saastamoinen+, *Nuclear level densities and γ-ray strength functions in samarium isotopes,*
Physical Review C 99 (2019) 054331 Impact factor: 3.146
Contributions: designed, setup and performed the experiment, wrote data analysis software, mentored and trained the lead author and students involved, fostered collaboration with the theorists. Farheen Naqvi was a postdoc in my group, she performed the analysis of the data under my guidance.

[7] C. S. Reingold@, O. Olivas-Gomez@, **A. Simon**, J. Arroyo*, M. Chamberlain*, J. Wurzer*, A. Spyrou, F. Naqvi+, A. C. Dombos@, A. Palmisano@, T. Anderson@, A. M. Clark@, B. Frentz@, M. R. Hall@, S. L. Henderson@, S. Moylan@, D. Robertson, M. Skulski@, E. Stech, S. Y. Strauss@, W. P. Tan, B. Vande Kolk@, *High Efficiency Total Absorption Spectrometer HECTOR for capture reaction measurements*
European Physical Journal A 55 (2019) 77 Impact factor: 2.799
Contributions: designed, purchased and tested the detector, built data acquisition system, developed data acquisition software and data analysis suite, trained the students, perfomed the experiment, trained the students in data analysis. The experiment was set up and performed by graduate and undergraduate students from my research group. They were also involved in various aspects of the data analysis led by Craig Reingold and Orlando Gomez.

[8] C. Dombos@, A. Spyrou, F. Naqvi+, S. J. Quinn@, S. N. Liddick, A. Algora, T. Baumann, J. Brett, B. P. Crider+, P. A. DeYoung, T. Ginter, J. Gombas, E. Kwan, S. Lyons+, W.-J. Ong@, A. Palmisano@, J. Pereira, C. J. Prokop, D. P. Scriven*, **A. Simon**, M. K. Smith+, and C. S. Sumithrarachchi, β-decay half-lives of neutron-rich nuclides in the A=100–110 mass region

Physical Review C 99 (2019) 015802 Impact factor: 3.146
Contributions: helped with the setup and performing the experiment, trained students in data acquisition and code development to tailor software for the experimental needs.

[9] N. Cooper+, C. W. Beausang, P. Humby@, **A. Simon**, J. T. Burke, R. O. Hughes, S. Ota+, C. Reingold@, A. Saastamoinen+, and E. Wilson+, *Entry-level spin distributions and relative γ-neutron branching ratios of samarium isotopes populated by the (p,t) reaction*
Physical Review C 98 (2018) 044618 Impact factor: 3.146
Contributions: designed, setup and performed the experiment, wrote data analysis software, mentored and trained the lead author and students involved. Nathan Cooper was a postdoc in my group he analyzed the data and prepared the publication under my supervision.

[10] D Pérez-Loureiro, C Wrede, MB Bennett, SN Liddick, A Bowe, BA Brown, AA Chen, KA Chipps, N Cooper, E McNeice, F Naqvi, R Ortez, SD Pain, J Pereira, C Prokop, SJ Quinn, J Sakstrup, M Santia, SB Schwartz, S Shanab, **A Simon**, A Spyrou, E Thiagalingam, *Confirmation of the isomeric state in P 26*
Physical Review C 96 (2017) 014306, Impact factor: 3.146
Contributions: helped with the setup and performing the experiment.

[11] W-J Ong, C Langer, F Montes, A Aprahamian, DW Bardayan, D Bazin, BA Brown, J Browne, H Crawford, R Cyburt, EB Deleeuw, C Domingo-Pardo, A Gade, S George, P Hosmer, L Keek, A Kontos, I-Y Lee, A Lemasson, E Lunderberg, Y Maeda, M Matos, Z Meisel, S Noji, FM Nunes, A Nystrom, G Perdikakis, J Pereira, SJ Quinn, F Recchia, H Schatz, M Scott, K Siegl, **A Simon**, M Smith, A Spyrou, J Stevens, SR Stroberg, D Weisshaar, J Wheeler, K Wimmer, RGT Zegers, *Low-lying level structure of Cu 56 and its implications for the rp process*
Physical Review C 95 (2017) 055806, Impact factor: 3.146
Contributions: helped with the setup and performing the experiment.

[12] **A. Simon**, M. Beard, B.S. Meyer, B. Roach*, *Impact of the α optical model potential on the γ-process nucleosynthesis*,
Journal of Physics G: Nuclear and Particle Physics 44 (2017) 064006 (Special Edition "Emerging Leaders") Impact factor: 2.448
Contributions: Developed the code to perform network calculations, ran all the required calculations and analyzed the results. Brandon Roach was and undergraduate working in my research group, he wrote scripts for parallel processing of the calculations and completed some of the analysis of the results.

[13] P. Humby@, **A. Simon**, C.W. Beausang, J. M. Allmond, J.T. Burke, R.J. Casperson, R. Chyzh@, M. Dag@, K. Gell*, R.O. Hughes+, J. Koglin@, E. McCleskey+, M. McCleskey+, S. Ota+, T.J. Ross+, A. Saastamoinen@, T. Tarlow*, G. Vyas*, *Investigation of discrete states and quasi-discrete structures observed in the ^{152,154}Sm(p,t) reactions using t-γ coincidences*,
Physical Review C 94 (2016) 064314 Impact factor: 3.146
Contributions: designed, setup and performed the experiment, wrote data analysis software, analyzed the experimental data with the main author, mentored and trained the students involved.

[14] T. Elkafrawy+, **A. Simon**, J.A. Tanis, A. Warczak, *Single-photon emission associated with double electron capture in F^{9+}+C collisions*,
Physical Review A 94 (2016) 042705 Impact factor: 2.765
Contribution: trained the lead author in experimental techniques and data analysis for this work, setup the detectors and acquisition system.

[15] D. Pérez-Loureiro+, C. Wrede, M.B. Bennett@, S.N. Liddick, A. Bowe*, B.A. Brown, A.A. Chen, K.A.

Chipps+, N. Cooper+, D. Irvine@, E. McNeice, F. Montes, F. Naqvi+, R. Ortez*, S.D. Pain, J. Pereira, C.J. Prokop@, J. Quaglia, S.J. Quinn@, J. Sakstrup*, M. Santia*, S.B. Schwartz@, S. Shanab*, **A. Simon**, A. Spyrou, E. Thiagalingam@, *β-delayed γ decay of ^{26}P: Possible evidence of a proton halo*,
Physical Review C 93 (2016) 064320 Impact factor: 3.146
Contributions: helped with the setup and performing the experiment.

[16] A.C. Dombos@, D.-L. Fang, A. Spyrou, S.J. Quinn@, **A. Simon**, B.A. Brown, K. Cooper@, A.E. Gehring, S.N. Liddick, D.J. Morrissey, F. Naqvi+, C.S. Sumithrarachchi, R.G.T. Zegers, *Total absorption spectroscopy of the β decay of ^{76}Ga*,
Physical Review C 93 (2016) 064317 Impact factor: 3.146
Contributions: set up the experiment, trained the students in experimental techniques and data analysis methods.

[17] X. Huyan@, O. Naviliat-Cuncic, D. Bazin, A. Gade, M. Hughes, S.N. Liddick, K. Minamisono, S. Noji+, S.V. Paulauskas+, **A. Simon**, P. Voytas+, D. Weisshaar, *Toward a measurement of weak magnetism in ^{6}He decay*,
Hyperfine Interactions, 237 (2016) 1 Impact factor: 0.486
Contributions: set up the experiment and tailored the data acquisition system to the needs of the detection system, helped with the execution of the experiment and troubleshooting the software.

[18] **A. Simon**, M. Guttormsen, A. C. Larsen, C.W. Beausang, P. Humby@, J.T. Burke, R.J. Casperson, R. O. Hughes+, T.J. Ross+, J.M. Allmond, R. Chyzh@, M. Dag@, J. Koglin@, E. McCleskey+, M. McCleskey+, S. Ota+, A. Saastamoinen@, *First observation of low-energy γ-ray enhancement in the rare-earth region*,
Physical Review C, 93 (2016) 034303 Impact factor: 3.146
Contributions: setup and executed the experiment, expanded the data analysis tools to include a new analysis technique, analyzed the data.

[19] A. Gumberidze, A. Surzhykov, D. Thorn, C. Fontes, B. Najjari, A. Voitkiv, S. Fritzsche, D. Banas, H. Beyer, W. Chen, R. DuBois, S. Geyer, R. Grisenti, S. Hagmann, M. Hegewald, S. Hess, C. Kozhuharov, R. Maertin+, N. Petridis+, R. Reuschl+, **A. Simon**, U. Spillmann, M. Trassinelli+, S. Trotsenko+, G. Weber+, D. Winters+, N. Winters, D. Yu, T. Stoehlker, *Ground-state excitation of heavy highly-charged ions*,
Journal of Physics B, 48 (2015) 144006 Impact factor: 1.833
Contributions: helped with the setup of the experiment and with shifts during the beam time.

[20] P. Humby@, **A. Simon**, C.W. Beausang, T. J. Ross+, R.O. Hughes+, J.T. Burke, R.J. Casperson, J. Koglin@, S. Ota@, J.M. Allmond, M. McCleskey+, E. McCleskey+, A. Saastamoinen@, R. Chyzh@, M. Dag@, K. Gell*, T. Tarlow*, G. Vyas*, *Improved measurement of the half-life of the $J_\pi=8^{-}$ ^{152m2}Eu nuclear isomer,*
Physical Review C, 91 (2015) 024322 Impact factor: 3.146
Contributions: designed, setup and performed the experiment, wrote data analysis software, analyzed the experimental data with the main author, mentored and trained the students involved.

[21] E. Klopfer*, J. Brett,* P. DeYoung, A. Dombos@, S. Quinn@, **A. Simon**, A. Spyrou, *SuNSCREEN: A cosmic-ray veto detector for capture-reaction measurements*,
Nuclear Instruments and Methods in Physics Research Section A, 788 (2015) 5
Impact factor: 1.200
Contributions: helped with the design and assembly of the detector, trained and mentored students that tested the setup, wrote the simulation code used by the students in this work.

[22] F. Naqvi+, S. J. Quinn@, A. Spyrou, A. Battaglia@, M. Couder, P.A. DeYoung, A.C. Dombos@, X. Fang@, J. Görres, A. Kontos+, Q. Li@, S. Lyons@, D. Robertson, **A. Simon**, K. Smith@, M.K. Smith@, E. Stech, W.P. Tan, M. Wiescher, *Proton capture cross section of ^{72}Ge and astrophysical implications,*
Physical Review C, 92 (2015) 025804 Impact factor: 3.146
Contributions: designed, setup and performed the experiment, wrote data analysis software.

[23] S.B. Schwartz@, C. Wrede, M.B. Bennett, S.N. Liddick, D. Pérez-Loureiro+, A. Bowe*, A.A. Chen, K.A. Chipps+, N. Cooper+, D. Irvine, E. McNeice, F. Montes, F. Naqvi+, R. Ortez*, S.D. Pain, J. Pereira, C. Prokop@, J. Quaglia, S.J. Quinn@, J. Sakstrup*, M. Santia*, S. Shanab*, **A. Simon**, A. Spyrou, E. Thiagalingam, *Observation of Doppler broadening in β-delayed proton-γ decay*,
Physical Review C, 92 (2015) 031302 Impact factor: 3.146
Contributions: helped with the setup and performing the experiment.

[24] **A. Simon**, M. Beard, A. Spyrou, S.J. Quinn@, B. Bucher@, M. Couder, P. A. DeYoung, A. C. Dombos@, J. Görres, A. Kontos+, A. Long+, M. T. Moran@, N. Paul@, J. Pereira, D. Robertson, K. Smith@, E. Stech, R. Talwar@, W.P. Tan, M. Wiescher, *Systematic study of (α, γ) reactions for stable nickel isotopes*,
Physical Review C, 92 (2015) 025806 Impact factor: 3.146
Contributions: designed, setup and performed the experiment, wrote data analysis software, analyzed the experimental data.

[25] C. Langer@, F. Montes, A. Aprahamian, D. Bardayan, D. Bazin, B. Brown, J. Browne, H. Crawford, R. Cyburt, C. Domingo-Pardo, A. Gade, S. George+, P. Hosmer, L. Keek+, A. Kontos+, I. Lee, A. Lemasson+, E. Lunderberg, Y. Maeda, M. Matos, Z. Meisel+, S. Noji+, F. Nunes, A. Nystrom, G. Perdikakis, J. Pereira, S. Quinn@, F. Recchia+, H. Schatz, M. Scott, K. Siegl, **A. Simon**, M. Smith, A. Spyrou, J. Stevens, S. Stroberg, D. Weisshaar, J. Wheeler, K. Wimmer, R. Zegers, *Determining the rp-Process Flow through ^{56}Ni: Resonances in ^{57}Cu(p, γ)^{58}Zn Identified with GRETINA*,
Physical Review Letters, 113 (2014) 32502 Impact factor: 7.645

[26] S. Quinn@, A. Spyrou, E. Bravo, T. Rauscher, **A. Simon**, A. Battaglia@, M. Bowers@, B. Bucher@, C. Casarella@, M. Couder, P. DeYoung, A. Dombos@, J. Görres, A. Kontos+, Q. Li@, A. Long+, M. Moran@, N. Paul@, J. Pereira, D. Robertson, K. Smith@, M. Smith@, E. Stech, R. Talwar@, W. Tan, M. Wiescher, *Measurement of the ^{58}Ni(α,γ)^{62}Zn reaction and its astrophysical impact*,
Physical Review C, 89 (2014) 54611 Impact factor: 3.146

[27] S. Quinn@, A. Spyrou, **A. Simon**, A. Battaglia@, M. Bowers@, B. Bucher@, C. Casarella@, M. Couder, P. DeYoung, A. Dombos@, J. Greene, J. Görres, A. Kontos+, Q. Li@, A. Long+, M. Moran@, N. Paul@, J. Pereira, D. Robertson, K. Smith@, M. Smith@, E. Stech, R. Talwar@, W. Tan, M. Wiescher, *First application of the γ-summing technique in inverse kinematics*,
Nuclear Instruments and Methods in Physics Research Section A, 757 (2014) 62
Impact factor: 1.200

[28] A. Spyrou, S. Liddick, A. Larsen, M. Guttormsen, K. Cooper@, A. Dombos@, D. Morrissey, F. Naqvi+, G. Perdikakis, S. Quinn@, T. Renstrom, J. Rodriguez, **A. Simon**, C. Sumithrarachchi, R. Zegers, *Novel technique for Constraining r-Process (n, γ) Reaction Rates*,
Physical Review Letters, 113 (2014) 232502 Impact factor: 7.645

[29] S. Suchyta@, S.N. Liddick, Y. Tsunoda, T. Otsuka, M. B. Bennett@, A. Chemey, M. Honma, N. Larson@, C.J. Prokop@, S. J. Quinn@, N. Shimizu, **A. Simon**, A. Spyrou, V. Tripathi, Y. Utsuno, J.M. VonMoss, *Shape coexistence in ^{68}Ni*,
Physical Review C, 89 (2014) 021301 Impact factor: 3.146

[30] **A Simon**, J. Fallis, A. Spyrou, A. M. Laird, C. Ruiz, L. Buchmann, B. R. Fulton, D. Hutcheon, L.

Martin, D. Ottewell, A. Royas, *Radiative capture reactions with heavy beams: extending the capabilities of DRAGON*,
The European Physical Journal A, 49 (2013) 1

[31] **A. Simon**, S. J. Quinn, A. Spyrou, A. Battaglia, I. Beskin, A. Best, B. Bucher, M. Couder, P. A. DeYoung, X. Fang, J. Görres, A. Kontos, Q. Li, S. N. Liddick, A. Long, S. Lyons, K. Padmanabhan, J. Peace, A. Roberts, D. Robertson, K. Smith, M. K. Smith, E. Stech, B. Stefanek, W. P. Tan, X. D. Tang, M. Wiescher. SuN, *Summing NaI(Tl) Gamma-Ray Detector for Capture Reaction Measurements,*
Nuclear Instruments and Methods in Physics Research Section A, 703 (2013) 16 62

[32] **A Simon**, A. Spyrou, T. Rauscher, C. Fröhlich, S. Quinn, A. Battaglia, A. Best, B. Bucher, M. Couder, P. DeYoung, X. Fang, J. Görres, A. Kontos, Q. Li, L.-Y. Lin, A. Long, S. Lyons, A. Roberts, D. Robertson, K. Smith, M. Smith, E. Stech, B. Stefanek, W. Tan, X. Tang, M. Wiescher, *Systematic study of (p, γ) reactions on Ni isotopes*,
Physical Review C, 87 (2013) 055802

[33] M. B. Bennett, C. Wrede, K. A. Chipps, J. José, S. N. Liddick, M. Santia, A. Bowe, A. A. Chen, N. Cooper, D. Irvine, E. McNeice, F. Montes, F. Naqvi, R. Ortez, S. D. Pain, J. Pereira, C. Prokop, J. Quaglia, S. J. Quinn, S. B. Schwartz, S. Shanab, **A. Simon**, A. Spyrou, E. Thiagalingam, *Classical-Nova Contribution to the Milky Way's ^{26}Al Abundance: Exit Channel of the Key 25Al(p,γ)26Si Resonance*,
Physical Review Letters, 111 (2013) 232503

[34] A. Gumberidze, D. Thorn, C. Fontes, B. Najjari, H. Zhang, A. Surzhykov, A. Voitkiv, S. Fritzsche, D. Ba- naś, H. Beyer, W. Chen, R. DuBois, S. Geyer, R. Grisenti, S. Hagmann, M. Hegewald, S. Hess, P. Indeli- cato, C. Kozhuharov, R. Märtin, I. Orban, N. Petridis, R. Reuschl, **A. Simon**, U. Spillmann, A. Surzhykov, M. Trassinelli, G. Weber, D. Winters, N. Winters, D. Yu, T. Stöhlker, *Electron-and Proton-Impact Excitation of Hydrogenlike Uranium in Relativistic Collisions*,
Physical Review Letters, 110 (2013) 213201

[35] N. Larson, S. Liddick, M. Bennett, A. Bowe, A. Chemey, C. Prokop, **A Simon**, A. Spyrou, S. Suchyta, S. Quinn, S. Tabor, P. Tai, V. Tripathi, J. VonMoss, *High efficiency beta-decay spectroscopy using a planar germanium double-sided strip detector*,
Nuclear Instruments and Methods in Physics Research Section A 727 (2013) 59

[36] S. Quinn, A. Spyrou, **A. Simon**, A. Battaglia, M. Couder, P. DeYoung, A. Dombos, X. Fang, J. Görres, A. Kontos, Q. Li, S Lyons, B. Meyer, G. F. Peaslee, D. Robertson, K. Smith, M. Smith, E. Stech, W. Tan, X. Tang, M. Wiescher, *Probing the production mechanism of the light p-process nuclei*,
Physical Review C, 88 (2013) 011603

[37] A. Spyrou, S. J. Quinn, **A. Simon**, T. Rauscher, A. Battaglia, A. Best, B. Bucher, M. Couder, P. A. DeYoung, A. C. Dombos, X. Fang, J. Görres, A. Kontos, Q. Li, L. Y. Lin, A. Long, S. Lyons, B. S. Meyer, A. Roberts, D. Robertson, K. Smith, M. K. Smith, E. Stech, B. Stefanek, W. P. Tan, X. D. Tang, M. Wiescher, *Measurement of ^{90,92}Zr(p,γ)^{91,93}Nb reaction cross sections*,
Physical Review C, 88 (2013) 045802

[38] Z. Kohley, J. Snyder, T. Baumann, G. Christian, P. DeYoung, J. Finck, R. Haring-Kaye, M. Jones, E. Lunder- berg, B. Luther, S. Mosby, **A. Simon**, J. Smith, A. Spyrou, S. Stephenson, M. Thoennessen, *Unresolved Question of the ^{10}He Ground State Resonance*,
Physical Review Letters, 109 (2012) 252301

[39] A. Gumberidze, T. Stöhlker, D. Banaś, H. F. Beyer, C. Brandau, H. Bräuning, S. Geyer, S. Hagmann, S. Hess, P. Indelicato, P. Jagodziński, C. Kozhuharov, A. Kumar, D. Liesen, R. Märtin, R. Reuschl, S. Salem, **A. Simon**, U. Spillmann, M. Trassinelli, S. Trotsenko, G. Weber, D. F. A. Winters, *Precision Studies of Fundamental Atomic Structure with Heaviest Few-Electron Ions*,

Hyperfine Interactions, 199 (2011) 59

[40] D. Thorn, A. Gumberidze, S. Trotsenko, D. Banaś, H. Beyer, C. Bostock, I. Bray, W. Chen, R. DuBois, C. Fontes, S. Fritzsche, D. Fursa, R. Grisenti, S. Geyer, S. Hagmann, S. Hess, M. Hegewald, C. Kozhuharov, R. Märtin, I. Orban, N. Petridis, R. Reuschl, **A. Simon**, U. Spillmann, A. Surzhykov, M. Trassinelli, G. Weber, D. Winters, N. Winters, H. Zhang, T. Stöhlker, *Polarization and Anisotropic Emission of K-shell Radiation from Heavy Few Electron Ions*,
Canadian Journal of Physics, 89 (2011) 513

[41] **A. Simon**, A. Warczak, T. ElKafrawy, J. A. Tanis, *Radiative Double Electron Capture in Collisions of O^{8+} Ions with Carbon*,
Physical Review Letters, 104 (2010) 123001

[42] S. Trotsenko, A. Kumar, A. V. Volotka, D. Banaś, H. F. Beyer, H. Bräuning, S. Fritzsche, A. Gumberidze, S. Hagmann, S. Hess, P. Jagodziński, C. Kozhuharov, R. Reuschl, S. Salem, **A. Simon**, U. Spillmann, M. Trassinelli, L. C. Tribedi, G. Weber, D. Winters, T. Stöhlker, *Spectral Shape of the Two-Photon Decay of the 2^1S_0 State in He-Like Tin,*
Physical Review Letters, 104 (2010) 33001

Unrefereed publications and conference proceedings

[1] M. R. Hall, D. W. Bardayan, S. Ahn, J. M. Allen, J. T. Anderson, A. D. Ayangeakaa, T. Baugher, J. C. Blackmon, D. Blankstein, S. Burcher, M. P. Carpenter, S. M. Cha, K. Y. Chae, K. A. Chipps, J. A. Cizewski, M. Febbraro, B. Frentz, O. Hall, S. L. Henderson, J. Hu, C. L. Jiang, K. L. Jones, E. J. Lee, A. Lepailleur, D. S. Monteiro, P. D. O'Malley, S. Ota, S. D. Pain, B. C. Rasco, A. Ratkiewicz, J. Riggins, D. Santiago-Gonzalez, D. Seweryniak, **A. Simon**, H. Sims, K. Smith, W. P. Tan, P. Thompson, C. Thornsberry, R. O. Torres-Isea, B. Vande Kolk, R. L. Varner, D. Walter, G. L. Wilson, and S. Zhu, *Using 19F(3He,t)19Ne*(γ) to study astrophysically important levels near the 18F+p threshold*
AIP Conference Proceedings 2160, 070009 (2019)

[2] **A Simon**, R Kelmar, O Olivas-Gomez, E Churchman, PMillican, C S Reingold, T Anderson, A M Clark, N Cooper, AC Dombos, B Frentz, S L Henderson, S Kelly, D Robertson, MSkulski, E Stech, SY Strauss, WP Tan, B Vande Kolk, *First measurements of capture reactions for the γ-process using HECTOR,*
Journal of Physics: Conference Series 1308, 012020 (2019)

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capture by bare ions in collisions with gas targets,
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Proceedings of Science, XIII Nuclei in the Cosmos, Debrecen, Hungary, 7-11 July, 2014

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[10] T. Elkafrawy, A. Warczak**, A. Simon** J. A. Tanis, *Evidence for radiative double electron capture (RDEC) in F^{9+} on carbon collisions*,
AIP Conf. Proc. 1525 (2013) 64

[11] A. Spyrou, **A. Simon**, S. J. Quinn, A. Battaglia, A. Best, I. Beskin, B. Bucher, M. Couder, P. A. DeYoung, X. Fang, J. Görres, A. Kontos, Q. Li, S. N. Liddick, A. Long, S. Lyons, K. Padmanabhan, J. Peace, A. Roberts, D. Robertson, K. Smith, M. K. Smith, E. Stech, B. Stefanek, W. P. Tan, X. D. Tang M. Wiescher, *p process measurements with SuN*,
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[12] A Gumberidze, D B Thorn, S Trotsenko, D Banaś, H Beyer, W Chen, R D DuBois, S Geyer, R Grisenti, S Hagmann, M Hegewald, S Hess, P Indelicato, C Kozhuharov, R Märtin, I Orban, N Petridis, R Reuschl, **A Simon**, U Spillmann, A Surzhykov, M Trassinelli, G Weber, D F A Winters, N Winters, D Yu Th Stöhlker, *Electron- and Proton-Impact Excitation in Stored Hydrogen-like Uranium Ions*,
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J. Phys.: Conf. Ser. 388 (2012) 082012

[15] **A Simon**, J A Tanis, T Elkafrawy, A Warczak, *Radiative double electron capture (RDEC) in ion-atom collisions*,
J. Phys.: Conf. Ser. 388 (2012) 012034

[16] **A. Simon**, A. Warczak, J. A. Tanis, *Radiative Double Electron Capture Observed During O^{8+}+C Collisions At 38 MeV*,
AIP Conf. Proc. 1336 (2011) 87

[17] **A Simon**, J A Tanis, T ElKafrawy, A Warczak, *Correlated radiative double electron capture (RDEC) in collisions of bare oxygen ions with carbon targets*,
J. Phys.: Conf. Ser. 194 (2009) 082044

[18] T Elkafrawy, **A Simon,** J A Tanis, *X-ray processes associated with projectile charge changing in ~ 1 MeV/u collisions of O^{5+} on Ar*,
J. Phys.: Conf. Ser. 194 (2009) 082033

Invited lectures and addresses

- *Measurements of capture reactions for the p-process using the gamma-summing technique*, 7th p-process workshop 2019, Piedmont, Italy, September 23 - 27, 2019
- *Systematic study of the level density and γ-ray strength function of samarium isotopes,* 7th Workshop on Nuclear Level Density and Gamma Strength, Oslo, Norway, May 27 - 31, 2019
- *Constraining the Hauser-Feshbach models for nucleosynthesis processes*, research seminar, Lawrence Livermore National Lab, Livermore, CA, February 8, 2019
- *Measurements of proton and alpha capture reactions for p-process nucleosynthesis using gamma-summing technique*, research seminar, U. Mass. Lowell, MA, March 21, 2019
- *Measurements of proton and alpha capture reactions for p-process nucleosynthesis using gamma-summing technique*, Invited Talk, 42nd Symposium on Nuclear Physics Cocoyoc, Morelos, Mexico, January 7-10, 2019
- *Photon-strength functions and experimental measurement techniques*, Invited talk, Nuclear Structure, August 5-10, 2018, East Lansing, MI
- *Constraining the Hauser-Feshbach Models for Nucleosynthesis* Processes, Texas A&M Cyclotron Laboratory Seminar, March 20, 2018
- *Stewardship Science at the University of Notre Dame*, Invited Talk, 2018 Stewardship Science Academic Programs (SSAP) Symposium, North Bethesda, MD, February 21-23, 2018
- *Stewardship Science at the University of Richmond*, Invited Talk, 2017 Stewardship Science Academic Programs (SSAP) Symposium, Naperville, IL , April 12-13, 2017
- *Constraining Hauser-Feshbach cross sections for the p-process nucleosynthesis*, Invited talk, 24th Conference on Application of Accelerators in Research and Industry, Ft. Worth, TX, Oct. 30-Nov 4, 2016
- *Hauser-Feshbach models from experimenter's perspective* Joint Institute for Nuclear Astrophysics - Center for the Evolution of the Elements Research Seminar, Michigan State University, East Lansing, MI, Oct. 10, 2016,
- *CloverShare at Notre Dame*, Invited talk, Low Energy Community Meeting, Notre Dame, IN, Aug 11-13, 2016
- *Origin of heavy*, Department of Physics Colloquium, University of Richmond, Richmond, VA *elements*, Oct. 21, 2015
- *Where do all the elements come from? Nuclear physics for the stellar p-process*, Nuclear Physics Department Colloquium, Jagiellonian University, Krakow, Poland, June 02, 2015

- *Where do all the elements come from? Nuclear physics for the stellar p-process*, Physics Department Colloquium, Western Michigan University, Kalamazoo, MI, Nov. 03, 2014

Conference presentations (contributed)

- *First results from HECTOR: High EffCiency TOtal absorption spectrometeR for p-process nucleosynthesis studies*, Nuclear Physics in Astrophysics IX, Frankfurt, Germany, Sep. 15-20, 2019
- *Proton capture studies for the nucleosynthesis p-process using HECTOR,* 2018 Fall Meeting of the APS Division of Nuclear Physics, Waikoloa, HI, Oct. 23–27, 2018
- *HECTOR: High EffiCiency TOtal absorption spectrometeR*, JINA Frontiers Meeting, Lansing, MI, Feb. 7-9, 2017
- *Proton capture studies for the nucleosynthesis p-process using HECTOR*, 2017 Fall Meeting of the APS Division of Nuclear Physics, Pittsburgh, PA, Oct. 25–28, 2017
- *Nuclear input for the p-process*, APS April Meeting, Baltimore, MD, Apr. 11-14, 2015
- *Application of the Oslo method to high-resolution γ-spectra*, 2015 Fall Meeting of the APS DNP, Santa Fe, NM, October 28-31, 2015
- *Sensitivity of the p-nuclei production to the nuclear input in type II supernovae*, p-process Workshop, Limassol, Cyprus, June 10-13, 2015
- *Low-energy enhancement in gamma-strength function of rare-earth elements*, 2015 Annual Fall Meeting of the APS Prairie Section, Notre Dame, IN, Nov. 19–21, 2015

Grants and Sponsored Programs

- *Exploring the origin of heavy elements: nuclear input for p-process nucleosynthesis*, NSF, $520,000, 4 years, PI: Simon (2016-2020)
  Role: PI of the grant
- *Stewardship science at University of Richmond*, NNSA subcontract through University of Richmond for three years: $55.4k, PI: Simon (2016-2017)
  Role: PI of the subcontract. Mentoring and training students and a postdoc at University of Richmond, conducting experiments at Texas A&M within the scope of the main grant.
- *Low Energy Nuclear Science*, DOE-NNSA, $175,000, 1 year, PI: Simon (2017-2018)
  Role: PI of the grant
- *Center of Excellence in Nuclear Training and University Based Research CENTAUR*, NNSA, $64,000, Subcontract within a 5-year multi-institutional project, PI: Yenello (Texas A&M) (2019-2020)
  Role: co-PI of the project, management of the ND contribution to the project, conducting experiments at Texas A&M, student training and mentoring.
- *Underground low-background nuclear astrophysics studies*, co-PI, $750,000, 4 years, PI: Wiescher (2019-2023)
  Role: co-PI responsible for detector system and data acquisition system for measurements to be performed within the project, student training and mentoring towards experiments in the underground environment.

Doctoral Dissertations Directed

Craig Reingold (PhD 2020)
Orlando Gomez (PhD 2022)

Rebeka Kelmar (PhD 2023)

Professional Memberships

Member of the American Physical Society Oct. 2008 - present

Other notable contributions

Organizer of the T3 Workshop on Statistical Nuclear Physics for Astrophysics and Applications, Athens, OH July 13-16, 2020

Organizer of the International Workshop on Nuclear Statistical Physics in Astrophysics and Nuclear Applications (NuSPANA), Santa Fe, NM, USA 27-30 April 2020

External reviewer for Athene Young Investigator Programme at TU Darmstadt Aug. 2019

JINA-CDN (Center for Dynamical Nucleosynthesis) Working Group Coordinator 2019- present

Advisor for the Physics Majors Class of 2022 Aug. 2018 - present

NSF Panelist April 2019

Organizer of the 6th p-process Workshop, Notre Dame, IN June 29-July 1, 2017
International workshop dedicated to the nucleosynthesis of heavy neutron-deficient nuclei

Journal Referee 2011 - present
Physical Review Letters, Physical Review C, Nuclear Physics A, Journal of Physics G

NSF grant proposal reviewer Sep. 2016 - present

Reviewer of CEU applications for the 2016 Fall DNP Meeting, Aug. 2016 - present
Oct 12-15, 2016, Vancouver CA

Ph.D. External Committee Member for David LaMantia Feb. 2016 - present
Western Michigan University

Faculty Senate, College of Science Representative Sep. 2015 - present

Recruitment Committee, Department of Physics Sep. 2014 – June 2017

Computer Committee, Department of Physics Sep. 2014 - present

Diversity Committee, Department of Physics Sep. 2016 – present

Graduate Curriculum Committee Sep. 2017 - present

Other notable contributions: outreach

- Presentation to the PAN students: *Where does the gold come from?*, 2015-2019
- Presentation to the REU students: *Origin of elements: stellar nucleosynthesis*, 2015-2018
- Presentation for high school students with HS on Air event organized by JINA: Where do the elements come from? Nucleosynthesis in stellar environments, Oct. 16, 2015
- Organizer of the Notre Dame presentation at the Graduate School Information Fair, 2015 Fall Meeting of the APS DNP, Oct. 28-31, 2015, Santa Fe, NM
- *JINA at Physics Live*, Feb. 6, 2016, St Joseph Library, South Bend, IN