

Gregory A. Christian

EXPERIMENTAL NUCLEAR PHYSICS

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Research Interests

- Structure of nuclei away from stability, including unbound systems.
- Laboratory measurement of nuclear reactions for stellar nucleosynthesis.
- Detector and algorithm development for nuclear physics experiments.

Education

Michigan State University

East Lansing, MI USA

PHD IN EXPERIMENTAL NUCLEAR PHYSICS

2009 - 2011

Conferred 12/16/2011

Dissertation Topic: *Spectroscopy of neutron-unbound fluorine.*

Advisor: Artemis Spyrou

M.S. IN PHYSICS

2005 - 2007

Conferred 05/02/2008

Thesis topic: *Production of nuclei in neutron-unbound states via primary fragmentation of ^{48}Ca .*

Advisor: Michael Thoennessen

Georgia Institute of Technology

Atlanta, GA USA

B.S. IN PHYSICS

2001 - 2005

Summa cum laude

Experience

Texas A&M University

College Station, TX USA

ASSISTANT PROFESSOR (TENURE TRACK)

Sept. 2015 - present

Research

- Transfer reactions to constrain radiative proton capture rates in novae and X-ray bursts.
- Spectroscopy of light nuclei near and beyond the neutron/proton driplines.
- Development of a high-efficiency, highly position sensitive neutron detector for breakup and reaction measurements.

Teaching

- Physics 202 - "College Physics", Spring 2015
- Physics 218 - "Mechanics", Fall 2016

TRIUMF

Vancouver, BC CANADA

POSTDOC

2011 - 2015

Nuclear astrophysics: Direct measurements of radiative capture reaction rates relevant for stellar nucleosynthesis.

- Led and analyzed an experiment measuring key resonance strengths in $^{38}\text{K}(\rho, \gamma)^{39}\text{Ca}$, an important reaction in oxygen-neon novae and currently the highest mass radiative capture reaction performed with a radioactive beam.
- Designed and implemented a new timestamp-based trigger and data acquisition system for the DRAGON recoil mass separator.

National Superconducting Cyclotron Laboratory (NSCL)

East Lansing, MI USA

GRADUATE RESEARCH ASSISTANT

2005 - 2007 | 2009 - 2011

Nuclear structure: Invariant mass measurements of neutron-unbound states in neutron-rich nuclei.

- Planned, set up, and analyzed the first ever MoNA-Sweeper experiment to include coincident γ -ray detection, studying the neutron decay of the ground and excited states in ^{28}F and excited states in ^{27}F .
- Proposed an original method of measuring the lifetime of neutron-unbound states by looking at energy loss in a thick target; this technique was used by collaborators to measure the lifetime of ^{26}O , the first ever observation of neutron radioactivity.

Georgia Institute of Technology

UNDERGRADUATE RESEARCH ASSISTANT

Nuclear structure: Experimental and theoretical study on the collective structure of nuclei in the $N = 90$ region.

Atlanta, GA USA

2004 - 2005

TEACHING ASSISTANT (MATHEMATICS)

- Led biweekly recitations, tutored students in office hours, hand-graded homeworks and exams.
- Subjects taught: Calculus, Differential Equations, Linear Algebra.

2004 - 2005

Skills

Programming

C/C++, ROOT, GEANT4 (highly proficient); Python, TCL (moderately proficient); FORTRAN (reading/editing ability).

Physics codes

COSY INFINITY (ion optics); NuShell (shell model calculations); Fresco, Azure (nuclear reactions).

Hardware

Digital and analogue data acquisition, trigger logic, radiation detection (Silicon, CsI, BGO, HPGe, plastic scintillator, drift and ionization chambers, micro-channel plates); vacuum systems, gas recirculation systems, electric and magnetic optics, high voltage supplies.

Other

Mentoring and teaching ability; communication skills; ability to work in a collaborative environment and generate ideas with colleagues.

Honors & Awards

2011	Dissertation Completion Fellowship , Michigan State University	East Lansing, MI
2005 - 2007	NSCL Research Fellowship , Michigan State University	East Lansing, MI
2004	President's Undergraduate Research Award , Georgia Institute of Technology	Atlanta, GA
2001 - 2005	Georgia Governor's Scholar , Scholarship Competition	Atlanta, GA

Service & Outreach

Texas A&M University Cyclotron Institute

COLLOQUIUM/SEMINAR CO-CHAIR

- Solicited invitations and coordinated visits for colloquium and seminar speakers at the Texas A&M University Cyclotron Institute.

College Station, TX

Aug. 2016–present

APS Division of Nuclear Physics Annual Meeting

SESSION CHAIR

- Chair of the “Nuclear Astrophysics–II” session.

Santa Fe, NM

Oct. 2015

TRIUMF Junior Research School

LECTURER

- Lectured on the purpose and design of recoil mass spectrometers to junior college students from Singapore.

Vancouver, BC

Jan. 2015/2014/2013

TRIUMF Open House

EXHIBITOR

- Public demonstration of radiation detectors.

Vancouver, BC

Sept. 2013

TRIUMF Astrophysics Discussion Meeting

CHAIR

- Leader of a monthly journal club meeting focusing on topics related to nuclear astrophysics.

Vancouver, BC

July 2013 - Jan. 2015

Gordon Research Seminar

SESSION CHAIR

- Chair of the nuclear structure session.

New London, NH

June 2013

NSCL Physics of Atomic Nuclei Program

LECTURER

- Lectured on neutron detection to high school students and teachers.

East Lansing, MI

Aug. 2010

NSCL Open House

EXHIBITOR

- Public demonstrations of the Modular Neutron Array.

East Lansing, MI

Nov. 2006

Refereed Publications

- [1] G. Lotay, **G. Christian**, C. Ruiz, C. Akers, D. S. Burke, W. N. Catford, A. A. Chen, D. Connolly, B. Davids, J. Fallis, U. Hager, D. A. Hutcheon, A. Mahl, A. Rojas, and X. Sun, *Direct measurement of the astrophysical $^{38}\text{K}(p, \gamma)^{39}\text{Ca}$ reaction and its influence on the production of nuclides toward the end point of nova nucleosynthesis*, *Phys. Rev. Lett.* **116**, 132701 (2016).
- [2] A. Sanetullaev, R. Kanungo, J. Tanaka, M. Alcorta, C. Andreoiu, P. Bender, A. Chen, **G. Christian**, B. Davids, J. Fallis, J. Fortin, N. Galinski, A. Gallant, P. Garrett, G. Hackman, B. Hadinia, S. Ishimoto, M. Keefe, R. Krücken, J. Lighthall, E. McNeice, D. Miller, J. Purcell, J. Randhawa, T. Roger, A. Rojas, H. Savajols, A. Shotter, I. Tanihata, I. Thompson, C. Unsworth, P. Voss, and Z. Wang, *Investigation of the role of ^{10}Li resonances in the halo structure of ^{11}Li through the $^{11}\text{Li}(p, d)^{10}\text{Li}$ transfer reaction*, *Phys. Lett. B* **755**, 481 (2016).
- [3] O. S. Kirsebom, P. Bender, A. Cheeseman, **G. Christian**, R. Churchman, D. S. Cross, B. Davids, L. J. Evitts, J. Fallis, N. Galinski, A. B. Garnsworthy, G. Hackman, J. Lighthall, S. Ketelhut, P. Machule, D. Miller, S. T. Nielsen, C. R. Nobs, C. J. Pearson, M. M. Rajabali, A. J. Radich, A. Rojas, C. Ruiz, A. Sanetullaev, C. D. Unsworth, and C. Wrede, *Measurement of lifetimes in ^{23}Mg* , *Phys. Rev. C* **93**, 025802 (2016).
- [4] W. F. Rogers, S. Garrett, A. Grovom, R. E. Anthony, A. Aulie, A. Barker, T. Baumann, J. J. Brett, J. Brown, **G. Christian**, P. A. DeYoung, J. E. Finck, N. Frank, A. Hamann, R. A. Haring-Kaye, J. Hinnefeld, A. R. Howe, N. T. Islam, M. D. Jones, A. N. Kuchera, J. Kwiatkowski, E. M. Lunderberg, B. Luther, D. A. Meyer, S. Mosby, A. Palmisano, R. Parkhurst, A. Peters, J. Smith, J. Snyder, A. Spyrou, S. L. Stephenson, M. Strongman, B. Sutherland, N. E. Taylor, and M. Thoennessen, *Unbound excited states of the $N = 16$ closed shell nucleus ^{24}O* , *Phys. Rev. C* **92**, 034316 (2015).
- [5] V. Margerin, G. Lotay, P. J. Woods, M. Aliotta, **G. Christian**, B. Davids, T. Davinson, D. T. Doherty, J. Fallis, D. Howell, O. S. Kirsebom, D. J. Mountford, A. Rojas, C. Ruiz, and J. A. Tostevin, *Inverse kinematic study of the $^{269}\text{Al}(d, p)^{27}\text{Al}$ reaction and implications for destruction of ^{26}Al in wolf-rayet and asymptotic giant branch stars*, *Phys. Rev. Lett.* **115**, 062701 (2015).
- [6] J. R. Tomlinson, J. Fallis, A. M. Laird, S. P. Fox, C. Akers, M. Alcorta, M. A. Bentley, **G. Christian**, B. Davids, T. Davinson, B. R. Fulton, N. Galinski, A. Rojas, C. Ruiz, N. de Séréville, M. Shen, and A. C. Shotter, *Measurement of $^{23}\text{Na}(\alpha, p)^{26}\text{Mg}$ at energies relevant to ^{26}Al production in massive stars*, *Phys. Rev. Lett.* **115**, 052702 (2015).
- [7] M. D. Jones, Z. Kohley, T. Baumann, **G. Christian**, P. A. DeYoung, J. E. Finck, N. Frank, R. A. Haring-Kaye, A. N. Kuchera, B. Luther, S. Mosby, J. K. Smith, J. Snyder, A. Spyrou, S. L. Stephenson, and M. Thoennessen, *Further insights into the reaction $^{14}\text{Be}(\text{CH}_2, X)^{10}\text{He}$* , *Phys. Rev. C* **91**, 044312 (2015).
- [8] Z. Kohley, T. Baumann, **G. Christian**, P. A. DeYoung, J. E. Finck, N. Frank, B. Luther, E. Lunderberg, M. Jones, S. Mosby, J. K. Smith, A. Spyrou, and M. Thoennessen, *Three-body correlations in the ground-state decay of ^{26}O* , *Phys. Rev. C* **91**, 034323 (2015), [arXiv:1503.06191](https://arxiv.org/abs/1503.06191).
- [9] A. N. Kuchera, A. Spyrou, J. K. Smith, T. Baumann, **G. Christian**, P. A. DeYoung, J. E. Finck, N. Frank, M. D. Jones, Z. Kohley, S. Mosby, W. A. Peters, and M. Thoennessen, *Search for unbound ^{15}Be states in the $3n + ^{12}\text{Be}$ channel*, *Phys. Rev. C* **91**, 017304 (2015), [arXiv:1501.03127](https://arxiv.org/abs/1501.03127).
- [10] **G. Christian**, C. Akers, D. Connolly, J. Fallis, D. Hutcheon, K. Olchanski, and C. Ruiz, *Design and commissioning of a timestamp-based data acquisition system for the DRAGON recoil mass separator*, *Eur. Phys. J. A* **50**, 75 (2014), [arXiv:1403.3425](https://arxiv.org/abs/1403.3425).
- [11] J. Fallis, A. Parikh, P. F. Bertone, S. Bishop, L. Buchmann, A. A. Chen, **G. Christian**, J. A. Clark, J. M. D'Auria, B. Davids, C. M. Deibel, B. R. Fulton, U. Greife, B. Guo, U. Hager, C. Herlitzius, D. A. Hutcheon, J. José, A. M. Laird, E. T. Li, Z. H. Li, G. Lian, W. P. Liu, L. Martin, K. Nelson, D. Ottewell, P. D. Parker, S. Reeve, A. Rojas, C. Ruiz, K. Setoodehnia, S. Sjue, C. Vockenhuber, Y. B. Wang, and C. Wrede, *Constraining nova observables: Direct measurements of resonance strengths in $^{33}\text{S}(p, \gamma)^{34}\text{Cl}$* , *Phys. Rev. C* **88**, 045801 (2013), [arXiv:1309.3543](https://arxiv.org/abs/1309.3543).
- [12] Z. Kohley, **G. Christian**, T. Baumann, P. A. DeYoung, J. E. Finck, N. Frank, M. Jones, J. K. Smith, J. Snyder, A. Spyrou, and M. Thoennessen, *Exploiting neutron-rich radioactive ion beams to constrain the symmetry energy*, *Phys. Rev. C* **88**, 041601 (2013), [arXiv:1310.0990](https://arxiv.org/abs/1310.0990).
- [13] **G. Christian**, D. Hutcheon, C. Akers, D. Connolly, J. Fallis, and C. Ruiz, *Strength of the $E_{c.m.} = 1113$ keV resonance in $^{20}\text{Ne}(p, \gamma)^{21}\text{Na}$* , *Phys. Rev. C* **88**, 038801 (2013), [arXiv:1309.1503](https://arxiv.org/abs/1309.1503).
- [14] J. Snyder, T. Baumann, **G. Christian**, R. A. Haring-Kaye, P. A. DeYoung, Z. Kohley, B. Luther, M. Mosby, S. Mosby, A. Simon, J. K. Smith, A. Spyrou, S. Stephenson, and M. Thoennessen, *First observation of ^{15}Be* , *Phys. Rev. C* **88**, 031303 (2013).
- [15] M. Thoennessen, **G. Christian**, Z. Kohley, T. Baumann, M. Jones, J. Smith, J. Snyder, and A. Spyrou, *Novel techniques to search for neutron radioactivity*, *Nucl. Instrum. Meth. in Phys. Res. A* **729**, 207 (2013), [arXiv:1307.2185](https://arxiv.org/abs/1307.2185).
- [16] C. Akers, A. M. Laird, B. R. Fulton, C. Ruiz, D. W. Bardayan, L. Buchmann, **G. Christian**, B. Davids, L. Erikson, J. Fallis, U. Hager, D. Hutcheon, L. Martin, A. S. J. Murphy, K. Nelson, A. Spyrou, C. Stanford, D. Ottewell, and A. Rojas, *Measurement of radiative proton capture on ^{18}F and implications for oxygen-neon novae*, *Phys. Rev. Lett.* **110**, 262502 (2013).

- [17] M. Thoennessen, S. Mosby, N. Badger, T. Baumann, D. Bazin, M. Bennett, J. Brown, **G. Christian**, P. DeYoung, J. Finck, M. Gardner, E. Hook, B. Luther, D. Meyer, M. Mosby, W. Rogers, J. Smith, A. Spyrou, and M. Strongman, *Observation of a low-lying neutron-unbound state in ^{19}C* , *Nucl. Phys. A* **912**, 1 (2013), [arXiv:1305.0677](#) .
- [18] S. Mosby, N. Badger, T. Baumann, D. Bazin, M. Bennett, J. Brown, **G. Christian**, P. DeYoung, J. Finck, M. Gardner, J. Hinnefeld, E. Hook, E. Lunderberg, B. Luther, D. Meyer, M. Mosby, G. Peaslee, W. Rogers, J. Smith, J. Snyder, A. Spyrou, M. Strongman, and M. Thoennessen, *Search for ^{21}C and constraints on ^{22}C* , *Nucl. Phys. A* **909**, 69 (2013), [arXiv:1304.4507](#) .
- [19] Z. Kohley, T. Baumann, D. Bazin, **G. Christian**, P. A. DeYoung, J. E. Finck, N. Frank, M. Jones, E. Lunderberg, B. Luther, S. Mosby, T. Nagi, J. K. Smith, J. Snyder, A. Spyrou, and M. Thoennessen, *Study of two-neutron radioactivity in the decay of ^{26}O* , *Phys. Rev. Lett.* **110**, 152501 (2013), [arXiv:1303.2617](#) .
- [20] Z. Kohley, E. Lunderberg, P. A. DeYoung, A. Volya, T. Baumann, D. Bazin, **G. Christian**, N. L. Cooper, N. Frank, A. Gade, C. Hall, J. Hinnefeld, B. Luther, S. Mosby, W. A. Peters, J. K. Smith, J. Snyder, A. Spyrou, and M. Thoennessen, *First observation of the ^{13}Li ground state*, *Phys. Rev. C* **87**, 011304 (2013), [arXiv:1301.4410](#) .
- [21] J. K. Smith, T. Baumann, B. A. Brown, **G. Christian**, J. E. Finck, C. R. Hoffman, Z. Kohley, S. Mosby, J. F. Novak, S. J. Quinn, J. Snyder, A. Spyrou, M. J. Strongman, and M. Thoennessen (MoNA Collaboration), *Neutron unbound states in ^{28}Ne and ^{25}F* , *Phys. Rev. C* **86**, 057302 (2012).
- [22] Z. Kohley, J. Snyder, T. Baumann, **G. Christian**, P. A. DeYoung, J. E. Finck, R. A. Haring-Kaye, M. Jones, E. Lunderberg, B. Luther, S. Mosby, A. Simon, J. K. Smith, A. Spyrou, S. L. Stephenson, and M. Thoennessen, *Unresolved question of the ^{10}He ground state resonance*, *Phys. Rev. Lett.* **109**, 232501 (2012).
- [23] Z. Kohley, E. Lunderberg, P. DeYoung, B. Roeder, T. Baumann, **G. Christian**, S. Mosby, J. Smith, J. Snyder, A. Spyrou, and M. Thoennessen, *Modeling interactions of intermediate-energy neutrons in a plastic scintillator array with GEANT4*, *Nucl. Instr. Meth. in Phys. Res. A* **682**, 59 (2012).
- [24] E. Lunderberg, P. A. DeYoung, Z. Kohley, H. Attanayake, T. Baumann, D. Bazin, **G. Christian**, D. Divaratne, S. M. Grimes, A. Haagsma, J. E. Finck, N. Frank, B. Luther, S. Mosby, T. Nagi, G. F. Peaslee, A. Schiller, J. Snyder, A. Spyrou, M. J. Strongman, and M. Thoennessen, *Evidence for the ground-state resonance of ^{26}O* , *Phys. Rev. Lett.* **108**, 142503 (2012), [arXiv:1202.3973](#) .
- [25] **G. Christian**, N. Frank, S. Ash, T. Baumann, P. A. DeYoung, J. E. Finck, A. Gade, G. F. Grinyer, B. Luther, M. Mosby, S. Mosby, J. K. Smith, J. Snyder, A. Spyrou, M. J. Strongman, M. Thoennessen, M. Warren, D. Weisshaar, and A. Wersal, *Spectroscopy of neutron-unbound $^{27,28}\text{F}$* , *Phys. Rev. C* **85**, 034327 (2012), [arXiv:1203.1369](#) .
- [26] A. Spyrou, Z. Kohley, T. Baumann, D. Bazin, B. A. Brown, **G. Christian**, P. A. DeYoung, J. E. Finck, N. Frank, E. Lunderberg, S. Mosby, W. A. Peters, A. Schiller, J. K. Smith, J. Snyder, M. J. Strongman, M. Thoennessen, and A. Volya, *First observation of ground state dineutron decay: ^{16}Be* , *Phys. Rev. Lett.* **108**, 102501 (2012).
- [27] **G. Christian**, N. Frank, S. Ash, T. Baumann, D. Bazin, J. Brown, P. A. DeYoung, J. E. Finck, A. Gade, G. F. Grinyer, A. Grovom, J. D. Hinnefeld, E. M. Lunderberg, B. Luther, M. Mosby, S. Mosby, T. Nagi, G. F. Peaslee, W. F. Rogers, J. K. Smith, J. Snyder, A. Spyrou, M. J. Strongman, M. Thoennessen, M. Warren, D. Weisshaar, and A. Wersal, *Exploring the low- Z shore of the island of inversion at $N = 19$* , *Phys. Rev. Lett.* **108**, 032501 (2012), [arXiv:1201.1267](#) .
- [28] A. Spyrou, J. K. Smith, T. Baumann, B. A. Brown, J. Brown, **G. Christian**, P. A. DeYoung, N. Frank, S. Mosby, W. A. Peters, A. Schiller, M. J. Strongman, M. Thoennessen, and J. A. Tostevin, *Search for the ^{15}Be ground state*, *Phys. Rev. C* **84**, 044309 (2011).
- [29] C. C. Hall, E. M. Lunderberg, P. A. DeYoung, T. Baumann, D. Bazin, G. Blanchon, A. Bonaccorso, B. A. Brown, J. Brown, **G. Christian**, D. H. Denby, J. Finck, N. Frank, A. Gade, J. Hinnefeld, C. R. Hoffman, B. Luther, S. Mosby, W. A. Peters, A. Spyrou, and M. Thoennessen, *First observation of excited states in ^{12}Li* , *Phys. Rev. C* **81**, 021302 (2010).
- [30] A. Spyrou, T. Baumann, D. Bazin, G. Blanchon, A. Bonaccorso, E. Breitbach, J. Brown, **G. Christian**, A. DeLine, P. DeYoung, J. Finck, N. Frank, S. Mosby, W. Peters, A. Russel, A. Schiller, M. Strongman, and M. Thoennessen, *First evidence for a virtual ^{18}B ground state*, *Phys. Lett. B* **683**, 129 (2010).
- [31] C. R. Hoffman, T. Baumann, D. Bazin, J. Brown, **G. Christian**, D. Denby, P. DeYoung, J. Finck, N. Frank, J. Hinnefeld, S. Mosby, W. Peters, W. Rogers, A. Schiller, A. Spyrou, M. Scott, S. Tabor, M. Thoennessen, and P. Voss, *Evidence for a doubly magic ^{24}O* , *Phys. Lett. B* **672**, 17 (2009).
- [32] **G. Christian**, W. Peters, D. Absalon, D. Albertson, T. Baumann, D. Bazin, E. Breitbach, J. Brown, P. Cole, D. Denby, P. DeYoung, J. Finck, N. Frank, A. Fritsch, C. Hall, A. Hayes, J. Hinnefeld, C. Hoffman, R. Howes, B. Luther, E. Mosby, S. Mosby, D. Padilla, P. Pancella, G. Peaslee, W. Rogers, A. Schiller, M. Strongman, M. Thoennessen, and L. Wagner, *Production of nuclei in neutron unbound states via primary fragmentation of ^{48}Ca* , *Nuc. Phys. A* **801**, 101 (2008).

- [33] C. R. Hoffman, T. Baumann, D. Bazin, J. Brown, **G. Christian**, P. A. DeYoung, J. E. Finck, N. Frank, J. Hinnefeld, R. Howes, P. Mears, E. Mosby, S. Mosby, J. Reith, B. Rizzo, W. F. Rogers, G. Peaslee, W. A. Peters, A. Schiller, M. J. Scott, S. L. Tabor, M. Thoennessen, P. J. Voss, and T. Williams, *Determination of the $N = 16$ shell closure at the oxygen drip line*, *Phys. Rev. Lett.* **100**, 152502 (2008)

Conference Proceedings

- [1] Jones, M. D., Kohley, Z., Baumann, T., **G. Christian**, DeYoung, P. A., Finck, J. E., Frank, N., Haring-Kaye, R. A., Kuchera, A. N., Luther, B., Mosby, S., Smith, J. K., Snyder, J., Spyrou, A., Stephenson, S. L., and Thoennessen, M., *Search for $4n$ contributions in the reaction $^{14}\text{Be}(\text{CH}_2, X)^{10}\text{He}$* , *EPJ Web of Conferences* **113**, 06006 (2016).
- [2] Z. Kohley, T. Baumann, D. Bazin, **G. Christian**, P. A. DeYoung, J. E. Finck, R. A. Haring-Kaye, J. Hinnefeld, N. Frank, E. Lunderberg, B. Luther, S. Mosby, W. A. Peters, J. K. Smith, J. Snyder, S. L. Stephenson, M. J. Strongman, A. Spyrou, M. Thoennessen, and A. Volya, *Structure and decay correlations of two-neutron systems beyond the dripline*, *J. Phys. Conf. Ser.* **569**, 012033 (2014).
- [3] M. Thoennessen, Z. Kohley, A. Spyrou, E. Lunderberg, P. A. DeYoung, H. Attanayake, T. Baumann, D. Bazin, B. A. Brown, **G. Christian**, D. Divaratne, S. M. Grimes, A. Haagsma, J. E. Finck, N. Frank, B. Luther, S. Mosby, T. Nagi, G. F. Peaslee, W. A. Peters, A. Schiller, J. K. Smith, J. Snyder, M. Strongman, and A. Volya, *Observation of ground-state two-neutron decay*, *Acta Physics Polonica B* **44**, 543 (2013), presented at the Zakopane Conference on Nuclear Physics “Extremes of the Nuclear Landscape”, Zakopane, Poland, August 27–September 2, 2012, preprint [arXiv:1211.2178](https://arxiv.org/abs/1211.2178) [nucl-ex].
- [4] Z. Kohley, A. Spyrou, E. Lunderberg, P. A. DeYoung, H. Attanayake, T. Baumann, D. Bazin, B. A. Brown, **G. Christian**, D. Divaratne, S. M. Grimes, A. Haagsma, J. E. Finck, N. Frank, B. Luther, S. Mosby, T. Nagi, G. F. Peaslee, W. A. Peters, A. Schiller, J. K. Smith, J. Snyder, M. J. Strongman, M. Thoennessen, and A. Volya, *Exploring the neutron dripline two neutrons at a time: The first observations of the ^{26}O and ^{16}Be ground state resonances*, *J. Phys. Conf. Ser.* **420**, 123052 (2013), invited Talk given at the 11th International Conference on Nucleus-Nucleus Collisions (NN2012), San Antonio, Texas, USA, May 27–June 1, 2012, preprint [arXiv:1208.2969](https://arxiv.org/abs/1208.2969) [nucl-ex]

Invited Talks

- [1] *Direct measurements of radiative capture reactions with DRAGON*, presented at the American Physical Society Division of Nuclear Physics Annual Meeting, Santa Fe, NM, Oct. 2015.
- [2] *Nuclear astrophysics with DRAGON*, presented at the Canadian Association of Physicists Congress, Sudbury, ON, June 2014

Contributed Talks

- [1] *Determining the endpoint of nova nucleosynthesis: Direct measurement of $^{38}\text{K}(p, \gamma)^{39}\text{Ca}$ at DRAGON*, presented at the JINA-CEE Frontiers in Nuclear Astrophysics Meeting, East Lansing, MI, March 2015.
- [2] *Direct measurement of $^{38}\text{K}(p, \gamma)^{39}\text{Ca}$ at DRAGON*, presented at the American Physical Society Division of Nuclear Physics Meeting, Waikaloa Village, HI, October 2014.
- [3] *Spectroscopy of neutron-unbound fluorine*, presented at the American Physical Society Spring Meeting, Anaheim, CA, May 2011.
- [4] *Spectroscopy of neutron-unbound fluorine isotopes*, presented at the American Physical Society Division of Nuclear Physics Meeting, Santa Fe, NM, November 2010.
- [5] *Population of neutron-unbound states from direct fragmentation*, presented at the American Physical Society Division of Nuclear Physics Meeting, Nashville, TN, October 2006

Seminars and Colloquia

- [1] *Direct measurement of $^{38}\text{K}(p, \gamma)^{39}\text{Ca}$ at DRAGON*, Texas A&M Special Colloquium, College Station, TX, February 2015.
- [2] *Direct measurement of $^{38}\text{K}(p, \gamma)^{39}\text{Ca}$ at DRAGON*, Los Alamos National Laboratory Special Seminar, Los Alamos, NM, February 2015.
- [3] *Direct measurement of $^{38}\text{K}(p, \gamma)^{39}\text{Ca}$ at DRAGON*, TRIUMF Nuclear Physics Seminar, Vancouver, BC, February 2015.
- [4] *Direct measurement of $^{38}\text{K}(p, \gamma)^{39}\text{Ca}$ at DRAGON*, Lawrence Berkeley National Laboratory Special Seminar, Berkeley, CA, October, 2014.

[5] *Two-neutron radioactivity and other recent results from the Modular Neutron Array*, TRIUMF Colloquium, Vancouver, BC, January 2014.

[6] *Spectroscopy of neutron-unbound fluorine*, TRIUMF Special Seminar, Vancouver, BC, May 2011

Posters

[1] *Radiative capture measurements with DRAGON*, presented at the Gordon Research Conference, New London, NH USA, June 2013.

[2] *Spectroscopy of neutron-unbound fluorine isotopes*, presented at the Euroschool on Exotic Beams, Santiago de Compostella, Spain, September 2010