Zinovia Eleme

Nuclear Physicist, Ph.D.

(+30) 6979592439 | 26/04/1992 | Zinovia.Eleme@cern.ch | zinovia-eleme | zenaeleme | Ioannina, Greece

Work Experience

Postdoctoral Researcher — *Ioannina, Greece*
12/2022-Present

Education

Doctor of Philosophy (Ph.D.) in Experimental Nuclear Physics — *Ioannina, Greece*
Department of Physics, University of Ioannina, Greece — 07/2017-12/2022
- Grade: Excellent
- Thesis: "Study of the ^{241}Am(n,f) reaction at the CERN n_TOF facility"

Postgraduate Studies (M.Sc.) in Physics — *Ioannina, Greece*
Department of Physics, University of Ioannina, Greece — 10/2015-07/2017
- Grade: 8.67/10.00
- Thesis: "Study of (n,x) reactions for Erbium isotopes at energies higher than 17 MeV"

Bachelor of Science Certificate (B.Sc.) in Physics — *Ioannina, Greece*
Department of Physics, University of Ioannina, Greece — 10/2010-07/2015
- Grade: 7.20/10.00
- Thesis: "Preparation of the ^{162}Er(n,2n)^{161}Er reaction study experiment at the neutron beam facility of NCSR Demokritos"

Teaching Experience

Teaching Assistant — *Ioannina, Greece*
Department of Physics, University of Ioannina, Greece — 2022-Present
Laboratories of Modern Physics
Department of Physics, University of Ioannina, Greece — 2015-2022
C Programming Language Laboratory Courses

Supervision Assistance of Bachelor Thesis — *Ioannina, Greece*
Department of Physics, University of Ioannina, Greece — 2019-2020

Technical Skills

Operating Systems	Windows & Linux/Unix
Programming Languages	C & C++
Social Skills	Teamwork, Multitasking & Project Planning
Applications	Microsoft Office, TeXmaker, Spreadsheet, Editing & Presentation Software
Data Analysis	ROOT, Origin, ImageJ
Simulation Toolkits & Codes	Geant4 & TALYS
Gamma-ray Spectroscopy Softwares	"tv" (lkp-Koeln) & Maestro
Languages	Greek (Native), English (University of Michigan, Proficiency C2) & French (Diplôme d' Etudes en Langue Française DELF B2)

Awards and Honors

2018 - 2021 Fellow of the Greek State Scholarships Foundation (IKY) for Ph.D. Studies

Publications

35 papers in peer-reviewed journals; 13 papers in conference proceedings (source:https://inspirehep.net/authors/1966768)

Some selected research papers of my publication record are the following:

- V. Michalopoulou, M. Axiotis, S. Chasapoglou, **Z. Eleme**, G. Gkatis, A. Kalamara, M. Kokkoris, A. Lagoyannis, N. Patronis, A. Stamatopoulos, A. Tsantiri and R. Vlastou, "Measurement of the ^{232}Th(n,f) cross section with quasi-monoenergetic neutron beams in the energy range 2–18 MeV", Eur. Phys. J. A, 57, 306 (2021), DOI:10.1140/epja/s10050-021-00613-6
- E. Georgali, N. Patronis, A. Anastasiadis, X. Aslanoglou, M. Axiotis, S. Chasapoglou, **Z. Eleme**, S. Harissopulos, A. Kalamara, M. Kokkoris, A. Lagoyannis, E. Mitsi, M. I. Savva, I. E. Stamatelatos, T. Vasilopoulou, and R. Vlastou, "Cross-section measurements of the ^{156}Dy(n,2n)^{155}Dy reaction at neutron energies higher than 17 MeV", Phys. Rev. C 104, 064603 (2021), DOI:10.1103/PhysRevC.104.064603
- **Z. Eleme**, N. Patronis, A. Stamatopoulos, A. Tsinganis, M. Kokkoris, V. Michalopoulou, M. Diakaki, R. Vlastou, L Tassan-Got, N. Colonna, J. Heyse et al., "First results of the ^{241}Am(n,f) cross section measurement at the Experimental Area 2 of the n_TOF facility at CERN", EPJ Web Conf. 239 05014 (2020), DOI:10.1051/epjconf/202023905014
- V. Michalopoulou, A. Stamatopoulos, R. Vlastou, M. Kokkoris, A. Tsinganis, M. Diakaki, **Z. Eleme**, N. Patronis, J. Heyse, P. Schillebeeckx, L. Tassan-Got, M. Barbagallo, N. Colonna, S. Urlass, D. Macina. E. Chiaveri et al., "First results of the 230Th(n,f) cross section measurements at the CERN n_TOF facility", EPJ Web Conf. 239 05004 (2020), DOI:10.1051/epjconf/202023905004
- E. Georgali, N. Patronis, A. Anastasiadis, X. Aslanoglou, M. Axiotis, **Z. Eleme**, S. Harissopulos, A. Kalamara, K. Karfopoulos, M. Kokkoris, A. Lagoyannis, M. Peoviti, C. Potiriadis, M. I. Savva, I. E. Stamatelatos, M. E. Stamati, A. Stamatopoulos, E. Vagena, T. Vasilopoulou and R. Vlastou, "Experimental study of the 165Ho(n, 2n) reaction: Cross section measurements for the population of the 164Ho ground state and isomeric state from the threshold up to 20 MeV", Phys. Rev. C 102, 034610 (2020), DOI:10.1103/PhysRevC.102.034610
- E. Georgali, **Z. Eleme**, N. Patronis, X. Aslanoglou, M. Axiotis, M. Diakaki, V. Foteinou, S. Harissopulos, A. Kalamara, M. Kokkoris, A. Lagoyannis, N. G Nicolis, G. Provatas, A. Stamatopoulos, S. Stoulos, A. Tsinganis, E. Vagena, R. Vlastou and S. M. Vogiatzi, "The (n,2n) reaction for the lightest stable erbium isotope 162Er from reaction threshold up to 19 MeV", Phys. Rev. C 98, 014622 (2018), DOI:10.1103/PhysRevC.98.014622

Scientific Proposals

- **Z. Eleme**, A. Tsinganis, N. Patronis, J. Heyse, P. Schillebeeckx, M. Bacak, N. Colonna, M. Diakaki, S. Goula, M. Kokkoris, N. Kyritsis, V. Michalopoulou, D. Papadimitriou, M. Peoviti, M.E. Stamati and R. Vlastou, "Measurement of the neutron-induced fission cross-section of ^{236}U at n_TOF", CERN-INTC-2024-029, INTC-P-700, (2024), https://cds.cern.ch/record/2894847
- N. Patronis, **Z. Eleme**, M. Diakaki, A. Tsinganis, R. Vlastou, M. Kokkoris, M.E. Stamati, V. Michalopoulou, A. Stamatopoulos, M. Barbagallo, N. Colonna, J. Heyse, M. Mastromarco, A. Mengoni, A. Moens, G. Noguere, A.J. Praena, P. Schillebeeckx, G. Sibbens, L. Tassan-Got and D. Vanleeuw, "Measurement of the fission cross-section of ^{243}Am at EAR-1 and EAR-2 of the CERN n_TOF facility", CERN-INTC-2020-048, INTC-P-566, (2020), https://cds.cern.ch/record/2730930

Participation in Research Actions

Title	Consultancy on updating the ^{241}Am(n,f) fission cross section at energies up to 20 MeV
Primary Investigator	Z. Eleme, University of Ioannina
My Role	Theoretical calculations with the TALYS nuclear reactions code
Place	International Atomic Energy Agency (IAEA), Vienna, Austria
Dates	2021
Title	ENEN+ mobility action: Characterization of the targets used in ^{241}Am(n,f) experiment at EAR-2 of n_TOF at CERN
Primary Investigator	Z. Eleme, University of Ioannina
My Role	Investigation of the surface profile of ^{241}Am targets
Place	Joint Research Center (JRC), Geel, Belgium
Dates	2019

Title	CHANDA: Measurement of the fission cross section of ^{241}Am
Primary Investigator	Professor N. Patronis, University of Ioannina
My Role	Experimental setup and Data Analysis
Place	CERN, Geneva, Switzerland
Dates	2018

Title	CHANDA: Comparative study of the neutron beam spatial profile at n_TOF EAR-1 and EAR-2 using CR-39 passive neutron detectors
Primary Investigator	Professor N. Patronis, University of Ioannina
My Role	Experimental setup and Data Analysis
Place	CERN, Geneva, Switzerland
Dates	2016

Title	CHANDA: Neutron beam profile at n_TOF EAR-2 using CR-39 passive neutron detectors
Primary Investigator	Professor N. Patronis, University of Ioannina
My Role	Experimental setup and Data Analysis
Place	CERN, Geneva, Switzerland
Dates	2014

Participation in Conferences, Meetings and Schools

- n_TOF Collaboration Meetings| 2018, 2019, 2020, 2022, 2023, 2024
- Hellenic Nuclear Physics Society (HNPS) annual conferences | 2014, 2015, 2016, 2017, 2019, 2021, 2022, 2023
- SANDA WP3 - Target Preparation for Improvement of Nuclear Data Measurements | October 2022, Paul Scherrer Institute (PSI), Villigen, Switzerland
- IAEA International Conference on Accelerators for Research and Sustainable Development: From Good Practices Towards Socioeconomic Impact | May 2022, IAEA Headquarters, Vienna, Austria
- FLUKA Beginner's Online Training | October 2020, CERN, Switzerland
- Nuclear Data for Science & Technology ND2019 | May 2019, Beijing, China
- n_TOF Winter School | January 2018, Zermatt, Switzerland
- Neutron Resonance Analysis School (NRAS) | November 2017, JRC-Geel, Belgium
- European Physical Society (EPS) Divisional Conference | October 2016, Leuven, Belgium
- 9^{th} International Balkan School on Nuclear Physics | July 2016, Ovidius University, Constanta, Romania

Oral Presentations

SANDA 2021	243-Americium targets for the study of neutron induced fission cross section at the n_TOF facility of CERN
HNPS 2019	Cross-section measurement of ^{241}Am(n,f) reaction at the Experimental Area 2 of the n_TOF facility at CERN: First Results
ND 2019	First results of the ^{241}Am(n,f) cross-section measurement at the Experimental Area 2 of the n_TOF facility at CERN
HNPS 2017	Neutron Beam Spatial Profile at n_TOF using CR-39 Nuclear Track Detectors
HNPS 2015	Determination of the Neutron Beam Spatial Profile at n_TOF EAR2 using CR-39 Track Detectors

Poster Presentations

IAEA 2022	Neutron induced fission cross section measurement of 241-Americium at the n_TOF facility
HNPS 2021	The ^{241}Am(n,f) reaction study at the n_TOF/CERN facility
EPS 2016	Measurement of the ^{162}Er(n,2n)^{161}Er reaction cross-section
IBSNP 2016	Geant4 Monte Carlo Simulations of a 100% relative efficiency HPGe detector