Prof. Marco La Commara,

Education

September – December 1990

Fellowship for graduating student at CEA (Commissariat à l'énergie atomique) at Saclay (France), in the framework of the experiment 35Cl+64Ni deep inelastic collisions feature studies.

January 1992

Italian Doctor degree in Physics 110/110 Magna cum Laude, at Mathematical, Physical and Natural Sciences Faculty, University of Naples Federico II. Thesis: "Photon emission in heavy-ion collisions at 10 A MeV energy". Tutor: Prof. M. Sandoli.

June 1992 – June 1993

Fellowship for neograduates from Ministry of University and Scientific and Technological Research works at Biophysics department of Genua University (I) in the molecular mechanics group.

July 1993 – October 1994

INFN young scientist yellow. He works in Napoli unity of INFN and his task is to develop charged particle detectors to be used in measurements on population of GDR in dinuclear system formed in heavy-ion collisions at low energy.

November 1994 – October 1997

MLC got a fellowship from MURST (Department of University and Scientific and Tecnological Research) in order to support his PhD degree work. His activity concerned both the improvement of the experimental arrays of charged fragments and photons and the data analysis, of several binuclear systems.

June 1998

MLC defended thesis and got his PhD degree.

Work Experience and Responsibility Roles

November 1994 – May 1998

Research Assistant at the Mathematical, Physical and Natural Sciences Faculty, Second University of Naples.

June 1998 – May 2000

Post-doctoral position at GSI, Darmstadt, Germany

June 2000 – December 2014

Permanent staff position as Assistant Professor at the Mathematical, Physical and Natural Sciences Faculty, University of Naples Federico II.

September 2000 – February 2001

Visiting scientist for CEA (Commissariat à l'énergie atomique) at Grand Accélérateur National d'Ions Lourds (GANIL), Caen, France.

November 2000 – October 2002

Member of the Executive Board of the Mathematical, Physical and Natural Sciences Faculty, University of Naples Federico II.

January 2002 - June 2006

P.I. of U-183 EU supported experiment @ GSI mass-Separator, whose goal is to measure exotic nuclei production cross-sections in the 100Sn region, via emission of complex fragments from light Barium isotopes.

November 2003 – October 2009

Member of the Executive Board (Consiglio di Amministrazione) of University of Naples Federico II. President of coordination board for student activities.

January 2003 – December 2008

Local responsible of PRISMA (INFN funded) collaboration.

October 2004

P.I. for the 94Ag research chain experiments @ GSI mass-Separator. 94Ag is one of the heaviest odd-odd nuclei experimentally known, with N=Z lying exactly on the proton drip line, being the 93Ag unbound. The 94Ag structure has so been studied for the first time on the basis of the gammas emitted after the beta+- decay, and measured in beta-gamma and beta-gamma-gamma coincidences.

November 2004 – October 2020

President of University sport committee and Rector delegate for academic sport activities.

January 2006

Co-spokesman of the E475S experiment, approved by the GANIL P.A.C., to investigate the dependence of complex fragment emission on entrance-channel isospin asymmetry dependence in the complete fusion reaction 75Kr+40Ca forming the compound system 115Ba.

May 2006 – September 2009

In charge for the Orienteering and Tutoring programs of the Mathematical, Physical and Natural Sciences Faculty, University of Naples Federico II.

November 2006 – Febraury 2007

Visiting scientist for CEA (Commissariat à l'énergie atomique) at Grand Accélérateur National d'Ions Lourds (GANIL) and Université de Caen, Caen, France.

January 2014 – October 2017

Coordinator of Nuclear Physics unit of Department of Physics, University of Naples Federico II.

December 2014 – September 2017

Associate Professor of Nuclear and Subnuclear Physics at the Mathematical, Physical and Natural Sciences Faculty, University of Naples Federico II.

Since October 2017

Associate Professor of Nuclear and Subnuclear Physics at the Pharmacy Department, University of Naples Federico II.

Since January 2018

Coordinator of Naples INFN unit photoelectronics clean-laboratory (L2) developments as member of DarkSide International collaboration for the search for Dark Matter.

May 2016 – on going

Member of national project evaluation staff for MUR.

2020 – on going

Member of RadioLab collaboration (INFN funded) and responsible for Radio-isotope researches and bio-pharmaceutical applications.

2021 – on going

Member of the Editorial Board of the international review Radiation.

January 2018 – on going

Local coordinator of AsFiN (INFN funded) collaboration.

2022 – on going

Review Editor for Frontiers in Physics and Astronomy

2021–2023

Member of T2K/HyperKamiokande international collaboration, coordinator for Radio-isotopes pollution in materials used for measurements.

Scientific activity

MLC has carried out his scientific activity mainly in fundamental nuclear physics research programs and in particular it has been developing in the field of low-energy experimental nuclear physics, from the study of giant dipole resonances, cluster decays of medium-mass isotopes, beta-decay studies of nuclei in proximity of the proton drip-line close to 100Sn, under-barrier fusion reactions between light nuclei, investigations on both structure and reaction-dynamic features of light weakly-bound isotopes (exotic nuclei), to the study of nuclear reactions of astrophysical interest and to the search for Dark Matter and fundamental physics, as neutrino observatory for proton decay. Among those fields MLC has been particularly involved in nuclear structure studies performed using a mass separator to identify proton and gamma emitting nuclei and in-fligh facilities to study the nuclear reaction mechanism involving radioactive beams with halo structure.

The wide variety of the research activity he has been involved in, together with the experience acquired during the long term appointments at foreign laboratories, has allowed him to acquire a deep knowledge of the scientific and technical problems of low energy nuclear physics, in particular MLC developed a specific knowledge on tracking detection systems for the experiments performed with in-flight facility, as EXOTIC beamline installed at LNL (INFN). He has been involved since 2017 in some of the pharmaceutical applications of nuclear physics techniques, in particular concerning transporting towards cells of nanoparticles carrying radio-isotopes able to freeze its possible carcinogenic development. MLC spent quite a bit of time, about 3 years, working in foreign Laboratories (GSI, Germany, GANIL and Saclay France) developing specific competencies and skills.

MLC is co-author of more than 250 scientific papers and their scientific relevance, and hence his research activities, are widely well recognized by the international community, as can be seen from the bibliographic production.

Orcid#: https://orcid.org/0000-0002-7904-094X

Bibliometric indicators (SC 02/A1-fisica sperimentale delle interazioni fondamentali), WoS-Core Collection: articles 281 h-index: 36 citations: 4954

Prof. M. La Commara got the National Scientific Habilitation to Full Professor.

Teaching activity

2013-present, Pharmacy Degree Course, Physics

2021-present, Pharmacy Degree Course, Nuclear Techniques in Radiofarmacy

2017-present, PhD School in Pharmaceutical Sciences/Master in Pharmaceutical experimantations and Master in Cosmetic Sciences and Technologies, Statistics and Data Evaluation techniques.

2015-2016, Physics degree course, Exotic Nuclei Physics.

2014-2015, Radioactivity course, Engineering and Computer Science Faculty, Frankfurt University of Applied Sciences.

2011-2014, Physics degree course, Exotic Nuclei Physics.

2008-2014, Industrial Chemistry degree course, General Physics I.

2000-2014 Physics degree course, Experimental Physics I.

2000-2001, Computer Sciences degree course, General Physics I .

2001-2002, Biological Sciences degree course, Computing Sciences Laboratory.

2001-2002, Physics degree course, General Physics I.

2002-2004 Industrial Chemistry degree course, Experimental Physics II.

2004-2009 Physics degree course, Laboratory of Nuclear Physics.

2000-2009, MTS, University Federico II Naples, Didactics of Physics.

2000-2009, MTS, University Federico II Naples, Laboratory of Mechanics and Thermodynamics.

2000-2007, MTS, University Federico II Naples, Data Analysis Laboratory.

2004-2009, MTSl, Second University of Naples, Didactics of Physics.

MLC has been tutor of several master degree thesis in Nuclear Experimental Physics and cotutor of PhD work

Décroissance de noyaux excités produits dans les réactions 78,82Kr+40Ca à 5.5 AMeV (Université de Caen Basse Normandie)

Scientific oral presentations

MLC participated as a speaker at several national and international conferences, workshops, schools1234567, also with invited talks. Among these the most recent are:

2011:

IWM2011, International workshop on Multifragmentation and Related Topics. Caen (F), 2011.

Invited talk: Decay modes of the systems formed in the reactions 78Kr+40Ca and 86Kr+48Ca.

2013:

International Nuclear Physics Conference, INPC 2013, Firenze (I), june 2013.

talk: Decay competition for IMF produced in the collisions 78Kr+40Ca and 86Kr+48Ca at 10 A.MeV.

2017:

International Conference on heavy-ion collisions at near-barrier energies 20-24 February 2017, Hobart, Tasmania

Invited talk: 8B + 208Pb Elastic Scattering at Coulomb Barrier Energies

2017:

12th Int. Spring Seminar on Nuclear Physics current problems and prospects for nuclear structure, Ischia (I), May 15-19, 2017

Invited talk: Sub-barrier reaction features of 8B + 208Pb system

2019:

42nd Symposium on Nuclear Physics, Cocoyoc, Mexico, January 7-10, 2019

Invited talk: A new approach at direct search for Dark Matter

International Conferences organization

2011 IWM2011, International workshop on Multifragmentation and Related Topics. Caen (F), 2011.

2016 11th Int. Conference on Clustering Aspects of Nuclear Structure and Dynamics

3rd Mission activity

2010-2017: Member of the Department of Physics group for spreding Scientific culture in High Schools.

2015-on going: in the teacher-group for PLS (Piano Lauree Scientifiche).

Curriculum Vitae – Alberto Manfreda

Informazioni Personali

Nome: Alberto Manfreda
Data di nascita:

Posizione attuale

Ricercatore presso l'Istituto Nazionale di Fisica Nucleare (INFN), sez. di Napoli.[1] **(Da Novembre 2022)**.

Posizioni precedenti

Assegnista di ricerca presso l'Istituto Nazionale di Fisica Nucleare (INFN), sez. di Pisa.[2] **(Novembre 2019 - Novembre 2022)**.
Tema di ricerca: "Sviluppo dei tool di analisi scientifica per la missione IXPE".

Assegnista di ricerca presso l'Istituto Nazionale di Fisica Nucleare (INFN), sez. di Pisa. **(Novembre 2017 - Novembre 2019)**.
Tema di ricerca: "Studio della radiazione cosmica carica con il Large Area Telescope di Fermi".

Attività di ricerca

La mia attività di ricerca si svolge negli ambiti della fisica sperimentale dei raggi cosmici e dell'astrofisica delle alte energie, ambiti nei quali mi occupo sia di sviluppo di rivelatori, che di software e analisi dati.

Tale attività ha avuto inizio con il lavoro di tesi magistrale presso l'Università di Pisa, durante il quale mi sono occupato di migliorare l'algoritmo di selezione degli eventi utilizzato dal Fermi Large Area Telescope (LAT)[3],un telesopio per raggi gamma, elettroni e positroni in orbita dal 2008, utilizzando tecniche di Machine Learning basate sui Boosted Decision Trees per valutare, evento per evento, la qualità della misura dell'energia.

Il lavoro sul LAT è proseguito nel corso del Dottorato di ricerca, che ha avuto come oggetto una misura dello spettro della componente leptonica dei raggi cosmici carichi. A seguito di tale attività, dal 2017 al 2019 ho svolto, per conto della collaborazione Fermi-LAT, il ruolo di Coordinatore del gruppo di scienza che si occupa dello studio dei raggi cosmici carichi e dell'emissione diffusa di raggi gamma prodotta dalla loro interazione con il mezzo interstellare.

[1] Complesso Universitario di Monte Sant'Angelo, via Cinthia, Napoli (Italia). http://www.na.infn.it/
[2] Largo Bruno Pontecorvo 3, Pisa (Italia). http://www.pi.infn.it/
[3] https://www-glast.stanford.edu/

Dal 2016 sono impegnato nella missione Imaging X-Ray Polarimetry Explorer (IXPE)[4],un'innovativa missione di polarimetria X finanziata dalla NASA nell'ambito dell'Astrophysics Explorer Program[5] in partnership con l'Agenzia Spaziale Italiana, il cui lancio è avvenuto il 9 Dicembre 2021. In particolare, ho preso parte alle attività di sviluppo, costruzione, calibrazione e caratterizzazione dei rivelatori a gas sensibili alla polarizzazione ospitati nel piano focale di IXPE, i Gas Pixel Detector (GPD).

Per conto della collaborazione IXPE mi sono anche occupato dello sviluppo di algoritmi per la ricostruzione degli eventi e dell'implementazione della pipeline di analisi dati per la missione, nonché dello sviluppo del software di simulazione del rivelatore.

Dopo il lancio, ho preso parte all'analisi dei dati raccolti dal satellite, in particolare dell'inattesa osservazione del Gamma Ray Burst 221009A, considerato il più brillante di sempre. Attualmente mi occupo dello studio del background astrofisico e strumentale del telescopio, nonché della correzione di effetti sistematici sul guadagno dei GPD.

Dal Gennaio 2023 sono membro della collaborazione KM3NeT[6]un osservatorio per neutrini di altissima energia composto da due telescopi attualmente in costruzione nelle profondità del Mediterraneo, uno dedicato all'astronomia con i neutrini (ARCA, nel sito KM3NeT-Italia), l'altro allo studio di oscillazioni (ORCA, nel sito KM3NeT-Francia). Per tale esperimento sono responsabile, presso il laboratorio CAPACITY di Caserta, dell'integrazione del modulo che fornisce l'interfaccia elettro-ottica a ciascuna delle unità di cui è composto un telescopio (Base Module), per il quale ho prodotto anche un'interfaccia software di test utilizzata in tutti i siti d'integrazione.

Attività didattica

2021/2022 e 2022/2023: Codocente per il corso di Computing Methods for Experimental Physics and Data Analysis del corso di Laurea Magistrale in Fisica presso il dipartimento "E.Fermi" dell'Università di Pisa.

2020 e 2021 Relatore presso l'Intensive School for Advanced Graduate Studies - Machine Learning, Università di Pavia.

2015/2016, 2016/2017, 2018/2019 e 2019/2020: Attività di supporto alla didattica per il corso di Laboratorio di Fisica I del corso di Laurea Triennale in Fisica presso il dipartimento "E.Fermi" dell'Università di Pisa.

[4] https://ixpe.msfc.nasa.gov/
[5] https://explorers.gsfc.nasa.gov/index.html
[6] https://www.km3net.org/

Altre attività

Revisore per Nuclear Instruments and Methods in Physics Research, Section A

Formazione

Dottorato in Fisica presso l'Università di Pisa (2014 - 2017)
Relatore: Prof. Luca Baldini (Università di Pisa).
Tesi: *"Cosmic-ray electrons and positrons with the Fermi Large Area Telescope"*.
Votazione: Ottimo e Lode.

Laurea Magistrale in Fisica presso l'Università di Pisa (2011 - 2014)
Relatore: Prof. Luca Baldini (Università di Pisa).
Tesi: *"Pass 8: development and science prospects for the new Fermi LAT event-level analysis"*.
Votazione: 109/110.

Laurea Triennale in Fisica presso l'Università del Salento (2007 - 2010)
Relatore: prof. Giampaolo Co' (Università del Salento).
Tesi: *"White dwarfs: a model for internal structure and equilibrium condition numerically integrated"*.
Votazione: 110/110 e lode.

Diploma di Maturità scientifica presso il Liceo Scientifico Statale C. De Giorgi di Lecce (2002-2007)
Votazione: 100/100.

Seminari, scuole e stage

Giugno 2021 *8th Thematic CERN School of Computing (tCSC spring 2021)* online. Scuola dedicata allo sviluppo di software scientifico ad alte performance per architetture eterogenee.
https://indico.cern.ch/event/1017080/

Giugno 2018 *Looking at Cosmic Sources in Polarized Light* presso Asiago (Italia). Scuola dedicata alla studio delle tecniche di polarimetria in astrofisica su tutto lo spettro elettromagnetico e dell'impatto di misure polarimetriche sulla modellizzazione delle sorgenti celesti.
https://www2.pd.infn.it/astro/pers/asiago2018/

Giugno 2016 *XIII Seminar on Software for Nuclear Subnuclear and Applied Physics* presso Porto Conte, Alghero (Italia).
Seminario dedicato allo studio del software comunemente impiegato in fisica fondamentale e applicata (Geant4) e ad un'introduzione alla programmazione per il calcolo in parallelo su GPU.
https://agenda.infn.it/conferenceDisplay.py?confId=10583

Gennaio 2006 Stage di 5 giorni presso i laboratori del CERN, come parte del progetto Extreme Energy Events (EEE), durante il quale ho preso parte alla

costruzione di un rivelatore di raggi cosmici di tipo Resistive Plate Chamber (RPC).
http://eee.centrofermi.it/

Lingue

Italiano (madrelingua), **Inglese**.

Competenze informatiche

OS: GNU/Linux, Microsoft Windows.

Linguaggi di programmazione e scripting: Python, C, C++

Linguaggi di markup: LaTeX

Software scientifico: Geant4, ROOT, Scikit-learn

Contributi a Conferenze

X-ray polarimetry of GRB 221009A (intervento)
Seventeenth Marcel Grossmann meeting, Pescara (Lug 2024)
https://indico.icranet.org/event/8/

Time-dependent instrumental effects in IXPE: pressure variation and GEM charging inside GPDs (poster)
16th Pisa Meeting on Advanced Detectors, La Biodola (Mag 2024)
https://www.pi.infn.it/pm/

IXPE Event Detection and Reconstruction (intervento)
20th Meeting of the High Energy Astrophysics Division of the AAS, Waikōloa (Mar 2023)
https://aas.org/meetings/head20

IXPE view of GRB 221009a (intervento)
IXPE: la nuova finestra osservativa sul cosmo ad alte energie, Roma (Feb 2023)
https://www.asi.it/event/workshop-ixpe-la-nuova-finestra-osservativa-sul-cosmo-ad-alte-energie/

Looking at x ray sky with polarized lenses (intervento)
Tenth International Fermi Symposium, Johannesburg (Ott 2022)
https://indico.cern.ch/event/1091305/

The Gas Pixel Detectors for the Imaging X-ray Polarimetry Explorer (intervento)
15th Pisa Meeting on Advanced Detectors, La Biodola (Mag 2022)
https://www.pi.infn.it/pm/

Nuove prospettive per l'astronomia X nello spazio (relazione su invito)
107° Congresso Nazionale della Società Italiana di Fisica, online (Set 2021)
https://www.sif.it/attivita/congresso/107

Construction and test of the Gas Pixel Detectors for the IXPE Mission (intervento)
High Precision X-ray Measurements 2021 (HPXM2021), Frascati (Giu 2021)
https://agenda.infn.it/event/22007/

The Gas Pixel Detector for the IXPE mission (intervento)
15-th Topical Seminar on Innovative Particle and Radiation Detectors (IPRD19), Siena (Ott 2019)
https://www.bo.infn.it/sminiato/siena19.html

The first 10 years of the Fermi Large Area Telescope (intervento)
The 9th international Workshop on Air Shower Detection at High Altitudes (WASHDA), Mosca (Set 2018)
http://wasdha2018.inr.ac.ru/

IXPE: Una nuova finestra sull'Universo (intervento)
IFAE, XVII Edizione, Milano (Apr 2018).
https://agenda.infn.it/conferenceDisplay.py?confId=14895

A new measurement of cosmic-ray electrons and positrons with the Large Area Telescope (poster)
35th International Cosmic Ray Conference (ICRC) 2017, Busan (Lug 2017).
http://www.icrc2017.org

A new measurement of cosmic-ray electrons and positrons with the Large Area Telescope (intervento)
APS April Meeting 2017, Washington DC (Gen 2017).
http://meetings.aps.org/Meeting/APR17/PersonIndex/3246

Highlights from the Fermi Large Area Telescope (intervento)
IFAE, XVI Edizione, Trieste (Apr 2017).
https://agenda.infn.it/conferenceDisplay.py?confId=12289

A new measurement of cosmic-ray electrons and positrons with the Large Area Telescope (intervento)
SciNeGHE 2016, Pisa (Ott 2016).
https://agenda.infn.it/conferenceDisplay.py?confId=11102

Geomagnetic effects on the CR Electron Spectrum measured by the Fermi-LAT (poster)
Sixth International Fermi Symposium, Washington DC (Nov 2015)
https://fermi.gsfc.nasa.gov/science/mtgs/symposia/2015/

Pubblicazioni[7]

[1] S. Aiello et al. "Atmospheric muons measured with the KM3NeT detectors in comparison with updated numeric predictions". In: (2024).

[2] S. Aiello et al. "Differential Sensitivity of the KM3NeT/ARCA detector to a diffuse neutrino flux and to point-like source emission: Exploring the case of the Starburst Galaxies". In: *Astroparticle Physics* (2024), p. 102990.

[3] S. Aiello et al. "Embedded software of the KM3NeT central logic board". In: *Computer Physics Communications* 296 (2024), p. 109036.

[4] S. Aiello et al. "The Power Board of the KM3NeT Digital Optical Module: design, upgrade, and production". In: *Electronics* 13.11 (2024), p. 2044.

[5] E. Churazov et al. "Pulsar-wind-nebula-powered Galactic center X-ray filament G0. 13–0.11-Proof of the synchrotron nature by IXPE". In: *Astronomy & Astrophysics* 686 (2024), A14.

[6] M. Errando et al. "Detection of X-ray Polarization from the Blazar 1ES 1959+ 650 with the Imaging X-ray Polarimetry Explorer". In: *The Astrophysical Journal* 963.1 (2024), p. 5.

[7] S. Fabiani et al. "Discovery of a variable energy-dependent X-ray polarization in the accreting neutron star GX 5- 1". In: *Astronomy & Astrophysics* 684 (2024), A137.

[8] R. Ferrazzoli et al. "Discovery of a Shock-compressed Magnetic Field in the Northwestern Rim of the Young Supernova Remnant RX J1713. 7–3946 with X-Ray Polarimetry". In: *The Astrophysical journal letters* 967.2 (2024), p. L38.

[9] J. Heyl et al. "The detection of polarized X-ray emission from the magnetar 1E 2259+ 586". In: *Monthly Notices of the Royal Astronomical Society* 527.4 (2024), pp. 12219–12231.

[10] P. Kaaret et al. "X-ray Polarization of the Eastern Lobe of SS 433". In: *The Astrophysical journal letters* 961.1 (2024), p. L12.

[11] D. Kim et al. "Magnetic field properties inside the jet of Mrk 421-Multiwavelength polarimetry, including the Imaging X-ray Polarimetry Explorer". In: *Astronomy & Astrophysics* 681 (2024), A12.

[12] P. Kouch et al. "IXPE observation of PKS 2155-304 reveals the most highly polarized blazar". In: *arXiv preprint arXiv:2406.01693* (2024).

[13] F. La Monaca et al. "Highly Significant Detection of X-Ray Polarization from the Brightest Accreting Neutron Star Sco X-1". In: *The Astrophysical journal letters* 960.2 (2024), p. L11.

[14] L. Marra et al. "IXPE observation confirms a high spin in the accreting black hole 4U 1957+ 115". In: *Astronomy & Astrophysics* 684 (2024), A95.

[15] J. Poutanen et al. "Studying geometry of the ultraluminous X-ray pulsar Swift J0243. 6+ 6124 using X-ray and optical polarimetry". In: *arXiv preprint arXiv:2405.08107* (2024).

[7] In ordine cronologico di pubblicazione

[16] J. Rankin et al. "X-Ray Polarized View of the Accretion Geometry in the X-Ray Binary Circinus X-1". In: *The Astrophysical journal letters* 961.1 (2024), p. L8.

[17] A. Ratheesh et al. "X-Ray Polarization of the Black Hole X-Ray Binary 4U 1630–47 Challenges the Standard Thin Accretion Disk Scenario". In: *The Astrophysical Journal* 964.1 (2024), p. 77.

[18] M. L. Saade et al. "X-Ray Polarimetry of the Dipping Accreting Neutron Star 4U 1624–49". In: *The Astrophysical Journal* 963.2 (2024), p. 133.

[19] F. Xie et al. "First detection of polarization in X-rays for PSR B0540-69 and its nebula". In: *The Astrophysical Journal* 962.1 (2024), p. 92.

[20] N. Bucciantini et al. "Polarisation leakage due to errors in track reconstruction in gas pixel detectors". In: *Astronomy & Astrophysics* 672 (2023), A66. DOI: 10.1051/0004-6361/202245744.

[21] N. Bucciantini et al. "Simultaneous space and phase resolved X-ray polarimetry of the Crab pulsar and nebula". In: *Nature Astronomy* 7.5 (2023), pp. 602–610.

[22] F. Capitanio et al. "Polarization Properties of the Weakly Magnetized Neutron Star X-Ray Binary GS 1826–238 in the High Soft State". In: *The Astrophysical Journal* 943.2 (feb. 2023), p. 129. DOI: 10.3847/1538-4357/acae88.

[23] M. Cocchi et al. "Discovery of strongly variable X-ray polarization in the neutron star low-mass X-ray binary transient XTE J1701-462". In: *A&A* 674 (2023), p. L10. DOI: 10.1051/0004-6361/202346275.

[24] L. Di Gesu et al. "Discovery of X-ray polarization angle rotation in the jet from blazar Mrk 421". In: *Nature Astronomy* 7.10 (2023), pp. 1245–1258.

[25] A. Di Marco et al. "First Detection of X-Ray Polarization from the Accreting Neutron Star 4U 1820-303". In: *The Astrophysical Journal Letters* 953.2 (ago. 2023), p. L22. DOI: 10.3847/2041-8213/acec6e.

[26] A. Di Marco et al. "Handling the Background in IXPE Polarimetric Data". In: *The Astronomical Journal* 165.4 (mar. 2023), p. 143. DOI: 10.3847/1538-3881/acba0f.

[27] V. Doroshenko et al. "Complex variations in X-ray polarization in the X-ray pulsar LS V +44 17/RX J0440.9+4431". In: *Astronomy & Astrophysics* 677 (2023), A57. DOI: 10.1051/0004-6361/202347088.

[28] S. R. Ehlert et al. "X-Ray Polarization of the BL Lacertae Type Blazar 1ES 0229+ 200". In: *The Astrophysical Journal* 959.1 (2023), p. 61.

[29] S. V. Forsblom et al. "IXPE Observations of the Quintessential Wind-accreting X-Ray Pulsar Vela X-1". In: *The Astrophysical Journal Letters* 947.2 (apr. 2023), p. L20. DOI: 10.3847/2041-8213/acc391.

[30] V E Gianolli et al. "Uncovering the geometry of the hot X-ray corona in the Seyfert galaxy NGC 4151 with IXPE". In: *Monthly Notices of the Royal*

Astronomical Society 523.3 (giu. 2023), pp. 4468–4476. ISSN: 0035-8711. DOI: 10.1093/mnras/stad1697.

[31] A Ingram et al. "The X-ray polarization of the Seyfert 1 galaxy IC 4329A". In: *Monthly Notices of the Royal Astronomical Society* 525.4 (set. 2023), pp. 5437–5449. ISSN: 0035-8711. DOI: 10.1093/mnras/stad2625.

[32] C. Malacaria et al. "A polarimetrically oriented X-ray stare at the accreting pulsar EXO 2030+375". In: *Astronomy & Astrophysics* 675 (2023), A29. DOI: 10.1051/0004-6361/202346581.

[33] A. Manfreda. "The Gas Pixel Detectors for the Imaging X-Ray Polarimetry Explorer mission". In: *Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment* 1049 (apr. 2023), p. 168044. DOI: 10.1016/j.nima.2023.168044.

[34] F. Marin et al. "X-ray polarization evidence for a 200-year-old flare of Sgr A". In: *Nature* 619.7968 (2023), pp. 41–45.

[35] R. Middei et al. "IXPE and Multiwavelength Observations of Blazar PG 1553+113 Reveal an Orphan Optical Polarization Swing". In: *The Astrophysical Journal Letters* 953.2 (ago. 2023), p. L28. DOI: 10.3847/2041-8213/acec3e.

[36] R. Middei et al. "X-Ray Polarization Observations of BL Lacertae". In: *Astrophysical Journal Letters* 942.1 (2023). DOI: 10.3847/2041-8213/aca281.

[37] M. Minuti et al. "XPOL-III: A new-generation VLSI CMOS ASIC for high-throughput X-ray polarimetry". In: *Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment* 1046 (gen. 2023), p. 167674. DOI: 10.1016/j.nima.2022.167674.

[38] A. A. Mushtukov et al. "X-ray polarimetry of X-ray pulsar X Persei: another orthogonal rotator?" In: *Monthly Notices of the Royal Astronomical Society* 524.2 (giu. 2023), pp. 2004–2014. ISSN: 0035-8711. DOI: 10.1093/mnras/stad1961.

[39] M. Negro et al. "The IXPE View of GRB 221009A". In: *The Astrophysical Journal Letters* 946.1 (mar. 2023), p. L21. DOI: 10.3847/2041-8213/acba17.

[40] J Podgorný et al. "The first X-ray polarimetric observation of the black hole binary LMC X-1". In: *Monthly Notices of the Royal Astronomical Society* 526.4 (ott. 2023), pp. 5964–5975. ISSN: 0035-8711. DOI: 10.1093/mnras/stad3103.

[41] J. Rankin et al. "Equalizing the Pixel Response of the Imaging Photoelectric Polarimeter Onboard the IXPE Mission". In: *The Astronomical Journal* 165.5 (apr. 2023), p. 186. DOI: 10.3847/1538-3881/acc38e.

[42] N. Rodriguez Cavero et al. In: *The Astrophysical Journal Letters* 958.1 (nov. 2023), p. L8. DOI: 10.3847/2041-8213/acfd2c.

[43] C. Sgrò et al. "X-ray single photon detection with XPOL-III". In: *Journal of Instrumentation* 18.12 (2023), p. C12015.

[44] V. F. Suleimanov et al. "X-ray polarimetry of the accreting pulsar GX 301-2". In: *Astronomy & Astrophysics* 678 (2023), A119. DOI: 10.1051/0004-6361/202346994.

[45] J. Svoboda et al. "First X-Ray Polarization Measurement Confirms the Low Black Hole Spin in LMC X-3". In: *The Astrophysical Journal* 960.1 (2023), p. 3.

[46] D Tagliacozzo et al. "The geometry of the hot corona in MCG-05-23-16 constrained by X-ray polarimetry". In: *Monthly Notices of the Royal Astronomical Society* 525.3 (set. 2023), pp. 4735–4743. ISSN: 0035-8711. DOI: 10.1093/mnras/stad2627.

[47] S. S. Tsygankov et al. "X-ray pulsar GRO J1008-57 as an orthogonal rotator". In: *Astronomy & Astrophysics* 675 (2023), A48. DOI: 10.1051/0004-6361/202346134.

[48] F. Ursini et al. "X-ray polarimetry and spectroscopy of the neutron star low-mass X-ray binary GX 9+9: An in-depth study with IXPE and NuSTAR". In: *Astronomy & Astrophysics* 676 (2023), A20. DOI: 10.1051/0004-6361/202346541.

[49] S. Zane et al. "A Strong X-Ray Polarization Signal from the Magnetar 1RXS J170849.0-400910". In: *The Astrophysical Journal Letters* 944.2 (feb. 2023), p. L27. DOI: 10.3847/2041-8213/acb703.

[50] S. Abdollahi et al. "Incremental Fermi Large Area Telescope Fourth Source Catalog". In: *Astrophysical Journal, Supplement Series* 260.2 (2022). DOI: 10.3847/1538-4365/ac6751.

[51] S. Abdollahi et al. "Search for New Cosmic-Ray Acceleration Sites within the 4FGL Catalog Galactic Plane Sources". In: *Astrophysical Journal* 933.2 (2022). DOI: 10.3847/1538-4357/ac704f.

[52] M. Ajello et al. "The Fourth Catalog of Active Galactic Nuclei Detected by the Fermi Large Area Telescope: Data Release 3". In: *Astrophysical Journal, Supplement Series* 263.2 (2022). DOI: 10.3847/1538-4365/ac9523.

[53] L. Baldini et al. "ixpeobssim: A simulation and analysis framework for the imaging X-ray polarimetry explorer". In: *SoftwareX* 19 (2022). DOI: 10.1016/j.softx.2022.101194.

[54] L. Di Gesu et al. "The X-Ray Polarization View of Mrk 421 in an Average Flux State as Observed by the Imaging X-Ray Polarimetry Explorer". In: *The Astrophysical Journal Letters* 938.1 (ott. 2022), p. L7. DOI: 10.3847/2041-8213/ac913a.

[55] A. Di Marco et al. "A Weighted Analysis to Improve the X-Ray Polarization Sensitivity of the Imaging X-ray Polarimetry Explorer". In: *Astronomical Journal* 163.4 (2022). DOI: 10.3847/1538-3881/ac51c9.

[56] A. Di Marco et al. "Calibration of the IXPE Focal Plane X-Ray Polarimeters to Polarized Radiation". In: *Astronomical Journal* 164.3 (2022). DOI: 10.3847/1538-3881/ac7719.

[57] A. Di Marco et al. "In-orbit monitoring of the imaging x-ray polarimeters on-board IXPE". In: vol. 12181. 2022. DOI: 10.1117/12.2629413.

[58] A. Di Marco et al. "Validation of Neural Network software by using IXPE ground calibration data". In: vol. 12181. 2022. DOI: 10.1117/12.2628976.

[59] V. Doroshenko et al. "Determination of X-ray pulsar geometry with IXPE polarimetry". In: *Nature Astronomy* 6.12 (2022), pp. 1433–1443.

[60] V. Doroshenko et al. "Determination of X-ray pulsar geometry with IXPE polarimetry". In: *Nature Astronomy* 6.12 (2022), pp. 1433–1443. DOI: 10.1038/s41550-022-01799-5.

[61] S. R. Ehlert et al. "Limits on X-Ray Polarization at the Core of Centaurus A as Observed with the Imaging X-Ray Polarimetry Explorer". In: *The Astrophysical Journal* 935.2 (ago. 2022), p. 116. DOI: 10.3847/1538-4357/ac8056.

[62] R. Farinelli et al. "Accretion geometry of the neutron star low mass X-ray binary Cyg X-2 from X-ray polarization measurements". In: *Monthly Notices of the Royal Astronomical Society* 519.3 (dic. 2022), pp. 3681–3690. ISSN: 0035-8711. DOI: 10.1093/mnras/stac3726.

[63] H. Krawczynski et al. "Polarized x-rays constrain the disk-jet geometry in the black hole x-ray binary Cygnus X-1". In: *Science* 378.6620 (2022), pp. 650–654. DOI: 10.1126/science.add5399.

[64] F. La Monaca et al. "A possibility to extend the IXPE energy band". In: vol. 12181. 2022. DOI: 10.1117/12.2628931.

[65] I. Liodakis et al. "Polarized blazar X-rays imply particle acceleration in shocks". In: *Nature* 611.7937 (2022), pp. 677–681. DOI: 10.1038/s41586-022-05338-0.

[66] A. Marinucci et al. "Polarization constraints on the X-ray corona in Seyfert Galaxies: MCG-05-23-16". In: *Monthly Notices of the Royal Astronomical Society* 516.4 (set. 2022), pp. 5907–5913. ISSN: 0035-8711. DOI: 10.1093/mnras/stac2634.

[67] H. L. Marshall et al. "Observations of 4U 1626–67 with the Imaging X-Ray Polarimetry Explorer". In: *The Astrophysical Journal* 940.1 (nov. 2022), p. 70. DOI: 10.3847/1538-4357/ac98c2.

[68] J. Rankin et al. "A pixel-by-pixel equalization method for the X-ray imaging polarimeter on board the IXPE mission". In: vol. 12181. 2022. DOI: 10.1117/12.2630042.

[69] J. Rankin et al. "An Algorithm to Calibrate and Correct the Response to Unpolarized Radiation of the X-Ray Polarimeter Onboard IXPE". In: *The Astronomical Journal* 163 (feb. 2022), p. 39. DOI: 10.3847/1538-3881/ac397f.

[70] R. Taverna et al. "Polarized x-rays from a magnetar". In: *Science* 378.6620 (2022), pp. 646–650. DOI: 10.1126/science.add0080.

[71] S.S. Tsygankov et al. "The X-Ray Polarimetry View of the Accreting Pulsar Cen X-3". In: *Astrophysical Journal Letters* 941.1 (2022). DOI: 10.3847/2041-8213/aca486.

[72] F. Ursini et al. "Mapping the circumnuclear regions of the Circinus galaxy with the Imaging X-ray Polarimetry Explorer". In: *Monthly Notices of the Royal Astronomical Society* 519.1 (nov. 2022), pp. 50–58. ISSN: 0035-8711. DOI: 10.1093/mnras/stac3189.

[73] M. C. Weisskopf et al. "Imaging X-ray Polarimetry Explorer: Prelaunch". In: *Journal of Astronomical Telescopes, Instruments, and Systems* 8.2 (2022). DOI: 10.1117/1.JATIS.8.2.026002.

[74] F. Xie et al. "Vela pulsar wind nebula X-rays are polarized to near the synchrotron limit". In: *Nature* 612.7941 (2022), pp. 658–660. DOI: 10.1038/s41586-022-05476-5.

[75] M. Ajello et al. "Fermi Large Area Telescope Performance after 10 Years of Operation". In: *The Astrophysical Journal Supplement Series* 256.1 (set. 2021), p. 12. DOI: 10.3847/1538-4365/ac0ceb.

[76] M. Ajello et al. "First Fermi-LAT Solar Flare Catalog". In: *The Astrophysical Journal Supplement Series* 252.2 (gen. 2021), p. 13. DOI: 10.3847/1538-4365/abd32e.

[77] M. Ajello et al. "Gamma Rays from Fast Black-hole Winds". In: *The Astrophysical Journal* 921.2 (nov. 2021), p. 144. DOI: 10.3847/1538-4357/ac1bb2.

[78] M. Ajello et al. "High-energy emission from a magnetar giant flare in the Sculptor galaxy". In: *Nature Astron.* 5.4 (gen. 2021), pp. 385–391. DOI: 10.1038/s41550-020-01287-8.

[79] L. Baldini et al. "Catalog of Long-term Transient Sources in the First 10 yr of Fermi-LAT Data". In: *The Astrophysical Journal Supplement Series* 256.1 (set. 2021), p. 13. DOI: 10.3847/1538-4365/ac072a.

[80] L. Baldini et al. "Design, construction, and test of the Gas Pixel Detectors for the IXPE mission". In: *Astroparticle Physics* 133 (2021), p. 102628. ISSN: 0927-6505. DOI: 10.1016/j.astropartphys.2021.102628.

[81] M. Barbanera et al. "Initial Tests and Characterization of the Readout Electronics for the IXPE Mission". In: *IEEE Transactions on Nuclear Science* 68.5 (2021), pp. 1144–1151. DOI: 10.1109/TNS.2021.3073662.

[82] W. D. Deininger et al. “IXPE Mission System and Development Status”. In: *2021 IEEE Aerospace Conference (50100)*. 2021, pp. 1–21. DOI: 10.1109/AERO50100.2021.9438239.

[83] S. Fabiani et al. “Outcomes of the IXPE instrument calibration”. In: *Space Telescopes and Instrumentation 2020: Ultraviolet to Gamma Ray*. Vol. 11444. International Society for Optics e Photonics. SPIE, 2021, pp. 1029 –1037. DOI: 10.1117/12.2566998.

[84] B. Ramsey et al. “The Imaging X-Ray Polarimetry Explorer (IXPE): technical overview IV”. In: *UV, X-Ray, and Gamma-Ray Space Instrumentation for Astronomy XXII*. Vol. 11821. International Society for Optics e Photonics. SPIE, 2021, pp. 225 –236. DOI: 10.1117/12.2595302.

[85] P. Soffitta et al. “The Instrument of the Imaging X-Ray Polarimetry Explorer”. In: *The Astronomical Journal* 162.5 (ott. 2021), p. 208. DOI: 10.3847/1538-3881/ac19b0.

[86] S. Abdollahi et al. “Fermi Large Area Telescope Fourth Source Catalog”. In: *The Astrophysical Journal Supplement Series* 247.1 (mar. 2020), p. 33. DOI: 10.3847/1538-4365/ab6bcb.

[87] M. Ajello et al. “Fermi and Swift Observations of GRB 190114C: Tracing the Evolution of High-energy Emission from Prompt to Afterglow”. In: *The Astrophysical Journal* 890.1 (feb. 2020), p. 9. DOI: 10.3847/1538-4357/ab5b05.

[88] M. Ajello et al. “The Fourth Catalog of Active Galactic Nuclei Detected by the Fermi Large Area Telescope”. In: *The Astrophysical Journal* 892.2 (apr. 2020), p. 105. DOI: 10.3847/1538-4357/ab791e.

[89] M. Barbanera et al. “Design and Development of the Back-End Electronics for the IXPE Mission”. In: *2020 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC)*. 2020, pp. 1–4. DOI: 10.1109/NSS/MIC42677.2020.9507935.

[90] M. Barbanera et al. “The back-end electronics for the imaging x-ray polarimetry explorer telescope”. In: *Space Telescopes and Instrumentation 2020: Ultraviolet to Gamma Ray*. Vol. 11444. International Society for Optics e Photonics. SPIE, 2020, pp. 977 –984. DOI: 10.1117/12.2560982.

[91] A. Manfreda. “The Gas Pixel Detetcor for the IXPE mission”. In: *Journal of Instrumentation* 15.04 (apr. 2020), pp. C04049–C04049. DOI: 10.1088/1748-0221/15/04/c04049.

[92] H. Nasimi et al. “FPGA-Based Back-End Electronics for the Imaging X-Ray Polarimetry Explorer Mission”. In: *2020 IEEE Aerospace Conference*. 2020, pp. 1–6. DOI: 10.1109/AERO47225.2020.9172625.

[93] P. Soffitta et al. “The Imaging X-ray Polarimetry Explorer (IXPE): technical overview III”. In: *Space Telescopes and Instrumentation 2020: Ultraviolet*

to Gamma Ray. Vol. 11444. International Society for Optics e Photonics. SPIE, 2020, pp. 1017 –1028. DOI: 10.1117/12.2567001.

[94] M. Ajello et al. "A Decade of Gamma-Ray Bursts Observed by Fermi-LAT: The Second GRB Catalog". In: *The Astrophysical Journal* 878.1 (giu. 2019), p. 52. DOI: 10.3847/1538-4357/ab1d4e.

[95] M. Ajello et al. "A Search for Cosmic-Ray Proton Anisotropy with the Fermi Large Area Telescope". In: *The Astrophysical Journal* 883.1 (set. 2019), p. 33. DOI: 10.3847/1538-4357/ab3a2e.

[96] M. Ajello et al. "Bright Gamma-Ray Flares Observed in GRB 131108A". In: *The Astrophysical Journal* 886.2 (nov. 2019), p. L33. DOI: 10.3847/2041-8213/ab564f.

[97] S. L. O'Dell et al. "The Imaging X-Ray Polarimetry Explorer (IXPE): technical overview II". In: *UV, X-Ray, and Gamma-Ray Space Instrumentation for Astronomy XXI*. Vol. 11118. International Society for Optics e Photonics. SPIE, 2019, pp. 248 –261. DOI: 10.1117/12.2530646.

[98] M. G. Aartsen et al. "Multimessenger observations of a flaring blazar coincident with high-energy neutrino IceCube-170922A". In: *Science* 361.6398 (2018), eaat1378. DOI: 10.1126/science.aat1378.

[99] S. Abdollahi et al. "A gamma-ray determination of the Universe's star formation history". In: *Science* 362.6418 (2018), pp. 1031–1034. ISSN: 0036-8075. DOI: 10.1126/science.aat8123.

[100] M. Ackermann et al. "Search for Gamma-Ray Emission from Local Primordial Black Holes with the Fermi Large Area Telescope". In: *Astrophys. J.* 857.1 (2018), p. 49. DOI: 10.3847/1538-4357/aaac7b.

[101] M. Ackermann et al. "The Search for Spatial Extension in High-latitude Sources Detected by the Fermi Large Area Telescope". In: *The Astrophysical Journal Supplement Series* 237.2 (ago. 2018), p. 32. DOI: 10.3847/1538-4365/aacdf7.

[102] M. Ackermann et al. "Unresolved Gamma-Ray Sky through its Angular Power Spectrum". In: *Phys. Rev. Lett.* 121 (24 dic. 2018), p. 241101. DOI: 10.1103/PhysRevLett.121.241101.

[103] M. Ajello et al. "Fermi-LAT Observations of LIGO/Virgo Event GW170817". In: *Astrophys. J.* 861.2 (2018), p. 85. DOI: 10.3847/1538-4357/aac515.

[104] Colin J. Clark et al. "Einstein@Home discovers a radio-quiet gamma-ray millisecond pulsar". In: *Sc. Adv.* 4.2 (2018), eaao7228. DOI: 10.1126/sciadv.aao7228.

[105] B. P. Abbott et al. "Multi-messenger Observations of a Binary Neutron Star Merger". In: *Astrophys. J.* 848.2 (2017), p. L12. DOI: 10.3847/2041-8213/aa91c9.

[106] H. Abdalla et al. "Gamma-ray blazar spectra with H.E.S.S. II mono analysis: The case of PKS 2155-304 and PG 1553+113". In: *Astron. Astrophys.* 600 (2017), A89. DOI: 10.1051/0004-6361/201629427.

[107] S. Abdollahi et al. "Cosmic-ray electron-positron spectrum from 7 GeV to 2 TeV with the Fermi Large Area Telescope". In: *Phys. Rev.* D95.8 (2017), p. 082007. DOI: 10.1103/PhysRevD.95.082007.

[108] S. Abdollahi et al. "Search for Cosmic-Ray Electron and Positron Anisotropies with Seven Years of Fermi Large Area Telescope Data". In: *Phys. Rev. Lett.* 118.9 (2017), p. 091103. DOI: 10.1103/PhysRevLett.118.091103.

[109] S. Abdollahi et al. "The second catalog of flaring gamma-ray sources from the Fermi All-sky Variability Analysis". In: *Astrophys. J.* 846.1 (2017), p. 34. DOI: 10.3847/1538-4357/aa8092.

[110] M. Ackermann et al. "Fermi-LAT Observations of High-energy Behind-the-limb Solar Flares". In: *Astrophys. J.* 835.2 (2017), p. 219. DOI: 10.3847/1538-4357/835/2/219.

[111] M. Ackermann et al. "Gamma-ray Blazars Within the First 2 Billion Years". In: *Astrophys. J.* 837.1 (2017), p. L5. DOI: 10.3847/2041-8213/aa5fff.

[112] M. Ackermann et al. "Observations of M31 and M33 with the Fermi Large Area Telescope: A Galactic Center Excess in Andromeda?" In: *Astrophys. J.* 836.2 (2017), p. 208. DOI: 10.3847/1538-4357/aa5c3d.

[113] M. Ackermann et al. "Search for Extended Sources in the Galactic Plane Using Six Years of *Fermi*-Large Area Telescope Pass 8 Data above 10 GeV". In: *Astrophys. J.* 843.2 (2017), p. 139. DOI: 10.3847/1538-4357/aa775a.

[114] M. Ackermann et al. "The Fermi Galactic Center GeV Excess and Implications for Dark Matter". In: *Astrophys. J.* 840.1 (2017), p. 43. DOI: 10.3847/1538-4357/aa6cab.

[115] M. Ajello et al. "3FHL: The Third Catalog of Hard Fermi-LAT Sources". In: *Astrophys. J. Suppl.* 232.2 (2017), p. 18. DOI: 10.3847/1538-4365/aa8221.

[116] M. Di Mauro et al. "Theoretical interpretation of Pass 8 *Fermi*-LAT $e^+ + e^-$ data". In: *Astrophys. J.* 845.2 (2017), p. 107. DOI: 10.3847/1538-4357/aa8225.

[117] A. Goldstein et al. "Fermi Observations of the LIGO Event GW170104". In: *Astrophys. J.* 846.1 (2017), p. L5. DOI: 10.3847/2041-8213/aa8319.

[118] A. Manfreda. "A new measurement of cosmic-ray electrons with the *Fermi* Large Area Telescope". In: *Nuovo Cim.* C40.3 (2017), p. 112. DOI: 10.1393/ncc/i2017-17112-8.

[119] B. P. Abbott et al. "Localization and broadband follow-up of the gravitational-wave transient GW150914". In: *Astrophys. J.* 826.1 (2016), p. L13. DOI: 10.3847/2041-8205/826/1/L13.

[120] B. P. Abbott et al. "Supplement: Localization and broadband follow-up of the gravitational-wave transient GW150914". In: *Astrophys. J. Suppl.* 225.1 (2016), p. 8. DOI: 10.3847/0067-0049/225/1/8.

[121] F. Acero et al. "Development of the Model of Galactic Interstellar Emission for Standard Point-Source Analysis of Fermi Large Area Telescope Data". In: *Astrophys. J. Suppl.* 223.2 (2016), p. 26. DOI: 10.3847/0067-0049/223/2/26.

[122] M. Ackermann et al. "2FHL: The Second Catalog of Hard Fermi-LAT Sources". In: *Astrophys. J. Suppl.* 222.1 (2016), p. 5. DOI: 10.3847/0067-0049/222/1/5.

[123] M. Ackermann et al. "Contemporaneous broadband observations of three high-redshift BL Lac Objects". In: *Astrophys. J.* 820.1 (2016), p. 72. DOI: 10.3847/0004-637X/820/1/72.

[124] M. Ackermann et al. "Fermi-LAT Observations of the LIGO event GW150914". In: *Astrophys. J.* 823.1 (2016), p. L2. DOI: 10.3847/2041-8205/823/1/L2.

[125] M. Ackermann et al. "Fermi Large Area Telescope Detection of Extended Gamma-Ray Emission from the Radio Galaxy Fornax A". In: *Astrophys. J.* 826.1 (2016), p. 1. DOI: 10.3847/0004-637X/826/1/1.

[126] M. Ackermann et al. "Measurement of the high-energy gamma-ray emission from the Moon with the Fermi Large Area Telescope". In: *Phys. Rev.* D93.8 (2016), p. 082001. DOI: 10.1103/PhysRevD.93.082001.

[127] M. Ackermann et al. "Minute-Timescale >100 MeV gamma-ray variability during the giant outburst of quasar 3C 279 observed by Fermi-LAT in 2015 June". In: *Astrophys. J.* 824.2 (2016), p. L20. DOI: 10.3847/2041-8205/824/2/L20.

[128] M. Ackermann et al. "Resolving the Extragalactic γ-Ray Background above 50 GeV with the Fermi Large Area Telescope". In: *Phys. Rev. Lett.* 116.15 (2016), p. 151105. DOI: 10.1103/PhysRevLett.116.151105.

[129] M. Ackermann et al. "Search for gamma-ray emission from the Coma Cluster with six years of Fermi-LAT data". In: *Astrophys. J.* 819.2 (2016). [Erratum: Astrophys. J.860,no.1,85(2018)], p. 149. DOI: 10.3847/0004-637X/819/2/149,10.3847/1538-4357/aac7c3.

[130] M. Ajello et al. "Deep morphological and spectral study of the SNR RCW 86 with Fermi-LAT". In: *Astrophys. J.* 819.2 (2016), p. 98. DOI: 10.3847/0004-637X/819/2/98.

[131] M. Ajello et al. "Fermi-LAT Observations of High-Energy γ-Ray Emission Toward the Galactic Center". In: *Astrophys. J.* 819.1 (2016), p. 44. DOI: 10.3847/0004-637X/819/1/44.

[132] M. Ajello et al. "Search for Spectral Irregularities due to Photon–Axionlike-Particle Oscillations with the Fermi Large Area Telescope". In: *Phys. Rev. Lett.* 116.16 (2016), p. 161101. DOI: 10.1103/PhysRevLett.116.161101.

[133] L. Baldini et al. "Ximpol: a new X-ray polarimetry observation-simulation and analysis framework". In: *41st COSPAR Scientific Assembly*. Vol. 41. Lug. 2016, E1.15-36-16, E1.15–36–16.

[134] F. Muleri et al. "Performance of the Gas Pixel Detector: an x-ray imaging polarimeter for upcoming missions of astrophysics". In: *Proc.SPIE*. Vol. 9905. Lug. 2016.

[135] P. Soffitta et al. "XIPE: the x-ray imaging polarimetry explorer". In: *Space Telescopes and Instrumentation 2016: Ultraviolet to Gamma Ray*. Vol. 9905. International Society for Optics e Photonics. SPIE, 2016, pp. 346 –365. DOI: 10.1117/12.2233046.

[136] M. Ackermann et al. "An extremely bright gamma-ray pulsar in the Large Magellanic Cloud". In: *Science* 350.6262 (2015), pp. 801–805. DOI: 10.1126/science.aac7400.

[137] M. Ackermann et al. "Multiwavelength Evidence for Quasi-periodic Modulation in the Gamma-ray Blazar PG 1553+113". In: *Astrophys. J.* 813.2 (2015), p. L41. DOI: 10.1088/2041-8205/813/2/L41.

[138] M. Ackermann et al. "Search for extended gamma-ray emission from the Virgo galaxy cluster with Fermi-LAT". In: *Astrophys. J.* 812.2 (2015), p. 159. DOI: 10.1088/0004-637X/812/2/159.

[139] M. Ackermann et al. "The spectrum of isotropic diffuse gamma-ray emission between 100 MeV and 820 GeV". In: *Astrophys. J.* 799 (2015), p. 86. DOI: 10.1088/0004-637X/799/1/86.

[140] C. J. Clark et al. "PSR J1906+0722: An Elusive Gamma-ray Pulsar". In: *Astrophys. J.* 809.1 (2015), p. L2. DOI: 10.1088/2041-8205/809/1/L2.

[141] M. Ackermann et al. "Fermi Establishes Classical Novae as a Distinct Class of Gamma-Ray Sources". In: *Science* 345 (2014), pp. 554–558. DOI: 10.1126/science.1253947.

[142] M. Ackermann et al. "The Spectrum and Morphology of the *Fermi* Bubbles". In: *Astrophys. J.* 793.1 (2014), p. 64. DOI: 10.1088/0004-637X/793/1/64.

Curriculum Vitae et Studiorum

Elvira Rossi

CURRICULUM VITAE REDATTO AI SENSI DEGLI ARTT. 46 E 47 DEL D.P.R. 28.12.2000, N. 445

La sottoscritta Elvira Rossi nata a , c.f. , e residente a , consapevole della responsabilità penale prevista, dall'art. 76 del D.P.R. 445/2000, per le ipotesi di falsità in atti e dichiarazioni mendaci ivi indicate:

DICHIARA

che le informazioni sotto riportate sono veritiere.

Informazioni Generali

Nome: Elvira Rossi
Data e luogo di nascita:
Cittadinanza:
Stato civile:
Indirizzo:
Telefono:
E-mail:

Posizione lavorativa attuale: Professore Associato presso il dipartimento di Fisica "Ettore Pancini" dell'Università degli Studi di Napoli "Federico II". Settore concorsuale 02/A1 – Fisica Sperimentale delle Interazioni Fondamentali – settore s.d. FIS/01, regime di impegno a tempo pieno.

Titoli di studio

2006: Conseguimento del titolo di Dottore di Ricerca in Fisica Fondamentale ed Applicata con tesi dal titolo: "Study of the angular resolution of the ARGO-YBJ experiment: the shadow of the Moon". Relatori: prof. Benedetto D'Ettorre Piazzoli, dott. Giuseppe Di Sciascio.

2002: Laurea in Fisica, conseguita presso l'Università degli studi di Napoli "Federico II" con votazione 110/110 e lode. Titolo della tesi: "Ricostruzione degli sciami atmosferici prodotti da fotoni di alta energia con il rivelatore ARGO-YBJ". Relatori: prof. Benedetto D'Ettorre Piazzoli, dott. Giuseppe Di Sciascio.

Esperienza lavorativa, incarichi di ricerca, qualifiche e riconoscimenti

2022: Professore Associato presso il dipartimento di Fisica "Ettore Pancini" dell'Università degli Studi di Napoli "Federico II". Settore concorsuale 02/A1 – Fisica Sperimentale delle Interazioni Fondamentali – settore s.d. FIS/01, regime di impegno a tempo pieno.

2020: Inserita nella classifica della rivista internazionale "Plos Biology" che raccolge circa il 2% dei migliori ricercatori del mondo basata sul database "Scopus" e firmata dal prof. John Ioannidis (della Stanford University) con Kevin Boyack e Jeroen Baas (95sima tra i 168 docenti federiciani inseriti nella lista): https://data.mendeley.com/datasets/btchxktzyw/2; https://www.unina.it/-/24789938-168-docenti-tra-i-migliori-ricercatori-al-mondo.

2019-2022: Ricercatore a tempo determinato ai sensi dell'articolo 24 comma 3, lett. b) della Legge n. 240/2010 per una durata di 3 anni (29/07/2019-28/07/2022) presso il dipartimento di Fisica "Ettore Pancini" dell'Università degli Studi di Napoli "Federico II". Settore concorsuale 02/A1 – Fisica Sperimentale delle Interazioni Fondamentali – settore s.d. FIS/01, regime di impegno a tempo pieno. Contratto stipulato ai sensi della legge 240/2010 entrata in vigore il giorno 29/1/2011

2018: Borsa di Studio avente a oggetto l'attività di ricerca da svolgersi presso il dipartimento di Fisica "E. Pancini" con il seguente tema "Sviluppo e progettazione di materiali didattici nell'ambito delle Masterclass in particelle elementari" con durata di 7 mesi. Scadenza 31/12/2018.

2013-2018: Ricercatore a tempo determinato triennale (30/05/2013-29/05/2016) e proroga biennale (30/05/2016-29/05/2018) presso il dipartimento di Ingegneria dell'università degli studi di Napoli "Parthenope". Settore concorsuale 02/A1 – Fisica Sperimentale delle Interazioni Fondamentali – settore s.d. FIS/01, regime di impegno a tempo pieno.

2014: Abilitazione Scientifica Nazionale alle funzioni di professore di seconda fascia nel settore concorsuale 02/A1" da Novembre 2014 a Novembre 2020. Academic Discipline: FIS01

2011-2013: assegno di ricerca biennale (01/07/2011-30/06/2013) con titolo "Algoritmi di filtro per i muoni al secondo livello di trigger dell'esperimento ATLAS ad LHC" presso il dipartimento di Fisica dell'Università "La Sapienza" di Roma.

2011: borsa di studio "Fondazione Della Riccia" dal titolo "Analisi dei processi $J/\psi \to \mu\mu$ e $Z \to \mu\mu$ con i dati da collisione protone-protone raccolti dall'esperimento ATLAS" per una durata di 5 mesi (15/01/2011-15/06/2011) presso il CERN (Organisation Européenne pour la Recherche Nucléaire).

2009-2010: assegno di ricerca annuale (1/08/2009 - 31/07/2010) con titolo "Preparazione all'analisi dei primi dati nell'esperimento ATLAS" presso il dipartimento di Fisica l'università Federico II di Napoli.

2009: Idonea alla procedura selettiva dell'I.N.F.N. (bando n. 13153/2009) per la formulazione di giudizi di idoneità per la eventuale costituzione di rapporti di lavoro con contratto a termine per personale ricercatore di III livello – fisica sperimentale.
2009: Qualifica SICSI (VIII ciclo) per l'insegnamento nella scuola secondaria superiore per l'indirizzo Fisica-Matematica-Informatica per le classi di concorso A049 (Matematica e Fisica) e A038 (Fisica)".
2006-2008: assegno di ricerca biennale (11/10/2006 - 10/10/2008) con titolo "Analisi dei dati raccolti dall'esperimento ARGO-YBJ per lo studio della radiazione gamma dal piano galattico" presso la sezione dell'I.N.F.N. (Istituto Nazionale di Fisica Nucleare) di Napoli.

Fondi e Finanziamenti per la ricerca
2023: Conferimento di fondi PRIN come Responsabile di unità **"**REal-time motion CorrEctioN in magneTic REsonance (RECENTRE)", coordinatore prof. Stefano Giagu.
2023: Responsabile locale della sigla INFN PNRR_PRIN94JHK relativa al Progetto PRIN come Responsabile di unità **"**REal-time motion CorrEctioN in magneTic REsonance (RECENTRE)", coordinatore prof. Stefano Giagu.
2023: Conferimento di fondi PRIN come pratecipante alla ricerca per il tema **"**Beyond-CMOS Systems for Fast Machine Learning in Physics", coordinatore prof. Raffaele Giordano.
2017: Conferimento dei fondi per il Finanziamento annuale individuale delle attività base di ricerca (FAABR), fondo istituito dal MIUR per la ricerca di base.
2017: Attribuzione del finanziamento per il sostegno alla Ricerca di Ateneo per l'Università degli Studi di Napoli Parthenope (quota A e quota B).
2016: Attribuzione del finanziamento per il sostegno alla Ricerca di Ateneo per l'Università degli Studi di Napoli Parthenope (quota A e quota B).
2016: Attribuzione del finanziamento per il sostegno alla Ricerca di Ateneo per l'Università degli Studi di Napoli Parthenope per un progetto in area bibliometrica dal titolo "Sviluppo di sistemi di mobilità sostenibile con tecnologie SMART capaci di utilizzare le risorse di Internet Of Things (IOT)" coordinatore prof. Maurizio Migliaccio.

Realizzazione di attività progettuale

- ***2022 ad oggi: Partecipazione al progetto "*Centro Nazionale di Ricerca in High-Performance Computing, Big Data and Quantum Computing"** ed in particolare allo "spoke 2: Fundamental Research & Space Economy"; all'interno del progetto, sono **coordinatrice nazionale del WP5 "Architectural Support for Theoretical and**

Experimental Physics Data Management on the Distributed CN infrastructure"

- ***2018 ad oggi: Partecipazione al progetto "Art & Science":*** dal 2018 parte della mia attività è stata dedicata al progetto Art & Science, il cui scopo è di avvicinare gli studenti delle scuole superiori italiane al mondo della Scienza e della Ricerca Scientifica usando l'Arte come linguaggio di comunicazione. Il progetto nasce nell'ambito del movimento culturale denominato STEAM (Science, Technology, Engineering, Art and Mathematics), movimento che sta riscuotendo un enorme interesse in questo periodo e che ha introdotto l'Arte tra le discipline più strettamente scientifiche e che prova, per la prima volta, ad accomunare la creatività del settore scientifico con quella del campo artistico.
- **2017: Partecipazione al progetto "Studio di problemi ingegneristici mediante tecniche di Machine Learning"** finanziato mediante fondi per il sostegno alla Ricerca di Ateneo per l'Università degli Studi di Napoli Parthenope (quota A). Il progetto è stato proposto da F. Conventi, C. Di Donato e E. Rossi.
- **2016: Partecipazione al progetto "Ricerca di nuova Fisica in eventi caratterizzati da uno stato finale con uno o due jet nell'esperimento ATLAS"** finanziato mediante fondi per il sostegno alla Ricerca di Ateneo per l'Università degli Studi di Napoli Parthenope (quota A). Il progetto è stato proposto da F. Conventi e E. Rossi.
- **2016: Partecipazione al progetto "Sviluppo di sistemi di mobilità sostenibile con tecnologie SMART capaci di utilizzare le risorse di Internet Of Things (IOT)"** finanziato mediante fondi per il sostegno alla Ricerca di Ateneo per l'Università degli Studi di Napoli Parthenope; coordinatore prof. Maurizio Migliaccio.
- **2012-2013: Partecipazione come Investigator al progetto PRIN dal titolo "Sistemi di readout per calorimetria a doppia lettura" ("Dual-Readout calorimetric systems")** all'Università di Roma "La Sapienza". Responsabile dell'unità di ricerca all'Università di Roma "La Sapienza": prof. Lacava Francesco. P.I.: LIVAN Michele Protocollo: 200822MP2J_003 Area 02 Durata: 24 mesi.

Partecipazione a Commissioni

2017-2018: Membro della Commissione Didattica per il Dipartimento di Ingegneria dell'Università degli Studi di Napoli "Parthenope".

2015-2017: Membro della Commissione per l'Assicurazione della Qualità (AQ) per le attività didattiche per il Dipartimento di Ingegneria dell'Università degli Studi di Napoli "Parthenope".

2020 ad oggi: Membro di Commissione per numerosi concorsi per titoli e colloquio per il conferimento di assegni di ricerca presso il Dipartimento di Fisica E. Pancini dell'Università Federico II di Napoli in ambito disciplinare FIS/01.
2020 ad oggi: Membro di Commissione per numerosi concorsi per titoli e colloquio per il conferimento di assegni di ricerca presso la sezione INFN di Napoli in ambito disciplinare FIS/01

Attività Scientifica
2001-2009: ho svolto la mia attività di ricerca nell'ambito della Fisica delle Astroparticelle del Gruppo II dell'I.N.F.N. nell'esperimento internazionale ARGO-YBJ.
2009 ad oggi: ho svolto la mia attività di ricerca nell'ambito della Fisica Subnucleare del Gruppo I dell'I.N.F.N. nell'esperimento internazionale ATLAS.
Dal 2001 al 2009 la mia attività di ricerca nell'esperimento ARGO-YBJ ha riguardato principalmente lo studio dei Raggi Cosmici e dell'Astronomia Gamma:

- La ricostruzione di Sciami Atmosferici Estesi (EAS) prodotti da fotoni di alta energia con il rivelatore ARGO-YBJ;
- Lo studio della risoluzione angolare dell'esperimento ARGO-YBJ mediante l'analisi dell'ombra della Luna;
- Lo studio del campo magnetico solare mediante l'analisi dell'ombra del Sole;
- Lo studio dell'All particle spectrum;
- Lo studio delle emissioni di raggi gamma provenienti dal Piano Galattico;
- Grid e Computing per l'esperimento ARGO-YBJ.

Dal 2009 a oggi, la mia attività di ricerca scientifica è stata incentrata nel campo della Fisica sperimentale delle Interazioni Fondamentali all'interno della collaborazione internazionale ATLAS al collisionatore protone-protone LHC del CERN. Nel corso della mia attività di ricerca ho contribuito direttamente alla prima osservazione sperimentale del bosone di Higgs a LHC e al successivo studio delle sue proprietà. La mia attività nell'esperimento ATLAS a LHC ha riguardato e riguarda:

- Trigger e DAQ dell'esperimento ATLAS;
- Fisica del Modello Standard (J/ψ, Z and W);
- Ricerca e prima osservazione sperimentale del bosone di Higgs;
- Studio delle proprietà del bosone di Higgs;
- Vector Boson Scattering (VBS);
- Ricerca di Fisica oltre il Modello Standard - Ricerca di nuove Risonanze dibosoniche ad alta;
- Ricerca di Fisica oltre il Modello Standard - Studio di processi con jet molto energetici ed energia mancante stato finale.

- Ricerca di Fisica oltre il Modello Standard – Ricerca di nuove Risonanze ad alta massa che decadono in un bosone di Higgs e in una nuova particella X con uno stato finale con due jet e due b-jet (XH→qqbb).

Dal 2018 ad oggi: la mia attività di ricerca scientifica è stata incentrata anche sullo sviluppo e la progettazione di metodologie didattiche nell'ambito del progetto Masterclass (https://physicsmasterclasses.org/) per le particelle elementari dal 2018 parte della mia attività di ricerca è stata dedicata allo sviluppo di metodi didattici per la divulgazione delle conoscenze nell'ambito del progetto Masterclass (https://physicsmasterclasses.org/ e http://www.na.infn.it/it/masterclass) per le particelle elementari.

Dal 2018 ad oggi: la mia attività di ricerca scientifica è stata anche dedicata al progetto "Art & Science": dal 2018 parte della mia attività è stata dedicata al progetto Art & Scince, il cui scopo è di avvicinare gli studenti delle scuole superiori italiane al mondo della Scienza e della Ricerca Scientifica usando l'Arte come linguaggio di comunicazione. Il progetto nasce nell'ambito del movimento culturale denominato STEAM (Science, Technology, Engineering, Art and Mathematics), movimento che sta riscuotendo un enorme interesse in questo periodo e che ha introdotto l'Arte tra le discipline più strettamente scientifiche e che prova, per la prima volta, ad accomunare la creatività del settore scientifico con quella del campo artistico.

Responsabilità nell'esperimento ATLAS:

- dal 2011 ad oggi: Esperto on call per i sistemi di High-Level Trigger per muoni e per la Fisica del B (Muon and B-Physics High-Level trigger) dell'esperimento ATLAS al CERN;
- dal 2016 ad oggi: Esperto on call per i sistemi del trigger di primo livello per il Barrel dei Muoni (Muon Barrel Level-1 trigger) dell'esperimento ATLAS al CERN.

Responsabilità nella sezione INFN di Napoli:

- dal 2024 ad oggi: gruppo di governance della Camera Pulita del Laboratorio CLEAN

Conoscenze informatiche

- Ottima conoscenza dei sistemi operativi Unix/Linux, Windows, Apple MC OS X.
- Ottima conoscenza dei programmi: Office, OpenOffice, iWork.
- Ottima conoscenza dei linguaggi di programmazione (C, C++, Fortran) e di scripting (Perl, shell, python).
- Buona conoscenza dei principali strumenti per il Machine Learning (NumPy, Keras, Panda, Tensor-Theano, scikit-learn).

- Ottima conoscenza degli strumenti di analisi di Fisica delle Alte Energie (HEP): ROOT, RooFit and RooStats, TMVA per le analisi multivariate.
- Ottima conoscenza del framework di analisi Athena dell'esperimento ATLAS e dei frontend GRID (Ganga, Panda, Athena).
- Buona conoscenza di Mathematica.

Esperienze didattiche

- **2024 ad oggi:** Docente del corso "Higgs Boson and Beyond at LHC" all'interno del programma formativo del Dottorato di Ricerca in Fisica dell'Università degli studi di Napoli Federico II, Dipartimento di Fisica. Il corso è disponibile anche per gli studenti dei Dottorati in Fisica dell'Università di Bari "A. Moro", dell'Università del Salento - Lecce, dell'Università della Campania "L. Vanvitelli" - Caserta nell'ambito della rete SUPRA (Southern Universities Physics Research Agreement). Il corso, diviso in due moduli da 2 crediti ciascuno, offre una panoramica sul bosone di Higgs, dalla scoperta alle misure più recenti delle sue proprietà misurate a LHC e introduce alle ricerche di Fisica oltre il Modello Standard. In ogni modulo sono previste 16 ore di corso, divise in lezioni frontali ed esercitazioni.
- **2024 ad oggi:** titolare del corso di "Analisi dati in Fisica Subnucleare" presso il dipartimento di Ingegneria dell'Università degli studi di Napoli "Federico II" per il corso di laurea in Scienze per la Natura e l'Ambiente.
- **2023 ad oggi:** titolare del corso di "Fisica e Laboratorio" presso il dipartimento di Ingegneria dell'Università degli studi di Napoli "Federico II" per il corso di laurea in Scienze per la Natura e l'Ambiente.
- **2019-2025:** titolare del corso di "Fisica Generale II" presso il dipartimento di Ingegneria dell'Università degli studi di Napoli "Federico II" per i corsi di studio di Ingegneria Meccanica, Ingegneria Aerospaziale, Ingegneria dell'automazione, Ingegneria Biomedica, Ingegneria Informatica.
- **2013-2018:** titolare del corso di "Fisica Generale I" presso il dipartimento di Ingegneria dell'Università degli studi di Napoli "Parthenope".
- **2013-2018:** titolare del "Precorso di Fisica", presso il dipartimento di Ingegneria dell'Università degli studi di Napoli "Parthenope".
- **2014 ad oggi**: Assistenza alle Masterclass in Fisica delle Particelle Elementari per gli studenti delle scuole superiori negli anni 2014-2018, presso l'Università di Napoli Federico II.
- **2014-2018:** titolare per le attività di tirocinio "Introduzione all'ambiente Matlab" presso la facoltà di Ingegneria dell'Università degli studi di Napoli "Parthenope".
- **2014-2018:** titolare per le attività di tirocinio "Introduzione ai Metodi Multivariati di analisi e al Machine Learning" presso la

facoltà di Ingegneria dell'Università degli studi di Napoli "Parthenope".

- **2012-2013:** Cultore della materia e membro delle commissioni d'esame per I corsi di "Fisica Generale I" e "Fisica Generale II" presso la facoltà di Ingegneria dell'Università degli studi di Napoli "Parthenope".
- **2006-2009:** ho svolto attività didattica come assistente per l'insegnamento di "Fisica I" del corso di laurea in Ingegneria Chimica, facoltà di Ingegneria dell'Università di Napoli "Federico II".
- **2005-2009:** ho svolto attività didattica come assistente per l'insegnamento di "Fisica II" del corso di laurea in Ingegneria Chimica, facoltà di Ingegneria dell'Università di Napoli "Federico II".
- **2003-2006:** ho svolto attività didattica come assistente di laboratorio per l'insegnamento di "Laboratorio di Fisica II" del corso di laurea in Fisica, facoltà di Scienze MM.FF.NN. dell'Università di Napoli "Federico II".

Esperienze come relatore o supervisore di tesi:

Come parte del gruppo ATLAS di Napoli, ho seguito in prima persona le attività di analisi del gruppo ed ho contribuito attivamente alla coordinazione e alla supervisione di studenti di dottorato e di laurea. Dal 2012 ho svolto numerosi incarichi come relatore o supervisore di tesi sia come membro della collaborazione ATLAS a LHC sia come docente presso il dipartimento di Ingegneria dell'Università di Napoli "Parthenope":

- *Supervisore di tesi per il dottorato di ricerca in Fisica dell'Università Federico II di Napoli su ricerca di fisica oltre il Modello Standard nell'esperimento ATLAS a LHC:*

- *Relatore di tesi per la laurea triennale e magistrale in Fisica dell'Università Federico II di Napoli su ricerca e studio del bosone di Higgs e ricerca di fisica oltre il Modello Standard nell'esperimento ATLAS a LHC:*
- *Tesi Magistrali:*
  -

- *Tesi triennali:*

- Relatore di tesi per la laurea magistrale in Ingegneria Gestionale dell'Università "Parthenope" di:

- Dal 2013 al 2018 sono stata Relatore di tesi per la laurea triennale in Ingegneria dell'Università "Parthenope" di Napoli su applicazioni di Reti Neurali e Machine Learning per l'Ingegneria:

- Dal 2013 al 2018 sono stata Relatore di tesi per la laurea triennale in Ingegneria dell'Università "Parthenope" di Napoli su applicazioni della Teoria delle Code per l'Ingegneria:
  -

- Dal 2013 al 2018 sono stata Relatore di tesi per la laurea triennale in Ingegneria dell'Università "Parthenope" di Napoli su applicazioni della Teoria dei Giochi per l'Ingegneria

- Dal 2013 al 2018 sono stata Relatore di tesi per la laurea triennale in Ingegneria dell'Università "Parthenope" di Napoli su applicazioni di Econofisica per l'Ingegneria Gestionale:

-
- Dal 2013 al 2018 sono stata Relatore di tesi per la laurea triennale in Ingegneria dell'Università "Parthenope" di Napoli su applicazioni di metodi propri della Fisica all'Ingegneria:
  -

Conferenze e workshops

- Sono parte del comitato organizzativo per il Workshop "Higgs Workshop @ Capri 2025" che si terrà a Capri dal 6-10 Ottobre 2025.
- Sono parte del comitato organizzativo per l'ATLAS Week 2025 che si terrà a Capaccio Paestum dal 13-17 Ottobre 2025.
- Sono stata convener della sessione "F1 - Frontiere dell'energia" ("Frontiers of Energy") a IFAE 2014, L'Aquila (Italia) (https://agenda.infn.it/conferenceDisplay.py?confId=7405).
- Sono stata convener della sessione Higgs "Higgs: status from run 1 and challenges for run 2" al X Workshop ATLAS Italia 10-12 Febbraio 2015, Milano (https://agenda.infn.it/conferenceDisplay.py?confId=8700).
- Sono stata parte del comitato organizzativo della conferenza TOP2015 "the 8th International Workshop on Top Quark Physics", Ischia (Italia) 14-18 Settembre 2015 (http://top2015.infn.it).
- Sono stata parte del comitato organizzativo del XII Workshop ATLAS Italia a Napoli 23-25 Novembre 2016 (https://agenda.infn.it/conferenceDisplay.py?confId=11167).
- Sono nel comitato organizzativo del Workshop "ATLAS Exotics and HDBS" sulle ricerche di Fisica oltre il Modello Standard dell'esperimento ATLAS che si terrà a Napoli dal 10-14 Giugno 2019.
- Dal 2014 ad oggi: sono Convener, Speaker e Assistente all'organizzazione delle Masterclasses in Fisica delle Particelle Elementari per gli studenti delle scuole superiori negli anni 2014-2018, presso l'Università di Napoli Federico II.

Presentazioni a conferenze nazionali e internazionali:

- 2023: Presentazione dal titolo "SM (QCD+EW) in ATLAS and CMS" al Workshop on Standard Model and Beyond tenutosi a Corfu (Grecia).
- 2022: Poster e presentazione dal titolo "Search for new resonances decaying into a Higgs boson and a generic new boson X in the $XH \rightarrow qqb$b final state with the ATLAS detector" XI International Conference on New Frontiers in Physics (ICNFP 2022), Creta (Grecia).
- 2018: Presentazione e poster alla conferenza internazionale European AI for Fundamental Physics Conference" (EuCAIFCon) dal titolo "Anomaly detection search for BSM physics in ATLAS experiment at LHC", tenutasi ad Amsterdam, Paesi Bassi.
- 2018: "New techniques in SUSY-inspired searches" – Dark Matter @ LHC 2018 Heidelberg (Germania).
- 2015: "Studio di spin e parità del bosone di Higgs in decadimenti bosonici con l'esperimento ATLAS." ("Study of the Spin and Parity of the Higgs boson in bosonic decays with

ATLAS experiment") - 101° Congresso Nazionale della Società Italiana di Fisica - Roma (2015).

- 2015: "Latest Higgs results from ATLAS" - DIS 2015 - XXIII International Workshop on Deep-Inelastic Scattering and Related Subject, Dallas USA (2015).
- 2013: "Production cross section of B-meson in ATLAS" - DIS 2013 - XXI International Workshop on Deep-Inelastic Scattering and Related Subject, Marseilles, France (2013).
- 2013: "Measurements of the properties of the Higgs-like boson in the four lepton decay channel with the ATLAS detector using 25 fb^{-1} of proton-proton collision data " - IFAE 2013 - Incontro di Fisica delle Alte Energie, Cagliari (2013).
- 2011: "B and D Hadron Production and Prospects" – PANIC2011 - Massachusetts Institute of Technology (MIT), Cambridge, MA, USA (2011).
- 2011: "Heavy flavor in ATLAS" - IFAE 2011 - Incontro di Fisica delle Alte Energie, Perugia (2011).
- 2010: "Prima osservazione sperimentale della risonanza J/ψ ->μ+μ- nell'esperimento ATLAS ad LHC" - XCVI Congresso Nazionale della Società Italiana di Fisica - Bologna (2010).
- 2008: "Result overview from the ARGO-YBJ experiment" - CRIS 2008 - Malfa, Salina Island, Eolian Islands, Italia (2008).

Poster a conferenze nazionali e internazionali:

- 2010: "Observation and study of the J/ψ ->μ+μ- in the ATLAS experiment at LHC" - HCP2010 - Toronto, Canada (2010).
- 2003: "Identification of cores outside the ARGO-YBJ detector" - Incontro Nazionale di Astrofisica delle Alte energie, Roma (2003).
- 2003: "Study of the angular resolution of the ARGO-YBJ detector" - Incontro Nazionale di Astrofisica delle Alte energie, Roma (2003).

Workshop italiani dell'esperimento ATLAS

- 2017: "Other BSM Higgs searches" - XIII Workshop ATLAS-Italia, Pavia - Dipartimento di Fisica e INFN (2017).
- 2016: "Higgs Searches BSM" – XII ATLAS Italia Workshop Napoli - Dipartimento di Fisica e INFN (2016).
- 2015: "Higgs Properties" – XI ATLAS Italia Workshop on Run2 First Results" Cosenza - Dipartimento di Fisica e INFN (2015).
- 2014: "Determinazione di Spin e parità del bosone di Higgs" ("Measurement of the Higgs boson Spin and Parity") - IX Workshop ATLAS-Italia "Physics and upgrade for HL-LHC program", Bologna - Dipartimento di Fisica e Astronomia (2014).

Seminari didattici e outreach

- 2014-2019: Seminario annuale per Masterclass organizzato dall'INFN e dal Dipartimento di Fisica dell'Università degli Studi di Napoli "Federico II". Titolo del seminario "Particelle elementari ed interazioni fondamentali" ("Elementary Particles and Fondamental Interaction").
- 2015-2018: Partecipazione a Futuro Remoto nell'ambito dei lavori dell'INFN, delle Università di Napoli Federico II e Parthenope ("http://www.cittadellascienza.it/futuroremoto/").
- Febbraio-Marzo 2019: Seminario "Ordine e Disordine" per il progetto Art & Science presso diverse scuole superiori della provincia di Napoli.
- Novembre 2018: Seminario "Viaggio alla scoperta dell'infinitamente - Dall'atomo di Bohr alla fisica delle particelle" presso il Liceo De Caprariis di Atripalda.
- Dicembre 2017: Seminario sul CERN e la ricerca nel campo della Fisica delle particelle elementari dopo la proiezione del film "Il senso della bellezza" di Valerio Jalongo presso il cinema Delle Palme di Napoli.
- Ottobre 2017: Partecipazione al progetto "Beamline for Schools" (BL4S) al CERN come supporto scientifico per le scuole e come supporto tecnico-scientifico durante la realizzazione dell'esperimento al CERN delle scuole vincitrici (http://beamline-for-schools.web.cern.ch/- https://twiki.cern.ch/twiki/bin/view/BL4S/BL4SDataAnalysis).
- Ottobre 2015: Seminario "Le frontiere della Fisica dopo la scoperta del bosone di Higgs" per Futuro Remoto (http://www.cittadellascienza.it/futuroremoto/).
- Aprile 2015: Seminario sul bosone di Higgs per "Meet LHC" organizzato dall'INFN, "Festival dell'astronomia e dell'esplorazione", Campobasso.
- Aprile 2013: Seminario sul bosone di Higgs per "Germogli sulle Macerie" Città della Scienza, Napoli (Italy).
- Dicembre 2013: Seminario sul bosone di Higgs per "Cerco…la Nobel" organizzato dall'Associazione Culturale "Poiesis", Cercola (Italia).

Scuole di Fisica delle alte Energie

- 2003 - 31st SLAC Summer Institute: Cosmic Connection - SLAC Institute Stanford, California (USA).
- 2004 - International school on AstroParticle - Laboratori del Gran Sasso, Assergi (Italia).
- 2007 - XVII GIORNATE DI STUDIO sui RIVELATORI - Torino (Italia).
- 2008 - II Scuola per utenti INFN della Grid - Bologna (Italia).
- 2009 - ATLAS regular computing tutorial - CERN - Ginevra (Svizzera).

- 2010 - “The Physics of LHC” - Martignano (Italia).

Lingue
Lingua madre: Italiano
Ottima conoscenza dell’Inglese scritto e parlato
Conoscenze di base del Francese scritto e parlato

Pubblicazioni:
Alla data 6/02/2025 sono autore di:

Database SCOPUS: 1354 pubblicazioni, h-index 130
Database Web of Science: 1363 pubblicazioni, h-index 123
Database inspirehep: 1406 pubblicazioni, h-index 198

Data 6/02/2025

Firma

CV

- Personal details: Francesco Tramontano,

- Current position: since 1 October 2018, Associate Professor of Theoretical Physics Mathematical Models and Methods, FIS/02, working at the University of Naples Federico II (UNINA)

- Previous positions held:
  - ***University***
    - Reasearcher at UNINA (RTDA+RTDB) from 1 October 2012 – 30 September 2018
  - ***International Fellowships***
    - 1 October 2011 - 30 September 2012, Marie Curie Intra European Fellow at CERN (**1 year**).
    - 1 October 2009 - 30 September 2011, Fellow at CERN (**2 years**).
  - ***National Fellowships***
    - 1 October 2002 - 30 Settembre 2009, research contracts at UNINA and INFN sec. of Naples.

- Education:
  - 1st March 2001, PhD in Theoretical Physics with full marks and honors (30th November 2000 internal defense) at UNINA
  - 16th July 1997, master's degree in Theoretical Physics with full marks and honors at UNINA
  - 1st July 1991, Scientific high school diploma in Naples, Italy.

- **Research activity**

  - **Organisation, direction and coordination of international research centers and/or groups:**
    - Coordinator of the theoretical studies related to the proposed SND@LHC (Scattering and Neutrino Detector at the LHC) experiment at CERN from 2019 to approval by the CERN Scientific Committee in April 2021.
    - Coordinator of the theoretical studies related to the Neutrino Physics section of the proposed SHiP (Search for Hidden Particles) experiment at CERN from September 2014 to present.
    - Coordinator of the LHC Higgs Cross Section Working Group subgroup at CERN dealing with the Higgs boson production channel in associated with a vector boson from August 2014 to February 2019.
    - Theoretical advisor of the CMS collaboration for top quark physics from September 2013 to present.

  - **Participation in national research centers and/or groups:**
    - Research Associate at the Naples Section, within Group IV of the National Institute of Nuclear Physics (INFN) from 14-01-2016 to date.
    - Associate in PRIN projects and INFN Specific Initiatives with continuity since actual return to Italy (October 2012)

- **Participation in international research centers and/or groups:**
  - Associated to CERN from 1-10-2009 to date (currently as VISC).
  - Visiting scientist at CERN, 3 months since 15 October 2010
  - Scientific Associate at CERN, 6 months since 1 February 2024

- **Invited talks at international congresses and conferences:**
  - "Charm physics: production and pdf aspects",
    Neutrino Physics at the LHC, CERN, 15-01-2021
  - "Heavy quark radiation in NLO+PS",
    Higgs Couplings 2018, Tokio, Giappone, dal 26-11-2018 al 20-11-2018
  - "Event generation for beam dump experiments searching for hidden particles",
    SHiP collaboration meeting, CERN, 14-15 Marzo 2018
  - "Description of prompt charm production in 400GeV proton collisions",
    SHiP Joint physics and detector meeting - CERN, 13 Luglio 2017
  - "Single top theory", 9th International Workshop on Top Quark Physics, Olomouc, Repubblica Ceca dal 19-09-2016 al 23-09-2016
  - "NNLO Higgs plus Vector boson production at the LHC",
    HP2.5, Firenze, Italia, dal 03-09-2014 al 05-09-2014
  - "Recent progress in higher order computations for the physics of the Higgs boson",
    Loops & Legs 2014, Weimar, Germania dal 27-04-2014 al 02-05-2014
  - "Single Top Theory Status",
    TOP 2013, Durbach, Germania dal 14-09-2013 al 19-09-2013
  - "The GoSam package: an overview",
    Loops & Legs 2012, Wernigerode, Germania, dal 15-04-2012 al 20-04-2012
  - "Progress in automated next-to-leading order calculations",
    ACAT 2011, Uxbridge, London, UK dal 05-09-2011 al 09-09-2011
  - "NLO calculations with SAMURAI",
    HP2.3, Firenze, Italia, dal 14-09-2010 al 17-09-2010
  - "MCFM status",
    MC4LHC readiness, CERN, Ginevra, Svizzera dal 29-03-2010 al 01-04-2010
  - "Single top studies with MCFM",
    TOP 2008, Isola D'Elba, Italia dal 18-05-2008 al 24-05-2008
  - "Single top production and decay at NLO",
    Deep Inelastic Scattering 2007, Monaco, Germania dal 16-04-2007 al 20-04-2007

- **Institutional activities**

Committee member of various Researcher, PostDoc and PhD positions in Italy.

Referee

- Since 2009 referee for the following journals: European Physical Journal C, Journal of High Energy Physics, Physical Reveiew D, Physical Review Letters, Physics Letters B.

Lectures at international schools:

- Lectures on QCD, 2018 joint CERN and JINR: "Eurpean School of High Energy Physics", Maratea, Italy
  CERN Yellow Rep. School Proc. 6 (2019), 43-100, DOI: 10.23730/CYRSP-2019-006.43

Scietific commettees

- Orgnizing and scientific committees of the 6th School of Analytic Computing in High-Energy and Gravitational Theoretical Physics, Atrani (Italy) 2-14 October 2023.
- Scientific committee of the CERN-EPFL-Korea Theory Institute "New Physics at the Intensity Frontier", CERN 2017.
- Scientific committee of the first and second CMS Single-Top Workshop, Naples 2013 and 2014.
- Scientific committee of the Workshop "Metropaw: theoretical and experimental physics meet metrology engineering at the particle accelerators frontiers for new knowledge", Benevento, Italy, 2014 (IMEKO-TC4).

Convener

- "Linear and Future Colliders 2015/17/19/21/22" at the ECT* in Trento, (top quark physics).
- "The LHC Physics Conference (LHCP) 2018", Bologna 2018 (top quark physics).
- "QCD@LHC 2017", Debrecen, Hungaria 2017 (Hard QCD and EW).

Organizer

- "Top 2015", Ischia 2015, Italy

- **Teaching activities**

  - **Frontal teaching activities (selection)**

- Lecturer of the first course of Perturbative QCD for the Master Degree in Physics at UNINA from a.y. 2022/23 to present, 64 hours/year, **2YEARS**
- Lecturer of the first course of Introduction to Quantum Chromodynamics for the PhD in Physics at UNINA from a.y. 2017/18 to present, 12 hours/year, **7YEARS**
- Lecturer of the course of Numerical Methods of Physics for the Master Degree in Physics at UNINA from a.y. 2017/18 to 2021/2022, 64 hours/year, **5YEARS**
- Lecturer of courses of General Physics at UNINA from a.y. 2012/13 to present, **12YEARS**

  - **Supplementary teaching activities**

- Supervisor of 5 Master's theses in Theoretical Physics at UNINA. The first graduate (a.y. 2015/2016) is currently POST-DOC at the University of Zurich in Switzerland; the second graduate (a.y. 2017/2018) has been working, on a full-time, open-ended contract, since the days following his Master's degree, in a high-tech company; the third graduate (a. a. 2018/2019) is currently POST-DOC at the University of Turin; the other two graduates (a.y. 2019/2020 and 2020/2021) are successfully pursuing their PhDs at the Universities of Naples Federico II and Zurich respectively.
- Tutor for two PhD theses in Fundamental and Applied Physics at the University 'Federico II' of Naples
- Internal referee for PhD theses in Theoretical Physics performed at the University "Federico II" of Naples and external referee for PhD theses in Theoretical Physics performed at the University of Pavia (1 thesis), the University of Leiden in the Netherlands (1 thesis) and the University of Valencia in Spain (3 thesis)

- **<u>Supervision of post-docs</u>**

- From 03-05-2021 to 02-05-2022 and from 01-06-22 to 31-10-2022 supervised the activity of the POST-DOC INFN (first period) and University of Naples 'Federico II' Fellow Jonathan Ronca (currently POST-DOC at the University of Rome 3).
- From 01-10-2014 to 30-06-2015, supervised the activities of POST-DOC INFN Assignee Anurag Tripathi, currently Associate Professor at the Department of Physics at IIT Hyderabad in India. Anurag Tripathi, currently Associate Professor at the Department of Physics at IIT Hyderabad in India.

- **Publications: 64 Total, 1 RPP, 11 PRL**
- **Proceedings: 25**
- **Contributions to Yellow Reports and other reviews: 9**

Napoli, 11 February 2025

Francesco Tramontano

Curriculum Vitae STEFANO MORISI

POSIZIONI LAVORATIVE

– 12/2021 - ad oggi, Professore Associato, Università Federico II di Napoli, Dipartimento di Fisica
– 12/2018 - 12/2021, Contratto RTDB, Università Federico II di Napoli, Dipartimento di Fisica
– 01/2015 - 11/2018, Assegno di Ricerca, Università Federico II di Napoli, Dipartimento di Fisica
– 02/2014 - 12/2014, Post-Doc, Deutsches Elektronen-Synchrotron (DESY), Zeuthen (Germania)
– 11/2012 - 01/2014, Post-Doc, University of Wurzburg, (Germania)
– 04/2007 - 10/2012, Post-Doc, IFIC-CSIC – Università di Valencia, (Spagna)
– 01/2006 - 12/2006, Assegno di Ricerca, Dip.Chimica Fisica ed Elettrochimica, Milano

EDUCAZIONE SCIENTIFICA

– 01/2006, Dottorato in Fisica, Milano, Extension of the Standard Model and fermion masses, correlatore: Caravaglios
– 09/2002, Laurea in Fisica, Milano, Study of process $e^+e^- \to \nu\overline{\nu}\gamma$ at LEP, correlatori: Ferrari, Vicini

INTERESSI DI RICERCA

Estensioni del Modello Standard:
– simmetrie di flavor e origine massa dei fermioni
– teorie di gauge e di grande unificazione
– origine della asimmetria barionica
– candidati di materia oscura
– strong CP problem

RIASSUNTO ATTIVITA' DI RICERCA

– 76 articoli su rivista e 4 articoli di rassegna.
– Numero di citazioni totali $\sim$ 4500, h-index 42 (solo articoli pubblicati da Inspire).
– Partecipazione a 41 conferenze/workshop di cui 30 come relatore e 12 seminari su invito in dipartimenti.
– Organizzazione di 3 conferenze e fondazione di una serie di conferenze.
– 5 studenti di dottorato.
– Partecipazione a 6 gruppi di ricerca.
– Referee di PLB, PRD, JHEP, JCAP

ATTIVIÁ DIDATTICA

–Titolare corso Fisica (**6CFU**), Dipartimento Biotecnologie per la salute
anni accademici 2019-2020, 2020-2021, 2021-2022, 2022-2023, 2023-2024, 2024-2025
– Esercitatore corso di Istituzioni di Meccanica Quantistica (**3CFU**), Dipartimento di Fisica
anni accademici 2020-2021, 2021-2022, 2022-2023, 2023-2024, 2024-2025
– Assistente di laboratorio di Fisica I, (**5 CFU**) dipartimento di Fisica,
anni accademici 2017-2018, 2018-2019
– Esercitatore teoria quantistica dei campi (**3 CFU**), Dipartimento di Fisica,
anni accademici 2016-2017, 2017-2018
– Esercitatore corso di fisica (**48 ore**), Università degli studi di Milano dipartimento di Biologia,
anni accademici 2004-2005, 2005-2006
– Esercitatore fisica III - fluidodinamica (**14 ore**), Università degli studi di Milano dipartimento di Fisica
anno accademico 2005-2006
– Corso monotematico: introduzione ai modelli di massa dei neutrini (**6 ore**),
Universitá di Colima, Messico, Gennaio 2013

CORRELATORE DI TESI

Dottorato in Fisica

Laurea Magistrale in Fisica

Laurea Triennale in Fisica

Supervisore per brevi periodi

PUBBLICAZIONI SCIENTIFICHE

Articoli pubblicati su Riviste Internazionali

[77] R. Calabrese, M. Chianese, J. Gunn, G. Miele, S. Morisi and N. Saviano, "Impact of primordial black holes on heavy neutral leptons searches in the framework of resonant leptogenesis," Submitted to Phys. Rev. D
[76] R. Calabrese, M. Chianese, J. Gunn, G. Miele, S. Morisi and N. Saviano, "Limits on light primordial black holes from high-scale leptogenesis," Phys. Rev. D **107** (2023) 12, 123537
[75] R. Calabrese, J. Gunn, G. Miele, S. Morisi, S. Roy and P. Santorelli, "Constraining scalar leptoquarks using COHERENT data," Phys. Rev. D **107** (2023) no.5, 055039
[74] G. Cacciapaglia, A. Cagnotta, R. Calabrese, F. Carnevali, A. De Iorio, A. O. M. Iorio, S. Morisi and F. Sannino, "Radiative flavor template at the LHC: g-2 and the W mass," Phys. Rev. D **107** (2023) no.5, 055033
[73] M. Chianese, D. F. G. Fiorillo, G. Mangano, G. Miele, S. Morisi and O. Pisanti, "Sensitivity of KM3NeT to Violation of Equivalence Principle," Symmetry **13**, no.8, 1353 (2021)
[72] A. Ambrosone, R. Calabrese, D. F. G. Fiorillo, G. Miele and S. Morisi, "Towards baryogenesis via absorption from primordial black holes," Phys. Rev. D **105**, no.4, 045001 (2022)
[71] R. Calabrese, D. F. G. Fiorillo, G. Miele, S. Morisi and A. Palazzo, "Primordial black hole dark matter evaporating on the neutrino floor," Phys. Lett. B **829**, 137050 (2022)
[70] R. Calabrese, A. De Iorio, D. F. G. Fiorillo, A. O. M. Iorio, S. Morisi and G. Miele, "Top-flavor scheme in the context of W' searches at LHC," Phys. Rev. D **104**, no.5, 055006 (2021)
[69] D. F. G. Fiorillo, A. Van Vliet, S. Morisi and W. Winter, "Unified thermal model for photohadronic neutrino production in astrophysical sources," JCAP **07**, 028 (2021)
[68] M. Chianese, D. F. G. Fiorillo, R. Hajjar, G. Miele, S. Morisi and N. Saviano, "Heavy decaying dark matter at future neutrino radio telescopes," JCAP **05**, 074 (2021)
[67] D. F. G. Fiorillo, G. Mangano, S. Morisi and O. Pisanti, "IceCube constraints on violation of equivalence principle," JCAP **04**, 079 (2021)
[66] D. F. G. Fiorillo, S. Morisi, G. Miele and N. Saviano, "Observable features in ultrahigh energy neutrinos due to active-sterile secret interactions," Phys. Rev. D **102**, no.8, 083014 (2020)

[65] D. F. G. Fiorillo, G. Miele, S. Morisi and N. Saviano, "Cosmogenic neutrino fluxes under the effect of active-sterile secret interactions," Phys. Rev. D **101**, no.8, 083024 (2020)
[64] M. Chianese, D. F. G. Fiorillo, G. Miele, S. Morisi and O. Pisanti, "Decaying dark matter at IceCube and its signature on High Energy gamma experiments," JCAP **11**, 046 (2019)
[63] M. Chianese, D. F. G. Fiorillo, G. Miele and S. Morisi, "Investigating two heavy neutral leptons neutrino seesaw mechanism at SHiP," Int. J. Mod. Phys. A 34, no. 08, 1950047 (2019)
[62] M. Chianese, G. Miele, S. Morisi and E. Peinado, "Neutrinophilic Dark Matter in the epoch of IceCube and Fermi-LAT," JCAP 1812, no. 12, 016 (2018)
[61] F. Buccella, D. F. G. Fiorillo, G. Miele, S. Morisi, O. Pisanti and P. Santorelli, "Neutrino phenomenology from leptogenesis," Eur. Phys. J. C 78, no. 10, 817 (2018)
[60] M. Chianese, G. Miele and S. Morisi, "Interpreting IceCube 6-year HESE data as an evidence for hundred TeV decaying Dark Matter," Phys. Lett. B 773, 591 (2017)
[59] M.Chianese, R.Mele, G.Miele, P.Migliozzi and S.Morisi, "Use of ANTARES and IceCube Data to Constrain a Single Power-law Neutrino Flux," Astrophys.J. 851, no. 1, 36 (2017)
[58] F.Buccella, M.Chianese, G.Mangano, G.Miele, S.Morisi and P.Santorelli, "A neutrino mass-mixing sum rule from SO(10) and neutrinoless double beta decay," JHEP 1704, 004 (2017)
[57] M.Chianese, G.Miele and S.Morisi, "Dark Matter interpretation of low energy IceCube MESE excess," JCAP 1701, no. 01, 007 (2017)
[56] M.Chianese, G.Miele, S.Morisi and E.Vitagliano,"Low energy IceCube data and a possible Dark Matter related excess," arXiv:1601.02934 [hep-ph], PLB 757, 251 (2016)
[55] SM Boucenna, S.Morisi and A.Vicente,"The LHC diphoton resonance from gauge symmetry,' arXiv:1512.06878 [hep-ph], PRD 93, 115008 (2016)
[54] S.M.Boucenna, M.Chianese, G.Mangano, G.Miele, S.Morisi, O.Pisanti and E.Vitagliano, Decaying Leptophilic Dark Matter at IceCube, arXiv:1507.01000 [hep-ph]. JCAP1512, no. 12, 055 (2015)
[53] Z.Berezhiani, M.Chianese, G.Miele and S.Morisi,Chances for SUSY-GUT in the LHC Epoch,arXiv:1505.04950 [hep-ph]. Accepted in JHEP.
[52] S. Roy, S. Morisi, N. N. Singh and J. W. F. Valle, The Cabibbo angle as a universal seed for quark and lepton mixings, arXiv:1410.3658 [hep-ph]. PLB 748 (2015) 1
[51] C. Bonilla, S. Morisi, E. Peinado and J. W. F. Valle, Relating quarks and leptons with the T7 flavour group, arXiv:1411.4883 [hep-ph]. PLB 742 (2015) 99
[50] S.M.Boucenna, S.Morisi, Q.Shafi and J.W.F.Valle, Inflation and majoron dark matter in the seesaw mechanism, Phys.Rev. D90 (2014) 055023;
[49] S.M.Boucenna, S.Morisi and J.W.F.Valle, Radiative neutrino mass in 331 scheme, PRD90, 013005(2014);
[48] A.Merle, S.Morisi and W.Winter, Common origin of reactor and sterile neutrino mixing, JHEP 1407 (2014) 039;
[47] M.B.Krauss, S.Morisi, W.Porod and W.Winter , Higher Dimensional Effective Operators for Direct Dark Matter Detection, JHEP 1402 (2014) 056;
[46] A.Aranda, C.Bonilla, S.Morisi, E.Peinado and J.W.F.Valle, Dirac neutrinos from flavor symmetry, Phys.Rev. D89 (2014) 033001;
[45]M.Hirsch, R.A.Lineros, S.Morisi, J.Palacio, N.Rojas and J.W.F.Valle, WIMP dark matter as radiative neutrino mass messenger, JHEP 1310, 149 (2013);
[44] S.Morisi, M.Nebot, K.M.Patel, E.Peinado and J.W.F.Valle, Quark-Lepton Mass Relation and CKM mixing in an A4 Extension of the MSSM, PRD 88, 036001, 2013;
[43] D.V. Forero,S. Morisi,J. C. Romao, J. W. F. Valle, Neutrino mixing with revamped A4 flavour symmetry, PRD88, 016003, 2013;
[42] S.Morisi, E.Peinado and A.Vicente , Flavor origin of R-parity, J. Phys. G: Nucl. Part. Phys.40, 2013;
[41] S.F.King, S.Morisi, E.Peinado and J.W.F.Valle, Quark-Lepton Mass Relation in a Realistic A4 Extension of the Standard Model, PLB 724, 68-72, 2013;
[40] G.J.Ding, S.Morisi and J.W.F. Valle, Bi-large Neutrino Mixing and Abelian Flavor Symmetry, PRD87, 2013;
[39] L.Lavoura, S.Morisi and J.W.F.Valle, Accidental Stability of Dark Matter, JHEP 1302, 118,2013;
[38] F. Bazzocchi, S. Morisi, E. Peinado, J. W. F. Valle, A. Vicente, Flavored bilinear R-parity violation, JHEP 1301, 2013;
[37] S. M. Boucenna, S. Morisi, M. Tortola, J. W. F. Valle, Bi-large neutrino mixing and the Cabibbo angle, PRD86, 051301, 2012;
[36] M.S.Boucenna, S.Morisi, E.Peinado, Y.Shimizu and J.W.F.Valle, Predictive Discrete Dark Matter Model, PRD 86, 073008, 2012;
[35] D.Meloni, S.Morisi and E.Peinado, Predicting leptonic CP violation in the light of Daya Bay result on theta13, Europ. Phys. J. C 72, Number 9, 2160, 2012;
[34] L.Dorame, S.Morisi, E.Peinado, J.W.F.Valle and A.D.Rojas, A new neutrino mass sum rule from inverse seesaw, PRD86, 2012, 056001;
[33] A.Mazumdar and S.Morisi, Split neutrinos - leptogenesis, dark matter and inflation, PRD86, 2012 045031;
[32] L.Dorame, D.Meloni, S.Morisi, E.Peinado and J.W.F.Valle , Constraining neutrinoless double beta decay, NPB861,

259, 2012;
[31] G.Blankenburg, S.Morisi, Fermion masses and mixing with tri-bimaximal in SO(10) with type-I seesaw, JHEP1201, 2012, 016;
[30] P.O.Ludl, S.Morisi, E.Peinado, The reactor mixing angle and CP violation with two texture zeros in the light of T2K, NPB857, 411, 2012;
[29] R.d.A.Toorop, F.Bazzocchi and S.Morisi, Quark mixing in the discrete dark matter model, NPB856, 2012;
[28] D.V.Forero, S.Morisi, M.Tortola, J.W.F.Valle, Lepton flavor violation and non-unitary lepton mixing in low-scale type-I seesaw, JHEP 1109, 2011, 142;
[27] S.Morisi, K.M.Patel and E.Peinado, Model for T2K indication with maximal atmospheric angle and tri-maximal solar angle, PRD84, 2011, 053002;
[26] D. Meloni, S. Morisi, E. Peinado, Stability of dark matter from the dihedral D4 group, PLB703, 2011;
[25] S.Morisi and E.Peinado, Admixture of quasi-Dirac and Majorana neutrinos with tri-bimaximal mixing, PLB701:451-457,2011;
[24] S. Morisi, E. Peinado, Yusuke Shimizu and J. W. F. Valle, Relating quarks and leptons without grand-unification, PRD84, 2011, 036003;
[23] M.S. Boucenna, M. Hirsch, S. Morisi, E. Peinado, M. Taoso, J.W.F. Valle, Phenomenology of Dark Matter from A4 Flavor Symmetry, JHEP 1105:037,2011;
[22] D. Meloni, S. Morisi, E. Peinado, Neutrino phenomenology and stable dark matter with A4, PLB697, 2011;
[21] M.Hirsch, S.Morisi, E.Peinado and J.W.F.Valle, Discrete dark matter, PRD82:116003,2010;
[20] D.Meloni, S.Morisi and E.Peinado, Fritzsch neutrino mass matrix from S3symmetry, J.Phys.G38:015003,2011;
[19] S.Morisi and E.Peinado, An S4 model for quarks and leptons with maximal atmospheric angle, PRD81,2010;
[18]S.Morisi and E.Peinado, An A4 model for lepton masses and mixings, PRD80, 113011, 2009;
[17] D.Aristizabal Sierra, F.Bazzocchi, I.de Medeiros Varzielas, L.Merlo and S.Morisi, Tri-Bimaximal Lepton Mixing and Leptogenesis, NPB827,34, 2010;
[16] D.Ibanez, S.Morisi and J.W.F.Valle, Inverse tri-bimaximal type-III seesaw and lepton flavor violation, PRD80, 053015, 2009;
[15] M.Hirsch, S.Morisi and J.W.F.Valle, A4-based tri-bimaximal mixing within inverse and linear seesaw schemes, PLB679, 454, 2009;
[14] F.Bazzocchi, L.Merlo and S.Morisi, Phenomenological Consequences of See-Saw in S4 Based Models, PRD80, 053003,2009;
[13] F.Bazzocchi, L.Merlo and S.Morisi, Fermion Masses and Mixings in a S4-based Model, NPB816, 204,2009;
[12] S.Morisi, Tri-Bimaximal lepton mixing with A_4 semidirect product $Z_2 \times Z_2 \times Z_2$, PRD79, 033008,2009;
[11] F.Bazzocchi and S.Morisi, S4 as a natural flavor symmetry for lepton mixing, PRD80, 096005,2009;
[10]M.Hirsch, S.Morisi and J.W.F.Valle, Modelling tri-bimaximal neutrino mixing, PRD79, 016001,2009;
[9] F.Bazzocchi, M.Frigerio and S.Morisi, Fermion masses and mixing in models with $SO(10) \times A_4$ symmetry, PRD78, 116018,2008;
[8] M.Hirsch, S.Morisi and J.W.F.Valle, Tri-bimaximal neutrino mixing and neutrinoless double beta decay, PRD78, 093007,2008;
[7] F.Bazzocchi, S.Morisi, M.Picariello and E.Torrente-Lujan, Embedding A_4 into SU(3)xU(1) flavor symmetry: Large neutrino mixing and fermion mass hierarchy in SO(10) GUT, J.Phys.G36,015002,2009;
[6] F.Bazzocchi, S.Morisi and M.Picariello, Embedding A_4 into left-right flavor symmetry: Tribimaximal neutrino mixing and fermion hierarchy, PLB659, 628,2008;
[5] S.Morisi , Quark masses and mixings in $E_6 \times S_3$: A Monte Carlo approach, Int.J.Mod.Phys.A 22, 2921,2007;
[4] F.Bazzocchi, S.Kaneko and S.Morisi, A SUSY A4 model for fermion masses and mixings, JHEP0803, 2008;
[3] S.Morisi, M.Picariello and E.Torrente-Lujan, A model for fermion masses and lepton mixing in $SO(10) \times A_4$, PRD75, 075015,2007;
[2] F.Caravaglios and S.Morisi, Gauge boson families in grand unified theories of fermion masses: $E_6^4 \times S_4$ Int.J.Mod. Phys.A 22, 2469,2007;
[1] S.Morisi and M.Picariello The flavor physics in unified gauge theory from an $S_3 \times P$ discrete symmetry, Int.J.Theor.Phys.45, 1267, 2006.

Articoli di rassegna pubblicati su Riviste Internazionali

[*R*4] S. Morisi and J.W.F. Valle , Neutrino masses and mixing: a flavour symmetry roadmap. Fortschr. Phys., 61: 466492 (2013)
[*R*3] S.F.King, A.Merle, S.Morisi, Y.Shimizu and M.Tanimoto, Neutrino Mass and Mixing: from Theory to Experiment, New J. Phys. 16, 045018 (2014)
[*R*2] S.M.Boucenna and S.Morisi, Theories relating baryon asymmetry and dark matter: A mini review, Frontiers in Physics, vol.1, 33 (2014)
[*R*1] S.M.Boucenna, S.Morisi and J.W.F.Valle, The low-scale approach to neutrino masses, arXiv:1404.3751 [hep-ph], Adv.High Energy Phys. 2014 (2014) 831598

RELATORE E PARTECIPAZIONE A CONGRESSI NAZIONALI E INTERNAZIONALI

– FPCapri, LHC constraints on W' mass: a theoretical point of view, Anacapri 06/2022
– PAHEN, Overview of neutrino sources: Dark Matter interpretation, Berlin 09/2019
– WIN 2019, Dark Matter at neutrino thelescopes, Bari 06/2019
– NOW 2018, Neutrino phenomenology from leptogenesis, Ostuni 09/2018
– Partecipazione meeting di collaborazione Antares/Km3Net, Marsiglia(Francia) 10/2017
– Partecipazione al workshop PAHEN, Napoli (Italia), 09/2017
– Partecipazione meeting ANTARES/KM3NeT, Bari (Italia), 06/2017
– Partecipazione XVI incontri fisica alte energie, Trieste (Italia), 04/2017
– Partecipazione meeting collaborazione KM3/Antares, Strasburgo(Francia)+Mainz (Germania), 09/ 2016
– Partecipazione come convener alla conferenza NOW2016, Otranto (Italia), 09/2016
– Exploring the Energy Ladder of the Universe, Mainz (Germany), 06/2016, Dark Matter scenarios @ IceCube
– KM3NeT and Antares Collaboration meeting, Noto (Italy) 06/2016 Dark Matter scenarios@IceCube
– Partecipazione workshop ICTP, Trieste (Italia) 05/2016
– Partecipazione meeting Challenges in the Dark Sector: Alternatives to the WIMP paradigm, Frascati (Italia) 10/2015
– Scuola hot topics organizzata da berezhiani, L'Aquila (Italia), 09/2015 Asymmetric Dark Matter.
– Partecipazione workshop (PRIN), Torino (Italia), 07/2015
– WIN, Heidelberg (Germany), 06/2015 1) Quo vadis neutrino flavor model 2) PeV decaying DM at IceCube
– Partecipazione workshop What Next, LNF Frascati (Italia) 04/2015
– ASTROPARTICLE PHYSICS14, Amsterdam, 06/2014 Towards a common origin of neutrino and dark matter
– FLASY2014, Sussex (UK), 06/2014Towards a common origin of neutrino and dark matter.
– FLASY2013, Niigata (Japan), 07/2013, Flavor problem and Flavor Symmetry.
– NOW2012, Bari (Italy), f 09/2012, Absolute neutrino mass scale from flavor symmetry.
– FLASY2012, Dortmund (Germany), 07/2012, Dark Matter and Flavor Symmetry.
– PLANCK2011, Lisbon (Portugal), 06/2011 Stability of the dark matter from non-abelian discrete flavor symmetry.
– NOW2010, Bari (Italy), 09/2010, Neutrino mass model and discrete symmetries.
– PASCOS2010, Valencia (Spain), 07/2010 Discrete Dark Matter.
– multidark workshop, Santander, 06/2010, stable DM and neutrino pheno with non Abelian discrete symmetry.
– Neutrino physics in the LHC era, Luxor (Egypt), 10/2009, low energy seesaw and LFV.
– TAUP09, Roma (Italy) 07/2009, Probing the Majorana nature of neutrino with 0nubb.
– High-energy phenomena in Galaxy Clusters and Dark Matter Searches, Granada, 02/2009 A model for tri-bimaximal neutrino mixing and a dark matter candidate.
– DISCRETE2008, Valencia (Spain), 12/2008, Modelling tri-bimaximal neutrino mixing.
– NPNAP2008, Trento (Italy), 09/2008, Modelling tri-bimaximal neutrino mixing.
– ISAPP2008, Valencia (Spain), 07/2008, Neutrino physics and non-abelian discrete groups.
– PMN2008, Milos (Greek), 06/2008, Tri-bimaximal and neutrinoless double beta decay: a SO(10)-motived A4 model.
– IFAE2008 Bologna (Italy), 03/2008, Neutrino Physics and A4 matter assignments.
– RENATA07, Valencia (Spain), 09/2007, Neutrino mixing with a non-abelian discrete symmetry in SO(10).
– Planck 06, Paris (France), 05/2006, Fermion mass in E6 GUT with discrete family permutation symmetry S_3.
– Cortona 06, Cortona (Italy), 05/2006, Fermion mass in E6 GUT with discrete family permutation symmetry S_3.
– IFAE 06, Pavia (Italy), 04/2006, Fermion mass in E6 GUT with discrete family permutation symmetry S_3.
– Moriond 06, La Thuile (Italy), 03/2006, Fermion mass in E6 GUT with discrete family permutation symmetry S_3.
– Cortona 05, Cortona (Italy), 05/2005, The flavor physics in unified gauge theory from $S_3 \times P$ discrete symmetry.

SEMINARI IN ISTITUTI INTERNAZIONALI SU INVITO

– Bari, Giugno 2017, rivelazione di materia oscura a IceCube
– DESY (Zeuthen), Febbraio 2016, Decaying Leptophilic Dark Matter at IceCube
–Turin, Decembre 2013, Theories relating baryon asymmetry and DM
– Karlsruhe, Novembre 2013, Flavor problem and physics beyond the SM
– Southampton, Aprile 2013, Flavor problem and flavor symmetry
– Bruxelles, Marzo 2013, Dark Matter stability from flavor symmetry
– Munich, Marzo 2013, Flavor problem flavor symmetry
– Liege, Febbraio 2012, Flavor problem flavor symmetry
– Naples, Decembre 2010, Models for neutrino mass and phenomenology
– Heidelberg Dicembre 2010, Models for neutrino mass
– Vienna Aprile 2009, Tribimaximal and neutrinoless double beta decay
– Turin Febbraio 2008, Neutrino physics and discrete symmetries
– Lecce Settembre 2006 , Fermion mass in E_6 GUT with family permutation symmetry S_3

ORGANIZZAZIONE CONFERENZE

– NEHOP2023 New Horizons in Primordial Black Hole physics, 19-21 June 2023, Napoli (Italia), *Organizzazione scientifica e pratica*
– PAHEN 2017, Perspectives in Astroparticle physics from High Energy Neutrinos, 25-27 September 2017, Napoli (Italia), *Organizzazione scientifica e pratica*
– NOW 2016, Neutrino oscillation workshop, September 2016, Otranto (Italia), *Organizzazione relatori di una sessione parallela*
– FLASY11, FLAvor SYmmetries and consequences in accelerators and cosmology, Luglio 2011, Valencia (Spagna), *Organizzazione scientifica e pratica*

Nota: *Sono un fondatore della serie di workshop FLASY*

PARTECIPAZIONE A GRUPPI DI RICERCA NAZIONALI E INTERNAZIONALI

– MULTIDARK, 01/2010 - 12/2015 Principal Investigator: C.Munoz, *Spanish Proj. supp. by the Ministry of Science and Innovation's, Consolider-Ingenio 2010Programme, Ref CSD 2009-00064*
– The quest for unification, 04/2007 - 04/2008, Principal investigador: Ignation Antoniadis, *Grant MRTN-CT-2004-503369.*
– Astroparticulas y fisica de altas energias, 04/2007 - 12/2011, Principal investigador: J.Valle. *MEC grant FPA2008-00319, FPA2011-22975 and Generalitat Valenciana Excellente Grant 2009/091*
– Membero al 30% della collaborazione sperimentale Antares/KM3NeT, 05/2016 - 06/2018, Coordinatore locale a Napoli: P.Migliozzi
– Membero al 30% della collaborazione sperimentale DarkSide, 07/2019 - 07/2022, Coordinatore locale a Napoli: G.Fiorillo
– Membero della iniziativa specifica Theoretical Astroparticle Physics Research Network (TASP), 01/2015 - presente, Coordinatore Nazionale: Eligio Lisi

ATTIVITA' GESTIONALE E CONCORSI

– Concorso DRn2024/3805 del 12/09/2024 per rinnovo RTDA (Presidente).

Curriculum
Antonia Di Crescenzo

GENERAL INFORMATION

- **Name and surname:** Antonia Di Crescenzo
- **Nationality:**
- **Field of interest:** Experimental Particle Physics

EDUCATION

- **PhD in Fundamental and Applied Physics**, University of Naples "Federico II" .
  Date: April 2013.
  Title: *Search for* $\nu_\mu \to \nu_\tau$ *oscillations in the OPERA experiment.*
  Supervisors: Prof. P. Strolin, Prof. G. De Lellis.
- **Master Degree in Physics**, University of Naples "Federico II".
  Date: October 2009.
  Final mark: 110/110 cum laude.
  Title: *Search for short lived particle decays in the OPERA experiment.*
  Supervisors: Prof. P. Strolin, Prof. G. De Lellis, Dr. F. Di Capua.
- **Bachelor Degree in Physics**, University of Naples "Federico II".
  Date: October 2007.
  Final mark: 110/110 cum laude.
  Title: *Reconstruction of charged particles trajectories in nuclear emulsion trackers*
  Supervisors: Prof. P. Strolin, Prof. G. De Lellis, Dr. F. Di Capua.

ACADEMIC CAREER

- **Associate Professor** at the Department of Physics of the University of Naples "Federico II".
  Date: from October 2024 until now.

- **Tenure-track Assistant Professor** at the Department of Physics of the University of Naples "Federico II".
  Date: from October 2021 to October 2024.

- **Scientific Associate** at CERN.
  Date: from September 2021 to December 2022.

- **Assistant Professor** at the Department of Physics of the University of Naples "Federico II".
  Date: from December 2017 to October 2021.

- **Postdoctoral Research Fellow**, at the Department of Physics of the University of Naples "Federico II".
  Date: from October 2015 to December 2017.
  Subject: *Design of the tau neutrino detector for the SHiP experiment at CERN.*

- **Postdoctoral Research Fellow**, at the Naples Section of INFN.
  Date: from October 2013 to October 2015.
  Subject: *Neutrino oscillations.*

AWARDS

- April 2014
  Prize for the best presentation in the PhD session of the XIII *Incontri di Fisica delle Alte Energie* edition.
- September 2013
  Prize "Sergio Focardi" of the Italian Physics Society.

BIBLIOMETRICS

- Publications in refereed international journals (WoS): 357
- Number of citations (WoS): 9227
- h-index (WoS): 50
- Presentations at the major international conferences: 20
- Experiment proposals: 5
- Conference proceedings published on international journals: 23

TEACHING ACTIVITIES

- From 2024 - Lecturer: General Physics for Computer Engineering at University of Naples "Federico" II.
- From 2022 - Lecturer: General Physics for Computer Science at University of Naples "Federico" II.
- From 2017 to 2021 - Lecturer: General Physics for Biological Sciences at University of Naples "Federico" II.
- From 2017 to 2021 - Teaching assistant: Nuclear and Particle Physics for Physics at University of Naples "Federico" II.

- From 2010 to 2017 - Teaching assistant: General Physics and Laboratory for Biological sciences at University of Naples “Federico” II.
- From 2013 to 2017 - Teaching assistant: Electromagnetism and Optics for Physics at University of Naples “Federico” II.
- Tutor of 2 PhD in Physics at University of Naples “Federico” II
- Tutor of 14 Master Degrees in Physics at University of Naples “Federico” II
- Tutor of 16 Bachelor Degrees in Physics at University of Naples “Federico” II

MAJOR COLLABORATIONS

- Member of the SND@LHC Collaboration from 2020
- Member of the SHiP Collaboration from 2014
- Member of the FOOT Collaboration from 2017
- Member of the NEWSdm Collaboration from 2015 to 2023
- Member of the OPERA Collaboration from 2010 to 2020

RESPONSIBILITIES

- *Scanning coordinator* for the SND@LHC experiment (2024-)
- *Physics coordinator* for the SND@LHC experiment (2021-2024)
- *Project leader* of the emulsion target and detector mechanics for the SND@LHC experiment (2020-)
- *Convener* of the SHiP-charm working group for the SHiP experiment (2017-2020)
- *Convener* of the physics group for tau neutrino and light dark matter search for the SHiP detector (2015-2022)
- *Convener* of the working group on the simulation for the NEWSdm experiment (2015-2019)
- *Convener* of the working group on the neutrino detector simulation for the SHiP experiment (2015-2020)
- *Responsible* of the Laboratory for nuclear emulsion scanning and analysis of the Napoli University for the OPERA and SHiP experiment (2010-2020)
- *Convener* of the working group on the *tau* for the OPERA experiment (2012-2015)
- *Convener* of the working group on the *charm* for the OPERA experiment (2010-2014)

INTERNATIONAL CONFERENCE TALKS

i1 - Diffraction and Low-x 2022
Corigliano Calabro, Italia **Date:** September 2022.
Title: QCD at a Forward Physics Facility at High-Luminosity LHC

i2 - NEUTRINO 2022 - International Conference on Neutrino Physics
Date: June 2022.
Title: Neutrino physics at LHC: current experiments

i3 - ICNFP2021 - International Conference on New Frontiers in Physics
Date: August 2021.
Title: Directional dark matter search with the NEWSdm experiment

i4 - NeuTel2021- International Conference on Neutrino Telescopes
Date: January 2021.
Title: The Scattering and Neutrino Detector at the LHC

i5 - LPP2020 - Eight workshop of the Long Lived Particles community
Date: November 2020.
Title: The Scattering and Neutrino Detector at the LHC

i6 - ICNFP2020 - International Conference on New Frontiers in Physics
Date: September 2020.
Title: Neutrino physics and dark matter search with the SHiP experiment

i7 - Matera Oscura 2019
Matera, Italy
Date: September 2019.
Title: Directional dark matter search with nuclear emulsions

i8 - ICNFP2019 - International Conference on New Frontiers in Physics
Kolimbari, Greece
Data: Agosto 2019.
Title: Directional dark matter search with nuclear emulsions

i9 - ICNFP2019 - International Conference on New Frontiers in Physics
Kolimbari, Greece
Date: August 2019.
Title: Neutrino physics and dark matter search with the SHiP experiment

i10 - Third Alpine LHC Summit
Obergurg, Austria
Date: April 2018.
Title: NEWSdm: Nuclear Emulsions for WIMP search with directional measurement

i11 - U.S. Cosmic Visions: New Ideas in Dark Matter
University of Maryland, USA
Date: March 2017.
Title: Prospects for the SHiP experiment

i12 - U.S. Cosmic Visions: New Ideas in Dark Matter
University of Maryland, USA
Date: March 2017.
Title: NEWSdm: Nuclear Emulsions for WIMP Search with directional measurement

i13 - ICNFP2016 - International Conference on New Frontiers in Physics
Kolimbari, Greece
Date: June 2016.
Title: Results from the OPERA experiment

i14 - ICNFP2016 - International Conference on New Frontiers in Physics
Kolimbari, Greeece
Date: June 2016.
Title: NEWS: Nuclear Emulsions for WIMP Search

i15 - HQL2106 -The XIIIth International Conference on Heavy Quarks and Leptons
Virginia Tech, USA
Date: May 2016.
Title: The SHIP project: Search for Hidden Particles

i16 - TAUP2015 - Topics in Astroparticle and Underground Physics
Torino, Italy
Date: September 2015.
Title: Search for sterile neutrino mixing in the muon neutrino to tau neutrino appearance channel with the OPERA detector.

i17 - XXIII International Workshop on Deep-Inelastic Scattering and Related Subjects
Dallas, USA
Date: April 2015.
Title: Neutrino scattering physics with the SHiP experiment.

i18 - NOW 2014 - Neutrino oscillation workshop
Otranto, Italy
Date: September 2014.
Title: OPERA experimental results.

i19 - Les Rencontres de Physique de la Vallèe d'Aoste
La Thuile (AO), Italy.
Date: February 2013.
Title: Latest results from the OPERA experiment.

i20 - 2nd International Conference on Particle Physics in Memoriam of Engin Arik and Her Colleagues
Istanbul, Turkey.
Date: June 2011.
Title: OPERA experimental results.

ORGANISATION OF SCIENTIFIC CONFERENCES

- Member of the local organizing committee of the *INFN School of Statistics 2019*, Paestum, Italy.
  Data: June 2019.
- Member of the local organizing committee of the *2018 European School of High Energy Physics*, Maratea, Italia.
  Data: June 2018.
- *Convener* of the Astroparticle Session of the XV IFAE Edition, **Data:** April 2016.

SELECTION OF PUBLICATIONS

a1 - SND@LHC Collaboration (R. Albanese et al.) *Observation of Collider Muon Neutrinos with the SND@LHC Experiment*, Phys. Rev. Lett. 131 (2023) 3, 031802

a2 - J.L. Feng et al., *The Forward Physics Facility at the High-Luminosity LHC*, J. Phys. G 50 (2023) 3, 030501

a3 - SHiP Collaboration (C. Ahdida et al.), *Track reconstruction and matching between emulsion and silicon pixel detectors for the SHiP-charm experiment*, JINST 17 (2022) 03, P03013

a4 - SHiP Collaboration (C. Ahdida et al.), *Sensitivity of the SHiP experiment to light dark matter*, JHEP 04 (2021) 199

a5 - A. Alexandrov et al., *Super-resolution high-speed optical microscopy for fully automated readout of metallic nanoparticles and nanostructures*, Sci.Rep. 10 (2020) 1, 18773

a6 - SHiP Collaboration (C. Ahdida et al.), *Measurement of the muon flux from 400 GeV/c protons interacting in a thick molybdenum/tungsten target*, Eur.Phys.J.C **80** (2020) 3, 284

a7 - OPERA Collaboration (N. Agafonova et al.), *Final results on neutrino oscillation parameters from the OPERA experiment in the CNGS beam*, Phys. Rev. D **100** (2019) 051301(R)

a8 - N. Beni et al., *Physics Potential of an Experiment using LHC Neutrinos*, J. Phys. G 46 (2019) 11, 115008

a9 - SHiP Collaboration (A. Ahdida et al.), *The experimental facility for the Search for Hidden Particles at the CERN SPS*, JINST **14** (2019) no.03, P03025

a10 - OPERA Collaboration (N. Agafonova et al.), *Final results of the OPERA experiment on* ν_τ *appearance in the CNGS neutrino beam*, Phys. Rev. Lett. 120 (2018) no.21, 211801

a11- OPERA Collaboration (N. Agafonova et al.), *Final results on* $\nu_\mu \to \nu_e$ *oscillations with the OPERA experiment in the CNGS beam*, JHEP **1806** (2018) 151

a12 - NEWSdm Collaboration (N. Agafonova et al.), *Discovery potential for directional Dark Matter detection with nuclear emulsions*, Eur. Phys. J. **C78** (2018) no.7, 578

a13 - A. Alexandrov et al., *The Continuous Motion Technique for a New Generation of Scanning Systems*, Nature Scientific Reports **7** (2017) 7310

a14 - J.B.R. Battat et al., *Readout technologies for directional WIMP Dark Matter detection*, Phys. Rept. **662** (2016) 1

a15 - A. Alexandrov et al., *A new generation scanning system for the high-speed analysis of nuclear emulsions* , JINST **11** (2016) no.06, P06002

a16 - OPERA Collaboration (N. Agafonova et al.), *Discovery of* τ *neutrino appearance in the CNGS neautrino beam*, Phys. Rev. Lett. **115** (2015) no.12, 121802

a17 - OPERA Collaboration (N. Agafonova et al.), *Evidence for* $\nu_\mu \to \nu_\tau$ *appearance in the CNGS neutrino beam with the OPERA experiment*, Phys. Rev. **D89** (2014) 5, 051102

a18- OPERA Collaboration (N. Agafonova et al.), *New results on* $\nu_\mu \to \nu_\tau$ *appearance with the OPERA experiment in the CNGS beam*, JHEP **11** (2013) 36

a19 - OPERA Collaboration (N. Agafonova et al.), *Search for* $\nu_\mu \to \nu_\tau$ *oscillation with OPERA experiment in the CNGS beam*, New J. Phys. **14** (2012) 033017

a20- OPERA Collaboration (N. Agafonova et al.), *Observation of a first ν_τ candidate in the OPERA experiment in the CNGS beam*, Phys. Lett. **B691** (2010) 138145

Andreas C. Best

CONTACT INFORMATION

CITIZENSHIP

LANGUAGE SKILLS
German: native language
English: fluent
Italian: good proficiency

RESEARCH INTERESTS
Experimental nuclear astrophysics, neutron and gamma-ray detection, detector simulation, low background environments

POSITIONS

University of Naples "Federico II", Naples, Italy
- Associate Professor — **February 2020 to present**
- Assistant Professor (RTD-A) — **January 2016 to February 2020**

University of Notre Dame, Notre Dame, Indiana USA
- Postdoctoral Researcher — **October 2015 to January 2016**

Laboratori Nazionali del Gran Sasso, Assergi, Italy
- Affiliated Scientist — **October 2015 to January 2016**
- Postdoctoral Fellow — **July 2013 to July 2015**

University of Notre Dame, Notre Dame, Indiana USA
- Postdoctoral Researcher — **January 2012 to July 2013**

Lawrence Berkeley National Laboratory, Berkeley, California USA
- Visiting Scientist — **January 2012 to July 2013**
- Visiting Scientist — **June 2011 to September 2011**

EDUCATION

University of Notre Dame, Notre Dame, Indiana USA

Ph.D., Experimental Nuclear Physics (January 2012)
- Thesis Topic: *Measurement of alpha capture reactions on ^{17}O and ^{18}O for the s process*
- Adviser: Professor Michael C.F. Wiescher
- Area of Study: Low Energy Nuclear Astrophysics

M.Sc., Experimental Nuclear Physics (January 2011)
- Adviser: Professor Michael C.F. Wiescher
- Area of Study: Low Energy Nuclear Astrophysics

Ruhr-Universität Bochum, Bochum, Germany

Dipl.-Phys., Experimental Nuclear Physics (January 2007)
- Thesis Topic: *Measurement of Low-Energy Resonances in $^{25}Mg(p,\gamma)^{26}Al$ with a 4 π Summing Detector* (in German)
- Adviser: Professor Claus Rolfs
- Area of Study: Low Energy Nuclear Astrophysics
- Minor: Philosophy

Academic Experience

University of Naples "Federico II", Naples, Italy

Introduction to Nuclear Physics Experiments (Master's course) **Spring/Fall 2019-2024**

- Theoretical overview and hands-on experiments using modern nuclear physics detectors

Nuclear Physics in Low-Background Conditions (Course in the framework of the PhD school of the University of Naples) **Fall 2023**

- PhD-level course on experimental nuclear physics in low background environmants

Nuclear Astrophysics (Master's course) **Spring 2017-2018**

- Complete introductory level class on Nuclear Astrophysics

Physics laboratory for 2nd semester mathematics students **Fall 2017-2020**

- 6 hours per week of laboratory courses accompanying a Physics I lecture for mathematics students

Nuclear Astrophysics (Master's course) **Spring 2016**

- 10 hours (6 Lectures and 4 Laboratory classes) on detection techniques in Nuclear Astrophysics

University of Notre Dame, Notre Dame, Indiana USA

Undergraduate Assistant Supervisor **Summer 2009 to Spring 2011**

- Supervised REU and undergraduate research students. Assisted in their setting up and analysis of undergraduate research projects. Guided a 2010 REU student in developing a Geant4 simulation of a plastic scintillator muon veto.

Teaching Assistant **September 2008 to May 2010**

Invited Lectures / Talks

CeNAM Frontiers in Nuclear Astrophysics 2024 June 2024
University of Notre Dame, Notre Dame, IN, USA
Deep-underground Nuclear Astrophysics

The Big-Three Reactions for Astrophysics May 2024
Strasbourg, France
$^{22}Ne(\alpha,n)^{25}Mg$

Nuclear Astrophysics Seminar June 2020
Institute of Modern Physics, Chinese Academy of Sciences, CN
Direct low-energy measurement of the $^{13}C(\alpha,n)^{16}O$ cross section at LUNA

Nuclear Physics Seminar May 2020
University of Padua, Padua, IT
SHADES - Measurement of the neutron source $^{22}Ne(\alpha,n)^{25}Mg$

School cum workshop on Low Energy Nuclear Astrophysics - SLENA 2020
Kolkata, India February 2020
Invited lecture series (1 hour each):

- Introduction to low-energy nuclear astrophysics
- Source and mitigiation of experimental backgrounds on the surface and deep-underground
- A recent experimental campaign: $^{13}C(\alpha, n)^{16}O$ at LUNA
- LUNA MV outlook & $^{22}Ne(\alpha, n)^{25}Mg$

X Incontro dei Gruppi Italiani di Astrofisica Nucleare Teorica e Sperimentale - GIANTS 2019 October 2017
Genoa, Italy
Invited Talk: $^{13}C(\alpha,n)^{17}O$ *cross section in the Gamow peak*

Nuclear Physics Seminar October 2019
University of Notre Dame, Notre Dame, IN, USA
Direct low-energy measurement of the $^{13}C(\alpha,n)^{16}O$ *cross section at LUNA*

Nuclear Physics Seminar October 2019
Laboratori Nazionali del Gran Sasso, Assergi, Italy
SHADES - An ERC Starting Grant to study the synthesis of the heavy elements in the Universe at the LNGS Underground Accelerator Facility

IX Incontro dei Gruppi Italiani di Astrofisica Nucleare Teorica e Sperimentale - GIANTS 2017 October 2017
Bologna, Italy
Invited Talk: *LUNA MV experiment at Gran Sasso National Laboratories*

The 9th European Summer School on Experimental Nuclear Astrophysics September 2017
St. Tecla, Italy
Invited Lecture: *Recent experiments at LUNA: a detailed study and its astrophysical impact*

2016 Meeting of the Brazilian Society of Physics
XXXIX Workshop on Nuclear Physics in Brazil September 2016
Natal, Brazil
Invited Talk: *LUNA: Present and Future*

Nuclear Astrophysics at the Canfranc Laboratory. 2nd CUNA workshop February 2016
Canfranc, Spain
Invited Talk: *CASPAR status update and neutron background measurements in underground labs*

XXI International School on Nuclear Physics and Applications & International Symposium on Exotic Nuclei September 2015
Varna, Bulgaria
Invited Talk: *Underground Nuclear Astrophysics*

IAPS @ Gran Sasso May 2015
Gran Sasso Science Institute, L'Aquila, Italy
Nuclear Astrophysics at Gran Sasso

Geant4 Lecture April 2015
University of Notre Dame, Indiana
Introduction to Geant4

Nuclear Astrophysics (postgraduate course, 1 lecture) March 2015
University of Bari, Bari, Italy
Low energy nuclear astrophysics

Nuclear Physics Seminar November 2014
University of Naples Federico II, Naples, Italy
Background issues in detecting low rate nuclear processes

Carpathian Summer School of Physics 2014 July 2014
Sinaia, Romania
Invited Lecture: *LUNA: Underground nuclear astrophysics*

Nuclear Physics Seminar November 2012
University of Naples Federico II, Naples, Italy
α-induced reactions and deep underground neutron background measurements for DIANA

Nuclear Physics Seminar November 2012
Laboratori Nazionali del Gran Sasso, Assergi, Italy
α-induced reactions and deep underground neutron background measurements for DIANA

Nuclear Physics Forum May 2012
Lawrence Berkeley National Laboratory, Berkeley, USA
α-induced reactions and deep underground neutron background measurements for DIANA

Nuclear Physics Seminar September 2010
University of Notre Dame, Notre Dame, USA
Determination of the stellar reaction rates of $^{17}O(\alpha,n)^{20}Ne$ and $^{17}O(\alpha,\gamma)^{21}Ne$

Attended Conferences

OMEG2024 - The 17th International Symposium on Origin of Matter and Evolution of Galaxies September 2024
Chengdu, China
- Invited Talk: *s process related measurements at the deep underground Gran Sasso National Laboratory*

NN2024 - 14th International Conference on Nucleus-Nucleus Collisions August 2024
Whistler, Canada
- Invited Talk: *Deep Underground Nuclear Astrophysics*

XIV Torino Workshop on AGB Stars June 2024
Frascati, Italy
- Contributed Talk: *The ongoing deep underground measurement of $^{22}Ne(\alpha,n)^{25}Mg$ at the Ion Beam Facility of the INFN-LNGS*

Nuclei in the Cosmos XVII September 2023
Daejeon, South Korea
- Contributed Talk: *22Ne+a measurements deep underground*

CGS17 — 17th International Symposium on Capture Gamma-Ray Spectroscopy and Related Topics July 2023
Grenoble, France
- Invited Talk: *Underground nuclear astrophysics at LUNA and the Bellotti Ion Beam facility of INFN-LNGS*

Workshop on Atomic and Nuclear Quantum Effects Near Threshold May 2023
Edinburgh, UK
- Invited Talk: *^{13}C+a and ^{22}Ne+a at low energies*

44th Symposium on Nuclear Physics, Cocoyoc 2023 January 2023
Cocoyoc, Mexico
- Invited Talk: *Underground nuclear astrophysics at LUNA MV*

The 13th Torino Workshop on AGB stars & the 3rd Perugia Workshop on Nuclear Astrophysics June 2022
Perugia, Italy
- Contributed Talk: *Measurements of s process neutron source cross sections*

Nuclear Physics in Astrophysics IX September 2019
Castle Waldthausen, Mainz, Germany
- Contributed Talk: *Low energy cross section of $^{18}O(p,\gamma)^{19}F$*

Nuclei in the Cosmos XV June 2018
Gran Sasso National Laboratory, Italy
- Contributed Talk: *Direct $^{13}C(\alpha, n)^{16}O$ cross section measurement at low energies*

Nuclei in the Cosmos XIII July 2014
Debrecen, Hungary
- Contributed Poster: *Low-energy neutron background characterization in deep underground laboratories*
- EPL poster price

2012 APS Division of Nuclear Physics Fall Meeting October 2012
Newport Beach, California, USA
- Contributed Talk: *Neutron background characterization of deep underground laboratories*

2011 APS Division of Nuclear Physics Fall Meeting October 2011
East Lansing, Michigan, USA
- Contributed Talk: *Measurement of the reactions $^{17}O(\alpha,\gamma)^{21}Ne$ and $^{17}O(\alpha,n)^{20}Ne$ and their impact on the weak s process*

Fourteenth International Symposium on Capture Gamma-Ray Spectroscopy and Related Topics (CGS 14) August 2011
Guelph, Canada
- Contributed Talk: *Measurement of the reactions $^{17}O(\alpha,\gamma)^{21}Ne$ and $^{17}O(\alpha,n)^{20}Ne$ and their impact on the weak s process*

2010 APS Division of Nuclear Physics Fall Meeting November 2010
Santa Fe, New Mexico, USA
- Contributed Talk: *Determination of the stellar reaction rates of $^{17}O(\alpha,n)^{20}Ne$ and $^{17}O(\alpha,\gamma)^{21}Ne$*

Nuclei in the Cosmos XI July 2010
Heidelberg, Germany
- Contributed Poster: *Determination of the stellar reaction rates of $^{17}O(\alpha,n)^{20}Ne$ and $^{17}O(\alpha,\gamma)^{21}Ne$*

2006 Meeting of the German Physical Society March 2006
Munich, Germany
- Contributed Talk: *Measurement of Low-Energy Resonances in $^{25}Mg(p,\gamma)^{26}Al$*

WORKSHOPS

2023 R-matrix Workshop on Methods and Applications June 2023
Athens, USA
- Invited Talk: Monte Carlo R matrix analysis of the low-energy $^{13}C(\alpha,n)^{16}O$ cross section

Key Reactions in Nuclear Astrophysics December 2022
ECT*, Trento, Italy

- Contributed talk: Measurement of 22Ne+alpha reactions at LUNA MV

Topical Meeting of IReNA - FA1 Nuclear reaction measurements in Underground Laboratories April 2022
Rome, Italy

- Contributed Talk: Neutron source measurements deep underground

i process workshop April 2019
TRIUMF, Vancouver, Canada
- Contributed Talk: $^{13}C(\alpha,n)^{16}O$ update and outlook

Digitization and Analysis of Signals from Nuclear Physics Detectors September 2014
Laboratori Nazionali di Legnaro, Legnaro, Italy

Direct Measurements in Nuclear Astrophysics with Recoil Mass separators October 2013
Caserta, Italy

7th European Summer School on Experimental Nuclear Astrophysics September 2013
Santa Tecla, Italy
- Contributed Talk: $^{17}O(\alpha,\gamma)^{21}Ne$ *and* $^{17}O(\alpha,n)^{20}Ne$ *for the weak s process*

DURA Annual Meeting 2013 March 2013
Stanford, California, USA

AARM Collaboration Meeting March 2013
Stanford, California, USA
- Contributed Talk: *Deep Underground Neutron Background Measurements for DIANA*

Cosmic Dust Grains as a Diagnostic for Massive Stars November 2012
Perugia, Italy

Nuclear Astrophysics Town Meeting 2012 October 2012
Detroit, Michigan, USA

Frontiers 2012 Workshop on Nuclear Astrophysics October 2012
East Lansing, Michigan, USA
- Contributed Talk: *Neutron background characterization of deep underground laboratories*

Carpathian Summer School of Physics 2012 June 2012
Sinaia, Romania
- Contributed Talk: $^{17}O(\alpha,\gamma)^{21}Ne$ *and* $^{17}O(\alpha,n)^{20}Ne$ *for the weak s process*

DURA Annual Meeting January 2012
Batavia, Illinois, USA

DUSEL AARM Collaboration Meeting February 2011
Minneapolis, Minnesota, USA

Frontiers 2010 Workshop on Nuclear Astrophysics October 2010
Fontana, Wisconsin, USA
- Contributed Talk: *Determination of the stellar reaction rates of* $^{17}O(\alpha,n)^{20}Ne$ *and* $^{17}O(\alpha,\gamma)^{21}Ne$

WE-Heraeus Summer School on Nuclear Astrophysics in the Cosmos July 2010
Darmstadt, Germany

Notre Dame R-Matrix School June 2010
Notre Dame, Indiana, USA

Nuclear Astrophysics Graduate Student Conference September 2009
Chapel Hill, North Carolina, USA
- Contributed Talk: $^{17}O(\alpha,n)^{20}Ne$

JINA R-Matrix School at Notre Dame February 2009
Notre Dame, Indiana, USA

3rd European Summer School on Experimental Nuclear Astrophysics October 2005
Santa Tecla, Italy

SCIENTIFIC REVIEW ACTIVITIES

Reviewer for Physical Review C, Physics Letters B, Astroparticle Physics, Monthly Notices of the Royal Astronomical Society, Nuclear Instruments and Methods in Physics Research Section A, Nuclear Science and Techniques, Journal of Instrumentation

Reviewer for "National Centre of Science and Technology evaluation", Kazakhstan - total grant amount of reviewed projects: 3 Million Euro

Habilitation for associate professor rank (ASN 2nda fascia, 2018)

BIBLIOMETRICS

H index: 25

Number of citations: 1600

GRANTS AND AWARDS

FARE Ricerca in Italia 2020 December 2022 - 2026
Project EASγ: Experimental and Astrophysical Study of ^{22}Ne$(\alpha,\gamma)^{26}$Mg 0.21 Million Euro

ERC Starting Grant 2019 #852016 February 2020 - 2025
Project SHADES: Scintillator-He3 Array for Deep-underground Experiments on the S-process 1.35 Million Euro

Junior Principal Investigator Grant (Programma STAR 2016) December 2016
2-year grant on development of neutron detectors for experiments in nuclear astrophysics EUR 92000

REFERENCES

Available upon request

PUBLICATIONS

B. Acharya, M. Aliotta, A. B. Balantekin, D. Bemmerer, C. A. Bertulani, **A. Best**, C. R. Brune, R. Buompane, F. Cavanna, J. W. Chen, J. Colgan, A. Czarnecki, B. Davids, R. J. deBoer, F. Delahaye, R. Depalo, A. García, M. Gatu Johnson, D. Gazit, L. Gialanella, U. Greife, D. Guffanti, A. Guglielmetti, K. Hambleton, W. C. Haxton, Y. Herrera, M. Huang, C. Iliadis, K. Kravvaris, M. La Cognata, K. Langanke, L. E. Marcucci, T. Nagayama, K. M. Nollett, D. Odell, G. D. Orebi Gann, D. Piatti, M. Pinsonneault, L. Platter, R. G. H. Robertson, G. Rupak, A. Serenelli, M. Sferrazza, T. Szücs, X. Tang, A. Tumino, F. L. Villante, A. Walker-Loud, X. Zhang and K. Zuber: *Solar fusion III: New data and theory for hydrogen-burning stars*. Submitted to Rev. Mod. Pys.

D. Rapagnani, O. Straniero, G. Imbriani, M. Aliotta, C. Ananna, F. Barile, L. Barbieri, D. Bemmerer, **A. Best**, A. Boeltzig, C. Broggini, C.G. Bruno, A. Caciolli, M. Campostrini, F. Casaburo, F. Cavanna, G.F. Ciani, P. Colombetti, A. Compagnucci, P. Corvisiero, L. Csedreki, T. Davinson, R. Depalo, A. Di Leva, Z. Elekes, F. Ferraro, A. Formicola, Zs. Fülöp, G. Gervino, R. M. Gesuè, Gy. Gyürky, A. Guglielmetti, C. Gustavino, M. Junker, M. Lugaro, P. Marigo, J. Marsh, E. Masha, R. Menegazzo, D. Mercogliano, V. Paticchio, D. Piatti, P. Prati, V. Rigato, D. Robb, R. S. Sidhu, J. Skowronski, T. Szücs, S. Zavatarelli: *CNO cycle revised: the ^{17}O destruction rate in stars*. Submitted to Phys Rev C

J. Skowronski, D. Piatti, D. Rapagnani, M. Aliotta, C. Ananna, L. Barbieri, F. Barile, D. Bemmerer, **A. Best**, A. Boeltzig, C. Broggini, C. G. Bruno, A. Caciolli, M. Campostrini, F. Casaburo, F. Cavanna, G. F. Ciani, P. Colombetti, A. Compagnucci, P. Corvisiero, L. Csedreki, T. Davinson, R. Depalo, A. Di Leva, Z. Elekes, F. Ferraro, A. Formicola, Zs. Fülöp, G. Gervino, R. M. Gesuè, A. Guglielmetti, C. Gustavino, Gy. Gyürky, G. Imbriani, 4 M. Junker, M. Lugaro, P. Marigo, J. Marsh, E. Masha, R. Menegazzo, D. Mercogliano, V. Paticchio, R. Perrino, P. Prati, V. Rigato, D. Robb, L. Schiavulli, R. S. Sidhu, O. Straniero, T. Szücs, S. Turkat, and S. Zavatarelli: *A Comparative Analysis of R-Matrix Fitting: $^{12}C(p,\gamma)^{13}N$ as Test Case*. Submitted to Phys Rev C

D. Dell'Aquila, I. Lombardo, L. Redigolo, M. Vigilante, F. Angelini, L. Baldesi, S. Barlini, **A. Best**, A. Camaiani, G. Casini, C. Ciampi, M. Cicerchia, M. D'Andrea, J. Diklić, D. Fabris, B. Gongora Servin, A. Gottardo, F. Gramegna, G. Imbriani, T. Marchi, A. Massara, D. Mengoni, A. Ordine, L. Palada, G. Pasquali, S. Piantelli, E. Pilotto, D. Rapagnani, M. Sigmund, A. Stefanini, D. Stramaccioni, D. Tagnani, I. Tišma, S. Valdré, G. Verde and N. Vukman: *Clarifying the radiative decay of the Hoyle state with charged-particle spectroscopy*. In Scientific Reports 14 (2024) 18958

D. Mercogliano, **A. Best** and D. Rapagnani: *The New Deep-Underground Direct Measurement of* $^{2}2Ne(\alpha,\gamma)^{26}Mg$ *with EAS*γ*: A Feasibility Study*. In Galaxies 2024, 12(6), 79

A. Best, D. Rapagnani and D. Mercogliano: *The Ongoing Deep Underground Measurement of* $^{22}Ne(\alpha,n)^{25}Mg$ *at the Ion Beam Facility of the INFN-LNGS*. In Galaxies 2024, 12(6), 68

K. Stöckel, N. Mozumdar, S. Zavatarelli, F. Ferraro, M. Aliotta, C. Ananna, L. Barbieri, F. Barile, D. Bemmerer, **A. Best**, A. Boeltzig, C. Broggini, C. G. Bruno, A. Caciolli, M. Campostrini, F. Cavanna, F. Casaburo, G. F. Ciani, P. Colombetti, A. Compagnucci, P. Corvisiero, L. Csedreki, T. Davinson, R. Depalo, D. Dell'Aquila, A. Di Leva, Z. Elekes, A. Formicola, Zs. Fülöp, G. Gervino, R. Gesuè, A. Guglielmetti, C. Gustavino, Gy. Gyürky, A. Kievsky, G. Imbriani, M. Junker, M. Lugaro, L. E. Marcucci, P. Marigo, J. Marsh, E. Masha, R. Menegazzo, D. Mercogliano, V. Mossa, V. Paticchio, D. Piatti, P. Prati, D. Rapagnani, V. Rigato, D. Robb, L. Schiavulli, R. S. Sidhu, J. Skowronski, O. Straniero T. Szücs and M. Viviani: *Novel approach to infer the* $D(p,\gamma)^{3}He$ *angular distribution: experimental results and comparison with theoretical calculations*. In Phys. Rev. C 110 (2024) L032801

L. Csedreki, G. Gyurky, D. Rapagnani, G. F. Ciani, M. Aliotta, C. Ananna, L. Barbieri, F. Barile, D. Bemmerer, **A. Best**, A. Boeltzig, C. Broggini, C. G. Bruno, A. Caciolli, F. Casaburo, F. Cavanna, P. Colombetti, A. Compagnucci, P. Corvisiero, T. Davinson, R. Depalo, A. Di Leva, Z. Elekes, F. Ferraro, A. Formicola, Z. Fulop, G. Gervino, A. Guglielmetti, C. Gustavino, G. Imbriani, M. Junker, M. Lugaro, P. Marigo, J. Marsh, E. Masha, R. Menegazzo, D. Mercogliano, V. Paticchio, R. Perrino, D. Piatti, P. Prati, D. Robb, L. Schiavulli, R. S. Sidhu, J. Skowronski, O. Straniero, T. Szücs, S. Zavatarelli: *Status and future directions for direct cross-section measurements of the* $^{13}C(\alpha,n)^{16}O$ *reaction for astrophysics*. In J. Phys. G 51 (2024) 105201

R. M. Gesuè, D. Piatti, G. Ciani, A. Boeltzig, D. Rapagnani, M. Aliotta, C. Ananna, F. Barile, L. Barbieri, F. Barile, D. Bemmerer, **A. Best**, C. Broggini, C. G. Bruno, A. Caciolli, M. Campostrini, F. Casaburo, F. Cavanna, P. Colombetti, A. Compagnucci, P. Corvisiero, L. Csedreki, T. Davinson, G. M. De Gregorio, D. Dell'Aquila, 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, J. Marsh, E. Masha, R. Menegazzo, D. Mercogliano, V.Paticchio, R. Perrino, P. Prati, V. Rigato, D. Robb, L. Schiavulli, R. S. Sidhu, J. Skowronski, O. Straniero, T. Szücs, and S. Zavatarelli: *First direct measurement of the 64.5 keV resonance strength in the* $^{17}O(p,\gamma)^{18}F$ *reaction*. In Phys. Rev. Lett. 133 (2024) 052701

M.P. Takács, F. Ferraro, D. Piatti, J. Skowronski, M. Aliotta, F. Barile, D. Bemmerer, **A. Best**, A. Boeltzig, C. Broggini, C. G. Bruno, A. Caciolli, M. Campostrini, F. Cavanna, C. Ananna, G. F. Ciani, A. Compagnucci, P. Corvisiero, L. Csedreki, T. Davinson, R. Depalo, A. Di Leva, Z. Elekes, A. Formicola, Zs. Fülöp, G. Gervino, R.M.Gesué, A. Guglielmetti, C. Gustavino, Gy. Gyürky, G. Imbriani, M. Junker, A. Karakas, M. Lugaro, P. Marigo, E. Masha, R. Menegazzo, D. Mercogliano, V.Paticchio, P. Prati, D. Rapagnani, V. Rigato, D. Robb, L. Schiavulli, R. S. Sidhu, O. Straniero, T. Szücs, and S. Zavatarelli: *Direct capture cross section and resonances in the $^{22}Ne(p,\gamma)^{23}Na$ reaction at low energy*. In Phys. Rev. C 109 (2024) 064627

L. Morales-Gallegos, M. Aliotta, L. Gialanella, **A. Best**, C. G. Bruno, R. Buompane, T. Davinson, M. De Cesare, A. Di Leva, A. D'Onofrio, J. G. Duarte, L. R. Gasques, G. Imbriani, G. Porzio, D. Rapagnani, M. Romoli, F. Terrasi: *Direct measurements of the $^{12}C+^{12}C$ reactions cross-sections towards astrophysical energies*. In European Phys. J. A 60 (2024), 11

C. Ananna, D. Rapagnani, D. Dell'Aquila, A. Di Leva, G. Imbriani, M. Junker, D. Mercogliano, **A.Best**: *Intrinsic background of EJ-309 liquid scintillator detectors*. In Nucl. Instr. Meth. A 1060 (2024) 169036

M. Junker, G. Imbriani, **A. Best**, A. Boeltzig, A. Compagnucci, A. Di Leva, F. Ferraro, D. Rapagnani, V. Rigato: *The deep underground Bellotti Ion Beam Facility—status and perspectives*. In Frontiers in Physics 11:1291113, 2023

E. Masha, L. Barbieri, J. Skowronski, M. Aliotta, C. Ananna, F. Barile, D. Bemmerer, **A. Best**, A. Boeltzig, C. Broggini, C. G. Bruno, A. Caciolli, M. Campostrini, F. Cavanna, G. F. Ciani, A. Ciapponi, P. Colombetti, A. Compagnucci, P. Corvisiero, L. Csedreki, T. Davinson, R. Depalo, A. Di Leva, Z. Elekes, F. Ferraro, E. Fiore, A. Formicola, Zs. Fülöp, G. Gervino, R.M.Gesué, A. Guglielmetti, C. Gustavino, Gy. Gyürky, G. Imbriani, J. Jose, M. Junker, M. Lugaro, P. Marigo, R. Menegazzo, P. Manoj, V.Paticchio, D. Piatti, P. Prati, D. Rapagnani, V. Rigato, D. Robb, L. Schiavulli, R. S. Sidhu, O. Straniero, T. Szücs, and S. Zavatarelli: *First measurement of the low-energy direct capture in $^{20}Ne(p,\gamma)^{21}Na$ and improved energy and strength of the E_{cm} = 368 keV resonance*. In Phys. Rev. C 108, (2023) L052801

J. Skowronski, A. Boeltzig, G. F. Ciani, L. Csedreki, D. Piatti, M. Aliotta, C. Ananna, F. Barile, D. Bemmerer, **A. Best**, C. Broggini, C.G. Bruno, A. Caciolli, M. Campostrini, F. Cavanna, P. Colombetti, A. Compagnucci, P. Corvisiero, T. Davinson, R. Depalo, A. Di Leva, Z. Elekes, F. Ferraro, A. Formicola, Zs. Füöp, G. Gervino, R.M. Gesuè, A. Guglielmetti, C. Gustavino, Gy. Gyürky, G. Imbriani, M. Junker, M. Lugaro, P. Marigo, E. Masha, R. Menegazzo, V. Paticchio, R. Perrino, P. Prati, D. Rapagnani, V. Rigato, L. Schiavulli, R. S. Sidhu, O. Straniero, T. Szücs, S. Zavatarelli: *Proton-Capture Rates on Carbon Isotopes and Their Impact on the Astrophysical $^{12}C/^{13}C$ Ratio*. In Phys. Rev. Letters 131 (2023) 162701

J. Skowronski, R.M. Gesuè, A. Boeltzig, G. F. Ciani, D. Piatti, M. Aliotta, C. Ananna, F. Barile, D. Bemmerer, **A. Best**, C. Broggini, C.G. Bruno, A. Caciolli, M. Campostrini, F. Cavanna, A. Compagnucci, P. Corvisiero, L. Csedreki, 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, M. Lugaro, P. Marigo, E. Masha, R. Menegazzo, V. Paticchio, R. Perrino, P. Prati, D. Rapagnani, V. Rigato, L. Schiavulli, R. S. Sidhu, O. Straniero, T. Szücs, S. Zavatarelli: *Advances in Radiative Capture Studies at LUNA with a Segmented BGO Detector*. In Journal of Physics G 50 (2023) 045201

H. Schatz, A. D. Becerril Reyes, **A. Best**, E. F. Brown, K. Chatziioannou, K. A. Chipps, C. M. Deibel, R. Ezzeddine, D. K. Galloway, C. J. Hansen, F. Herwig, A. P. Ji, M. Lugaro, Z. Meisel, D. Norman, J. S. Read, L. F. Roberts, A. Spyrou, I. Tews, F. X. Timmes, C. Travaglio, N. Vassh, C. Abia, P. Adsley, S. Agarwal, M. Aliotta, W. Aoki, A. Arcones, A. Aryan, A. Bandyopadhyay, A. Banu, D. W. Bardayan, J. Barnes, A. Bauswein, T. C. Beers, J. Bishop, T. Boztepe, B. Côté, M. E. Caplan, A. E. Champagne, J. A. Clark, M. Couder, A. Couture, S. E. de Mink, S. Debnath, R. J. deBoer, J. den Hartogh, P. Denissenkov, V. Dexheimer, I. Dillmann, J. E. Escher, M. A. Famiano, R. Farmer, R. Fisher, C. Fröhlich, A. Frebel, C. Fryer, G. Fuller, A. K. Ganguly, S. Ghosh, B. K. Gibson, T. Gorda, K. N. Gourgouliatos, V. Graber, M. Gupta, W. Haxton, A. Heger, W. R. Hix, W C. G. Ho, E. M. Holmbeck, A. A. Hood, S. Huth, G. Imbriani, R. G. Izzard, R. Jain, H. Jayatissa, Z. Johnston, T. Kajino, A. Kankainen, G. G. Kiss, A. Kwiatkowski, M. La Cognata, A. M. Laird, L. Lamia, P. Landry, E. Laplace, K. D. Launey, D. Leahy, G. Leckenby, A. Lennarz, B. Longfellow, A. E. Lovell, W. G. Lynch, S. M. Lyons, K. Maeda, E. Masha, C. Matei, J. Merc, B. Messer, F. Montes , A. Mukherjee, M. Mumpower, D. Neto, B. Nevins, W. G. Newton, L. Q. Nguyen, K. Nishikawa, N. Nishimura, F. M. Nunes, E. O'Connor, B. W. O'Shea, W-J. Ong, S. D. Pain, M. A. Pajkos, M. Pignatari, R. G. Pizzone, V. M. Placco, T. Plewa, B. Pritychenko, A. Psaltis, D. Puentes, Y-Z. Qian, D. Radice, D. Rapagnani, B. M. Rebeiro, R. Reifarth, A. L. Richard, N. Rijal, I. U. Roederer, J. S. Rojo, J. S K, Y. Saito, A. Schwenk, M. L. Sergi, R. S. Sidhu, A. Simon, T. Sivarani, Á. Skúladóttir, M. S. Smith, A. Spiridon, T. M. Sprouse, S. Starrfield, A. W. Steiner, F. Strieder, I. Sultana, R. Surman, T. Szücs, A. Tawfik, F. Thielemann, L. Trache, R. Trappitsch, M. B. Tsang, A. Tumino, S. Upadhyayula, J. O. Valle Martínez, M. Van der Swaelmen, C. Viscasillas Vázquez, A. Watts, B. Wehmeyer, M. Wiescher, C. Wrede, J. Yoon, R G. T. Zegers, M. A. Zermane, M. Zingale: *Horizons: Nuclear Astrophysics in the 2020s and Beyond*. In Journal of Physics G 49 (2022) 110502

D. Piatti, E. Masha, M. Aliotta, J. Balibrea-Correa, F. Barile, D. Bemmerer, **A. Best**, A. Boeltzig, C. Broggini, C. G. Bruno, A. Caciolli, F. Cavanna, T. Chillery, G. F. Ciani, A. Compagnucci, P. Corvisiero, L. Csedreki, T. Davinson, R. Depalo, 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, M. Lugaro, P. Marigo, R. Menegazzo, V. Mossa, F. R. Pantaleo, V. Paticchio, R. Perrino, P. Prati, D. Rapagnani, L. Schiavulli, J. Skowronski, K. Stöckel, O. Straniero, T. Szücs, M. P. Takács, and S. Zavatarelli: *First direct limit on the 334 keV resonance strength in $^{22}Ne(\alpha,\gamma)^{26}Mg$ reaction*. In European Phys. J. A 58 (2022), 194

A. Boeltzig, R. J. deBoer, Y. Chen, **A. Best**, M. Couder, A. Di Leva, B. Frentz, J. Görres, Gy. Gyürky, G. Imbriani, M. Junker, Q. Liu, S. Lyons, K. Manukyan, K. Macon, L. Moralez, M. T. Moran, D. Odell, E. Stech, C. Seymour, G. Seymour, B. Vande Kolk, M. Wiescher: *Investigation of direct capture in the $^{23}Na(p,\gamma)^{24}Mg$ reaction*. In Phys. Rev C 106 (2022), 045801

G.F. Ciani, L. Csedreki, D. Rapagnani, M. Aliotta, J. Balibrea-Correa, F. Barile, D. Bemmerer, **A. Best**, A. Boeltzig, C.Broggini, C.G. Bruno, A. Caciolli, F. Cavanna, T. Chillery, P. Corvisiero, S. Cristallo, T. Davinson, R. Depalo, A. Di Leva, Z. Elekes, F. Ferraro, E. Fiore, A. Formicola, Zs. Fülöp, G. Gervino, A.Guglielmetti, C. Gustavino, Gy. Gyürky, G. Imbriani, M. Junker, 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. Vescovi, S. Zavatarelli: *Direct measurement of the $^{13}C(\alpha, n)^{16}O$ reaction into the Gamow peak*. In Phys. Rev. Letters 127 (2021), 152701

F. R. Pantaleo, A. Boeltzig, **A. Best**, R. Perrino, M. Aliotta, J. Balibrea-Correa, F. Barile, D. Bemmerer, C.Broggini, C.G. Bruno, R. Buompane, A. Caciolli, F. Cavanna, T. Chillery, G.F. Ciani, P. Corvisiero, L. Csedreki, T. Davinson, R. deBoer, R. Depalo, G. D'Erasmo, 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. Paticchio, D.Piatti, P. Prati, D. Rapagnani, L. Schiavulli, K. Stöckel, O. Straniero, T. Szücs, M. P. Takács, D. Trezzi, M. Wiescher, S. Zavatarelli: *Low-energy resonances in the $^{18}O(p,\gamma)^{19}F$ reaction*. In Phys. Rev. C 104 (2021), 025802

L. Csedreki, G.F. Ciani, J. Balibrea-Correa, **A. Best**, M. Aliotta, F. Barile, D. Bemmerer, A. Boeltzig, C.Broggini, C.G. Bruno, A. Caciolli, F. Cavanna, T. Chillery, P. Colombetti, P. Corvisiero, T. Davinson, R. Depalo, A. Di Leva, Z. Elekes, F. Ferraro, E. M. Fiore, A. Formicola, Zs. Fülöp, G. Gervino, A.Guglielmetti, C. Gustavino, Gy. Gyürky, G. Imbriani, Z. Janas, M. Junker, I. Kochanek, M. Lugaro, P.Marigo, E. Masha, C. Mazzocchi, 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, S. Zavatarelli: *Characterization of the LUNA neutron detector array for the measurement of the $^{13}C(\alpha,n)^{16}O$ reaction*. In Nucl. Instr. Meth. A 994 (2021) 165081

P. Adsley, U. Battino, **A. Best**, A. Caciolli, A. Guglielmetti, G. Imbriani, M. La Cognata, H. Jayatissa, L. Lamia, E. Masha, C. Massimi, S. Palmerini, A. Tattersall, R. Hirschi: *Re-evaluation of the $^{22}Ne(\alpha,\gamma)^{26}Mg$ and $^{22}Ne(\alpha,n)^{25}Mg$ reaction rates*. In Phys. Rev. C 103 (2021), 015805

V. Mossa, K. Stöckel, F. Cavanna, F. Ferraro, M. Aliotta, F. Barile, D. Bemmerer, **A. Best**, A. Boeltzig, C. Broggini, C. G. Bruno, A. Caciolli, T. Chillery, G. F. Ciani, P. Corvisiero, L. Csedreki, 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, A. Kievsky, I. Kochanek, M. Lugaro, L. E. Marcucci, G. Mangano, P. Marigo, E. Masha, R. Menegazzo, F. R. Pantaleo, V. Paticchio, R. Perrino, D. Piatti, O. Pisanti, P. Prati, L. Schiavulli, O. Straniero, T. Szücs, M.P. Takács, D. Trezzi, M. Viviani, S. Zavatarelli *The baryon density of the Universe from an improved rate of deuterium burning*. In Nature 587, 210 (2020)

D. Piatti, T. Chillery, R. Depalo, M. Aliotta, D. Bemmerer, **A. Best**, A. Boeltzig, C. Broggini, C. G. Bruno, A. Caciolli, F. Cavanna, G. F. Ciani, P. Corvisiero, L. Csedreki, T. Davinson, A. Di Leva, Z. Elekes, F. Ferraro, E. M. Fiore, A. Formicola, Zs. Fülöp, G. Gervino1, A. Gnech1, A. Guglielmetti, C. Gustavino, Gy. Gyürky, G. Imbriani, M. Junker, I. Kochanek, M. Lugaro, L. E. Marcucci, P. Marigo, E. Masha, R. Menegazzo, V. Mossa, F. R. Pantaleo, V. Paticchio, R. Perrino, P. Prati, L. Schiavulli, K. Stöckel, O. Straniero, T. Szücs, M.P. Takács, S. Zavatarelli: *Underground experimental study finds no evidence of low-energy resonance in the $^{6}Li(p,\gamma)^{7}Be$ reaction*. In Phys. Rev. C 102, 052802(R) (2020)

G.F. Ciani, L. Csedreki, J. Balibrea-Correa, **A. Best**, M. Aliotta, F. Barile D. Bemmerer, A. Boeltzig, C. Broggini, C.G. Bruno, A. Caciolli, 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, S. Zavatarelli: *A new approach to monitor ^{13}C-targets degradation in situ for $^{13}C(\alpha,n)^{16}O$ cross-section measurements at LUNA*. In Eur. Phys. J. A 56 (2020), 75

A. Best, F.R. Pantaleo, A. Boeltzig, G. Imbriani, M. Aliotta, J. Balibrea-Correae, D. Bemmerer, C. Broggini, 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, 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, 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, S. Zavatarelli: *Cross section of the reaction $^{18}O(p,\gamma)^{19}F$ at astrophysical energies: The 90 keV resonance and the direct capture component*. In Physics Letters B 797 (2019) 134900

A. Boeltzig, **A. Best**, F.R. Pantaleo, G. Imbriani, M. Junker, M. Aliotta, J. Balibrea-Correae, D. Bemmerer, C. Broggini, 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, 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,1, D. Piatti, P. Prati, L. Schiavulli, K. Stöckel, O. Straniero, F. Strieder, T. Szücs, M.P. Takács, D. Trezzi, M. Wiescher, S. Zavatarelli: *Direct Measurements of Low-Energy Resonance Strengths of the $^{23}Na(p,\gamma)^{24}Mg$ Reaction for Astrophysics*. In Physics Letters B 795 (2019), 122

C.G. Bruno, M. Aliotta, P. Descouvemont, **A. Best**, T. Davinson, D. Bemmerer, A. Boeltzig, C. Broggini, A. Caciolli, 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 and D. Trezzi: *Improved astrophysical rate for the $^{18}O(p,\alpha)^{15}N$ reaction by underground measurements*. In Physics Letters B 790 (2019), 237

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. Caciolli, T. Chillery, G. F. Ciani, P. Corvisiero, T. Davinson, G. D'Erasmo, A. Di Leva, Z. Elekes, E. M. Fiore, A. Formicola, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyürky, G. Imbriani, M. Junker, A. 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: *Direct Capture Cross Section and the $E_p = 71$ and 105 keV Resonances in the $^{22}Ne(p,\gamma)^{23}Na$ Reaction*. In Phys. Rev. Letters 121, 172701 (2018)

J. Balibrea-Correa, G. F. Ciani, R. Buompane, F. Cavanna, L. Csedreki, R. Depalo, F. Ferraro, and **A. Best**: *Improved pulse shape discrimination in high pressure ^3He counters*. In Nucl. Instr. Meth. A 906 (2018), 103

S. Lyons, J. Görres, R. J. deBoer, E. Stech, **A. Best**, Y. Chen, G. Gilardy, Q. Liu, A. M. Long, M. Moran, D. Robertson, C. Seymour, B. Vande Kolk, and M. Wiescher: *Determination of $^{20}Ne(p,\gamma)^{21}Na$ cross sections from Ep = 500 - 2000 keV*. In Phys. Rev. C 97 065802 (2018)

S. Cristallo, M. La Cognata, C. Massimi, **A. Best**, S. Palmerini, O. Straniero, O. Trippella, M. Busso, G. F. Ciani, F. Mingrone, L. Piersanti, and D. Vescovi: *The importance of the $^{13}C(\alpha,n)^{16}O$ reaction in asymptotic giant branch stars*. In The Astrophysical Journal 859 (2018) 105

A. Boeltzig, **A. Best**, G. Imbriani, M. Junker, M. Aliotta, D. Bemmerer, C. Broggini, C. G. Bruno, R. Buompane, A. Caciolli, F. Cavanna, T. Chillery, G. F. Ciani, P. Corvisiero, L. Csedreki, T. Davinson, R. deBoer, R. Depalo, A. Di Leva, Z. Elekes, F. Ferraro, A. Formicola, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, G. Gyürky, R. Menegazzo, V. Mossa, F. 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, S. Zavatarelli: *Improved background suppression for radiative capture reactions at LUNA with HPGe and BGO detectors*. In Journal of Physics G 45, 025203 (2018)

R. J. deBoer, J. Görres, M. Wiescher, R. E. Azuma, **A. Best**, C. R. Brune, C. E. Fields, S. Jones, M. Pignatari, D. Sayre, K. Smith, F. X. Timmes, E. Uberseder: *The $^{12}C(\alpha,\gamma)^{16}O$ reaction and its implications for stellar helium burning*. In Rev. Mod. Phys. 89, 035007 (2017)

A. Di Leva, G. Imbriani, R. Buompane, L. Gialanella, **A. Best**, S. Cristallo, M. De Cesare, A. D'Onofrio, J. G. Duarte, L. R. Gasques, L. Morales-Gallegos, A. Pezzella, G. Porzio, D. Rapagnani, V. Roca, M. Romoli, D. Schürmann, O. Straniero, F. Terrasi: *Measurement of 1323 and 1487 keV resonances in $^{15}N(\alpha,\gamma)^{19}F$ with the recoil separator ERNA*. In Phys. Rev. C 95, 045803 (2017)

M. Lugaro, A. I. Karakas, C. G. Bruno, M. Aliotta, L. R. Nittler, D. Bemmerer, **A. Best**, A. Boeltzig, C. Broggini, A. Caciolli, F. Cavanna, G. F. Ciani, 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, D. Piatti, P. Prati, D. A. Scott, O. Straniero, F. Strieder, T. Szücs, M. P. Takács, D. Trezzi: *Origin of stardust unveiled by the new LUNA rate of the $^{17}O(p,\alpha)^{14}N$ reaction*. In Nature Astronomy 1, 0027 (2017)

O. Straniero, M. Aliotta, **A. Best**, A. Boeltzig, D. Bemmerer, C. Broggini, C. G. Bruno, A. Caciolli, 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, G. Gyürky, G. Imbriani, M. Junker, R. Menegazzo, V. Mossa, F. Pantaleo, D. Piatti, L. Piersanti, P. Prati, E. Samorjai, F. Strieder, T. Szücs, M.P. Takács, D. Trezzi: *The impact of the revised $^{17}O(p,\alpha)^{14}N$ reaction rate on the ^{17}O stellar abundances and yields*. In Astronomy & Astrophysics 598, A128 (2017)

A. Slemer, P. Marigo, D. Piatti, M. Aliotta, D. Bemmerer, **A. Best**, A. Boeltzig, A. Bressan, C. Broggini, C. G. Bruno, A. Caciolli, F. Cavanna, G. F. Ciani, P. Corvisiero, T. Davinson, R. Depalo, A. Di Leva, Z. Elekes, F. Ferraro, A. Formicola, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, G. Gyürky, G. Imbriani, M. Junker, R. Menegazzo, V. Mossa, F. Pantaleo, P. Prati, O. Straniero, T. Szücs, M. P. Takács, D. Trezzi: *^{22}Ne and and ^{23}Na ejecta from intermediate-mass stars: The impact of the new LUNA rate for $^{22}Ne(p,\gamma)^{23}Na$*. In Mon. Not. R. Astron. Soc. (2016) 465 (4) 4817

R. Depalo, F. Cavanna, M. Aliotta, M. Anders, D. Bemmerer, **A. Best**, A. Boeltzig, C. Broggini, C. G. Bruno, A. Caciolli, 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: *Direct measurement of low-energy $^{22}Ne(p,\gamma)^{23}Na$ resonances*. In Phys. Rev. C 94, 055804 (2016)

C. G. Bruno, D. A. Scott, M. Aliotta, A. Formicola, **A. Best**, A. Boeltzig, D. Bemmerer, C. Broggini, A. Caciolli, 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: *Improved direct measurement of the 64.5 keV resonance strength in the $^{17}O(p,\alpha)^{14}N$ reaction at LUNA*. In Phys. Rev. Lett. 117, 142502 (2016)

Q. Li, J. Görres, R. J. deBoer, G. Imbriani, **A. Best**, A. Kontos, P. J. LeBlanc, E. Uberseder, M. Wiescher: *Cross section measurement of $^{14}N(p,\gamma)^{15}O$ in the CNO cycle*. In Phys. Rev. C 93, 055806 (2016)

A. Best, A. Caciolli, Zs. Fülöp, Gy. Gyürky, M. Laubenstein, E. Napolitani, V. Rigato, V. Roca, T. Szücs: *Underground nuclear astrophysics: why and how*. In Eur. Phys. J. A (2016) 52, 72

A. Best, J. Görres, M. Junker, K.-L. Kratz, M. Laubenstein, A. Long, S. Nisi, K. Smith, M. Wiescher: *Low energy neutron background in deep underground laboratories*. In Nucl. Instr. Meth. A 812 (2016), 1

F. Cavanna, R. Depalo, M. Aliotta, M. Anders, D. Bemmerer, **A. Best**, C. Broggini, C. Bruno, A. Caciolli, 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. Takács, D. Trezzi: *Three new low-energy resonances in the $^{22}Ne(p,\gamma)^{23}Na$ reaction*. In Phys. Rev. Lett. 115, 252501 (2015)

C. G. Bruno, D. A. Scott, A. Formicola, M. Aliotta, T. Davinson, M. Anders, **A. Best**, D. Bemmerer, C. Broggini, A. Caciolli, 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, D. Trezzi: *Resonance strengths in the $^{17,18}O(p,\alpha)^{14,15}N$ reactions and background suppression underground*. In Eur. Phys. J. A 51 (2015), 94

B. Bucher, X. D. Tang, X. Fang, A. Heger, S. Almaraz-Calderon, A. Alongi, A. D. Ayangeakaa, M. Beard, **A. Best**, J. Browne, C. Cahillane, M. Couder, R. deBoer, A. Kontos, L. Lamm, Y. J. Li, A. Long, W. Lu, S. Lyons, M. Notani, D. Patel, N. Paul, M. Pignatari, A. Roberts, D. Robertson, K. Smith, E. Stech, R. Talwar, W. P. Tan, M. Wiescher, S. E. Woosley: *The first direct measurement of $^{12}C(^{12}C,n)^{23}Mg$ at stellar energies*. In Phys. Rev. Lett. 114, 251102 (2015)

R. J. deBoer, **A. Best**, J. Görres, K. Smith, W. Tan, M. Wiescher, R. Raut, G. Rusev, A. P. Tonchev, W. Tornow: *Photoneutron strengths in ^{26}Mg at energies of astrophysical interest*. In Phys. Rev. C 89, 055802 (2014)

A. Spyrou, S. J. Quinn, A. Simon, T. Rauscher, A. Battaglia, **A. Best**, B. Bucher, M. Couder, P. A. DeYoung, A. Dombos, X. Fang, J. Görres, A. Kontos, Q. Li, L. Y. Lin, A. Long, S. Lyons, B. S. Meyer, A. Roberts, D. Robertson, K. Smith, M. K. Smith, E. Stech, B. Stefanek, W. P. Tan, X. D. Tang, M. Wiescher: *Measurement of the $^{90,92}Zr(p,\gamma)^{91,93}Nb$ reactions for the nucleosynthesis of elements around A=90*. In Phys. Rev. C 88, 045802 (2013)

A. Kontos, E. Uberseder, R. deBoer, J. Görres, C. Akers, **A. Best**, M. Couder, M. Wiescher: *Astrophysical S factor of $^{3}He(\alpha,\gamma)^{7}Be$*. In Phys. Rev. C 87, 065804 (2013)

A. Best, M. Couder, M. Famiano, A. Lemut, M. Wiescher: *Study of the beam-induced neutron flux and required shielding for DIANA*. In Nucl. Instr. Meth. A 727 (2013), 104

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

A. Best, S.Falahat, J. Görres, M. Couder, R. deBoer, R. T. Güray, A. Kontos, K. L. Kratz, P. J. LeBlanc, Q. Li, S. O'Brien, N. Özkan, K. Sonnabend, R. Talwar, W. Tan, E. Uberseder, M. Wiescher: *Measurement of the reaction $^{18}O(\alpha,n)^{21}Ne$*. In Phys. Rev. C 87, 045806 (2013)

A. Best, M. Beard, J. Görres, M. Couder, R. deBoer, S. Falahat, R. T. Güray, A. Kontos, K. L. Kratz, P. J. LeBlanc, Q. Li, S. O'Brien, N. Özkan, M. Pignatari, K. Sonnabend, R. Talwar, W. Tan, E. Uberseder, M. Wiescher: *Measurement of the reaction $^{17}O(\alpha,n)^{20}Ne$ and its impact on the s process in massive stars*. In Phys. Rev. C 87, 045805 (2013)

A. Simon, S. J. Quinn, A. Spyrou A. Battaglia, I. Beskin, **A. Best**, B. Bucher, M. Couder, P. A. DeYoung, X. Fang, J. Görres, A. Kontos, Q. Li, S. N. Liddick, A. Long, S. Lyons, K. Padmanabhan, J. Peace, A. Roberts, D. Robertson, K. Smith, M. K. Smith, E. Stech, B. Stefanek, W. P. Tan, X. D. Tang, M. Wiescher: *SuN: Summing NaI(Tl) gamma-ray detector for capture reaction measurements*. In Nucl. Instr. Meth. A 703 (2013), 16

S. Falahat, **A. Best**, M. Couder, J. Görres, E. Stech, M. Wiescher, K.-L. Kratz, U. Ott: *A ^{3}He detector for the measurement of (α,n) reactions*. In: Nucl. Instr. Meth. A 700 (2013), 53

A. Kontos, J. Görres, **A. Best**, M. Couder, R. deBoer, G. Imbriani, Q. Li, D. Robertson, D. Schürmann, E. Stech, E. Uberseder, M. Wiescher: *Proton capture on ^{17}O and its astrophysical implications*. In: Phys. Rev. C 86, 055801 (2012)

G. Imbriani, R. J. deBoer, **A. Best**, M. Couder, G. Gervino, J. Görres, P. J. LeBlanc, H. Leiste, A. Lemut, E. Stech, F. Strieder, E. Uberseder, M. Wiescher: *Measurement of γ rays from $^{15}N(p,\gamma)^{16}O$ cascade and $^{15}N(p,\alpha_1\gamma)^{12}C$ reactions*. In: Phys. Rev. C 85, 065810 (2012)

A. Palumbo, W. P. Tan, J. Görres, **A. Best**, M. Couder, R. Crowter, R. J. deBoer, G. Efe, S. Falahat, Zs. Fülöp, J. P. Greene, R. T. Güray, G. G. Kiss, P. J. LeBlanc, H. Y. Lee, S. O'Brien, N. Özkan, E. Strandberg, E. Somorjai, M. Wiescher: *Systematic study of the α-optical potential via elastic scattering near the Z = 50 region for p-process nuclei*. In: Phys. Rev. C 85, 035808 (2012)

F. Strieder, B. Limata, A. Formicola, G. Imbriani, M. Junker, D. Bemmerer, **A. Best**, C. Broggini, A. Caciolli, P. Corvisiero, H. Costantini, Z. Elekes, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyürky, A. Lemut, M. Marta, C. Mazzocchi, R. Menegazzo, P. Prati, V. Roca, C. Rolfs, C. Rossi Alvarez, E. Somorjai, O. Straniero, F. Terrasi, H.P. Trautvetter: *The $^{25}Mg(p,\gamma)^{26}Al$ reaction at low astrophysical energies*. In: Physics Letters B 707 (2012) 60

A. Best, J. Görres, M. Couder, R. deBoer, S. Falahat, A. Kontos, P. J. LeBlanc, Q. Li, S. O'Brien, K. Sonnabend, R. Talwar, E. Uberseder, M. Wiescher: *First direct measurement of resonances in $^{17}O(\alpha,\gamma)^{21}Ne$*. In: Phys. Rev. C 83, 052802(R) (2011)

P.J. Le Blanc, G. Imbriani, J. Görres, M. Junker, R. Azuma, M. Beard, D. Bemmerer, **A. Best**, C. Broggini, A. Caciolli, P. Corvisiero, H. Costantini, M. Couder, R. deBoer, Z. Elekes, S. Falahat, A. Formicola, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyürky, F. Kaeppeler, A. Kontos, R. Kuntz, H. Leiste, A. Lemut, Q. Li, B. Limata, M. Marta, C. Mazzocchi, R. Menegazzo, S. O'Brien, A. Palumbo, P. Prati, V. Roca, C. Rolfs, C. Rossi Alvarez, E. Somorjai, E. Stech, O. Straniero, F. Strieder, W. Tan, F. Terrasi, H.P. Trautvetter, E. Uberseder, M. Wiescher: *Constraining the S factor of $^{15}N(p,\gamma)^{16}O$ at astrophysical energies*. In: Phys. Rev. C 82, 055804 (2010)

B. Limata, F. Strieder, A. Formicola, G. Imbriani, M. Junker, H.W. Becker, D. Bemmerer, **A. Best**, R. Bonetti, C. Broggini, A. Caciolli, P. Corvisiero, H. Costantini, A. DiLeva, Z. Elekes, Zs. Fülöp, G. Gervino, A. Guglielmetti, C. Gustavino, Gy. Gyürky, A. Lemut, M. Marta, C. Mazzocchi, R. Menegazzo, P. Prati, V. Roca, C. Rolfs, C. Rossi Alvarez, C. Salvo, E. Somorjai, O. Straniero, F. Terrasi, H.-P. Trautvetter: *New experimental study of low-energy (p,γ) resonances in magnesium isotopes*. In: Phys. Rev. C 82, 015801 (2010)

Conference Publications

B. Bucher, X. Fang, X.D. Tang, W.P. Tan, S. Almaraz-Calderon, A. Alongi, A.D. Ayangeakaa, M. Beard, **A. Best**, J. Browne, C. Cahillane, M. Couder, E. Dahlstrom, P. Davies, R. deBoer, A. Kontos, L. Lamm, A. Long, W. Lu, S. Lyons, C. Ma, A. Moncion, M. Notani, D. Patel, N. Paul, M. Pignatari, A. Roberts, D. Robertson, K. Smith, E. Stech, R. Talwar, S. Thomas, M. Wiescher: *Constraining the 12C+12C fusion cross section for astrophysics*. In: *Proceedings: CGS15*, EPJ Web of Conferences 93 03009 (2015)

A. Best: *LUNA: Nuclear Astrophysics Underground*. In: *Exotic Nuclei and Nuclear/Particle Astrophysics (V). From Nuclei to Stars*, 2014

B. Bucher, J. Browne, S. Almaraz-Calderon, A. Alongi, A. D. Ayangeakaa, **A. Best**, M. Couder, J. DeBoer, X. Fang, W. Lu, M. Notani, D. Patel, N. Paul, A. Roberts, R. Talwar, W. Tan, X. D. Tang, A. Villano: *The Role of $^{12}C(^{12}C,n)^{23}Mg$ in the Astrophysical S-Process*. In: *Journal of Physics: Conference Series* **381** *012121 (Rutherford Centennial Conference on Nuclear Physics)*, 2012

X. Fang, B. Bucher, S. Almaraz-Calderon, A. Alongi, D. Ayangeakaa, **A. Best**, G. Berg, C. Cahillane, E. Dahlstrom, R. DeBoer, M. Freer, H. Fujita, Y. Fujita, U. Garg, J. Goerres, K. Hatanaka, A. Howard, T. Itoh, T. Kadoya, T. Kawabata, J. Kolata, Q. Li, Y. J. Li, B. Liu, A. Long, Y. W. Lui, S. Lyons, Y. Matsuda, K. Miki, N. Paul, A. Roberts, M. Smith, R. Talwar, A. Tamii, W. P. Tan, X. D. Tang, M. Wiescher, N. Yokota: *Experimental investigations of the ^{12}C+^{12}C fusion toward extremely low energies by direct and indirect methods*. In: *The 11th International Conference on Nucleus-Nucleus Collisions*, 2012

B. Bucher, X. Fang, S. Almaraz-Calderon, A. Alongi, A. D. Ayangeakaa, M. Beard, **A. Best**, J. Browne, C. Cahillane, M. Couder, R. deBoer, A. Kontos, A. Long, W. Lu, S. Lyons, M. Notani, D. Patel, N. Paul, A. Roberts, D. Robertson, K. Smith, E. Stech, R. Talwar, W. Tan, X. D. Tang: *Searching for the low-energy resonances in the $^{12}C(^{12}C,n)^{23}Mg$ reaction cross section relevant for s-process nucleosynthesis*. In: *The 11th International Conference on Nucleus-Nucleus Collisions*, 2012

A. Spyrou, A. Simon, S. J. Quinn, A. Battaglia, **A. Best**, I. Beskin, B. Bucher, M. Couder, P. A. DeYoung, X. Fang, J. Görres, A. Kontos, Q. Li, S. N. Liddick, A. Long, S. Lyons, K. Padmanabhan, J. Peace, A. Roberts, D. Robertson, K. Smith, M. K. Smith, E. Stech, B. Stefanek, W. P. Tan, X. D. Tang, M. Wiescher: *p process measurements with SuN*. In: *Exotic Nuclei and Nuclear/Particle Astrophysics (IV). From Nuclei to Stars*, 2012

A. Best, J. Görres, M. Beard, M. Couder, R. deBoer, S. Falahat, R.T. Güray, A.Kontos, K.-L. Kratz, P.J. LeBlanc, Q. Li, S. O'Brien, N. Özkan, M. Pignatari, K. Sonnabend, R. Talwar, W. Tan, E. Uberseder and M. Wiescher: *$^{17}O(\alpha,\gamma)^{21}Ne$ and $^{17}O(\alpha,n)^{20}Ne$ for the weak s process*. In: *Exotic Nuclei and Nuclear/Particle Astrophysics (IV). From Nuclei to Stars*, 2012

A. Best, J. Görres, M. Beard, M. Couder, R. deBoer, S. Falahat, R. T. Güray, A. Kontos, K. L. Kratz, P. J. LeBlanc, Q. Li, S. O'Brien, N. Özkan, K. Sonnabend, R. Talwar, W. Tan, E. Uberseder, M. Wiescher: *Measurement of the reactions $^{17}O(\alpha,n)^{20}Ne$ and $^{17}O(\alpha,n_1)^{20}Ne$ and their impact on the weak s process*. In: *Proceedings: CGS14*, 2011.

A. Best, J. Görres, M. Wiescher, S. Falahat, K.-L. Kratz: *Determination of the stellar reaction rates of $^{17}O(\alpha,n)^{20}Ne$ and $^{17}O(\alpha,\gamma)^{21}Ne$*. In: *Proceedings of Science: Nuclei in the Cosmos XI*, 2010.

A. Formicola, **A. Best**, G. Imbriani, M. Junker, D. Bemmerer, R. Bonetti, C. Broggini, A. Caciolli, F. Confortola, P. Corvisiero, H. Costantini, Z. Elekes, Zs Fulop, G. Gervino, A. Guglielmetti, Gy. Gyürky, C. Gustavino, A. Lemut, B. Limata, M. Marta, C. Mazzocchi, R. Menegazzo, P. Prati, V. Roca, C. Rolfs, C. Rossi Alvarez, E. Somorjai, O. Straniero, F. Strieder, F. Terrasi, H. P. Trautvetter: *Measurement of $^{25}Mg(p,\gamma)^{26}Al$ resonance strengths via gamma spectrometry*. In: *J. Phys. G (35) 014013: Nuclear Physics in Astrophysics III*, 2008.