

PERSONAL INFORMATION

Dmitry Testov (PhD)

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Gender M | Date of birth 22 March 1983

Nationality Russian



EDUCATION, TRAINING

- | | | |
|-----------|---|--|
| 2011–2014 | PhD, Experimental Nuclear Physics, University Paris-South 11 and Institute of Nuclear Physics Orsay [thesis on-line] www.theses.fr/2014PA112012/abes/VD2_TESTOV_DMISTRY_17012014.pdf | www.u-psud.fr |
| 2004—2006 | Master, Nuclear Physics, Voronezh State University, GPA 5/5, thesis was done at Joint Institute for Nuclear Research, Dubna [thesis on-line]: http://www1.jinr.ru/Preprints/2007/155%28P13-2007-155%29.pdf | www.jinr.ru |
| 2000—2004 | Bachelor, Medicine Nuclear Physics, Voronezh State University, GPA 4,7/5 | |

MAIN SCIENTIFIC INTERESTS

Investigations of electromagnetic properties of low lying states in neutron-diffident nuclei in the vicinity of ^{100}Sn

Mirror nuclei, mirror energy difference is sd-shell

β -decay properties and structure of neutron-rich isotopes approaching the r-process path

WORK EXPERIENCE

November 2020 — now **Research Scientist III**

[The Extreme Light Infrastructure Nuclear Physics](#) / [Gamma Driven Experiments Department](#)



→ Coordinator of the ELIADE experiment

February 2019 — now **Senior Researcher**

[Joint Institute for Nuclear Research](#) ↻ / [Flerov Laboratory of Nuclear Reactions](#) ↻

→ I coordinate TETRA collaboration ↻ between JINR (Dubna Russia), IPN Orsay (France).

✓ I coordinate the research program between JINR and IPN Orsay to measure β -decay properties of neutron-rich nuclei for astrophysical r-process (about 30 nuclei measured);

✓ Collaborate with the theory group from Bogolubov Laboratory of Theoretical Physics;

✓ I am responsible for maintenance of TETRA

✓ I promote TETRA as international scientific projects. TETRA is included as a scientific tool to DESIR SPIRAL2 ↻ (France), SPES ↻ (Italy).

✓ Additional administrative tasks: ensure timely preparation, submission of formal reports financial controls on grant activities PICs ↻, by bilateral agreement JINR-IN2P3 (France) ↻



October 2014 — 2019 **Research grant**

Department of Physics, Astronomy, University of Padova / Legnaro National Laboratories, Italy
Carry out experimental research activities within the field of nuclear structure physics and/or nuclear astrophysics:

- ✓ Spectroscopy and lifetime measurements of neutron-deficient nuclei using GALILEO and its ancillary devices
- ✓ Study of β -decay properties of neutron-rich nuclei crossing major neutron shells $N=50$, $N=82$.
- ✓ Submitted many scientifically, technically established proposals and Lol at leading European Laboratories for nuclear physics: LNL Legnaro (Italy), IPN Orsay (France)
- ✓ Promote the local facility (National Legnaro Laboratories) at the international levels; present research findings at seminars, conferences see [Talks](#)
- ✓ Mentor two students master (from University of Surrey) and a bachelor student (University of Padova)
- ✓ Report regularly on my activities in peer-reviewed journals see [Publications](#) and [Annual Reports](#)

Support of GALILEO γ -ray spectrometer ([arxiv](#) ⇨) and its ancillary devices:

- ✓ Coordinate assembly of Si detector arrays installed in the high-vacuum reaction chamber: EUCLIDES (*Eur. Phys. J. A* (2019) 55 47) (responsible for the array); SPIDER (*Phys.Scr.* 92, 074001 (2017)) and TRACE (*Eur. Phys. J. A* 54 209 (2018))
- ✓ Operation and characterisation of performance of: High-Purity Germanium Detectors and Si-detectors using standard calibration sources and on-line using nuclear reactions
- ✓ Take a responsibility to purchase new Si detectors at Micron Inc., UK and Alibava Systems; provide quality control upon delivery; reassure compliance with administrative/budget regulations of INFN.
- ✓ Participate in development and construction of new home made neutron detector NEDA (*Nucl. Inst.&Meth. A* 927 81 (2019));
- ✓ Keep up-to-date the community concerning the technical developments and upgrades of GALILEO, draft associated documentation
- ✓ Offer an expert advise to users of LNL Legnaro facilities, 25+ experiments conducted

December 2010 — February 2014 **PhD – Thesis** [thesis online](#) ⇨

Institute of Nuclear Physics Orsay ⇨ & University Paris-Sud 11, Orsay, France ⇨

- ✓ Delivered new detection system TETRA for ALTO project; published in a peer-viewed journal [*Nucl. Inst.&Meth. A* 815 96 (2017)]. Today TETRA is an essential part of ALTO, webpage <http://ipnwww.in2p3.fr/TETRA,694?lang=fr>
- ✓ **Learnt** Monte Carlo N-Particle-code (MCNP) to calculate the best configuration of TETRA; published the results: [*JINST* 10 P09011 (2015)]
- ✓ **Validated** the analysis procedure using well known short-lived β -neutron decaying sources: [*JINST* 14 P08002 (2019)]
- ✓ Developed and tested new method (combined c++ and Wolfram Mathematica) to improve systematic errors of measurements; reported the method and the results in a peer-viewed publication [*Phys. Rev. C* 95, 054320 (2017)]

AWARDS

First Prize in Experimental
Physics Research, 2017
Joint Institute for Nuclear Research

Delayed neutron emission from exotic nuclei <http://www.jinr.ru/posts/jinr-prizes-for-2017/>
First Prize in the experimental nuclear physics (Examination of the phenomena of β -delayed (multi) neutron emission at ALTO ISOL facility using TETRA decay-tape station.

Second Awards in the experimental
research, for young researchers ,
2012, JINR

I received this price to have successfully completed design/construction/commissioning of TETRA decay station at ALTO (IPN Orsay) together with scientists from JINR Dubna

PhD studentship Award from the
French Ministry of Higher Education

Research 3 year Funding Grant, 2010-2014

PERSONAL SKILLS

Languages	English (B2) French (B2) Italian (B2) Russian (native)
Analytical skills	<ul style="list-style-type: none"> – Critical analysis of theoretical and experimental reviews to collect information to support scientific projects; – Strategic planning to push own scientific project from an idea to publication of final result in a peer-reviewed journal;
High-tech scientific equipment	<ul style="list-style-type: none"> – Taking inventory in the design and construction of modern detection systems; – Optimisation of detector design by modelling; – Evaluating experimental approaches and methods in nuclear physics; – Examining performance of nuclear physics instruments;
Proficient computer user	Linux-OS, Windows, scientific computing, C++, root, GEANT4; MCNP; Wolfram Mathematica;
Additional computer skills	MS Office, Open Office, Latex, Adobe Photoshop, Corel Draw.
Useful hobby	Photographer
Organisational / managerial skills	<ul style="list-style-type: none"> – Guide international projects of the research in the field of nuclear physics – Ability (and even strong necessity) to work in a multi-task environment – Member of Local Organising Committee AGATA@LNL workshop March 2019
Accurate communicator	<ul style="list-style-type: none"> – Knowledge of three European languages; – On regular basis I promote scientific projects; – Easy-going person for team work in multi-cultural environment; – I collaborate with scientists in Russia, Vietnam, EU, US; – Deputy deputy in the Scientific Council of the University Paris-South 11 and the Scientific Council of the Institute of Nuclear Physics in Orsay in 2011-2012 – Mentored 2 master and 1 bachelor students; – Assistant in the Physic Mechanic Laboratory for students ; – President of Jury in the nuclear physics section for junior researchers and student (April 2019, JINR) on-line

SUPERVISION OF STUDENTS (3)

Samuel Bakes, master, University of Surrey, UK defended February, 2019	Octupolle deformed bands in ^{110}Te , see Activity Report ✓ INFN Annual Report 2018 „Lifetime measurements of octupolly deformed bands in ^{110}Te ” S. Bakes, D. Testov , the Galileo collaboration on-line
Jack Bradbury, master, University of Surrey, UK defence February, 2020	Studying astrophysical reactions at LNL see Activity Report and J.Bradbury et al., LNL Annual Rep. 2019 p. 35 „Lifetime measurements in ^{113}P ” on-line also published at <i>Nucl. Inst.&Meth. A</i> 979 164345 (2020)
Anita Candiela, bachelor, University of Padova, Italy (2019)	„Mirror energy difference in $A = 33$ ” (on-line)
Avesani, Matilde, bachelor, University of Padova, Italy (2020)	„Studi di struttura nucleare con lo spettrometro GALILEO.” (on-line)