

Session Program

11-17 Oct 2020

**LXX International conference "NUCLEUS -
2020. Nuclear physics and elementary
particle physics. Nuclear physics
technologies"**

***Section 1. Experimental and theoretical
studies of the properties of atomic nuclei***

Online

Monday 12 October

15:30

Section 1. Experimental and theoretical studies of the properties of atomic nuclei

Session | Location: Online

15:30–15:55

Description of the $M1$ resonance in ^{208}Pb within the self-consistent phonon-coupling model

Speaker

Victor Tselyaev

15:55–16:20

MICROSCOPIC DESCRIPTION OF ISOSCALAR GIANT MONOPOLE RESONANCE IN $^{118-132}\text{Sn}$

Speaker

Dr Nikolay Arsenyev

16:20–16:45

TWO-PHONON STRUCTURES FOR β -DELAYED γ -SPECTROSCOPY

Speaker

Dr Alexey Severyukhin

16:45–17:00

Coffee break

17:00–17:25

Particle-hole dispersive optical model for open-shell nuclei. Implementations for describing 0^{+} giant resonances in tin isotopes

Speaker

Mr Georgy Kolomiitsev

17:25–17:50

Properties of Isoscalar Giant Multipole Resonances in medium-heavy closed-shell nuclei: a semimicroscopic description

Speaker

Dr Mikhail Gorelik

17:50–18:15

ABOUT THE DEPENDENCE OF NUCLEAR SURFACE DIFFUSENESS ON NEUTRON-PROTON ASYMMETRY AND ITS INFLUENCE ON THE EVOLUTION OF SINGLE-PARTICLE SPECTRA

Speaker

Olga Bespalova

18:40

Tuesday 13 October

14:40

Section 1. Experimental and theoretical studies of the properties of atomic nuclei

Session | Location: Online

14:40–15:05

SELF-CONSISTENT STUDY OF NUCLEAR CHARGE RADII WITHIN THE FAYANS FUNCTIONAL

Speaker

Ivan Borzov

15:05–15:30

THE STRUCTURE OF HIGH-SPIN (9+) ISOMERS AND THE NATURE OF ROTATIONAL BANDS IN ODD-ODD Ho NUCLEI WITH A = 156, 158, 160.

Speaker

Mr Владимир Стегайлов

15:30–15:55

TRIAXIALITY OF EVEN-EVEN NUCLEI WITH QUADRUPOLE AND OCTUPOLE DEFORMATIONS

Speaker

S.N. Kudiratorov

15:55–16:20

Self-consistent calculations of transitions between the first one-phonon 2+ and 3- states in Sn isotopes

Speaker

Mr Mikhail Shitov

16:20–16:35

Coffee break

16:35–17:00

ЭНЕРГЕТИЧЕСКИЙ СПЕКТР И СТРУКТУРА СОСТОЯНИЙ ИЗОТОПА ${}^{156}\text{Gd}$.

Speaker

П.Н. Усманов

17:00–17:25

COLLECTIVE STATES AND BANDCROSSING IN EVEN CERIUM ISOTOPES

Speaker

Dr Alexander Efimov

17:25–17:50

$\Delta I=1$ "STAGGERING" EFFECT IN THE SPECTRUM OF BAND OF EVEN-EVEN NUCLEI

Speaker

F.N. Temirov

18:15

Thursday 15 October

14:29

Section 1. Experimental and theoretical studies of the properties of atomic nuclei

Session | Location: Online

14:29–14:55 **First contribution cancelled**

14:55–15:20 **Shape Coexistence in ^{96}Zr within Geometrical Collective Model**

Speaker

E.V. Mardyban

15:20–15:45

On the microscopic pygmy- and giant resonances theory accounting for complex $1p1h$ phonon configurations

Speaker

Dr Sergey Kamedzhiev

15:45–16:10

ENERGY SPECTRUM OF COLLECTIVE STATES OF ODD-ODD NUCLEI

Speaker

M.S. Nadirbekov

16:10–16:25

Coffee break

16:25–16:50

ENERGY SURFACE AROUND A DEFORMED EVEN-EVEN NUCLEI WITH $150 < A < 190$

Speaker

A. K. Vlasnikov

16:50–17:15

INFLUENCE OF NEUTRON SHELLS ON SURFACE TENSION IN NUCLEI

Speaker

Aleksey Dolgodvorov

17:15–17:40

DEEP NEURAL NETWORKS AND THE PHENOMENOLOGY OF SUPER-HEAVY NUCLEI

Speaker

Andrzej Bobyk

17:40–18:05

DISCRETE TRANSFORMS IN QUANTUM CHAOS

Speaker

Prof. Vadim Bunakov

18:05

Friday 16 October

15:15

Section 1. Experimental and theoretical studies of the properties of atomic nuclei

Session | Location: Online

15:15–15:40

ON POSSIBILITY TO DETECT LIGHT STERILE NEUTRINO IN BETA- AND NEUTRINOLESS DOUBLE BETA-DECAYS OF NUCLEI

Speaker

Dr Sergei Semenov

15:40–16:05

DIFFERENTIAL INTENSITIES OF TWO NEUTRINO DOUBLE BETA-DECAY OF SELENIUM-82

Speaker

Dr Sergei Semenov

16:05–16:30

FOUR-NEUTRON DECAY CORRELATIONS

Speaker

Pavel Sharov

16:30–16:45

Coffee break

16:45–17:10

TAGS SPECTRA ANALYSIS AND BETA DECAY STRENGTH FUNCTION STRUCTURE

Speaker

Igor Izosimov

17:10–17:35

FINE STRUCTURE OF β -DECAY STRENGTH FUNCTION

Speaker

Dr Igor Izosimov

17:35–18:00

NON-STATISTICAL EFFECTS IN BETA & GAMMA DECAYS AND BETA-DELAYED FISSION ANALYSIS

Speaker

Igor Izosimov

18:00–18:25

Investigating the kaonic atoms and K^0 nuclear absorption at low-energy: SIDDHARTA-2 and AMADEUS

Speaker

Dr Raffaele Del Grande

18:25–18:50

Structure Of Light Λ -hypernuclei Near Nucleon Drip Lines And Baryonic Interaction

Speaker

Semyon Sidorov

18:50–19:15

RESEARCH OF ISOBAR: Yb-Tm-Er-Ho WITH A=157.

Speaker

Dr Владимир Стегайлов

19:15

Saturday 17 October

09:25

Section 1. Experimental and theoretical studies of the properties of atomic nuclei

Session | Location: Online

09:25–09:50

NUCLEAR MATTER DENSITY DISTRIBUTIONS OF THE LIGHT WEAKLY BOUND NUCLEI

Speaker

Bakytzhan Urazbekov

09:50–10:15

Use of molecules to extract fundamental properties of nuclei

Speaker

Dr Leonid Skripnikov

10:15–10:40

Study of nuclear magnetic quadrupole moments at triatomic molecules

Speaker

Mr Daniel Maison

10:40–11:05

Collective structure in ^{116}Sb

Speaker

Mr Shabir Dar

11:05–11:20

Coffee break

11:20–11:45

Structure of ^{10}Li in one-neutron transfer reaction $2\text{H}(^9\text{Li}, \text{p})$

Speaker

Andrey Bezbakh

11:45–12:10

STUDY OF LEVEL STRUCTURE OF HEAVY HELIUM ISOTOPE ^8He IN STOPPED PION ABSORPTION

Speaker

Dr Boris Chernyshev

12:10–12:35

FORMATION OF HEAVY HELIUM ISOTOPE ^9He IN $^{11}\text{B}(\pi^-, \text{pp})\text{X}$ REACTION

Speaker

Tatiana Leonova

12:35–13:00

The properties of the $^4\text{He}_3$ and $^3\text{He}^4\text{He}_2$ three - atomic systems

Speaker

Artem Korobitsin

13:00–13:50

Lunch break

13:50

14:10

Section 1. Experimental and theoretical studies of the properties of atomic nuclei

Session | **Location:** Online | **Convener:** Prof. Sergey Yakovlev

14:10–14:35 **Quantum speed limits for time evolution of a system subspace**

Speaker

Prof. Alexander K Motovilov

14:35–15:00 **Metastable states of diatomic beryllium molecule**

Speaker

Sergue Vinitzky

15:00–15:25 **Efimov states in three-atomic systems**

Speaker

E.A. Kolganova

15:25–15:50

THEORETICAL STUDY OF WEAKLY-BOUND TRIATOMIC SYSTEMS WITH FADDEEV EQUATIONS IN TOTAL ANGULAR MOMENTUM REPRESENTATION

Speaker

Vitaly Gradusov

15:50–16:05 **Coffee break**

16:05–16:30 **Role of dibaryon resonances in elastic and inelastic NN scattering**

Speaker

Olga Rubtsova

16:30–16:55

Discrete Variable Representation method in the study of few-body quantum systems with a low binding energy

Speaker

Vladimir Timoshenko

16:55–17:20

SCATTERING PROCESSES IN FEW-BODY SYSTEMS WITH NON-ZERO ANGULAR MOMENTUM

Speaker

Mr Evgeny Yarevsky

17:20–17:45

RADIAL ASYMPTOTIC OF THE WAVE FUNCTION OF FEW-PARTICLES IN THE CONTINUUM

Speaker

Prof. Sergey Yakovlev

17:45