

# Curriculum Vitae

Athanasiou (Thanassis) Psaltis, Ph.D.

## Assistant Professor of Physics

Department of Astronomy and Physics  
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## Research Interests

nuclear astrophysics • experimental studies with stable and radioactive ion beams • nuclear sensitivity studies • thermonuclear reaction networks • evaluation of thermonuclear reaction rates • radiative capture reactions with recoil separators • charged-particle spectroscopy • in-beam and activation  $\gamma$ -ray spectroscopy

## Education

<b>McMaster University</b> • Hamilton, ON, Canada Ph.D. in Physics	September 2015 – August 2020
Advisor: Prof. Alan Chen	
Thesis title: "Radiative alpha capture on ${}^7\text{Be}$ with DRAGON at $\nu p$ -process nucleosynthesis energies"	
	
<b>National and Kapodistrian University of Athens</b> • Athens, Greece B.Sc. in Physics	October 2010 – September 2014
Advisor: Assoc. Prof. Theodoros Mertzimekis	
Minored in astrophysics. Thesis title: "Experimental studies of cross sections and angular distributions of ${}^{112}\text{Cd}(p,\gamma){}^{113}\text{In}$ with application in nucleosynthesis"	
	

## Research Positions

<b>Saint Mary's University</b> • Halifax, NS, Canada	August 2025 – Present
Assistant Professor of Physics	
<b>Triangle Universities Nuclear Laboratory</b> • Durham, NC, USA	January 2023 – August 2025
Postdoctoral Research Scholar	
Collaborated with Professors <b>Richard Longland</b> and <b>Christian Iliadis</b> on experimental and theoretical nuclear astrophysics. Conducted research in nova nucleosynthesis, performed transfer reaction measurements using the Enge magnetic spectrograph, and contributed to the evaluation of thermonuclear reaction rates.	
<b>Technische Universität Darmstadt</b> • Darmstadt, Germany	September 2020 – January 2023
Postdoctoral Researcher	
Collaborated with Professor <b>Almudena Arcones</b> on investigating nuclear and astrophysical uncertainties in core-collapse supernovae and neutron star mergers through extensive impact studies using reaction networks.	

**McMaster University** • Hamilton, ON, Canada  
Research Assistant

September 2015 – August 2020

Worked with Prof. [Alan Chen](#), engaging in experiments at prominent nuclear physics facilities globally as a visiting researcher, including TRIUMF, RIKEN, NSCL, Argonne National Laboratory, TUNL, and Maier-Leibnitz-Laboratorium.

**Los Alamos National Laboratory** • Los Alamos, NM, USA  
Visiting Graduate Researcher

May 2019

Collaborated with Drs. [Samuel Jones](#) and Chris Fryer on reaction network calculations for the  $\nu p$ -process with [NuGrid](#). Code development on NuGrid's [NuPPN](#) nuclear reaction network to include neutrino reactions.

**TRIUMF** • Vancouver, BC, Canada  
Visiting Graduate Researcher

June 2017 – September 2017

Collaborated with the [DRAGON group](#) during the preparation of my Ph.D. thesis project. Additionally, assisted in other experiments conducted by the DRAGON/TUDA group.

**National Centre of Scientific Research Demokritos** • Athens, Greece November 2013 – March 2014  
Undergraduate Researcher

Engaged in research at the [Tandem Accelerator Lab](#) of the Institute of Nuclear and Particle Physics for my undergraduate thesis. Additionally, assisted in two additional nuclear astrophysics experiments.

**NuSTRAP - University of Athens** • Athens, Greece November 2011 – September 2015  
Database Contributor

Completion and upgrade of the [Electromagnetic Moment Resources](#) online database. The database is currently hosted by the International Atomic Energy Agency (IAEA) [Nuclear Data Services](#).

## Approved User Facility Proposals

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7 approved user facility proposals at TRIUMF (3), Argonne National Laboratory (2), RIKEN (1), and FRIB (1). Total of **52 days** of machine-time.

7. "Measurement of the  $^{20}\text{Ne}(\alpha, \gamma)^{24}\text{Mg}$  with DRAGON"  
Spokespersons: A.A. Chen, A. Lennarz, **A. Psaltis** and C. Ruiz  
S2417 of TRIUMF EEC 202407S meeting (2024)
6. "Measurement of the  $^{84}\text{Se}(\alpha, xn)$  cross section with MUSIC to constrain neutrino-driven wind nucleosynthesis"  
Spokesperson: **A. Psaltis**  
#2114 of the ATLAS PAC (2024)
5. "Determining the Site of Globular Cluster Potassium Enrichment via the  $^{38}\text{Ar}(p, \gamma)^{39}\text{K}$  Reaction in Inverse Kinematics"  
Spokesperson: C. Marshall, Co-spokespersons: **A. Psaltis** and K. Chipps  
e21070 of FRIB PAC1 meeting (2021)
4. "Studying neutrino-driven wind nucleosynthesis with MUSIC: Measurement of the  $^{93}\text{Sr}(\alpha, xn)$  cross section"  
Spokespersons: **A. Psaltis** and W.J. Ong  
#1923 of the ATLAS PAC (2021)
3. "Studying supernova nucleosynthesis with CRIB: Measurement of the  $^{13}\text{N}(\alpha, p)^{16}\text{O}$  reaction"  
Spokesperson: **A. Psaltis**  
AVF69 of the 21st Nuclear Physics PAC of RI Beam factory (2020)

2. "Studying stellar helium burning with DRAGON: Direct measurement of the  $^{18}\text{O}(\alpha, \gamma)^{22}\text{Ne}$  reaction"  
Spokespersons: **A. Psaltis**, A.A. Chen, A. Lennarz and M. Williams  
S1928 of TRIUMF EEC 2019o6S meeting (2019)
1. "Breakout reactions from the pp-chain and the  $\nu p$ -process: Measurement of the  $^7\text{Be}(\alpha, \gamma)^{11}\text{C}$  reaction rate in inverse kinematics"  
Spokespersons: **A. Psaltis**, A.A. Chen and D.S. Connolly  
S1692 of TRIUMF EEC 2016o7S meeting (2016)

## Honours & Awards

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<b>Visiting Fellowship</b> – IReNA	2025
HUN-REN CSFK Astronomical Institute of Konkoly in Budapest to work with Drs. Marco Pignatari and Maria Lugaro	
<b>The Frank Dennee Scholarship</b> – McMaster University	2017, 2019
Internal award based on academic achievement for graduate students in nuclear science and nuclear engineering.	
<b>ComSciCon 2018</b> – National Science Communication Workshop	2018
Selection to attend the workshop from over 900 applicants.	
<b>International Excellence Award</b> – McMaster University	2018
<b>The Bridge residency program</b> – SciArt Center	2017
Four-month virtual residency program, where artists and scientists are paired to collaborate on a project of their choice.	

## Science Communication

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<b>ComSciConCAN</b> – Co-founder/ Organizing Committee Member	September 2018 - Present
ComSciCon is a workshop series organized by graduate students, for graduate students, focused on science communication skills. Our goal is to empower future leaders in technical communication to share the results from research in their field with broad and diverse audiences, not just practitioners in their fields. The event started in the US in 2013 and for the first time, it was hosted in Canada in the summer of 2019.	
<b>ScienceSeeker</b> – Science news editor	February 2016 - February 2022
Edited in one of the Top 100 Science Blogs on the Web. My role included picking interesting blog posts about Art, Physics, and General Science out of a collection of 2,300 blogs and other science news sources from around the globe every week. Picks can be found on Twitter using the hashtag #SciSeekPicks.	
<b>William J. McCallion Planetarium</b> • Hamilton, ON, Canada	November 2015 - August 2020
Producer/Presenter	
Production and live presentation of educational shows. Presented to thousands of people, mostly students and the general public. Produced three full-dome interactive public shows:	
<ul style="list-style-type: none"> <li>• "Rust and stardust: The lives of the stars and the origin of the elements" – 2016</li> <li>• "Star Wars: The Science Awakens" – 2017</li> <li>• "The golden dance of death" – 2019</li> </ul>	
<b>Pint of Science</b> • Hamilton, ON, Canada	January 2018 - August 2020
City Coordinator	
Pint of Science is a non-profit organization that brings some of the most brilliant scientists to your local	

pub to discuss their latest research and findings with you. Organization of the event in Hamilton.

**Researchers' Night Hamilton** • Hamilton, ON, Canada  
Coordinator

October 2015 - August 2020

Researchers' Night is a European-based concept, which gives the public a unique opportunity to interact with scientists in a non-formal way for an evening. Coordination of the invited scientists, setup of the event, and social media coverage.

**SciCo** • Athens, Greece  
Science Ambassador

September 2015 - April 2019

SciCo is the first Non-Profit Science Communication Organization in Greece. Part of the organizing team of the biggest Science Festival in Greece with more than 30,000 visitors every year - [Athens Science Festival](#). Attended trainings on creative writing, creative storytelling, and science communication.

## Teaching Experience

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**Saint Mary's University** • Halifax, NS, Canada  
Instructor

September 2025 – Present

Winter 2026 courses:

- PHYS 3600: Experimental Physics I
- PHYS 4410: Electrodynamics

**Technische Universität Darmstadt** • Darmstadt, Germany  
Teaching Assistant

September 2021 – February 2022

Consulting students for their research projects (Stellar Structure and Explosive Nucleosynthesis) in the "Nuclear Astrophysics" seminar.

**McMaster University** • Hamilton, ON, Canada  
Teaching Assistant

September 2015 – May 2020

Introduction to experiments, one-on-one lab assistance (~30 students), answering questions, test invigilation as well as marking quizzes, lab reports, and exams.

Classes taught:

- PHYS 1A03: Introductory Physics
- PHYS 1E03: Waves, Electricity and Magnetic Fields
- PHYS 1AA3: Introduction to Modern Physics
- Astronomy/Origins 2B03: Big Questions
- Arts & Science 2D06: Physics
- iSCI 3A12: Light, the Universe, and Everything (LUE)

## Mentoring

- Dhruval Shah: Measurement of the  $^{18}\text{O}(\alpha, \gamma)^{22}\text{Ne}$  with DRAGON (M.Sc. student 2024 – present)
- Tali Lansing: Elastic scattering measurements for  $\alpha$ OMP (REU summer student 2023)
- Jan Kuske: Nucleosynthesis calculations for the  $r$ -process (M.Sc. student 2021 – 2023)
- Liam Kroll: Core-Collapse Supernovae simulations using MESA (summer student 2018, 2019)  
Now graduate student at Dalhousie University (Halifax, NS, Canada)
- Physics & Astronomy Mentor-mentee program (2016 – 2020)

## Professional Service

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<b>Department representative</b>	• Science Atlantic	September 2025 – Present
<b>Symposium Organizer</b>	• CAP Computational Advances in Astrophysics and Cosmology	May 2024
<b>r-process Experiments Focus Area coordinator team</b>	• IReNA	December 2022 – Present
<b>Referee</b>	• ApJS, PRC, Front. Astron. Space Sci., Universe, Galaxies	December 2021 – Present
<b>PI Team</b>	• NuGrid Collaboration	February 2021 – Present
<b>Member</b>	• ELEMENTS	March 2022 – January 2023
<b>Member</b>	• SFB 1245	September 2020 – January 2023
<b>Committee Member</b>	IReNA Online Seminar Series Chair between October 2021 – April 2022.	September 2020 – April 2022
<b>Conference Chair</b>	• “Virtual workshop on $(\alpha, n)$ reactions for astrophysics”	14-15 July 2021
<b>Twitter Team</b>	• JINA Horizons	30 November – 4 December 2020

## Publications

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 ORCID iD: 0000-0003-2197-0797

**47 Journal Publications** • 9 first/second author

**23 Conference Proceedings** • 6 first author

In the publications noted with a  $\star$ , I led the nucleosynthesis calculations

### A Journal Publications

- [A047] A. Psaltis and F. Montes, *Recent advancements on  $(\alpha, n)$  reactions in astrophysical environments*, J. Phys. G: Nucl. Part. Phys., **Invited Topical Review** expected Q2 2026
- [A046] N. Bhati *et al.* (including **A. Psaltis**), *Direct measurement of  $^{59}\text{Cu}(p, \alpha)^{56}\text{Ni}$  precludes a strong NiCu cycle in Type-I X-ray bursts*, *Astrophys. J.*, Submitted (2025)
- [A045] A. Sarancino *et al.* (including **A. Psaltis**), *Low-energy dipole strength distribution in  $^{102}\text{Ru}$ : Coexistence of scissors and octupole resonances*, *Phys. Rev. Lett.*, Submitted (2025)
- [A044] K.A. Chipps *et al.* (including **A. Psaltis**), *Direct Cross Section Measurement of  $^{102}\text{Pd}(\gamma, p)$  and  $^{102}\text{Pd}(\gamma, \alpha)$  for the Astrophysical p Process*, *Phys. Rev. C*, Submitted (2025)
- [A043] T. Budner *et al.* (including **A. Psaltis**), *Proton Pandemonium: A first look at the  $^{31}\text{Cl}(\beta p\gamma)^{30}\text{P}$  decay scheme*, *Phys. Rev. C*, Submitted (2025)
- [A042] C. Iliadis *et al.* (including **A. Psaltis**), *The 2025 Evaluation of Experimental Thermonuclear Reaction Rates (ETR25)*, *Astrophys. J. Suppl. Ser.*, Accepted (2025)
- [A041] T. Mishenina *et al.* (including **A. Psaltis**), *Molybdenum and Ruthenium in the Galactic Disk: A Closer Look at their nucleosynthesis components*, *A&A* **705**, A38 (2026) doi [10.1051/0004-6361/202557454](https://doi.org/10.1051/0004-6361/202557454)
- [A040] A. Tsantiri *et al.* (including **A. Psaltis**), *Constraining the Production of the Lightest p Nucleus  $^{74}\text{Se}$* , *Phys. Rev. Lett.* **135**, 212701 (2025) doi [10.1103/d7dr-h36j](https://doi.org/10.1103/d7dr-h36j)
- [A039] C. Marshall *et al.* (including **A. Psaltis**), *Bayesian Analysis of the  $^{86}\text{Sr}(\alpha, \alpha)$  Reaction to Constrain  $^{86}\text{Sr}(\alpha, n)$  at Astrophysical Energies*, *Phys. Rev. C* **112**, 045801 (2025). doi [10.1103/1tx5-lcgh](https://doi.org/10.1103/1tx5-lcgh)
- [A038] M. Pignatari *et al.* (including **A. Psaltis**), *Production of radioactive  $^{22}\text{Na}$  in core-collapse supernovae: the Ne-E(L) component in presolar grains and its possible consequences on supernova observations*, *Astrophys. J.* **990**, 19 (2025), doi [10.3847/1538-4357/adef4c](https://doi.org/10.3847/1538-4357/adef4c)

- [A037] A. Psaltis et al., Low-metallicity nova explosions: a site for weak rp-process nucleosynthesis, *Astrophys. J.* **987**, 88 (2025), doi [10.3847/1538-4357/addfd5](https://doi.org/10.3847/1538-4357/addfd5) \*
- [A036] L. Ward et al. (including A. Psaltis), Impact of thermonuclear reaction rate uncertainties on the identification of presolar grains from classical novae, *Astrophys. J.* **986**, 109 (2025), doi [10.3847/1538-4357/add47a](https://doi.org/10.3847/1538-4357/add47a)
- [A035] G. Owens-Fryar et al. (including A. Psaltis), Total Absorption Spectroscopy for the  $\Omega^+$  decay strength distribution of  $^{60}\text{Ga}$ , *Phys. Rev. C* **111**, 065801 (2025), doi [10.1103/PhysRevC.111.065801](https://doi.org/10.1103/PhysRevC.111.065801)
- [A034] C. Fougères, M.L. Avila, A. Psaltis et al., First measurement of  $^{87}\text{Rb}(\alpha, xn)$  cross sections at weak r-process energy in  $\nu$ -driven supernova ejecta to investigate elemental abundances in low-metallicity stars, *Astrophys. J.* **983**, 142 (2025), doi [10.3847/1538-4357/adc253](https://doi.org/10.3847/1538-4357/adc253) \*
- [A033] S.F. Dellmann et al. (including A. Psaltis), First Proton-Induced Cross Sections on a Stored Rare Ion Beam: Measurement of  $^{118}\text{Te}(p,\gamma)$  for Explosive Nucleosynthesis, *Phys. Rev. Lett.* **134**, 142701 (2025), doi [10.1103/PhysRevLett.134.142701](https://doi.org/10.1103/PhysRevLett.134.142701)
- [A032] M. Williams et al. (including A. Psaltis), First measurement of a weak r-process reaction on a radioactive nucleus, *Phys. Rev. Lett.* **134**, 112701 (2025), doi [10.1103/PhysRevLett.134.112701](https://doi.org/10.1103/PhysRevLett.134.112701)
- [A031] L. Varga et al. (including A. Psaltis), Proton-Capture Studies in the ESR Storage Rings: Measurement of  $^{124}\text{Xe}(p,\gamma)$  and  $^{124}\text{Xe}(p,n)$  at Improved Sensitivity, *Phys. Rev. Lett.* **134**, 082701 (2025) doi [10.1103/PhysRevLett.134.082701](https://doi.org/10.1103/PhysRevLett.134.082701)
- [A030] D. Walter et al. (including A. Psaltis), Signature of  $0^+$  excited state and shape coexistence in  $^{94}\text{Kr}$  through  $^{93}\text{Kr}(d,p)^{94}\text{Kr}$  reaction, *Phys. Lett. B* **862**, 139352 (2025) doi [10.1016/j.physletb.2025.139352](https://doi.org/10.1016/j.physletb.2025.139352)
- [A029] D. García-Senz et al. (including A. Psaltis), Don't forget the electrons: extending moderately-sized nuclear networks for multidimensional hydrodynamic codes, *A&A* **688**, A218 (2024), doi [10.1051/0004-6361/202449863](https://doi.org/10.1051/0004-6361/202449863)
- [A028] J. J. Marsh et al. (including A. Psaltis), The first in-beam reaction measurement at CRYRING@ESR using the CARME array, *Eur. Phys. J. A* **60**, 95 (2024), doi [10.1140/epja/s10050-024-01318-2](https://doi.org/10.1140/epja/s10050-024-01318-2)
- [A027] A. Psaltis et al., Neutrino-Driven Outflows and the Elemental Abundance Patterns of Very Metal-Poor Stars , *Astrophys. J.* **966**, 11 (2024), doi [10.3847/1538-4357/ad2dfb](https://doi.org/10.3847/1538-4357/ad2dfb) \*
- [A026] H. Jayatissa et al. (including A. Psaltis), Study of the  $^{22}\text{Mg}$  waiting point relevant for x-ray burst nucleosynthesis using a direct measurement of the  $^{22}\text{Mg}(\alpha,p)^{25}\text{Al}$  reaction, *Phys. Rev. Lett.* **131**, 112701 (2023), doi [10.1103/PhysRevLett.131.112701](https://doi.org/10.1103/PhysRevLett.131.112701)
- [A025] J. Kavoor et al. (including A. Psaltis), Structure studies of  $^{13}\text{Be}$  from the  $^{12}\text{Be}(d,p)$  reaction in inverse kinematics on a solid deuteron target, *Phys. Rev. C* **108**, 034601 (2023), doi [10.1103/PhysRevC.108.034601](https://doi.org/10.1103/PhysRevC.108.034601)
- [A024] L. Roberti, M. Pignatari, A. Psaltis et al., The  $\gamma$ -process nucleosynthesis in core-collapse supernovae I. A novel analysis of  $\gamma$ -process yields in massive stars, *A&A* **677**, A22 (2023), doi [10.1051/0004-6361/202346556](https://doi.org/10.1051/0004-6361/202346556)
- [A023] M. Williams et al. (including A. Psaltis), Cross Sections of the  $^{83}\text{Rb}(p,\gamma)^{84}\text{Sr}$  and  $^{84}\text{Kr}(p,\gamma)^{85}\text{Rb}$  Reactions at Energies Characteristic of the Astrophysical  $\gamma$  Process, *Phys. Rev. C*, **107** 035803 (2023), doi [10.1103/PhysRevC.107.035803](https://doi.org/10.1103/PhysRevC.107.035803)
- [A022] H. Schatz et al. (including A. Psaltis), Horizons: Nuclear Astrophysics in the 2020s and Beyond, *J. Phys. G: Nucl. Part. Phys.* **49**, 110502 (2022), doi [10.1088/1361-6471/ac8890](https://doi.org/10.1088/1361-6471/ac8890) – Major Review
- [A021] N. Vukman et al. (including A. Psaltis), Cluster decays of  $^{12}\text{Be}$  excited states, *Front. Phys.* **10** 1009421 (2022), doi [10.3389/fphy.2022.1009421](https://doi.org/10.3389/fphy.2022.1009421)
- [A020] A. Psaltis et al., First inverse kinematics measurement of resonances in  $^7\text{Be}(\alpha, \gamma)^{11}\text{C}$  relevant to neutrino-driven wind nucleosynthesis using DRAGON, *Phys. Rev. C* **106** 045805 (2022), doi [10.1103/PhysRevC.106.045805](https://doi.org/10.1103/PhysRevC.106.045805)

- [A019] A. Psaltis et al., Direct measurement of resonances in  ${}^7\text{Be}(\alpha, \gamma){}^{11}\text{C}$  relevant to  $\nu p$ -process nucleosynthesis, Phys. Rev. Lett. **129** 162701 (2022), doi [10.1103/PhysRevLett.129.162701](https://doi.org/10.1103/PhysRevLett.129.162701)
- [A018] L. Lombardo et al. (including A. Psaltis), Chemical Evolution of R-process Elements in Stars (CERES) I. Stellar parameters and chemical abundances from Na to Zr, A&A **665** A10 (2022), doi [10.1051/0004-6361/202243932](https://doi.org/10.1051/0004-6361/202243932)
- [A017] A. Psaltis et al., Constraining nucleosynthesis in neutrino-driven winds: observations, simulations and nuclear physics, Astrophys. J **935**, 27 (2022) doi [10.3847/1538-4357/ac7da7](https://doi.org/10.3847/1538-4357/ac7da7) \*
- [A016] T. Budner et al. (including A. Psaltis), Constraining the  ${}^{30}\text{P}(p, \gamma){}^{31}\text{S}$  reaction rate in ONe novae via the weak, low-energy,  $\beta$ -delayed proton decay of  ${}^{31}\text{Cl}$ , Phys. Rev. Lett. **128**, 182701 (2022), doi [10.1103/PhysRevLett.128.182701](https://doi.org/10.1103/PhysRevLett.128.182701)
- [A015] J. Hooker et al. (including A. Psaltis), Use of Bayesian Optimization to Understand the Structure of Nuclei, Nucl. Instr. Meth. Phys. Res. B **512** 6 (2022), doi [10.1016/j.nimb.2021.11.014](https://doi.org/10.1016/j.nimb.2021.11.014)
- [A014] J. S. Randhawa et al. (including A. Psaltis), First direct measurement of  ${}^{59}\text{Cu}(p, \alpha){}^{56}\text{Ni}$ : A step towards constraining the Ni-Cu cycle in the Cosmos, Phys. Rev. C **104** L042801 (2021), doi [10.1103/PhysRevC.104.L042801](https://doi.org/10.1103/PhysRevC.104.L042801)
- [A013] M. Witt, A. Psaltis et al., Post-explosion evolution of core-collapse supernovae, Astrophys. J **921** 19 (2021), doi [10.3847/1538-4357/ac1a6d](https://doi.org/10.3847/1538-4357/ac1a6d) \*
- [A012] J. Hu et al. (including A. Psaltis), Advancement of Photospheric Radius Expansion and Clocked Type-I X-Ray Burst Models with the New  ${}^{22}\text{Mg}(\alpha, p){}^{25}\text{Al}$  Reaction Rate Determined at the Gamow Energy, Phys. Rev. Lett. **127**, 172701 (2021), doi [10.1103/PhysRevLett.127.172701](https://doi.org/10.1103/PhysRevLett.127.172701)
- [A011] M. Holl et al. (including A. Psaltis), Proton inelastic scattering reveals deformation in  ${}^8\text{He}$ , Phys. Lett. B **822**, 136710 (2021), doi [10.1016/j.physletb.2021.136710](https://doi.org/10.1016/j.physletb.2021.136710)
- [A010] P. Mohr et al. (including A. Psaltis), Astrophysical reaction rates of  $\alpha$ -induced reactions for nuclei with  $26 \leq Z \leq 83$  from the new Atomki-V2  $\alpha$ -nucleus potential, At. Data Nucl. Data Tables, **142**, 101453 (2021), doi [10.1016/j.adt.2021.101453](https://doi.org/10.1016/j.adt.2021.101453)
- [A009] T. N. Szegedi et al. (including A. Psaltis), Activation thick target yield measurement of  ${}^{100}\text{Mo}(\alpha, n){}^{103}\text{Ru}$  for studying the weak  $r$ -process nucleosynthesis, Phys. Rev. C **104**, 035804 (2021), doi [10.1103/PhysRevC.104.035804](https://doi.org/10.1103/PhysRevC.104.035804) \*
- [A008] G. Lotay et al. (including A. Psaltis), First direct measurement of an astrophysical  $p$  process reaction cross section using a radioactive ion beam, Phys. Rev. Lett. **127**, 112701 (2021), doi [10.1103/PhysRevLett.127.112701](https://doi.org/10.1103/PhysRevLett.127.112701)
- [A007] M. Lovely et al. (including A. Psaltis), Proton capture on  ${}^{34}\text{S}$  in the astrophysical energy regime of ONe novae, Phys. Rev. C **103**, 055801 (2021), doi [10.1103/PhysRevC.103.055801](https://doi.org/10.1103/PhysRevC.103.055801)
- [A006] A. Psaltis et al., Beyond the acceptance limit of DRAGON: the case of the  ${}^6\text{Li}(\alpha, \gamma){}^{10}\text{B}$  reaction, Nucl. Instr. Meth. Phys. Res. A **987**, 164828 (2021), doi [10.1016/j.nima.2020.164828](https://doi.org/10.1016/j.nima.2020.164828)
- [A005] M. Williams et al. (including A. Psaltis), First inverse kinematics study of the  ${}^{22}\text{Ne}(p, \gamma){}^{23}\text{Na}$  reaction and its role in AGB star and classical nova nucleosynthesis, Phys. Rev. C **102**, 035801 (2020), doi [10.1103/PhysRevC.102.035801](https://doi.org/10.1103/PhysRevC.102.035801)
- [A004] A. Lennarz et al. (including A. Psaltis), First inverse kinematics measurement of key resonances in the  ${}^{22}\text{Ne}(p, \gamma){}^{23}\text{Na}$  reaction at stellar temperatures, Phys. Lett. B **807**, 135539 (2020), doi [10.1016/j.physletb.2020.135539](https://doi.org/10.1016/j.physletb.2020.135539)
- [A003] A. Psaltis et al., Cross-section measurements of radiative proton-capture reactions in  ${}^{112}\text{Cd}$  at energies of astrophysical interest, Phys. Rev. C **99**, 065807 (2019), doi [10.1103/PhysRevC.99.065807](https://doi.org/10.1103/PhysRevC.99.065807)
- [A002] A. Khaliel et al. (including A. Psaltis), First cross-section measurements of the reactions  ${}^{107,109}\text{Ag}(p, \gamma){}^{108,110}\text{Cd}$  at energies relevant to the  $p$  process, Phys. Rev. C **96**, 035806 (2017), doi [10.1103/PhysRevC.96.035806](https://doi.org/10.1103/PhysRevC.96.035806) – Academy of Athens award on Experimental Physics

- [A001] T.J. Mertzimekis, K. Stamou and **A. Psaltis**, *An online database of nuclear electromagnetic moments*, Nucl. Instr. Meth. Phys. Res. A, **807**, 56 (2016), doi [10.1016/j.nima.2015.10.096](https://doi.org/10.1016/j.nima.2015.10.096)

## B Peer-Reviewed Conference Proceedings

- [Bo23] **A. Psaltis** et al., *Using  $(\alpha, xn)$  reaction rates and abundance ratios to constrain the weak r-process*, J. Phys.: Conf. Ser. **2586** 012105 (2023), doi [10.1088/1742-6596/2586/1/012105](https://doi.org/10.1088/1742-6596/2586/1/012105)
- [Bo22] P. Adsley et al. (including **A. Psaltis**), *Understanding globular cluster abundances through nuclear reactions*, J. Phys.: Conf. Ser. **012100** 012105 (2023), doi [10.1088/1742-6596/2586/1/012100](https://doi.org/10.1088/1742-6596/2586/1/012100)
- [Bo21] J. Glorius et al. (including **A. Psaltis**), *Storage, accumulation and deceleration of secondary beams for nuclear astrophysics*, Nucl Instrum Methods Phys Res B **541**, 190 (2023), doi [10.1016/j.nimb.2023.04.059](https://doi.org/10.1016/j.nimb.2023.04.059)
- [Bo20] N. Vukman et al. (including **A. Psaltis**), *Helium Clustering in Neutron-rich Be Isotopes*, Acta Phys Pol B Proc Suppl **16**, 4-A34 (2023), doi [10.5506/aphyspolbsupp.16.4-a34](https://doi.org/10.5506/aphyspolbsupp.16.4-a34)
- [Bo19] C. Angus et al. (including **A. Psaltis**), *Measurement of the  $^{86}\text{Kr}(\alpha, n)^{89}\text{Sr}$  cross section at energies relevant for the weak r-process*, EPJ Web of Conferences **279**, 08002 (2023), doi [10.1051/epjconf/202327911003](https://doi.org/10.1051/epjconf/202327911003)
- [Bo18] S.F. Dellmann et al. (including **A. Psaltis**), *Proton capture on stored radioactive  $^{118}\text{Te}$  ions*, EPJ Web of Conferences **279** 11018 (2023), doi [10.1051/epjconf/202327911018](https://doi.org/10.1051/epjconf/202327911018)
- [Bo17] **A. Psaltis** et al., *Constraining nucleosynthesis in neutrino-driven winds using the impact of  $(\alpha, xn)$  reaction rates*, EPJ Web of Conferences **279**, 08002 (2023), doi [10.1051/epjconf/202327908002](https://doi.org/10.1051/epjconf/202327908002)
- [Bo16] H. Yamaguchi et al. (including **A. Psaltis**), *RIB induced reactions: Studying astrophysical reactions with low-energy RI beam at CRIB*, EPJ Web of Conferences **275**, 01015 (2023), doi [10.1051/epjconf/202327501015](https://doi.org/10.1051/epjconf/202327501015)
- [Bo15] T. Wheeler et al. (including **A. Psaltis**), *Measuring the  $^{15}\text{O}(\alpha, \gamma)^{19}\text{Ne}$  Reaction in Type I X-ray Bursts using the GADGET II TPC: Hardware*, EPJ Web of Conferences **260**, 11046 (2022), doi [10.1051/epjconf/202226011046](https://doi.org/10.1051/epjconf/202226011046)
- [Bo14] R. Mahajan et al. (including **A. Psaltis**), *Measuring the  $^{15}\text{O}(\alpha, \gamma)^{19}\text{Ne}$  Reaction in Type I X-ray Bursts using the GADGET II TPC: Software*, EPJ Web of Conferences **260**, 11034 (2022), doi [10.1051/epjconf/202226011034](https://doi.org/10.1051/epjconf/202226011034)
- [Bo13] **A. Psaltis** et al., *Exploring the uncertainties of  $(\alpha, xn)$  reactions for the weak r-process*, EPJ Web of Conferences **260**, 07003 (2022), doi [10.1051/epjconf/202226007003](https://doi.org/10.1051/epjconf/202226007003)
- [Bo12] J. Hu et al. (including **A. Psaltis**), *First measurement of  $^{25}\text{Al} + p$  resonant scattering relevant to the astrophysical reaction  $^{22}\text{Mg}(\alpha, p)^{25}\text{Al}$* , EPJ Web of Conferences **260**, 05001 (2022), doi [10.1051/epjconf/202226005001](https://doi.org/10.1051/epjconf/202226005001)
- [Bo11] H. Yamaguchi et al. (including **A. Psaltis**), *Experimental studies on astrophysical reactions at the low- energy RI beam separator CRIB*, EPJ Web of Conferences **260** 03003 (2022), doi [10.1051/epjconf/202226003003](https://doi.org/10.1051/epjconf/202226003003)
- [Bo10] J. Liang et al. (including **A. Psaltis**), *Spectroscopic Study of  $^{39}\text{Ca}$  for Endpoint Nucleosynthesis in Classical Novae*, J. Phys.: Conf. Ser. **1668** 012025 (2020), doi [10.1088/1742-6596/1668/1/012025](https://doi.org/10.1088/1742-6596/1668/1/012025)
- [Bo09] **A. Psaltis** et al., *Study of the  $^7\text{Be}(\alpha, \gamma)^{11}\text{C}$  reaction with DRAGON for  $\nu p$ -process nucleosynthesis*, J. Phys.: Conf. Ser. **1668**, 012035 (2020), doi [10.1088/1742-6596/1668/1/012035](https://doi.org/10.1088/1742-6596/1668/1/012035)
- [Bo08] H. Shimizu et al. (including **A. Psaltis**), *Study on  $^{26m}\text{Al}(p, \gamma)$  Reaction at the SNe Temperature*, JPS Conf. Proc. **31**, 011073 (2020), doi [10.7566/JPSCP.31.011073](https://doi.org/10.7566/JPSCP.31.011073)

- [Boo7] **A. Psaltis** et al., *Radiative alpha capture on  $^7\text{Be}$  with DRAGON at energies relevant to the  $\nu p$ -process*, Springer Proceedings in Physics – NIC XV (2018), 425.  
doi 10.1007/978-3-030-13876-9\_81
- [Boo6] **A. Psaltis** et al., *First radiative proton–capture cross-section measurements in mid-weight nuclei relevant to the  $p$ -process*, Springer Proceedings in Physics – NIC XV (2018), 421.  
doi 10.1007/978-3-030-13876-9\_80
- [Boo5] J. Liang et al. (including **A. Psaltis**), *Spectroscopic study on  $^{39}\text{Ca}$  using the  $^{40}\text{K}(d,t)^{39}\text{Ca}$  reaction for classical nova endpoint nucleosynthesis*, Springer Proceedings in Physics – NIC XV (2018), 397.  
doi 10.1007/978-3-030-13876-9\_74
- [Boo4] H. Shimizu et al. (including **A. Psaltis**), *Isomeric  $^{26}\text{Al}$  beam production with CRIB*, EPJ Web of Conferences **184**, 02013 (2018), doi 10.1051/epjconf/201818402013
- [Boo3] N. Vukman et al. (including **A. Psaltis**), *Examining the Helium Cluster Decays of the  $^{12}\text{Be}$  Excited States by Triton Transfer to the  $^9\text{Li}$  Beam*, RÁBIDA 2018: Basic Concepts in Nuclear Physics: Theory, Experiments and Applications pp 257–258, doi 10.1007/978-3-030-22204-8\_43
- [Boo2] D. Kahl et al. (including **A. Psaltis**), *Impact of the  $^{26m}\text{Al}(p,\gamma)$  reaction to galactic  $^{26}\text{Al}$  yield*, AIP Conference Proceedings **1947**, 020003 (2018), doi 10.1063/1.5030807
- [Boo1] D. Kahl et al. (including **A. Psaltis**), *Isomer beam elastic scattering:  $^{26m}\text{Al}(p,p)$  for Astrophysics*, EPJ Web of Conferences **165**, 01030 (2017), doi 10.1051/epjconf/201716501030

## C Non-Peer-Reviewed Publications

- [Coo4] **A. Psaltis**, *Chasing Stardust*, American Scientist, May 2024,  
<https://www.americanscientist.org/blog/from-the-staff/chasing-stardust>
- [Coo3] M. Pignatari and **A. Psaltis**, *Underground route to grasping the oldest stars*, Nature **610** 641 (2022),  
doi 10.1038/d41586-022-03367-3 News & Views
- [Coo2] A. Khaliel et al. (including **A. Psaltis**), *Experimental Investigation of radiative proton-capture reactions relevant to Nucleosynthesis*, HNPS2016 Proceedings, doi 10.12681/hnps.1861
- [Coo1] E. Batziou et al. (including **A. Psaltis**), *Modeling radiative proton–capture reactions in mid–heavy nuclei*, HNPS2015 Proceedings, doi 10.12681/hnps.1893

## D Books

- [Doo3] *Galactic and Stellar Physics* by A.G.W. Cameron, Based on a course lecture given at Yale University 1964–1965, Compiled by W.D. Arnett, C.J. Hansen and J.W. Truran, re-typeset in LATEX by D. Kahl, **A. Psaltis**, J. Liang and S. Malek (in preparation)
- [Doo2] *Physics of the Solar System* by A.G.W. Cameron, Based on a course lecture given at Yale University 1963–1964, Compiled by W.D. Arnett, C.J. Hansen and J.W. Truran, re-typeset in LATEX by D. Kahl, **A. Psaltis**, J. Liang and S. Malek (in preparation)
- [Doo1] *Nuclear Astrophysics* by A.G.W. Cameron, Based on a course lecture given at Yale University 1962–1963, Assisted by W.D. Arnett, C.J. Hansen and J.W. Truran, re-typeset in LATEX by D. Kahl, **A. Psaltis**, J. Liang and S. Malek (in preparation)

## Academic Presentations

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### 19 Invited presentations • 31 Contributed presentations

R-Process Alliance Meeting – <b>invited oral</b> (Livermore, CA, USA)	November 2025
TRIUMF Science Week – <b>invited oral</b> (Vancouver, BC, Canada)	July 2025
Nuclei in the Cosmos XVIII – oral & poster (Girona, Catalonia)	June 2025
Astronomy & Physics special Colloquium – <b>invited oral</b> (Halifax, NS, Canada)	May 2025
IJCLab Colloquium – <b>invited oral</b> (Orsay, France)	April 2025
McMaster University Colloquium – <b>invited oral</b> (Hamilton, ON, Canada)	November 2024
University of Tennessee Seminar – <b>invited oral</b> (Knoxville, TN)	October 2024
8th p-process workshop – oral (Budapest, Hungary)	October 2024
Nuclear Physics in Astrophysics XI – oral (Dresden, Germany)	September 2024
University of Edinburgh special Colloquium – <b>invited oral</b> (Edinburgh, UK)	July 2024
ATOMKI Seminar – <b>invited oral</b> (Debrecen, Hungary)	January 2024
XVII Nuclei in the Cosmos – oral & poster (Daejeon, South Korea)	September 2023
Science Summit at the 79th UN General Assembly – <b>invited oral</b> (New York, NY)	September 2023
BRIDCE-IReNA Annual Meeting – <b>invited oral</b> (Edinburgh, UK)	September 2023
Gordon Research Conference in Nuclear Chemistry – <b>invited oral</b> (New London, NH USA)	June 2023
Texas A&M Cyclotron Colloquium – <b>invited oral</b> (College Station, TX USA)	April 2023
Nuclear Lunch Webinar – <b>invited oral</b> (Athens, Greece)	December 2022
Origin of Matter and Evolution of Galaxies (OMEG16) – oral (Virtually)	October 2022
28th International Nuclear Physics Conference – oral (Cape Town, South Africa)	September 2022
Nuclear Physics in Astrophysics X – oral (Geneva, Switzerland)	September 2022
FRIB Theory Seminar – <b>invited oral</b> (East Lansing, MI, USA)	June 2022
2022 JINA-CEE Frontiers in Nuclear Astrophysics – poster (South Bend, IN, USA)	May 2022
ELEMENTS Annual Conference 2022 – oral (Frankfurt, Germany)	May 2022
ELEMENTS Kick-off WA3 workshop – <b>invited oral</b> (Virtually)	February 2022
Advisory Committee On TRIUMF (ACOT) meeting – <b>invited poster</b> (Virtually)	November 2021
28th Symposium of the Hellenic Nuclear Physics Society – oral (Athens, Greece)	September 2021
XVI Nuclei in the Cosmos – oral & poster (Virtually)	September 2021
DPG Matter and Cosmos Section – oral (Virtually)	August 2021
TRIUMF Science Week – poster (Virtually)	August 2021
2021 CAP Virtual Congress – oral (Virtually)	June 2021
IKP Seminar – <b>invited oral</b> (Darmstadt, Germany)	August 2020
Advisory Committee On TRIUMF meeting – <b>invited oral</b> (Vancouver, BC, Canada)	November 2019
7th p-process workshop 2019 – oral (Serralunga d' Alba, Italy)	September 2019
Nuclear Physics in Astrophysics IX – oral (Mainz, Germany)	September 2019
CNLS Astrophysics Friday Meeting – <b>invited oral</b> (Los Alamos, NM, USA)	May 2019
5th Joint Meeting of the APS DNP and the PSJ – oral (Waikoloa, HI, USA)	October 2018

15th International Symposium on Nuclei in the Cosmos – posters (Assergi, Italy)	June 2018
15th Russbach School on Nuclear Astrophysics – oral (Russbach, Austria)	March 2018
NARRS Workshop – oral (Darmstadt, Germany)	March 2018
TRIUMF Science Week – poster (Vancouver, BC, Canada)	July 2017
2017 JINA-CEE Frontiers in Nuclear Astrophysics – oral (Lansing, MI, USA)	February 2017
McMaster Physics & Astronomy Symposium Day – oral (Hamilton, ON, Canada)	October 2016
École Joliot-Curie: "Origin of Nuclei in the Universe" – poster (Le Barcarès, France)	September 2016
p-process Workshop 2015: Status and Outlook – oral (Limassol, Cyprus)	June 2015
24th Symposium of the Hellenic Nuclear Physics Society – poster (Ioannina, Greece)	May 2015
23rd Symposium of the Hellenic Nuclear Physics Society – oral (Thessaloniki, Greece)	June 2014
Charged Particle Optics: Theory and Simulation (CPOTS 2013) – oral (Heraklion, Greece)	August 2013
21st Symposium of the Hellenic Nuclear Physics Society – poster (Athens, Greece)	May 2012