

“APPROVED”



Academician V.A. Matveev

Director of the Joint Institute for Nuclear Research,
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Dubna, 19.09 2017

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Prof. Dr. Pericles A. Mitkas

Rector of Aristotle University of Thessaloniki,
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Thessaloniki, 27.3. 2017

APPENDIX (No1) - 4700-4-17/19
of the fulfilment of joint research work

In the frame of the Agreement concerning Scientific Cooperation between the Joint Institute for Nuclear Research and Aristotle University of Thessaloniki

Joint Institute for Nuclear Research (JINR), Frank Laboratory of Neutron Physics Division of Nuclear Physics Sector of Neutron Activation Analysis and Applied Research and Aristotle University of Thessaloniki (AUTH), Faculty of Sciences, School of Physics, Thessaloniki, Greece have signed this protocol with the purpose of integrating their efforts and shortening the terms of obtaining results in the environmental studies using nuclear and related analytical techniques in accordance with the topical plans for research of collaborating organizations.

The Parties commit themselves to perform the joint investigations and developments according to an agreed program in the framework of the topic: 03-4-1128-2017/2019 “Investigations of Neutron Nuclear Interactions and Properties of the Neutron”; AUTH: “Investigation of the impact of heavy metals and radionuclide contamination on the environment”.

1. Location of the research and developments FLNP JINR (Dubna) and (AUTH), Thessaloniki, Greece
2. Schedule of performing joint work

No	Formulation of work and stages	Terms of work (year, quarter)		Executing organization
		Start	Ending	
1.	Sample collection and sample preparation for NAA and gamma-spectrometry.	I quartal 2017	II quartal 2017	AUTH
2.	NAA (Dubna) and gamma spectrometry (Thessaloniki) of the environmental samples	I quartal 2017	III quartal 2018	FLNP JINR & AUTH
3.	Data processing and paper preparation for publication in scientific journals	III quartal 2018	IV quartal 2019	FLNP JINR & AUTH

3. Commitments of the collaborating organizations:

Commitments	JINR	AUTH
4.1 SCIENTIFIC AND TECHNICAL (conducting of measurements; creation of installations; development of techniques and software; experimental data processing)	<ol style="list-style-type: none"> 1. Development of methodology for irradiation and data acquisition 2. Data processing 3. Comparison of the data obtained in JINR and AUTH 4. Data interpretation and results dissemination 	<ol style="list-style-type: none"> 1. Sample collection and preparation for NAA and gamma-spectrometry 2. Data processing 3. Comparison of the data obtained in JINR and AUTH 4. Data interpretation and results dissemination
4.2 FINANCING (payment of the purchased or developed equipment, materials, etc.) SOURCES OF FINANCING	According to FLNP JINR theme 03-4-1128-2017/2019	According to the budget of PhD students for 2017-2019
4.3 MATERIAL AND TECHNICAL (transfer of devices, equipment, etc.)	Unspecified	Unspecified
4.4. BUSINESS TRIPS OF SPECIALISTS (number, terms, and payments)	In accordance with the business travel plan of 03-4-1128-2017/2019	—
4.5. Obligation of confidentiality	According to JINR regulations	According to AUTH regulations
4.6. Other obligations	Unspecified	Unspecified

5. In the course of the fulfillment of joint research work under the present protocol, the organizations plan to achieve the following concrete results: to study heavy metal pollution in air based on moss analysis by multielement NAA.
6. Information on the work and results of the joint research is confidential.
7. Publication of the results of research carried out in the frames of this protocol, is performed jointly under the additional coordination between collaborating organizations. Registration of applications on the inventions and the discoveries on the results of the work the parties entrust to the patent service JINR which coordinates the order of registration, volume of patent protection, countries of patenting and the condition of using the inventions.
8. Experimental installations (equipment, techniques, technologies) created in frames of the fulfillment of work under the present protocol, are the property of the participating parties.
9. The obtained results are supposed to be used at the Joint institute for Nuclear Research and at the Aristotle University of Thessaloniki with the purpose of development of recommendations regarding diminution of industrial impact on the environment and public health and methodological developments of NAA and gamma-ray spectrometric examination of the environmental samples.
10. In case of possibility of using the results of work with commercial purposes, the parties register the conditions of such use of by an additional agreement.
11. The employees of the organizations, which have been sent for the fulfillment of work under the present protocol, are obliged to strictly observe the mode of work, labor protection rules and safety precautions as well as other instructions acting in the receiving organization.
12. The present protocol will be in effect since its approval by collaborating organizations until 31 December 2019.
13. The present protocol on joint research work can be prolonged, amended or terminated under the agreement of the parties. All changes should be made out by a new protocol or by the appropriate notification by letter. The initiating party warns the other party about termination of the protocol not less than 3 months before the termination.
14. The validity of the protocol is prolonged up to April 2022 on the basis of the Agreement for Academic Cooperation between JINR and AUTH.

15. Persons responsible for solving organizational, scientific and technical questions connected to the fulfillment of this protocol, for the duly informing of the patent services about the inventions as well as for the realization of the necessary instructing of visiting employees are nominated:

JINR

AUTH

Assoc. Prof. Dr. M.V. Frontasyeva (Head of Sector of NAA and Applied Research)

Assoc. Prof. Dr. Alexandra Ioannidou (Associate Professor, School of Physics, Aristotle University of Thessaloniki)



AGREED

Joint Institute for Nuclear Research
Dubna, Russia

Aristotle University of Thessaloniki
Thessaloniki, Greece

Director of Laboratory
Dr. V.N. Shvetsov

Chairman of the School of Physics
Prof. Dr. Kostas Chrysafis




Leader of the theme
Dr. P.V. Sedyshev



Legal addresses of collaborating organizations:

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