



# LXXI International conference "NUCLEUS – 2021. Nuclear physics and elementary particle physics. Nuclear physics technologies"

## Monday 20 September 2021

### Section 1. Experimental and theoretical studies of the properties of atomic nuclei (13:35 - 18:05)

-Conveners: Egor Zemlin

time	[id] title	presenter
13:35	[45] Search for cluster states in $^{13}\text{C}$	DANILOV, Andrey
14:00	[278] Binding energies of light hypernuclei	EGOROV, Mikhail
14:25	[16] Study of neutron decay channels of light neutron-excess nuclei using ab initio methods	Dr RODKIN, Dmitry
14:50	[283] Thermal shift of atomic levels in hydrogen: influence on the determination of the proton radius	SOLOVYEV, Dmitry
15:15	Coffee break	
15:35	[301] Large-scale calculation of nuclear ground-state properties	Dr YÜKSEL, Esra
16:00	[37] SELF-CONSISTENT CALCULATIONS OF THE GROUND STATE AND $\beta$ -DECAY PROPERTIES IN C, N, O REGION.	BORZOV, Ivan
16:25	[105] Stability of Light Exotic $\Lambda$ -hypernuclei with Unstable Cores	SIDOROV, Semyon
16:50	[121] SPECTROSCOPY OF HEAVY HELIUM ISOTOPE $^9\text{He}$ IN REACTIONS OF STOPPED PION ABSORPTION	Dr ЧЕРНЫШЕВ, Борис
17:15	End of session	

# Tuesday 21 September 2021

## Section 1. Experimental and theoretical studies of the properties of atomic nuclei (13:50 - 18:00)

-Conveners: Dmitrii Nesterov

time	[id] title	presenter
13:50	[36] SELF-CONSISTENT STUDY OF NUCLEAR CHARGE RADII IN Ca REGION	BORZOV, Ivan
14:15	[218] First calculation of the $\gamma$ -decay width of a nuclear $2_1^+$ state: The case of $^{48}\text{Ca}$	SEVERYUKHIN, Alexey
14:40	[171] Experimental study of halo in isobar-analog states	DEMYANOVA, Alla
15:05	[216] SINGLE-PARTICLE ASYMPTOTIC NORMALIZATION COEFFICIENTS IN MIRROR MEDIUM-MASS NUCLEI	SUKHAREVA, Olga
15:30	Coffee break	
15:50	[154] Pairing and $(9/2)_n$ configuration in the neutron-rich Ni isotopes	ЖУЛЯЕВА, Дарья
16:15	[169] Description of the spectra of the lowest states for a chain of Zr isotopes based on the geometric collective model	MARDYBAN, Evgenii
16:40	[96] Giant neutron halo in Ce isotopes near the neutron drip line	BESPALOVA, Olga
17:05	[57] ON DETERMINATION OF $^{82}\text{Se}$ TWO-NEUTRINO DOUBLE BETA DECAY MECHANISM AND STERILE NEUTRINOS CONTRIBUTION	Dr SEMENOV, Sergei
17:30	[376] PAIRING ENERGIES OF ODD ACTINIDE NUCLEI IN FIXED QUANTUM STATES	VLASNIKOV, A. K.

**Wednesday 22 September 2021****Section 1. Experimental and theoretical studies of the properties of atomic nuclei (13:30 - 18:00)****-Conveners: Tatiana Lazareva**

time	[id] title	presenter
13:30	[100] Limiting temperature of nuclei within effective relativistic mean-field theory	PARMAR, Vishal
13:55	[144] Convergence of calculations in oscillator basis	KULIKOV, Vasily
14:20	[41] Z(4)-DDM: A $\gamma$ -rigid solution of the Bohr Hamiltonian with Davidson potential for $\beta$ and $\gamma = 30^\circ$	Dr LAHBAS, Alaaeddine
14:45	[66] ON THE TRUE AND FICTITIOUS ENHANCEMENTS OF THE FUNDAMENTAL SYMMETRY BREAKING EFFECTS	Prof. BUNAKOV, Vadim
15:10	Coffee break	
15:30	[97] New mass evaluation and its implication for the neutron-rich nucleosynthesis product yield	VLADIMIROVA, Elena
15:55	[238] The role of spin-spin forces in calculations of transition probabilities between the first one-phonon states.	Mr SHITOV, Mikhail
16:20	[233] Effect of tensor correlations on the Gamov-Teller strength distribution in closed-shell parent nuclei	BONDARENKO, Vladimir
16:45	[32] NUCLEAR RADII SYSTEMATICS BASED ON AN ARTIFICIAL NEURAL NETWORK WITH FUZZY LOGIC	MITROPOLSKY, I.A.
17:10	[262] STRUCTURE AND PROPERTIES OF NUCLEAR ISOMERS. ON THE 100TH ANNIVERSARY OF THE DISCOVERY OF NUCLEAR ISOMERISM	MITROPOLSKY, Ivan

# Thursday 23 September 2021

## **Section 1. Experimental and theoretical studies of the properties of atomic nuclei: Few-Body Problem in Physics: Theory and Solution Methods (15:00 - 19:00)**

-Conveners: Sergey Yakovlev

time	[id] title	presenter
15:00	[137] Study of light nuclei within the SS-HORSE-NCSM approach	Dr MAZUR, Igor
15:25	[94] Incoming wave boundary conditions in sub-barrier heavy ion fusion reactions	VINITSKY, Sergue
15:50	[255] THREE-BODY SCATTERING IN THE TOTAL ANGULAR MOMENTUM REPRESENTATION	YAREVSKY, Evgeny
16:15	[115] Direct calculation of quasi-stationary states of the neutron plus nonspherical nucleus system.	KRASOVITSKIY, Pavel
16:40	Coffee break	
16:55	[257] Theoretical Study of Weakly-Bound Triatomic Systems with Discrete Variable Representation method	TIMOSHENKO, Vladimir
17:20	[365] DETERMINATION OF ASYMPTOTIC NORMALIZATION COEFFICIENTS BY ANALYTIC CONTINUATION OF DIFFERENTIAL CROSS SECTIONS	BLOKHINTSEV, L.D.
17:45	[186] Optimal bounds on the quantum speed of subspace evolution	Prof. MOTOVILOV, Alexander K
18:10	[210] Spectral density for a discretized continuum	Dr RUBTSOVA, Olga
18:35	[106] HYPER-RADIAL ASYMPTOTIC OF THE WAVE FUNCTION OF THREE PARTICLES WITH COULOMB INTERACTION IN THE CONTINUUM	Prof. YAKOVLEV, Sergey

**Friday 24 September 2021****Section 1. Experimental and theoretical studies of the properties of atomic nuclei (13:00 - 17:00)****-Conveners: Vladimir Kovalenko**

time	[id] title	presenter
13:00	[402] Analysis of random vectors, frequencies of discrete distributions of reference streams, by the method of complex moments	VAKHTEL, Victor
13:25	[236] Microscopic theory of pygmy- and giant resonances: Accounting for complex $1p1h$ phonon and two-phonon configurations.	Prof. KAMERDZHIEV, Sergey
13:50	[69] ANALOG RESONANCES AND LOCAL INTERACTION PARAMETERS	KOROTEEV, Grigory
14:15	[254] Investigation of low-lying resonances in breakup of halo nuclei within the time-dependent approach	Ms VALIOLDA, Dinara
14:40	Coffee break	
14:55	[190] A SEMI-MICROSCOPIC DESCRIPTION OF ISOSCALAR GIANT MULTIPOLE RESONANCES IN MEDIUM-MASS CLOSED SHELL NUCLEI	Dr GORELIK, Mikhail
15:20	[193] DIBARYON RESONANCES AND THREE-BODY FORCES IN LARGE-ANGLE PD SCATTERING AT INTERMEDIATE ENERGIES	Dr PLATONOVA, Maria
15:45	[249] A SEMI-MICROSCOPIC DESCRIPTION OF $0^{\{+}}$ GIANT RESONANCES IN THE EVEN $^{112-124}\text{Sn}$ PARENT NUCLEI	KOLOMIYTSEV, Georgy
16:10	[192] Microscopic description of isoscalar giant monopole resonance: The case of $^{132}\text{Sn}$	ARSENYEV, Nikolay
16:35	[274] ELASTIC HADRON SCATTERING ON THE $7\text{Be}$ NUCLEUS AT INTERMEDIATE ENERGIES	IMAMBEKOV, Onlassyn

# Saturday 25 September 2021

## Section 1. Experimental and theoretical studies of the properties of atomic nuclei (14:00 - 18:50)

-Conveners: Daria Prokhorova

time	[id] title	presenter
14:00	[11] FROM QUARK AND NUCLEON CORRELATIONS TO NUCEAR DRIP LINE	Dr MUSULMANBEKOV, Genis
14:25	[347] THE EXPERIMENTAL ARRANGEMENT AND PRELIMINARY RESULTS OF SEARCH FOR LIGHT NEUTRON CLUSTERS IN 235U NUCLEI DECAY	CHUMAKOV, Daniil K.
14:50	[82] In-source laser spectroscopy of short-lived isotopes in the lead region	MOLKANOV, Pavel
15:15	[275] SOME FEATURES OF THE LONG ROTATIONAL BANDS IN HEAVY AND SUPERHEAVY EVEN-EVEN NUCLEI	EFIMOV, Aleksander
15:40	[368] СВОЙСТВА СОСТОЯНИЙ ОТРИЦАТЕЛЬНОЙ ЧЕТНОСТИ ЯДРА $^{156}\text{Gd}$	УСМАНОВ, П.Н.
16:05	Coffee break	
16:20	[329] Beta-delayed neutron emission from the $^{123}\text{Ag}$ nucleus	TESTOV, Dmitry
16:45	[272] Determination of band-head spin of $^{193}\text{Pb}$ superdeformed Band	Dr JAIN, Poonam
17:10	[118] CONFIRMATION OF A NEW ISOMERIC STATE IN THE $^{186}\text{Re}$ NUCLEUS	KOLTSOV, Vladimir
17:35	[246] Equilibrium ground-state deformation of medium and heavy nuclei calculated on the basis of deformed Woods--Saxon potential with variable surface diffuseness	Ms BYKHALO, Galina Dr STOPANI, Konstantin
18:00	[287] New insights into nuclear physics and weak mixing angle using electroweak probes	CADEDDU, Matteo