



# LXXII International conference "Nucleus-2022: Fundamental problems and applications"

## Tuesday 12 July 2022

### Experimental and theoretical studies of nuclear reactions: NR2 - Физический факультет, ЦФА (10:00-11:40)

-Conveners: Юрий Чувильский

time	[id] title	presenter
10:00	[261] TIME-DEPENDENT MICROSCOPIC DESCRIPTION OF FAST ALPHA PARTICLES EMITTED IN NUCLEUS-NUCLEUS COLLISIONS	Prof. SAMARIN, Viacheslav
10:20	[149] Sub Coulomb barrier d+208Pb scattering in the time-dependent basis function approach	YIN, Peng ZHAO, Xingbo VARY, James P.
10:40	[406] VELOCITY DISTRIBUTIONS OF PROJECTILE-LIKE FRAGMENTS IN FRAGMENTATION REACTIONS AT FERMI ENERGIES	MIKHAILOVA, Tatiana
11:00	[383] Influence of cluster structure to the mechanism of nuclear reactions	ISSATAYEV, Talgat
11:20	[444] MODELLING OF THE CLUSTER FORMATION IN HEAVY NUCLEI FISSION	UNZHAKOVA, Anna

### Experimental and theoretical studies of nuclear reactions: NR1 - Физический факультет, СФА (10:00-11:40)

-Conveners: V Varlamov

time	[id] title	presenter
10:00	[112] OBSERVATION OF THE SHAPE ISOMER STATES IN FISSION FRAGMENTS FROM ( $\gamma$ , f) REACTIONS	KAMANIN, Dmitry
10:20	[430] Influence of the entrance channel asymmetry on the fission properties of excited 180Hg nuclei	KULKOV, Kirill
10:40	[366] PHOTOFISSION OF 238U IN THE ENERGIES RANGE OF GIANT DIPOLE RESONANCE	ALBAGHDADI, Omar
11:00	[168] Fission modes in 238Np populated by 6Li+232Th	Dr BANERJEE, Tathagata

### Experimental and theoretical studies of nuclear reactions: NR2 - Физический факультет, ЦФА (12:10-13:40)

-Conveners: Юрий Чувильский

time	[id] title	presenter
12:10	[111] NEW MODES OF COLLINEAR CLUSTER TRI-PARTITION OF $^{252}\text{Cf}(sf)$	Prof. PYATKOV, Yuri
12:30	[175] YIELDS AND ENERGY DISTRIBUTIONS OF $\alpha$ -PARTICLES IN SPONTANEOUS TERNARY NUCLEAR FISSION	TITOVA, Larisa
13:10	[287] PROBLEMS OF DESCRIPTION OF P-EVEN T-ODD ASYMMETRIES IN NUCLEAR FISSION REACTIONS WITH THE EMISSION OF LIGHT PARTICLES IN THE FRAMEWORK OF THE SEMICLASSICAL APPROACH	LYUBASHEVSKY, Dmitrii

### Experimental and theoretical studies of nuclear reactions: NR1 - Физический факультет, СФА (12:10-13:50)

**-Conveners: V Varlamov**

time	[id] title	presenter
12:10	[276] ENERGY DEPENDENCE OF TOTAL REACTION CROSS SECTIONS FOR ISOTOPES OF Be ON TARGETS ${}^{28}\text{Si}$ , ${}^{59}\text{Co}$ , ${}^{181}\text{Ta}$	STUKALOV, Sergey
12:30	[29] ASYMPTOTIC NORMALIZATION COEFFICIENTS AND THE NEUTRON WIDTHS FOR ${}^{30}\text{Si}+n \rightarrow {}^{31}\text{Si}$ FROM THE PERIPHERAL ${}^{30}\text{Si}(\text{d},\text{p}){}^{31}\text{Si}$ REACTION	IKROMKHONOV, Erkinjon
12:50	[363] CRYOGENIC GAS CATHETER STOPPING ENERGY EFFICIENCY SIMULATION	KOHOUTOVA, Alena
13:10	[64] Simulated and experimental characteristics of a gas-filled recoil separator DGFRS-II	Mr SOLOVYEV, Dmitriy
13:30	[488] Comparison between elastic scattering of strongly bound $\alpha$ particles and exotic ${}^6\text{He}$ on a ${}^{12}\text{C}$ target and the effect of the two-neutron halo of ${}^6\text{He}$	AMER, Ahmed

**Experimental and theoretical studies of nuclear reactions: NR1 Experiment neutrons - Физический факультет, СФА (15:00-16:40)**

**-Conveners: Yuri Kopatch**

time	[id] title	presenter
15:00	[135] RESULTS OF SIMULATION OF TOTAL AND DIFFERENTIAL CROSS SECTIONS FOR ${}^{236}\text{U}$ FISSION BY NEUTRONS WITH ENERGY UP TO 200 MeV	BARABANOV, Alexey
15:20	[344] Prompt fission neutrons investigation at IREN in resonance neutron energy range	Dr ZEYNALOV, Shakir
15:40	[21] PROMPT FISSION NEUTRON SPECTRA OF ${}^{235}\text{U}$ AND ${}^{239}\text{Pu}$	MASLOV, Vladimir
16:10	[144] THE METHOD AND SET UP FOR THE MEASUREMENT OF DELAYED NEUTRON TEMPORAL CHARACTERISTICS FOR THE FISSION OF HEAVY NUCLEI IN THE COMPLEX PRIMARY NEUTRON FIELDS	Mr GREMYACHKIN, Dmitrii

**Experimental and theoretical studies of nuclear reactions: NR2 - Физический факультет, ЦФА (15:00-16:30)**

**-Conveners: Alla Demyanova**

time	[id] title	presenter
15:00	[123] Study of the ${}^{16}\text{O}(\alpha, \alpha){}^{16}\text{O}(3-)$ and ${}^{15}\text{N}(\alpha, \text{t}){}^{16}\text{O}(3-)$ reactions mechanism at $E_{\alpha} = 30.3$ MeV	ZELENSKAYA, Natali
15:30	[54] Study of muon catalyzed ${}^3\text{He}$ Fusion	Mr SOLOVYEV, I.
15:50	[87] THUNDERSTORM FLASHES AS THE MECHANISM OF ${}^{14}\text{C}$ RADIOISOTOPE GENERATION	LYASHUK, Vladimir
16:10	[124] TIME-DEPENDENT DESCRIPTION OF THE REACTION ${}^{28}\text{Si}({}^{11}\text{Be}, {}^{10}\text{Be})$ AT LOW ENERGIES	AZHIBEKOV, Aidos

**Experimental and theoretical studies of nuclear reactions: NR1 Experiment neutrons - Физический факультет, СФА (17:10-19:00)**

**-Conveners: Yuri Kopatch**

time	[id] title	presenter
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17:10	[445] ASYMMETRY EFFECTS MODELLING IN SLOW NEUTRONS INDUCED PROCESSES ON $^{35}\text{Cl}$ NUCLEUS	OPREA, Alexandru Ioan
17:30	[448] ESTIMATION OF THE REACTION CROSS SECTION $\text{Li}(n,\alpha)\text{T}$	Dr NAJAFOV, Bakhtiyar
17:50	[88] TalysLib: a ROOT-based toolkit for nuclear data access	FEDOROV, Nikita
18:10	[183] Segmented HPGe Detector for Nuclear Reactions Research	БЫСТРЯКОВ, Артём

**Experimental and theoretical studies of nuclear reactions: NR2 - Физический факультет, ЦФА (17:10-19:00)**

**-Conveners: Alla Demyanova**

time	[id] title	presenter
17:10	[230] OPTICAL MODEL ANALYSIS OF PROTON ELASTIC SCATTERING ON $^6\text{Li}$ NUCLEI WITH RESONANCE CONTRIBUTION	Ms SELYANKINA, S. M. Ms SELYANKINA, S. M.
17:30	[336] ELASTIC PROTON SCATTERING BY NUCLEI $^7\text{Be}$ AND $^8\text{B}$ AT ENERGY 700 MeV	IMAMBEK, Onlassyn
17:50	[441] PROTON INDUCES PROCESSES ON STRONTIUM ISOTOPES	OPREA, Cristiana
18:10	[177] Analysis of cluster radioactivity using Q-value dependent relative separation	Ms JINDAL, Chahat Mr SHARMA, Nitin Mr SHARMA, Manoj Kumar

## Wednesday 13 July 2022

### Experimental and theoretical studies of nuclear reactions - Физический ф-т, СФА (15:00-16:40)

-Conveners: Alexander Kuznetsov

time	[id] title	presenter
15:00	[17] THE SPECIFIC FEATURES OF PHOTODISINTEGRATION OF 58,60Ni	Prof. VARLAMOV, Vladimir
15:20	[19] PARTIAL PHOTONUCLEAR REACTION CROSS SECTIONS OBTAINED USING BREMSSTRAHLUNG	Prof. VARLAMOV, Vladimir
15:25	[34] TO YIELD STUDIES FOR THE REACTIONS 13C( $\gamma$ , p), 14N( $\gamma$ , 2p), 14N( $\gamma$ , 2n) WITH (12B, 12N)- ACTIVITY MEASUREMENTS BY DeltaE- DETECTOR TELESCOPES AT THE PULSED ELECTRON ACCELERATOR	DZHILAVYAN, Leonid
15:45	[98] PHOTONUCLEAR REACTIONS: SOME POSSIBILITIES FOR METHODOLOGICAL IMPROVEMENT	KRMAR, Miodrag
16:05	[367] Photoneutron Cross Sections Of Cobalt	Mrs DRUZHININA, Alexandra

### Experimental and theoretical studies of nuclear reactions - Физический ф-т, СФА (17:10-19:00)

-Conveners: Alexander Kuznetsov

time	[id] title	presenter
17:10	[390] The investigation in non-statistical mechanisms of photonuclear emission of charged particles on molybdenum	REMIZOV, Pavel
17:30	[470] INVESTIGATION OF ( $\gamma$ , $\alpha$ n) REACTIONS ON 93Nb	REMIZOV, Pavel
17:40	[472] STUDY OF REACTIONS WITH THE $\alpha$ -PARTICLE EMISSION AT $E_{max}=20$ MeV ON NATURAL ZIRCONIUM TARGETS	REMIZOV, Pavel
17:50	[469] STUDY OF RADIONUCLIDE YIELD IN PHOTONUCLEAR REACTIONS ON NATURAL IRON	IUSIUK, Denis
18:05	[471] STUDY OF ( $\gamma$ , p)-REACTIONS ON NICKEL ISOTOPES	BALABA, Yury
18:20	[311] Application of unfolding method for obtaining nuclear data	KNEZEVIC, David
18:40	[493] ISOMERISM AND DECAY OF ODD-ODD NUCLEI 156,158,160Ho NEW ISOMER $T_{1/2} = (1.8 \pm 0.2)$ min 156Ho	Mr STEGAYLOV, Vladimir

# Thursday 14 July 2022

## Experimental and theoretical studies of nuclear reactions - Физический ф-т, СФА (15:00-16:40)

-Conveners: Vladimir Maslov

time	[id] title	presenter
15:00	[102] DIRECT REACTIONS AND SYNTHESIS OF COLD HEAVY NUCLEI	Prof. BUNAKOV, Vadim
15:20	[110] A NOVEL APPROACH FOR TAKING INTO ACCOUNT THE ZERO-POINT OSCILLATIONS IN CALCULATING HEAVY-ION FUSION CROSS-SECTIONS	Dr CHUSHNYAKOVA, Maria
16:00	[188] Diffuseness of nucleon density distribution and double-folding nucleus-nucleus potential	SIMONOV, Makar

## Experimental and theoretical studies of nuclear reactions - Физический ф-т, СФА (17:09-18:49)

-Conveners: Vladimir Maslov

time	[id] title	presenter
17:09	[243] RELATIVE PROBABILITY OF HIGH-SPIN ISOMERIC STATES POPULATION IN ( $\alpha$ ,n)-REACTIONS	CHUVILSKAYA, Tatjana
17:29	[169] FRAGMENTATION OF NUCLEI UNDER RADIATION ACTION OF VARIOUS TYPE	NOVIKOV, Nikolay
17:49	[18] THE MSU SINP CDFE IN THE NUCLEAR REACTION DATA CENTRES NETWORK	Prof. VARLAMOV, Vladimir
18:09	[11] Charge exchange processes in carbon ions fragmentation at 300 MeV/nucleon: a comparison with models of ion-ion interactions	Ms KULIKOVSKAYA, A. A.
18:29	[108] MEASUREMENT OF THE NEUTRON YIELD FROM $^{13}\text{C}(\alpha, n_0)^{16}\text{O}$ REACTION	PRUSACHENKO, Pavel

## Friday 15 July 2022

### Experimental and theoretical studies of nuclear reactions: Neutrino physics and nuclear astrophysics - Физический ф-т, СФА (10:00-11:40)

-Conveners: Alexander Chepurnov

time	[id] title	presenter
10:00	[275] Nuclei Identification by Multiple Energy Losses in Detectors of the PAMELA Spectrometer	ALEKSEEV, Vladislav
10:20	[431] THE CROSS-SECTION OF NUCLEAR-TUNGSTEN INTERACTIONS OBTAINED WITH MEASUREMENTS OF COSMIC RAYS BY PAMELA	GOLUB, Olga
10:40	[187] Measurement of the reactions with light nuclei by AMBER experiment at CERN	DZYUBA, Alexey
11:00	[83] ЗАХВАТ СОЛНЕЧНЫХ НЕЙТРИНО ЯДРАМИ МОЛИБДЕНА 98 и 100	ОСИПЕНКО, Алексей
11:20	[130] Cross section of neutrino absorption by $^{82}\text{Se}$ nuclei	Dr SEMENOV, Sergei

### Experimental and theoretical studies of nuclear reactions: High energies - Физический ф-т, СФА (12:10-13:50)

-Conveners: Alexander Chepurnov

time	[id] title	presenter
12:10	[370] STUDY OF THE MECHANISMS OF HADRON-NUCLEAR INTERACTIONS ON THE POSITIVE BEAM LINE 18 OF U-70 ACCELERATOR (Experiment proposal)	SADOVSKY, Serguei
12:30	[459] STUDY OF TAGGED NEUTRINO BEAM CHARACTERISTICS AT THE U-70 ACCELERATOR	Dr SOKOLOV, A. A.
12:50	[404] DEUTERON BEAM VECTOR POLARIZATION MEASUREMENT USING PROTON-PROTON QUASIELASTIC SCATTERING AT THE ENERGIES FROM 200 TO 650 MEV/NUCLEON	VOLKOV, Ivan
13:10	[329] Construction Management Information System at JINR	CEBALLOS SANCHEZ, Cesar

### Experimental and theoretical studies of nuclear reactions - Физический ф-т, СФА (15:00-16:40)

-Conveners: V Varlamov

time	[id] title	presenter
15:00	[428] LOW ENERGY INCOMPLETE FUSION REACTIONS: PROBING OF ENTRANCE CHANEEL EFFECTS	Mr JASHWAL, ANUJ KUMAR
15:20	[387] INVESTIGATION OF FISSION MODES OF $^{248}\text{Cf}$ AND $^{254,256}\text{Fm}$ FORMED IN THE REACTIONS WITH HEAVY IONS	OSTROUKHOV, A.A.
16:00	[308] Study of multinucleon transfers in reactions with $^{48}\text{Ca}$ ions on Au, U targets at an energy of 280 MeV	SHAKHOV, Aleksei

### Experimental and theoretical studies of nuclear reactions: Few body - Физический ф-т, ЦФА (17:09-18:50)

-Conveners: Vladimir Melezhik

time	[id] title	presenter
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17:09	[290] RADIATIVE CAPTURE IN THE ${}^4\text{He} + {}^2\text{H}$ SYSTEM IN THE FRAMEWORK OF A MICROSCOPIC APPROACH	Dr SOLOVYEV, Alexander
17:29	[216] Muon Capture on the Deuteron. The MuSun Experiment	Dr VOROPAEV, N.I.
17:50	[260] Experiments to search for singlet deuteron and problem of the dineutron	BORZAKOV, Sergey
18:10	[181] Data on the np-scattering length from the nd-breakup reaction at low energies	KASPAROV, Aleksandr

**Experimental and theoretical studies of nuclear reactions - Физический ф-т, СФА (17:10-18:50)**

**-Conveners: V Varlamov**

time	[id] title	presenter
17:10	[141] Studies of excited states of ${}^9\text{Be}$ in the region of 11-13 MeV excitation	STARASTSIN, Viktor
17:30	[461] Cross-section measurement for the ${}^7\text{Li}(p,p'{}^{\infty}){}^7\text{Li}$ and ${}^7\text{Li}(p,{}^{\infty}){}^4\text{He}$ reaction	Dr KASATOV, D.
17:50	[307] DIFFERENTIAL CROSS-SECTIONS FOR ELASTIC BACKSCATTERING OF ALPHA PARTICLES BY CARBON	BOBROVSKII, Timofey
18:10	[494] ANALYSIS OF THE COMPOSITION OF ISOTOPES IN A SAMPLE OF HIGH-TEMPERATURE SUPERCONDUCTORS (HTS) AFTER IRRADIATION IN THE RADIATION FIELD OF A LEAD CONVERTER WITH A PROTON BEAM (EP = 660 MeV)	Mr STEGAYLOV, Vladimir