

Report 2020

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Publications:

Title	Authors	Journal
Modeling of GERDA Phase II data	Agostini, M et al. including Inzhechik L. V.	Journal of High Energy Physics
First Search for Bosonic Superweakly Interacting Massive Particles with Masses up to $1\text{MeV}/c^2$ with GERDA	Agostini, M et al. including Inzhechik L. V.	<i>Phys.Rev.Lett</i>
Transverse and longitudinal segmented forward hadron calorimeters with SiPMs light readout for future fixed target heavy ion experiments	Guber, F. Finogeev, D. Golubeva, M. Ivashkin, A. Zvestnyy, A. Karpushkin, N. Morozov, S. Kugler, A. Mikhaylov, V. Senger, A.	Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment
Compact segmented hadron calorimeter for detection of low energy spectators at MPD/NICA facility	Ivashkin, A. Finogeev, D. Golubeva, M. Guber, F. Zvestnyy, A. Karpushkin, N. Morozov, S.	Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment
Effect of High-Lying Resonances on Cross Sections for Solar-Neutrino Capture by 127I Nuclei	Lutostansky, Y.S. Koroteev, G.A. Klochkova, N.V. Osipenko, A.P. Tikhonov, V.N. Fazliakhmetov, A. N.	Physics of Atomic Nuclei
Prototype of a segmented scintillator detector for particle flux measurements on spacecraft	Stadnichuk, E. Abramova, T. Zelenyi, M. Zvestnyy, A. Nozik, A. Palmin, V. Zimovets, I.	Journal of Instrumentation
High-multiplicity muon events observed with EMMA array	Trzaska, W.H. Bezrukov, L. Enqvist, T. Inzhechik, L. Joutsenvaara, J. Kuusiniemi, P. Loo, K. Lubsan dorzhiev, B. Supecki, M.	Journal of Physics: Conference Series
New Capabilities of an Iodine Detector for Solar Neutrinos	Lutostansky, Y.S. Koroteev, G.A. Klochkova, N.V. Osipenko, A.P. Tikhonov, V.N. Fazliakhmetov, A. N.	JETP Letters
New forward hadron calorimeter and hodoscope for the BM@N heavy ions experiment	Guber, F. Finogeev, D. Golubeva, M. Ivashkin, A. Zvestnyy, A. Kapishin, M. Karpushkin, N. Morozov, S. Petukhov, O.	Journal of Instrumentation
Formation of Free and Bound Spectator Nucleons in Hadronic Interactions between Relativistic Nuclei	Svetlichnyi, A.O. Pshenichnov, I.A.	Bulletin of the Russian Academy of Sciences: Physics
Declarative analysis in "troitsknu-mass" experiment	Nozik, A.	Journal of Physics: Conference Series
Nuclear Resonances and the Interaction between Neutrinos and a Ga-Ge System	Koroteev, G.A. Klochkova, N.V. Osipenko, A.P. Lutostansky, Y.S. Tikhonov, V.N. Fazliakhmetov, A.N.	Bulletin of the Russian Academy of Sciences: Physics
Secondary Nuclei from Peripheral and Ultraperipheral Collisions of Relativistic Heavy Ions	Pshenichnov, I.A. Dmitrieva, U.A. Svetlichnyi, A.O.	Bulletin of the Russian Academy of Sciences: Physics

Conferences:

- "Exploring nuclear fragmentation at heavy-ion colliders", A.Svetlichnyi, R.Nepeyvoda, I.Pshenichnov-- NUCLEUS-2020, 11-17 October 2020 online
- "What can we learn from remnants of spectator matter in central nucleus-nucleus collisions?", I.Pshenichnov, N.Kozyrev, A.Svetlichnyi, U.Dmitrieva-- NUCLEUS-2020, 11-17 October 2020 online
- "Spectator nucleons in most central Au-Au collisions at NICA", U.Dmitrieva, N.Kozyrev, A.Svetlichnyi, I.Pshenichnov-- AYSS-2020, 9-13 November 2020 online
- "Using spectator matter for centrality determination in nucleus-nucleus collisions", A.Svetlichnyi-- Workshop on analysis techniques for centrality determination and flow measurements at FAIR and NICA, 24-28 August 2020 online
- "C++ implementation of famous nuclear fragmentation models written originally in Fortran", I.Pshenichnov, A.Svetlichnyi, R.Nepeyvoda-- Workshop on analysis techniques for centrality determination and flow measurements at FAIR and NICA, 24-28 August 2020 online
- "Composition of spectator matter as a key to centrality determination", A.Svetlichnyi-- SHINE Open Seminar, 17 Sep 2020, Zurich (online)
- "Зависимость n/p отношения в спекторной материи от энергии и массы сталкивающихся ядер", P.C.Непейвода, A.O.Светличный-- Ломоносов-2020, 10 - 27 ноября 2020, онлайн.
- "Зависимость выходов спекторных протонов и нейтронов в столкновениях релятивистских ядер Pb208 от толщины поверхностного нейтронного слоя", H.A.Козырев, U.A.Дмитриева, A.O.Светличный-- Ломоносов-2020, 10 - 27 ноября 2020, онлайн.

- "Properties of Spectator Matter in Nuclear Collisions at the NICA Collider", I. Pshenichnov, R. Nepeyvoda, N. Kozyrev, A. Svetlichnyi, U. Dmitrieva -- RFBR grants for NICA, 20-23 October 2020, Dubna (online).
- "Влияние поверхностного нейтронного слоя на спекторную материю в столкновениях релятивистских ядер", Н.А. Козырев, И.А. Пшеничнов, А.О. Светличный -- 63-я всероссийская конференция МФТИ
- "Анализ фрагментации спекторов в столкновениях тяжёлых ядер", Р.С. Непейвода, А.О. Светличный, И.А. Пшеничнов -- 63-я всероссийская конференция МФТИ
- Alexander Nozik, Timur Hamitov, 11th IAXO Collaboration Meeting, Preliminary Slow Control system design, CERN
- Alexander Nozik, 12th IAXO Collaboration Meeting, Confluence, matter most and software coordination, online
- Alexander Nozik, ICPPA-2020, Advanced multi-platform visualization framework for particle physics experiments (<https://indico.particle.mephi.ru/event/35/contributions/2279/>)
- "Простейшая реакторная модель динамики лавин убегающих электронов в грозовых облаках", Стадничук Е.М. -- 63-я всероссийская конференция МФТИ, <https://conf.mipt.ru/conference/8359>
- "Бесконечная позитронная обратная связь в Relativistic Feedback Discharge Model", Стадничук Е.М. -- IX межинститутская молодёжная конференция Физика элементарных частиц и космология 2020, <https://belle.lebedev.ru/conference/>
- "A criterion for infinite positron feedback in the dynamics of runaway electron avalanches", E. Stadnichuk -- The XXIV International Scientific Conference of Young Scientists and Specialists (AYSS-2020), <https://indico.jinr.ru/event/11119/>
- "Сцинтилляционный детектор солнечных космических лучей", Стадничук Е.М., Зимовец И.В., Зелёный М.Е., Пальмин В.С., Моисеенко Д.А., Шестаков А.Ю., Журавлев Р.Н. -- Пятнадцатая ежегодная конференция "Физика плазмы в солнечной системе", <https://plasma2020.cosmos.ru/>
- "Хаотическая реакторная модель", Стадничук Е.М., Нозика А., Зелёный М.Е. -- Пятнадцатая ежегодная конференция "Физика плазмы в солнечной системе", <https://plasma2020.cosmos.ru/>
- " $^{127}(\text{nu}, \text{e})^{127}\text{X}$ reaction for solar neutrino spectrum clarification", A.N. Fazliakhmetov, G.A. Koroteev, Yu.S. Lutostansky, V.N. Tikhonov, Conference on Neutrino and Nuclear Physics 2020 (CNNP2020), Cape Town (South Africa) 24-28 February 2020 https://indico.tlabs.ac.za/event/85/contributions/1552/attachments/710/827/Fazliakhmetov_CNNP2020.pdf
- "GTNuclear resonances for $^{71}\text{Ga}(\text{e}, \text{e})^{71}\text{Ge}$ reaction investigation", A.N. Fazliakhmetov, G.A. Koroteev, Yu.S. Lutostansky, V.N. Tikhonov, Conference on Neutrino and Nuclear Physics 2020 (CNNP2020), Cape Town (South Africa) 24-28 February 2020 https://indico.tlabs.ac.za/event/85/contributions/1551/attachments/662/771/CNNP_Koroteev_28.02.pdf
- "Calculation of the neutrino-nuclear reaction cross-sections for ^{76}Ge nuclei and estimation of the solar neutrino background in the GERDA/LEGEND experiments", A.N. Fazliakhmetov, G.A. Koroteev, Yu.S. Lutostansky, A.K. Vyborov, Conference on Neutrino and Nuclear Physics 2020 (CNNP2020), Cape Town (South Africa) 24-28 February 2020 https://indico.tlabs.ac.za/event/85/contributions/1555/attachments/712/830/Calculation_of_the_neutrino-nuclear_reaction_cross-sections_for_Ge76_nuclei_and_estimation_of_the_solar_neutrino_background_in_the_GERDA/LEGEND_experiments_.pdf
- " $^{127}\text{I}(\text{e}, \text{e}^-)^{127}\text{Xe}$ reaction for solar neutrino spectrum clarification", A.N. Fazliakhmetov, G.A. Koroteev, Yu.S. Lutostansky, A. P. Osipenko, V.N. Tikhonov, NUCLEUS-2020, 11-17 October 2020 online https://indico.cern.ch/event/839985/contributions/3985363/attachments/2120569/3569074/Fazliakhmetov_NUCLEUS2020.pdf
- "Проектирование системы метаанных физических событий эксперимента VM@N мегапроекта NICA", А.Г. Дегтярев, К.В. Герценберггер, П.А. Климай, 63-я всероссийская конференция МФТИ
- "Development of the Information Systems for online and offline data processing in the NICA experiments", K. Gertsenberger et al. (incl. A. Nozik, P. Klimaj), The Conference on RFBR Grants for NICA 20-23 October 2020, JINR, Dubna, Russia