

NICUSOR ARSENE
Intitute of Space Science
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EDUCATION

- Doctor of Philosophy, Astroparticle Physics* Oct 2012 - Jan 2017
Faculty of Physics, University of Bucharest, Bucharest, Romania
- Mass composition of Ultra High Energy Cosmic Rays (UHECRs), Extensive Air Showers (EAS), Quantum Black Holes Induced EAS.
- Master of Science, Nuclear Physics* Oct 2010 - Oct 2012
Faculty of Physics, University of Bucharest, Bucharest, Romania
- Ultra high energy cosmic rays, mass composition of primary cosmic rays.
- Physics Diploma, Theoretical Physics* Oct 2007 - Oct 2010
Faculty of Physics, University of Bucharest, Bucharest, Romania

INTERNATIONAL COLLABORATIONS

- Member of the Pierre Auger Collaboration Jan 2015 - present

WORK EXPERIENCE

- Scientific Researcher III* Dec 2016 - present
Institute of Space Science, Atomistilor 409, 077125 Magurele, Romania
- Research in ultra high energy cosmic rays, extensive air showers, mass composition of primary cosmic rays, quantum black holes production via particles collision.
- Scientific Researcher* Dec 2011 - Dec 2016
Institute of Space Science, Atomistilor 409, 077125 Magurele, Romania
- Research in ultra high energy cosmic rays, extensive air showers, mass composition of primary cosmic rays, quantum black holes from ultra high energy cosmic rays, quantum black holes production at LHC.
- Scientific Researcher Assistant* Jul 2010 - Dec 2011
National Institute for Laser, Plasma and Radiation (INFLPR), Atomistilor 409, 077125 Magurele, Romania
- Study of an anodic arc plasma. Experimental physics.

COMPUTING SKILLS

- Programing languages*
- C/C++, ROOT, Mathematica.
- Operating systems*
- LINUX, Windows.

PUBLICATIONS

N. Arsene, O. Sima, A. Haungs and H. Rebel, "Simulation study of the correlation (X_{max}^μ , N^μ) in view of obtaining information on primary mass of the UHECRs", *Astropart.Phys.* 83 (2016) 13-20.

N. Arsene, R. Casadio, O. Micu, "Quantum production of black holes at colliders", *Eur.Phys.J.* C76 (2016) no.7, 384.

N. Arsene, O. Sima, " X_{max}^μ vs. N^μ from Extensive Air Showers as estimator for the mass of primary UHECR's. Application for the Pierre Auger Observatory", *AIP Conf.Proc.* 1645, 286 (2015).

N. Arsene, L.I. Caramete, P. B. Denton, O. Micu, "Quantum Black Holes Effects on the Shape of Extensive Air Showers", Accepted in *Rom. Rep. Phys.* (2015).

N. Arsene, X. Calmet, L.I. Caramete, O. Micu, "Back-to-Back Black Holes decay Signature at Neutrino Observatories", *Astropart. Phys.* 54,132-138 (2014).

N. Arsene, H. Rebel, O. Sima, "On the possibility to discriminate the mass of the primary cosmic ray using the muon arrival times from extensive air showers: Application for Pierre Auger Observatory", *AIP Conf.Proc.* 1498, 304-308, (2012).

C.C. Surdu-Bob, ..., **N. Arsene**, et al., "Pure, smooth and dense W films obtained by an anodic arc plasma", *OPTOELECTRONICS AND ADVANCED MATERIALS-RAPID COMMUNICATIONS*, 5, 1336-1340, (2011).

CONFERENCE TALKS

Auger Analysis Meeting, Karlsruhe, Germany 2016. "Simulation study of the correlation (X_{max}^μ , N^μ) in view of obtaining information on primary mass of the UHECRs"

Annual session of communications, Faculty of Physics University of Bucharest, Bucharest, Romania, 2015. "Quantum Black Holes Effects on the Shape of Extensive Air Showers".

Carpathian Summer School of Physics, Sinaia, Romania 2014. " X_{max}^μ vs. N^μ from Extensive Air Showers as estimator for the mass of primary UHECR's. Application for the Pierre Auger Observatory".

Carpathian Summer School of Physics, Sinaia, Romania 2012. "On the possibility to discriminate the mass of the primary cosmic ray using the muon arrival times from extensive air showers: Application for Pierre Auger Observatory".

Annual session of communications, Faculty of Physics University of Bucharest, Bucharest, Romania 2012. "On the possibility to discriminate the mass of the primary cosmic ray using the muon arrival times from extensive air showers: Application for Pierre Auger Observatory".

SUMMER SCHOOLS & WORKSHOPS

Offline Workshop and Tutorial 22-24.06 2016, Karlsruhe, Germany 22-24.06 2016

Carpathian Summer School of Physics 2014. "Exotic nuclei and nuclear particle astrophysics", Sinaia - Romania.

International Summer School for Advanced Studies 2012. "Dynamics of open nuclear systems", Predeal, Romania.

Carpathian Summer School of Physics 2012. "Exotic nuclei and nuclear astrophysics", Sinaia - Romania.

GSI-Summer School 2010, Darmstadt - Germany.

AWARDS & FELLOWSHIPS

Award: "Excellence in doctoral research in Romania - Earth Science and Space Science" granted by Ad-Astra organization (<http://premiu.ad-astra.ro/>), 2016.

Fellowship: Carpathian Summer School of Physics 2014. "Exotic nuclei and nuclear particle astrophysics", Sinaia - Romania.

Fellowship: International Summer School for Advanced Studies 2012. "Dynamics of open nuclear systems", Predeal, Romania.

Fellowship: Carpathian Summer School of Physics 2012. "Exotic nuclei and nuclear astrophysics", Sinaia - Romania.