

Prof. Dr. Marialuisa Aliotta FRSE | Curriculum Vitae

School of Physics and Astronomy, University of Edinburgh (UK)
JCMB Peter Guthrie Tait Road, EH9 3FD Edinburgh
+44 (0)131 650 5288 m.aliotta@ed.ac.uk
www.marialuisaaliotta.com

Last update: June 2023

Current Position: Full Professor – Head of Nuclear Physics Group, University of Edinburgh, UK

Professional career:

2021 – present Head of Nuclear Physics Group, University of Edinburgh, UK
2016 – present Full Professor, Personal Chair in Experimental Nuclear Astrophysics, UoE
2013 – 2016 Reader, UoE
09.2010 – 01.2011 Maternity leave (5 months)
2008 – 2013 Senior Lecturer, UoE
2001 – 2008 Lecturer, UoE
2001 Marie Curie Individual Post-Doctoral Fellowship, UoE, UK (declined)
1999 – 2001 Alexander von Humboldt Post-doctoral Fellowship, Ruhr-Universität Bochum, Germany
1994 – 1995 Postgraduate Fellowship at the Ruhr-Universität Bochum, Germany

Academic Degrees:

April 1999 PhD in Physics (Summa cum Laude), University of Catania, Italy
March 1993 Degree in Physics (Summa cum Laude), University of Catania, Italy

University Education

1993 – 1994 Undergraduate Fellowship at Laboratori Nazionali del Sud, INFN, Catania, Italy
1990 – 1991 Erasmus Grant at Oxford University, Oxford, UK
1986 – 1992 Undergraduate studies, University of Catania, Italy

Honors and Awards

2022 Fellow of the Royal Society of Edinburgh, UK
2021 IoP/SIF Giuseppe Occhialini Medal and Prize
09.2020 – 07.2021 EMMI Visiting Professorship GSI/Frankfurt University, Germany
2015 Van Heyningen Award for Teaching in Science and Engineering (runner-up), UoE
2008 Offer, W2 Professorship at Technische Universität München (TUM), Germany
07.2015 – 12.2015 Visiting Professorship at the Seconda Università di Napoli, Caserta (Italy)
2004 Professional Certificate in University Teaching, Institute for Learning and Teaching in Higher Education, UK
1995 – 1998 PhD studentship, Università di Catania, Italy

Professional Memberships

2001 – present Institute of Physics (IoP), UK
2004 Institute for Learning and Teaching (now Higher Education Academy), UK
2001 – 2012 Engineering and Physical Sciences Research Council College, UK

Languages Italian (native speaker), English (fluent), German (fluent), Spanish (good)

RESEARCH INTERESTS AND ACTIVITIES

My research focusses on the study of nuclear reactions of astrophysical interest using both stable and radioactive nuclei. Throughout my career I have proposed and led experiments at various international laboratories, including at CERN (Switzerland), GANIL (France) and TRIUMF (Canada), to investigate reactions important for explosive stellar scenarios. Since 2010, my work is mostly devoted to the study of nuclear reactions at ultra-low energies performed at the Laboratory for Underground Nuclear Astrophysics (**LUNA**) at Gran Sasso (Italy). My enthusiasm for my research and my ability to communicate have also gained me several invitations as a plenary speaker at international conferences, summer schools, and public events (see list of invited talks). In 2014, I was invited to join the **Nuclear Physics Advisory Panel** of the **Science and Technology Facilities Council** (STFC) to develop the next UK Nuclear Physics five-year **Roadmap**. I am currently a member of STFC **Nuclear Physics Grants Panel** (since 2020), the **Chair** of the **Nuclear Physics**

Experiment Evaluation Committee at TRIUMF (since 2020), a Member of the **Joint Scientific Council of FAIR/GSI** (since 2022), and the **Head of the Edinburgh Nuclear Physics Group** (since 2021).

RESERCH GRANTS

Nuclear physics research in the UK is funded by STFC via Group Consolidated Grants (with the Head of Group as PI). I have been leading the group's activities in low-energy nuclear astrophysics research at LUNA since 2010.

Science and Technology Facilities Council (STFC)

Nuclear Physics Consolidated Group Grants

| | | | |
|----------------------|----------------------------|------------|---------------------|
| 01.10.21 – 30.09.24: | RA5543 - STFC ST/V001051/1 | £1,611,204 | (Co-I; PI PJ Woods) |
| 01.10.17 – 30.09.21: | RA4111 - STFC ST/P004008/1 | £2,786,904 | (Co-I; PI PJ Woods) |
| 01.08.15 – 30.09.18: | RA2927 - STFC ST/L005824/1 | £1,265,730 | (Co-I; PI PJ Woods) |
| 01.08.11 – 31.07.15: | RA1811 - STFC ST/J00006X/1 | £1,584,323 | (Co-I; PI PJ Woods) |
| 01.08.08 – 31.07.13: | RA0800 - STFC ST/F011938/1 | £1,974,382 | (Co-I; PI PJ Woods) |
| 21.06.08 – 20.06.10: | RA0372 - STFC PP/F000839/1 | £458,851 | (Co-I; PI PJ Woods) |

Royal Society

International Exchange Scheme

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|----------------------|----------|---------|-------------------------------|
| 01.07.13 – 30.06.16: | IE130289 | £12,000 | (PI: M Aliotta, L Gialanella) |
|----------------------|----------|---------|-------------------------------|

Engineering and Physical Sciences Research Council

Group Grant

| | | | |
|----------------------|-----------------------------|----------|-------------------------|
| 01.02.04 – 31.01.08: | R37378 - EPSRC GR/S69160/01 | £604,505 | (Co-I; PI Prof P Woods) |
|----------------------|-----------------------------|----------|-------------------------|

Other grants and sponsorships

| | | |
|--|----------|--------------------------------|
| UK Nuclear Physics Summer School | £59,800 | (PI: M Aliotta, JF Smith) |
| SUPA support to NPA VII Conference | £2,000 | (PI) |
| SUPA Distinguished Visiting Scientist | £4,800 | (beneficiary: F Strieder, RUB) |
| QAA Scotland | £10,000 | (Co-I; PI S Bates) |
| Royal Society Conference Grant: | £970 | (recipient) |
| Development Trust Small Project Grant | £ 1,000 | (PI) |
| to stage the play <i>Copenhagen</i> with students from the School of Physics and Astronomy | | |
| Alexander von Humboldt sponsorship | € 4,700 | (recipient) |
| Alexander von Humboldt Fellowship | € 65,100 | (recipient) |

RESEARCH SUPERVISION

PhD Students

| | |
|-----------|---|
| 2023-2027 | L Barbieri (2 nd supervisor) |
| 2023-2027 | D Robb (2 nd supervisor) |
| 2017-2019 | A Frantzana (1 st supervisor) |
| 2016-2020 | T Chillery (1 st supervisor) |
| 2013-2017 | CG Bruno (1 st supervisor) |
| 2012-2017 | L Morales Gallegos (1 st supervisor) |
| 2010-2014 | DA Scott (1 st supervisor) |
| 2009-2012 | K Slaughter (2 nd supervisor) |
| 2007-2012 | PJC Salter (1 st supervisor) |
| 2005-2008 | A Josephides (2 nd supervisor) |

REFEREEING ACTIVITIES

Grants and Fellowship applications

| | |
|--------------|--|
| 2021 | ERC, Horizon2020, EU |
| 2015, 2021 | Future Leaders Fellowships, UKRI |
| 2019 | Deutsche Forschungsgemeinschaft (DFG), Germany |
| 2014 | Danish Council for Independent Research, Denmark |
| 2012-present | STFC Rutherford Fellowships, UK |
| 2012 | MIUR, Italy |
| 2011 | Helmoltz Gesellschaft, Germany |
| 2010 | NSERC, Canada |
| 2007 | STFC, UK |
| 2006 | EPSRC, UK |

Journals

Phys. Rev. Lett., Phys. Rev. C, Nucl. Phys. A, J. Phys. G: Nucl. and Part. Phys., Eur. Phys. J. A, Nucl. Instr. Meth. A
Review Editor of the Editorial Board of Nuclear Physics, a specialty of Frontiers in Physics
Associate Editor for Nuclear Physics, Frontiers

TEACHING EXPERIENCE

Undergraduate teaching

| | | |
|--------------|---|----------------|
| 2014-present | Nuclear Astrophysics | (O, CO, L, WL) |
| 2001-2020 | Nuclear Physics | (CO, L, WL) |
| 2012-2014 | Practical Physics Laboratory | (LS) |
| 2012-2014 | Practical Physics Workshops | (O, WL) |
| 2011-2012 | Physics 1B Laboratory | (LS) |
| 2008-2010 | Data Analysis (for Physics 2A) | (WD) |
| 2004-2008 | Physics 1A | (L, WL) |
| 2001-2004 | Nuclear Physics 3 (now Subatomic Physics) | (CO, L) |
| 2001-2004 | Workshops for Physics 1A | (WL) |

Postgraduate teaching

| | | |
|--------------|--|-------------|
| 2013-2014 | Nuclear Astrophysics with Radioactive Beams (UK) | (O, L) |
| 2010-present | Hands on Writing Workshop (SUPA) | (O, CO, WL) |
| 2006-2008 | Advanced Topics in Nuclear Astrophysics (SUPA) | (O, L) |

Originator (O), course organizer (CO), lecturer (L), workshop leader (WL), workshop demonstrator (WD), laboratory supervisor (LS)

I love teaching and I am passionate about it. Over the years, I have taken roles of increased responsibility both in teaching and its administration. My teaching activities have exposed me to diverse environments, including large- and small-group lecturing, tutorials and workshops, with different skills required on my part. Elements of innovative learning and teaching embedded in my classes have included: mini-lectures by students, clickers, in-class competitions, video-feedback, and peer assessment of essays. I am regarded as an enthusiastic and highly effective lecturer (my Nuclear Physics course is extremely popular and consistently rates as one of the best courses in the School) and have been nominated for the University of Edinburgh Teaching Awards on many occasions. In 2015, I was nominated as **Best Teacher Overall** and received the **Van Heyningen Award for Teaching in Science and Engineering** (runner up). In 2014, I also proposed, created and run a **new course on Nuclear Astrophysics**, which now typically attracts over 20 students and receives very positive feedback. Following up from the success of my **Hands on Writing workshop** within SUPA, I have been running writing workshops as an external consultant at other universities in Scotland (St Andrews, Dundee, University of West Scotland, Paisley) and overseas (Italy, Germany, US). In 2018, I published a book with CRC Press, Taylor & Francis: **Mastering Academic Writing in the Sciences: A Step-by-Step Guide**. My pedagogic skills are also recognized externally as testified by several invitations to national and international Summer Schools (see *Invited lecturer at national and international summer school*). On teaching-related issues, I have published 3 refereed articles and 1 book chapter to date (see Publication Records).

Undergraduate Student Supervision

MPhys Project Students

| | |
|-----------|--------------------|
| 2022-2023 | K Samoulis |
| 2019-2020 | E Goss |
| 2016-2017 | A Wylie |
| 2012-2013 | C Griffin, M Leary |
| 2010-2011 | D Glowa |
| 2009-2010 | DA Scott |
| 2004-2005 | G Wong |

Appointments as External Examiner

PhD Vivas

| | |
|------|---|
| 2018 | Simon Lindberg - Chalmers University, Sweden |
| 2016 | Lauren Petrie - University of Surrey, UK |
| 2013 | Jelena Gajaevic - University of Ljubljana, Slovenia |
| 2011 | Predrag Ujic - GANIL, France |
| 2012 | Adam Garry Tuff - University of York, UK |

Degree Programmes

| | |
|------|--|
| 2019 | Invitation to act as external examiner for the Physics program at University of York (declined) |
| 2012 | Invitation to act as external examiner for the Physics and Physics with Nuclear Technology program at University of West Scotland (declined) |
| 2023 | Invitation to act as external examiner for the Physics program at University of York (declined) |

PROFESSIONAL SERVICE

MEMBERSHIP OF COMMITTEES

University of Edinburgh

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|--------------|---|
| 2010-2017 | Policies and Resources Committee of the University Court |
| 2010 | Court Review Group |
| 2008-2017 | University Court (Senate Assessor) |
| 2007-present | Academic Senate |

College of Science and Engineering

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|-----------|------------------------------------|
| 2010-2011 | International Strategy Group |
| 2006 | Working Group on Flexible Learning |

School of Physics and Astronomy

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|--------------|--|
| 2021-present | Director of Student Recruitment |
| 2016-present | Personal Tutor |
| 2011-2012 | Forward Look Implementation Party |
| 2010 | Convener of Forward Look Task Force |
| 2009-2012 | Post-Graduate Pastoral Interviewer |
| 2009-2010 | International Exchange Coordinator |
| 2008 | Selection Panel for Teaching Development Officer |
| 2007-2011 | Elected Member of Teaching Committee |
| 2007 | Convener of Task Force on Methods and Combinations of Assessment |
| 2007 | Selection Panel for SUPA Lectureship in Experimental/Computational Biophysics |
| 2007 | Selection Panel for Teaching Development Officer |
| 2006-2013 | Point of contact for female students |
| 2006-2010 | SUPA Graduate School Management Committee |
| 2006-2010 | Director of Studies |
| 2005-2012 | Graduate Studies Committee |
| 2005-2011 | SUPA Graduate School Representative for Nuclear and Plasma Physics Theme |
| 2005-2007 | Post-Graduate Pastoral Interviewer |
| 2005 | Selection Panel for SUPA Lectureship in Astrobiology |
| 2005 | Selection Panel for SUPA Lectureship in Nuclear Physics |
| 2005 | Selection Panel for SUPA Lectureship in Particle Physics Experiment |
| 2005 | Selection Panel for SUPA Lectureship in Particle Physics Theory |
| 2005 | Selection Panel for Two-year Lectureship in Astronomy and Astrophysics |
| 2004-2007 | Quality Assurance Officer for the School of Physics and Astronomy |
| 2002-2013 | Recruitment and Publicity |
| 2001-2006 | Institute of Physics Nuclear Physics Group |

UK and International Memberships, Panels, Committees

| | |
|--------------|---|
| 2023 | Interview Panel for Lectureship in Nuclear Physics, University of Glasgow, UK |
| 2023 | Reviewer , Senior Lectureship Experimental Nuclear Physics, University of Jyväskylä, Finland |
| 2023 | IAC , International Symposium on Nuclear Astrophysics at Manipal, India |
| 2023 | Co-convener of Nuclear Astrophysics session at Gordon Conference , US |
| 2022 | Interview Panel for Lectureship in Nuclear Physics, University of Glasgow, UK |
| 2022 | UKRI Future Leader Fellowships Interview Panel |
| 2022 | International Advisory Committee for X Nuclear Physics in Astrophysics Conference, CERN |
| 2022-2024 | Royal Society International Exchanges Committee, UK |
| 2022-present | Joint Scientific Council at GSI/FAIR , Germany |
| 2021-present | Institute of Physics Awards – Panel Member, UK |
| 2020-present | Associate Editor for Nuclear Physics - Frontiers |
| 2020-present | Chair of Experiment Evaluation Committee for TRIUMF National Laboratory (Canada) |
| 2019 | Deutsche Forschungsgemeinschaft (DFG) Grant Review Panel |
| 2019-2022 | STFC Nuclear Physics Group Grants Panel |
| 2018-present | UKRI Future Leader Fellowships Sifting Panel |
| 2016-2020 | Experiment Evaluation Committee for TRIUMF National Laboratory (Canada) |
| 2015-2016 | Chair of STFC Rutherford Fellowship Panel for Nuclear Physics |
| 2015 | Co-Chair of VII International Conference Nuclear Physics in Astrophysics (York) |
| 2015 | International Advisory Board, Nuclear Structure and Dynamics III, Slovenia |
| 2014-2016 | STFC Education, Training and Careers Committee |
| 2014-2017 | STFC Nuclear Physics Advisory Panel Member |

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|--------------|---|
| 2012-2016 | STFC Rutherford Fellowships Panel Member |
| 2011 | Director of the UK Nuclear Physics Summer School (St Andrews) |
| 2010-present | Scientific Committee of the European Summer School on Experimental Nuclear Astrophysics |
| 2010-2013 | STFC Project Peer Review Panel |
| 2010-2011 | UKISOL Steering Group |
| 2008-2011 | Board of Directors for the EuroSchool on Exotic Beams |
| 2008 | Programme Committee <i>13th Capture Gamma Ray and Related Topics Symposium</i> Cologne, Germany |
| 2006 | Organizer of IoP Half-day Meeting on Nuclear Astrophysics (Edinburgh) |
| 2006 | International Advisory Committee <i>IX Nuclei in the Cosmos Conference</i> , CERN Geneva, Switzerland |
| 2005 | International Advisory Committee <i>12th Capture Gamma Ray and Related Topics Conference</i> , Notre Dame University, US |
| 2004 | Chair of UK IoP Nuclear Physics Conference, Edinburgh, UK |

INVITED TALKS AND LECTURES

International conferences and workshops

| | |
|------|---|
| 2023 | African Nuclear Physics Conference, Cape Town, 29 November – 3 December 2023, South Africa (online) |
| 2022 | European Nuclear Physics Conference, Santiago de Compostela, 24-28 October 2022, Spain (unable to attend) |
| 2022 | International Nuclear Physics Conference, Cape Town, 9-11 September 2022, South Africa (unable to attend) |
| 2022 | IoP Nuclear Physics Conference, Surrey, 20-22 April 2022, UK |
| 2021 | Occhialini 2021 Prize and Medal , Invited Talk at 107 ^o Congresso Società Italiana di Fisica, 13 September 2021, Italy (online) |
| 2021 | Keynote Speaker, Physics Days 2021, 24-26 March 2021, Finland (online) |
| 2019 | IX International Nuclear Physics in Astrophysics Conference, 15-20 September 2019, Frankfurt (Germany) |
| 2019 | JINA-CEE Frontiers in Nuclear Astrophysics Conference, 20-22 May 2019, East Lansing (US) |
| 2018 | EuNPC Conference , Bologna, 2-9 September, Italy |
| 2017 | 79th ICFA Seminar , Ottawa, 6-9 November, Canada |
| 2017 | <i>Nuclear Astrophysics at the Dresden Felsenkeller</i> Workshop, Dresden, 26-28 June 2017, Germany |
| 2017 | VIII Nuclear Physics in Astrophysics Conference, Catania, 18-23 June 2017, Italy Special Session in celebration of Prof Spitaleri |
| 2017 | 55 th International Winter Meeting on Nuclear Physics, Bormio 23-27 January 2017, Italy |
| 2015 | ECOS-LINCE Workshop, Huelva, 8-10 July, Spain (unable to attend) |
| 2014 | EPS Invited Speaker XIII International Conference Nuclei in the Cosmos Debrecen, 7-11 July, Hungary |
| 2013 | XLI International Workshop “Astrophysics and Nuclear Structure”, Hirschegg 26 Jan-1 Feb, Austria |
| 2012 | X Quark Confinement and the Hadron Spectrum Conference, Garching 8-12 October, Germany |
| 2012 | Zakopane Conference on Nuclear Physics , Zakopane, 27 August - 2 September, Poland |
| 2012 | IUPAP Conference on Few-Body Problems in Physics, 20-25 August, Japan (unable to attend) |
| 2012 | International Workshop Canfranc, 21-23 March, Spain (unable to attend) |
| 2011 | IoP Nuclear and Particle Physics Divisional Conference, Glasgow, 4-7 April, UK |
| 2011 | International Workshop on Underground Accelerator, Gran Sasso, 10-11 February, Italy |
| 2010 | International Workshop Dresden, 28-30 April, Germany |
| 2009 | CLAUS09: International Workshop in honor of Claus Rolfs, Anacapri, 14-16 May, Italy |
| 2009 | Nuclear Astrophysics Opportunities at the Underground Laboratory Canfranc, Barcelona 19-20 Feb, Spain |
| 2008 | FUSION08 International Conference <i>New Aspects of Heavy Ion Collisions near the Coulomb barrier</i> , Chicago 22-26 Sept, US |
| 2008 | XXXVI International Workshop <i>Modern Aspects in Nuclear Structure and Reactions</i> , Hirschegg 13-19 January, Austria |
| 2007 | Laboratori Nazionali del Sud, INFN, Catania, 15-16 February, Italy |
| 2006 | Radioactive Nuclear Beams Conference , Cortina d’Ampezzo, 5-7 July, Italy |
| 2006 | Current Problems in Nuclear Physics and Atomic Energy, Kyev, 29 May-3 June, Ukraine (unable to attend) |
| 2006 | XXXIV International Workshop “Astrophysics and Nuclear Structure”, Hirschegg 15-21 January, Austria |
| 2005 | FINUSTAR Conference , Kos 12-17 September, Greece |
| 2004 | Nuclear Physics Seminar, Michigan State University, 15 March, USA |
| 2003 | NuPECC Town Meeting, Darmstadt 29 January-1 February, Germany |
| 2002 | REX-ISOLDE Workshop, CERN Geneva 16-18 December, Switzerland |
| 2001 | NAP2001 Symposium, GSI - Darmstadt 3-4 May, Germany |
| 2000 | TOURS2000 Symposium on Nuclear Physics IV, Tours 4-7 September, France |

Seminars and Public Lectures

- 2023 Physics Colloquium, University of Mainz, 19 December 2023, Germany
2022 Physics Colloquium, University of Birmingham, 30 March 2022, UK (online)
2021 Physics Colloquium, SFB Workshop, 11 June 2021, Germany (online)
2021 Physics Colloquium, University of Milan, 19 January 2021, Italy (online)
2019 **Science Festival**, 24 October – 4 November, Genova, Italy (in Italian)
2017 BRIDGCE Workshop, Edinburgh, 4-5 September 2017, UK
2016 **Pint of Science**, Three Sisters' Pub Edinburgh, 23 May, UK
2014 **IoP Public Lecture, Open University**, Milton Keynes, 13 May, UK
2013 **IoP Public Lecture**, Newcastle, 13 December, UK
2011 Albert Einstein Institute for Gravitational Waves, Hannover, 8 December, Germany, UK
2011 **Public Lecture, The Rutherford 100th, Rutherford Appleton Laboratory**, 19 May, UK
2010 IoP Workshop in Nuclear Astrophysics, University of York, 8 February, UK
2009 University of Surrey, 8 December, UK
2009 Annual Meeting of the IoP Astroparticle Physics Group, Edinburgh, 8-9 June, UK
2008 University of Birmingham, 17 December, UK
2008 University of Lancaster, 21 November, UK
2008 Royal Observatory of Edinburgh Workshop: Habitability of the Galaxy, 8-10 October, Edinburgh, UK
2008 **Café Scientifique, Film House**, 28 July, Edinburgh, UK
2008 Retirement event in honor of Prof Dame Carole Jordan, Somerville College Oxford, 12 July, UK
2007 Learning & Teaching Forum on Collaborative Learning, UoE, 17 April, UK (event cancelled)
2007 John Adams Institute, University of Oxford, 14 June, UK
2007 National Astronomy Meeting, UCLan Preston, 16-20 April, UK (unable to attend)
2007 Rutherford Appleton Laboratory, CCRLC, Chilton, 25 January, UK (general interest lecture)
2006 BUS2006 Workshop, Boulby, 21-22 October, UK
2006 Astroparticle Conference, 23-24 May, UK
2006 IoP Nuclear Physics Conference, York 19-21 April, UK
2005 SUPA – Nuclear and Plasma Physics Launch Event, Glasgow 7 October, UK
2005 NUSTAR05, University of Guildford, Sussex, January UK (unable to attend)
2003 Nuclear Physics Seminar, University of York, 7 November, UK
2003 IoP Nuclear Physics Conference, Glasgow 9-11 April, UK
2002 Future of Nuclear Astrophysics Meeting, Abingdon 19-20 April, UK

National and international Summer Schools

- 2024 19th International Workshop on Nuclear Astrophysics, Russbach 3-9 March, Austria (2 lectures)
2019 UK Nuclear Physics Summer School, 5-16 August, St Andrews (2 lectures)
2018 ChETEC Training School, Bucharest 10-20 April, Romania (5 lectures)
2017 9th European Summer School on Experimental Nuclear Astrophysics, S. Tecla 17-24 September, Italy (2 lectures)
2014 11th International Workshop on Nuclear Astrophysics, Russbach 9-15 March, Austria (2 lectures)
2013 7th European Summer School on Experimental Nuclear Astrophysics, S. Tecla 15-27 September, Italy (2 lectures)
2011 6th European Summer School on Experimental Nuclear Astrophysics, S. Tecla 18-27 September, Italy (1 lecture)
2010 7th International Workshop on Nuclear Astrophysics, Russbach 15-19 March, Austria (2 lectures)
2010 Doctoral Training Program at ECT* Trento, 12 April - 13 June, Italy (4 lectures)
2007 XIV UK Nuclear Physics Summer School, Newcastle 29 August - 8 September, UK (3 lectures)
2006 4th International Summer School on Subatomic Physics, Beijing 21-25 August, China (2 lectures)
2004 11th Euro Summer School on Exotic Beams, Guildford 19-27 August, UK (4 lectures)
2003 2nd European Summer School on Experimental Nuclear Astrophysics, S. Tecla 28 Sept.-5 Oct., Italy (2 lectures)
2003 12th UK Postgraduate Nuclear Physics Summer School, St. Andrews 1-14 September, UK (4 lectures)
2002 3rd International Balkan School on Nuclear Physics, Thessaloniki 18-24 September, Greece (2 lectures)
2002 Nuclear Physics Autumn Retreat, Manchester 5-6 September, UK (1 lecture)

PEER-REVIEWED PUBLICATIONS (last update: May 2022)

All my research is conducted at national or international accelerator-based facilities. The nature of the research is such that teams of 15-30 scientists are often involved, and sole-author publications are extremely rare. Typically, the first author is a PhD student who carried out most of the data analysis, or a young post-doc. From my records on the ISI Web of Knowledge, I have an “h-index” of 34 (last update: October 2023). The papers preceded by an asterisk (*) are those to which I contributed significantly; those with a dollar sign (\$) indicate I was the main originator. All articles listed below are in refereed journals. Articles published in Book Series as Conference Proceedings are not included.

1. Horizons: Nuclear Astrophysics in the 2020s and Beyond
H. Schatz, et al.
Journal Physics G: Nuclear and Particle Science (2022) submitted
2. *\$*Exploring stars in underground laboratories: Challenges and solutions*
M. Aliotta, A. Boeltzig, R. Depalo, Gy. Gyürky
Annual Review of Nuclear and Particle Science (2022) accepted
3. *\$*Direct measurements of the $^{12}\text{C}+^{12}\text{C}$ reaction cross sections towards astrophysical energies*
L. Morale-Gallegos, **M. Aliotta**, L. Gialanella, A. Best, C.G. Bruno, T. Davinson, M. De Cesare, A. Di Leva, A. D’Onofrio, J. Duarte, L.R. Gasques, G. Imbriani, G. Porzio, D. Rapagnani, M. Romoli, F. Terrasi
European Physical Journal A 58 (2022) 65
4. **The status and future of direct nuclear reaction measurements for stellar burning*
M. Aliotta, R. Buompane, M. Couder, A. Couture, R. deBoer, A. Formicola, L. Gialanella, J. Glorius, G. Imbriani, M. Junker, C. Langer, A. Lennarz, Y.A. Litvinov, W.-P. Liu, M. Lugaro, C. Matei, Z.P. Meisel, L. Piersanati, R. Reifarth, D. Robertson, A. Simon, O. Straniero, A. Tumino, M. Wiescher, Y. Xu
Journal of Physics G: Nuclei and Particles 49 (2022) 010501
5. *Direct measurements of the $^{13}\text{C}(a,n)^{16}\text{O}$ cross section into the s-process Gamow peak*
G. F. Ciani, L. Csedreki, D. Rapagnani, **M. Aliotta**, et al. (Luna Collaboration)
Physical Review Letter, 127 (2021) 152701
6. *Low-energy resonances in the $^{18}\text{O}(p,\gamma)^{19}\text{F}$ reaction*
F. R. Pantaleo, A. Boeltzig, A. Best, R. Perrino, **M. Aliotta**, J. Balibrea-Correa, F. Barile, D. Bemmerer, C. Brogгинi, C. G. Bruno, R. Buompane, A. Caciolli, F. Cavanna, T. Chillery, G. F. Ciani, P. Corvisiero, L. Csedreki, T. Davinson, R. J. deBoer, R. Depalo, G. D’Erasmus, A. Di Leva, Z. Elekes, F. Ferraro, E. M. Fiore, A. Formicola, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyürky, G. Imbriani, M. Junker, I. Kochanek, M. Lugaro, E. Masha, R. Menegazzo, V. Mossa, V. Patichchio, D. Piatti, P. Prati, D. Rapagnani, L. Schiavulli, K. Stöckel, O. Straniero, T. Szücs, M. P. Takács, D. Trezzi, M. Wiescher, S. Zavatarelli
Physical Review C, 104 (2021) 025802
7. *Characterization of the LUNA neutron detector array for the measurement of the $^{13}\text{C}(a,n)^{16}\text{O}$ reaction*
L. Csedreki, G.G. Ciani, J. Balibrea-Correa, A. Best, **M. Aliotta**, et al (LUNA Collaboration)
Nuclear Instruments and Methods A 994 (2021) 165081
8. *\$*The baryon density of the Universe from an improved rate of deuterium burning*
V. Mossa, K. Stöckel, F. Cavanna, F. Ferraro, **M. Aliotta**, et al.
Nature 587 (2020) 210-213
9. **Underground experimental study finds no evidence of low-energy resonance in the $^6\text{Li}(p,g)^7\text{Be}$ reaction*
D. Piatti, T. Chillery, R. Depalo, **M. Aliotta**, et al (LUNA Collaboration)
Physical Review C 102 (2020) R052802(R)
10. **Setup commissioning for an improved measurement of the $D(p,\gamma)^3\text{He}$ cross-section at Big Bang Nucleosynthesis energies*
V. Mossa, K. Stöckel, F. Cavanna, F. Ferraro, **M. Aliotta**, F. Barile, D. Bemmerer, A. Best, A. Boeltzig, C. Brogгинi, C.G. Bruno, A. Caciolli, L. Csedreki, T. Chillery, G.F. Ciani, P. Corvisiero, T. Davinson, R. Depalo, A. Di Leva, Z. Elekes, E.M. Fiore, A. Formicola, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyürky, G. Imbriani, M. Junker, I. Kochanek, M. Lugaro, L.E. Marcucci, P. Marigo, E. Masha, R. Menegazzo, F.R. Pantaleo, V. Patichchio, R. Perrino, D. Piatti, P. Prati, L. Schiavulli, O. Straniero, T. Szücs, M.P. Takács, D. Trezzi, S. Zavatarelli, and G. Zorzi
European Physical Journal A 56 (2020) 144

11. **⁵A new approach to monitor ¹³C-targets degradation in situ for ¹³C(α ,n)¹⁶O cross-section measurements at LUNA*
G.F. Ciani, L. Csedreki, J. Balibrea-Correa, A. Best, **M. Aliotta**, F. Barile, D. Bemmerer, A. Boeltzig, C. Broggini, C.G. Bruno, A. Cacioli, F. Cavanna, T. Chillery, P. Colombetti, P. Corvisiero, T. Davinson, R. Depalo, A. Di Leva, L. Di Paolo, Z. Elekes, F. Ferraro, E.M. Fiore, A. Formicola, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyürky, G. Imbriani, M. Junker, I. Kochanek, M. Lugaro, P. Marigo, E. Masha, R. Menegazzo, V. Mossa, F.R. Pantaleo, V. Paticchio, R. Perrino, D. Piatti, P. Prati, L. Schiavulli, K. Stöckel, O. Straniero, T. Szücs, M.P. Takács, F. Terrasi, D. Trezzi, and S. Zavatarelli
European Physical Journal A 56 (2020) 75

12. *High-resolution radioactive beam study of the ²⁶Al(d, p) reaction and measurements of single-particle spectroscopic factors* G. Lotay, P.J. Woods, M. Moukaddam, **M. Aliotta**, G. Christian, B. Davis, T. Davinson, D.T. Doherty, D. Howell, V. Margerin, C. Ruiz
European Physical Journal A 56 (2020) 3

13. *Cross section of the reaction ¹⁸O(p, γ)¹⁹F at astrophysical energies: the 90 keV resonance and the direct capture component*
A. Best, F.R. Pantaleo, A. Boeltzig, G. Imbriani, **M. Aliotta**, J. Balibrea-Correa, D. Bemmerer, C. Broggini, C.G. Bruno, R. Buompane, A. Cacioli, F. Cavanna, T. Chillery, G.F. Ciani, P. Corvisiero, L. Csedreki, T. Davinson, R.J. deBoer, R. Depalo, A. Di Leva, Z. Elekes, F. Ferraro, E.M. Fiore, A. Formicola, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyürky, M. Junker, I. Kochanek, M. Lugaro, P. Marigo, R. Menegazzo, V. Mossa, V. Paticchio, R. Perrino, D. Piatti, P. Prati, L. Schiavulli, K. Stöckel, O. Straniero, F. Strieder, T. Szücs, M.P. Takács, D. Trezzi, M. Wiescher and S. Zavatarelli
Physics Letters B 797 (2019) 134900

14. *Direct measurements of low-energy resonance strengths of the ²³Na(p, γ)²⁴Mg reaction for astrophysics*
A. Boeltzig, A. Best, F.R. Pantaleo, G. Imbriani, M. Junker, **M. Aliotta**, J. Balibrea-Correa, D. Bemmerer, C. Broggini, C.G. Bruno, R. Buompane, A. Cacioli, F. Cavanna, T. Chillery, G.F. Ciani, P. Corvisiero, L. Csedreki, T. Davinson, R.J. deBoer, R. Depalo, A. Di Leva, Z. Elekes, F. Ferraro, E.M. Fiore, A. Formicola, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyürky, I. Kochanek, M. Lugaro, P. Marigo, R. Menegazzo, V. Mossa, F. Munnik, V. Paticchio, R. Perrino, D. Piatti, P. Prati, L. Schiavulli, K. Stöckel, O. Straniero, F. Strieder, T. Szücs, M.P. Takács, D. Trezzi, M. Wiescher and S. Zavatarelli
Physics Letters B 795 (2019) 122

15. **⁵Improved astrophysical rate for the ¹⁸O(p, α)¹⁵N reaction by underground measurements*
C.G. Bruno, **M. Aliotta**, P. Descouvemont, A. Best, T. Davinson, D. Bemmerer, A. Boeltzig, C. Broggini, A. Cacioli, F. Cavanna, T. Chillery, G.F. Ciani, P. Corvisiero, R. Depalo, A. Di Leva, Z. Elekes, F. Ferraro, A. Formicola, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyürky, G. Imbriani, M. Junker, M. Lugaro, P. Marigo, R. Menegazzo, V. Mossa, F.R. Pantaleo, D. Piatti, P. Prati, K. Stöckel, O. Straniero, F. Strieder, T. Szücs, M.P. Takács, D. Trezzi, and S. Zavatarelli
Physics Letters B 790 (2019) 237

16. *Direct capture cross section and the $E_p = 71$ and 105 keV resonances in the ²²Ne(p, γ)²³Na reaction*
F. Ferraro, M.P. Takács, D. Piatti, F. Cavanna, R. Depalo, **M. Aliotta**, D. Bemmerer, A. Best, A. Boeltzig, C. Broggini, C.G. Bruno, A. Cacioli, T. Chillery, G.F. Ciani, P. Corvisiero, T. Davinson, G. D'Erasmus, A. Di Leva, Z. Elekes, E.M. Fiore, A. Formicola, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyürky, G. Imbriani, M. Junker, M. Karakas, I. Kochanek, M. Lugaro, P. Marigo, R. Menegazzo, V. Mossa, F.R. Pantaleo, V. Paticchio, R. Perrino, P. Prati, L. Schiavulli, K. Stöckel, O. Straniero, T. Szücs, D. Trezzi, and S. Zavatarelli
Physical Review Letters 121 (2018) 172701

17. **Development of a two-stage detection array for low-energy light charged-particles in nuclear astrophysics applications*
M. Romoli, L. Morale-Gallegos, **M. Aliotta**, C.G. Bruno, R. Buompane, A. D'Onofrio, T. Davinson, M. De Cesare, A. Di Leva, P. Di Meo, J. Duarte, L. Gasques, L. Gialanella, G. Imbriani, G. Porzio, D. Rapagnani, A. Vanzanella
European Physical Journal A 54 (2018) 142

18. **⁵Reduction of deuterium content in carbon targets for ¹²C+¹²C reaction studies of astrophysical interest*
L. Morale-Gallegos, **M. Aliotta**, C.G. Bruno, R. Buompane, T. Davinson, M. De Cesare, A. Di Leva, A. D'Onofrio, L.R. Gasques, L. Gialanella, G. Imbriani, G. Porzio, D. Rapagnani, M. Romoli, D. Schuermann, F. Terrasi, and L.Y. Zhang
European Physical Journal A 54 (2018) 132

19. *Effect of beam energy straggling on resonant yield in thin gas targets: The cases $^{22}\text{Ne}(p,\gamma)^{23}\text{Na}$ and $^{14}\text{N}(p,\gamma)^{15}\text{O}$*
D. Bemmerer, F. Cavanna, R. Depalo, **M. Aliotta**, M. Anders, A. Boeltzig, C. Broggin, C.G. Bruno, A. Cacioli, P. Corvisiero, L. Csedreki, T. Davinson, Z. Elekes, F. Ferraro, A. Formicola, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyürky, R. Menegazzo, V. Mossa, F.R. Pantaleo, P. Prati, D.A. Scott, O. Straniero, T. Szücs, M.P. Takács, and D. Trezzi (LUNA collaboration)
[Europhysics Letters 122 5 \(2018\) 52001](#)
20. *Erratum: Three New Low-Energy Resonances in the $^{22}\text{Ne}(p,\gamma)^{23}\text{Na}$ Reaction [PRL 115, 252501 (2015)]*
F. Cavanna, R. Depalo, M. Aliotta, M. Anders, D. Bemmerer, A. Best, A. Boeltzig, C. Broggin, C. G. Bruno, A. Cacioli, P. Corvisiero, T. Davinson, A. di Leva, Z. Elekes, F. Ferraro, A. Formicola, Zs. Fulop, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyurky, G. Imbriani, M. Junker, R. Menegazzo, V. Mossa, F. R. Pantaleo, P. Prati, D. A. Scott, E. Somorjai, O. Straniero, F. Strieder, T. Szucs, M. P. Takacs, and D. Trezzi (The LUNA Collaboration)
[Physical Review Letters 120, 239901\(E\) \(2018\)](#)
21. *A high-efficiency gas target setup for underground experiments, and redetermination of the branching ratio of the 189.5 keV $^{22}\text{Ne}(p,\gamma)^{23}\text{Na}$ resonance*
F. Ferraro, M.P. Takács, D. Piatti, V. Mossa, **M. Aliotta**, D. Bemmerer, A. Best, A. Böltzig, C. Broggin, C.G. Bruno, A. Cacioli, F. Cavanna, T. Chillery, G.F. Ciani, P. Corvisiero, L. Csedreki, T. Davinson, R. Depalo, G. D'Erasmus, A. Di Leva, Z. Elekes, E.M. Fiore, A. Formicola, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyürky, G. Imbriani, M. Junker, I. Kochanek, M. Lugaro, L.E. Marcucci, P. Marigo, R. Menegazzo, F. R. Pantaleo, V. Paticchio, R. Perrino, P. Prati, L. Schiavulli, K. Stöckel, O. Straniero, T. Szücs, D. Trezzi, and S. Zavatarelli
[European Physical Journal A 54 \(2018\) 44](#)
7. *Improved background suppression for radiative capture reactions at LUNA with HPGe and BGO detectors*
A. Böltzig, G. Imbriani, A. Best, M. Junker, **M. Aliotta**, D. Bemmerer, C. Broggin, C.G. Bruno, R. Buompane, A. Cacioli, F. Cavanna, T. Chillery, G.F. Ciani, P. Corvisiero, L. Csedreki, T. Davinson, R.J. deBoer, R. Depalo, A. Di Leva, Z. Elekes, F. Ferraro, E.M. Fiore, A. Formicola, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyürky, I. Kochanek, R. Menegazzo, V. Mossa, F. R. Pantaleo, V. Paticchio, R. Perrino, D. Piatti, P. Prati, L. Schiavulli, K. Stöckel, O. Straniero, F. Strieder, T. Szücs, M.P. Takács, D. Trezzi, M. Wiescher, and S. Zavatarelli
[Journal of Physics G 45 \(2018\) 025203](#)
22. *^{17}O Origin of meteoritic stardust unveiled by new proton-capture rate on oxygen-17*
M. Lugaro, A. Karakas, C.G. Bruno, **M. Aliotta**, L.R. Nittler, D. Bemmerer, A. Best, A. Böltzig, C. Broggin, A. Cacioli, F. Cavanna, G.F. Ciani, P. Corvisiero, S. Cristallo, T. Davinson, R. Depalo, A. Di Leva, Z. Elekes, F. Ferraro, A. Formicola, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyürky, G. Imbriani, M. Junker, R. Menegazzo, V. Mossa, F. R. Pantaleo, D. Piatti, P. Prati, D.A. Scott, O. Straniero, F. Strieder, T. Szücs, M. P. Takács, D. Trezzi (LUNA Collaboration)
[Nature Astronomy 1 \(2017\) 0027](#)
23. *Big Bang Lithium-6 Nucleosynthesis studies deep underground*
D. Trezzi, M. Anders, **M. Aliotta**, A. Bellini, D. Bemmerer, C. Broggin, A. Cacioli, P. Corvisiero, H. Costantini, T. Davinson, Z. Elekes, M. Erhard, A. Formicola, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyürky, G. Imbriani, M. Junker, A. Lemut, M. Marta, C. Mazzocchi, R. Menegazzo, P. Prati, C. Rossi Alvarez, D.A. Scott, E. Somorjai, O. Straniero, T. Szücs,
[Astroparticle Journal 89 \(2017\) 57-65](#)
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A. Slemer, P. Marigo, D. Piatti, **M. Aliotta**, D. Bemmerer, A. Best, A. Böltzig, A. Bressan, C. Broggin, C.G. Bruno, A. Cacioli, F. Cavanna, P. Corvisiero, T. Davinson, R. Depalo, A. Di Leva, Z. Elekes, F. Ferraro, A. Formicola, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyürky, G. Imbriani, M. Junker, R. Menegazzo, V. Mossa, F. R. Pantaleo, P. Prati, O. Straniero, T. Szücs, M.P. Takács, D. Trezzi (LUNA Collaboration)
[Monthly Notices of the Royal Astronomical Society 465 \(2017\) 4817-4837](#)
25. *The impact of the revised $^{17}\text{O}(p,\alpha)^{14}\text{N}$ reaction rate on the ^{17}O stellar abundances and yields*
O. Straniero, C.G. Bruno, **M. Aliotta**, A. Best, A. Böltzig, D. Bemmerer, C. Broggin, A. Cacioli, F. Cavanna, G.F. Ciani, P. Corvisiero, S. Cristallo, T. Davinson, R. Depalo, A. Di Leva, Z. Elekes, F. Ferraro, A. Formicola, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyürky, G. Imbriani, M. Junker, R. Menegazzo, V. Mossa, F. R. Pantaleo, D. Piatti, L. Piersanti, P. Prati, E. Somorjai, F. Strieder, T. Szücs, M. P. Takács, D. Trezzi (LUNA Collaboration)
[Astronomy & Astrophysics 598 \(2017\) A128](#)

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 R. Depalo, F. Cavanna, **M. Aliotta**, M. Anders, D. Bemmerer, A. Best, A. Böltzig, C. Brogгинi, C.G. Bruno, A. Cacioli, G.F. Ciani, P. Corvisiero, T. Davinson, A. Di Leva, Z. Elekes, F. Ferraro, A. Formicola, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyürky, G. Imbriani, M. Junker, R. Menegazzo, V. Mossa, F. R. Pantaleo, D. Piatti, P. Prati, O. Straniero, F. Strieder, T. Szücs, M. P. Takács, D. Trezzi (LUNA Collaboration)
[Physical Review C 94 \(2016\) 055804](#)
27. *$^{5\text{S}}$ Improved Direct Measurement of the 64.5 keV Resonance in the $^{17}\text{O}(p,\alpha)^{14}\text{N}$ Reaction at LUNA*
 C.G. Bruno, D.A. Scott, **M. Aliotta**, A. Formicola, D. Bemmerer, A. Best, A. Böltzig, C. Brogгинi, A. Cacioli, F. Cavanna, G.F. Ciani, P. Corvisiero, T. Davinson, R. Depalo, A. Di Leva, Z. Elekes, F. Ferraro, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyürky, G. Imbriani, M. Junker, R. Menegazzo, V. Mossa, F. R. Pantaleo, D. Piatti, P. Prati, E. Somorjai, O. Straniero, F. Strieder, T. Szücs, M. P. Takács, D. Trezzi (LUNA Collaboration)
[Physical Review Letters 117 \(2016\) 142502](#)
28. *$^{\text{H}}$ Helium burning and neutron sources in the stars*
M. Aliotta, M. Junker, P. Prati, F. Strieder
[Topical Issue - European Physical Journal 52 \(2016\) 76](#)
29. *Ultra-sensitive γ -ray spectroscopy set-up for investigating primordial lithium problem*
 G. Gervino, C. Gustavino, D. Trezzi, **M. Aliotta**, M. Anders, A. Boeltzig, D. Bemmerer, A. Best, C. Brogгинi, C. Bruno, A. Cacioli, F. Cavanna, P. Corvisiero, T. Davinson, R. Depalo, A. Di Leva, Z. Elekes, F. Ferraro, A. Formicola, Zs. Fülöp, A. Guglielmetti, Gy. Gyürky, G. Imbriani, M. Junker, R. Menegazzo, P. Prati, D.A. Scott, O. Straniero, T. Szücs, (LUNA Collaboration)
[Nuclear Instruments and Methods in Physics Research Section A, 824 \(2016\) 617 s](#)
30. *Three new low-energy resonances in the $^{22}\text{Ne}(p,\gamma)^{23}\text{Na}$ reaction*
 F. Cavanna, R. Depalo, **M. Aliotta**, M. Anders, D. Bemmerer, A. Best, C. Brogгинi, C.G. Bruno, A. Cacioli, P. Corvisiero, T. Davinson, A. Di Leva, Z. Elekes, F. Ferraro, A. Formicola, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyürky, G. Imbriani, M. Junker, R. Menegazzo, P. Prati, D.A. Scott, E. Somorjai, F. Strieder, O. Straniero, T. Szücs, M.P. Takacs, and D. Trezzi (for the LUNA Collaboration)
[Physical Review Letters 115 \(2015\) 252501](#)
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 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
[Physical Review Letters 115 \(2015\) 062701](#)
32. *$^{5\text{S}}$ Resonance strengths in the $^{17,18}\text{O}(p,\alpha)^{14,15}\text{N}$ reactions and background suppression underground - Commissioning of a new setup for charged-particle detection at LUNA*
 C.G. Bruno, D.A. Scott, A. Formicola, **M. Aliotta**, T. Davinson, M. Anders, A. Best, D. Bemmerer, C. Brogгинi, A. Cacioli, F. Cavanna, P. Corvisiero, R. Depalo, A. Di Leva, Z. Elekes, Zs. Fülöp, G. Gervino, C.J. Griffin, A. Guglielmetti, C. Gustavino, Gy. Gyürky, G. Imbriani, M. Junker, R. Menegazzo, E. Napolitani, P. Prati, E. Somorjai, O. Straniero, F. Strieder, T. Szücs, and D. Trezzi
[European Physical Journal A 51 \(2015\) 94](#)
33. *A new study of the $^{22}\text{Ne}(p,\gamma)^{23}\text{Na}$ reaction deep underground: Feasibility, setup, and first observation of the 186 keV resonance*
 F. Cavanna, R. Depalo, M.-L. Menzel, **M. Aliotta**, M. Anders, D. Bemmerer, C. Brogгинi, C.G. Bruno, A. Cacioli, P. Corvisiero, T. Davinson, A. Di Leva, Z. Elekes, F. Ferraro, A. Formicola, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyürky, G. Imbriani, M. Junker, R. Menegazzo, P. Prati, C. Rossi Alvarez, D.A. Scott, O. Straniero, F. Strieder, T. Szuecs, and D. Trezzi (LUNA Collaboration)
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34. *First Direct Measurement of the $^2\text{H}(\alpha,\gamma)^6\text{Li}$ Cross Section at Big Bang Energies and the Primordial Lithium Problem*
 M. Anders, D. Trezzi, R. Menegazzo, **M. Aliotta**, A. Bellini, D. Bemmerer, C. Brogгинi, A. Cacioli, P. Corvisiero, H. Costantini, T. Davinson, Z. Elekes, M. Erhard, A. Formicola, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyürky, M. Junker, A. Lemut, M. Marta, C. Mazzocchi, P. Prati, C. Rossi Alvarez, D.A. Scott, E. Somorjai, O. Straniero, T. Szuecs (LUNA Collaboration)

35. *Underground study of the $^{17}\text{O}(p,\gamma)^{18}\text{F}$ reaction for explosive hydrogen burning*
A. Di Leva, D.A. Scott, A. Caciolli, A. Formicola, F. Strieder, **M. Aliotta**, M. Anders, D. Bemmerer, C. Broggini, P. Corvisiero, Z. Elekes, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyürky, G. Imbriani, J. Jose', M. Junker, M. Laubenstein, R. Menegazzo, E. Napolitani, P. Prati, V. Rigato, V. Roca, E. Somorjai, C. Salvo, O. Straniero, T. Szuëcs, F. Terrasi, and D. Trezzi (LUNA Collaboration)
Physical Review C 90 (2014) 015803 Erratum: Physical Review C 90 (2014) 019902
36. *Cross section measurements at astrophysically relevant energies: The LUNA experiment*
A. Formicola, C.G. Bruno, A. Caciolli, F. Cavanna, R. Depalo, A. Di Leva, D.A. Scott, D. Trezzi, **M. Aliotta**, M. Anders, D. Bemmerer, C. Broggini, P. Corvisiero, Z. Elekes, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyürky, G. Imbriani, M. Junker, R. Menegazzo, P. Prati, E. Somorjai, O. Straniero, F. Strieder, T. Szuëcs
Nuclear Instruments and Methods in Physics Research Section A 742 (2014) 258-260
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M. Anders, D. Trezzi, A. Bellini, **M. Aliotta**, D. Bemmerer, C. Broggini, A. Caciolli, H. Costantini, P. Corvisiero, T. Davinson, Z. Elekes, M. Erhard, A. Formicola, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyürky, M. Junker, A. Lemut, M. Marta, C. Mazzocchi, R. Menegazzo, P. Prati, CR. Alvarez, D. Scott, E. Somorjai, O. Straniero, T. Szuëcs
European Physical Journal A 49 (2013) 28
38. *5* First Direct Measurement of the $^{17}\text{O}(p,\gamma)^{18}\text{F}$ Reaction Cross Section at Gamow Energies for Classical Novae*
D. Scott, A. Caciolli, A. Di Leva, A. Formicola, **M. Aliotta**, M. Anders, D. Bemmerer, C. Broggini, M. Campeggio, P. Corvisiero, Z. Elekes, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyürky, G. Imbriani, M. Junker, M. Laubenstein, R. Menegazzo, M. Marta, E. Napolitani, P. Prati, V. Rigato, V. Roca, E. Somorjai, C. Salvo, O. Straniero, F. Strieder, T. Szuëcs, F. Terrasi, and D. Trezzi (LUNA Collaboration)
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A. Caciolli, D. Scott, A. Di Leva, A. Formicola, **M. Aliotta**, M. Anders, D. Bemmerer, C. Broggini, M. Campeggio, P. Corvisiero, Z. Elekes, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyürky, G. Imbriani, M. Junker, R. Menegazzo, E. Napolitani, P. Prati, V. Rigato, V. Roca, C. Rolfs, C. Rossi Alvarez, E. Somorjai, C. Salvo, O. Straniero, F. Strieder, T. Szücs, F. Terrasi, H.P. Trautvetter, and D. Trezzi (LUNA collaboration)
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40. *5* Measurement of the $^{18}\text{Ne}(\alpha,p_0)^{21}\text{Na}$ reaction cross section in the burning energy region for X-ray bursts*
P.J.C. Salter, **M. Aliotta**, T. Davinson, H. Al Falou, A. Chen, B. Davids, B. Fulton, N. Galinski, D. Howell, G. Lotay, P. Machule, A. StJ. Murphy, C. Ruiz, S. Sjuë, M. Taggart, P. Walden, P.J. Woods
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A. Tumino, C. Spitaleri, A.M. Mukhamedzhanov, S. Typel, **M. Aliotta**, V. Burjan, M.G. del Santo, G.G. Kiss, V. Kroha, Z. Hons, M. La Cognata, L. Lamia, J. Mrazek, R.G. Pizzone, S. Piskor, G.G. Rapisarda, S. Romano, M.L. Sergi, R. Sparta
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M. La Cognata, A.M. Mukhamedzhanov, C. Spitaleri, I. Indelicato, **M. Aliotta**, V. Burjan, S. Cherubini, A. Coc, M. Gulino, Z. Hons, G.G. Kiss, V. Kroha, L. Lamia, J. Mrazek, S. Palmerini, S. Piskor, R.G. Pizzone, S.M.R. Puglia, G.G. Rapisarda, S. Romano, M.L. Sergi, A. Tumino.
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