

BLTP/JINR - KLFTP/CAS

Joint Workshop on

NUCLEAR PHYSICS

Dubna, August 2-6, 2012

PROGRAM

August 2, Thursday

14:30 - 15:00 *Registration*

15:00 - 15:10 **Opening**

Chair *V. Voronov*

15:10 - 15:35 The effect of $Q > 0$ neutron transfer and weakly bound projectile on near-barrier heavy ion reactions [Huan-Qiao Zhang](#)

15:40 - 16:00 Total and partial capture cross sections in the reactions with deformed nuclei at energies near and below the Coulomb barrier [R. Kuzyakin](#)

16:05 - 16:30 Production of doubly magic nucleus ^{100}Sn in fusion and quasifission reactions [Sh. Kalandarov](#)

16:35 - 17:00 *Coffee break*

Chair *Shan-Gui Zhou*

17:00 - 17:25 Second order phase transition from octupole-non-deformed to octupole deformed shape in the alternating parity bands of nuclei around ^{240}Pu [R. Jolos](#)

17:30 - 17:55 Microscopic analysis of shape transition and low lying excitation for tungsten isotopes [Chunyan Song](#)

18:00 - 18:20 Non-axial octupole shapes in $N = 150$ isotones [Jie Zhao](#)

18:25 - 18:50 Probing the Skyrme interaction through the $M1$ transition between low-energy quadrupole excitations [A. Severyukhin](#)

19:00 **Welcome Party (BLTP)**

August 3, Friday

Chair	<i>Huan-Qiao Zhang</i>	
9:00 - 9:25	Gamma decay of the GDR as a tool for studies of nucleus at extreme values of temperature, spin and isospin	Adam Maj
9:30 - 9:55	Nuclear vorticity in second-order $E1$ giant resonances	V. Nesterenko
10:00 - 10:25	Ground-State correlations and structure of the low-lying states in odd-even spherical and transitional nuclei	S. Mishev
10:30 - 10:50	Effects of phonon-phonon coupling on properties of pygmy resonance in $^{124-132}\text{Sn}$	N. Arsenev
10:55 - 11:25	<i>Coffee break</i>	
Chair	<i>A. Vdovin</i>	
11:25 - 11:50	On the way to a microscopic description of nuclear energy density functionals	P. Ring
11:55 - 12:20	Precise mass measurements of atomic nuclei and their impact in nucleosynthesis processes	Baohua Sun
12:25 - 12:50	Magnetic and antimagnetic rotation in Covariant Density Functional Theory	Jie Meng
12:55 - 14:30	Lunch	
Chair	<i>R. Jolos</i>	
14:30 - 14:55	Relativistic energy density functional description of shape transition in superheavy nuclei	D. Vretenar
15:00 - 15:25	Systematic study of fusion reactions leading to superheavy nuclei	Ning Wang
15:30 - 15:55	The competition between alpha-decay and spontaneous fission for heavy and superheavy nuclei	Hong-Fei Zhang
16:00 - 16:15	The emission of prompt neutrons from the spontaneous fission of the neutron-deficient short-lived isotopes with $Z > 100$	A. Svirikhin
16:20 - 16:50	<i>Coffee break</i>	
Chair	<i>G. Adamian</i>	
16:50 - 17:15	Two-step model for quasi-fission and fusion-fission in the heavy ion reactions	Caiwan Shen
17:20 - 17:45	Synthesis of superheavy nuclei in heavy-ion reactions with transuranium targets	Nan Wang
17:50 - 18:15	Transport phenomenon in heavy ion collisions	Shiwei Yan
18:20 - 18:35	Structure of nuclei in α -decay chains of $^{291,293}117$	A. Kuzmina

August 4, Saturday

Chair	<i>P. Ring</i>	
9:30 - 9:55	Pseudospin symmetry in single particle resonant states	Shan-Gui Zhou
10:00 - 10:25	New method for a solution of coupled radial Schrödinger equations: applications for halo nuclei	S. Ershov
10:30 - 10:55	SD-pair shell model for even-even system	Yanan Luo
11:00 - 11:30	<i>Coffee break</i>	
Chair	<i>Jie Meng</i>	
11:30 - 11:55	Structure of superheavy helium isotopes beyond the drip line	S. Sidorchuk
12:00 - 12:25	Studies of exotic nuclear states	A. Ogloblin
12:30 - 12:55	Three-body correlations in spectrum of ${}^6\text{Be}$ studied in knockout and charge-exchange reactions	I. Egorova
13:00 - 15:00	Lunch	
Chair	<i>A. Maj</i>	
15:00 - 15:25	Effects of the momentum dependent symmetry energy in heavy-ion collisions	Yuan Gao
15:30 - 15:55	Mass distribution for induced fission of different Hg isotopes	A. Andreev
16:00 - 16:25	Cluster approach to the structure of heavy nuclei	T. Shneidman
16:30 - 16:55	Population and properties of superdeformed bands in $A \sim 150$ region	A. Zubov
17:00 - 17:30	<i>Coffee break</i>	
Chair	<i>D. Vretenar</i>	
17:30 - 17:55	Application of heavy shell model to nuclear single particle and collective excitation	Xian-Rong Zhou
18:00 - 18:25	Study of sub-barrier fusion in the ${}^{28}\text{Si}+{}^{208}\text{Pb}$ reaction	E. Kuzmin
18:30 - 18:55	Simulation of quantum systems in quantum computers	Gui Lu Long
19:00 -	Closing	
20:00 -	Conference dinner	

August 5, Sunday

Excursion to Moscow, bus at **8:00** (from hotel "Dubna")