

Приложение 1

Директору ОИЯИ

академику РАН Г.В.Трубникову

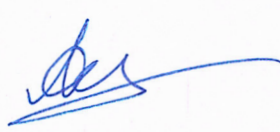
от Апарина Алексея Андреевича  
(ФИО, должность, сектор, отдел,

СНС сектор № 1, НЭОФТИ на РНИС, ЛФВЭ  
отделение, лаборатория)

**ЗАЯВЛЕНИЕ**

Прошу Вас допустить меня к участию в выборах на замещение вакантной должности

старшего научного сотрудника, сектора №1 НЭОФТИ на РНИС, ЛФВЭ  
(название должности, сектора, отдела, отделения, лаборатории)

 / Апарин А. А. / 01.04.22

Научная биография (Curriculum Vitae)

Старшего научного сотрудника сектора № 1, НЭОФТИ на RHIC, отделения № 4, ЛФВЭ  
(название занимаемой должности, отдела, сектора, отделения, лаборатории)

Апарина Алексея Андреевича

(Ф.И.О.)

Апарин Алексей Андреевич, 10.02.1989, [aparin@jinr.ru](mailto:aparin@jinr.ru), 216 4909

**Образование**

Высшее, 2006 – 2012 МГУ им. М.В. Ломоносова, специалист  
2018 кандидат физ.-мат. наук, специальность 01.04.16, ОИЯИ

**Опыт работы**


с 2010 г. – техник, мнс, нс, снс ЛФВЭ ОИЯИ  
с 2012 г. – член коллаборации STAR  
с 2019 г. – член коллаборации MPD

**Научные интересы**

Физика высоких энергий, столкновения тяжелых ионов, рождение частиц в  
глубоконеупругих процессах

WoS ResearcherID  
AAE-1455-2022  
SCOPUS author ID  
55646156200

Руководитель гранта РФФИ 22-72-10028, участник ПЦФ МО Республики Казахстан BR21881941,  
руководитель двух грантов Полномочного Представителя АРЕ в ОИЯИ на 2024 г., лауреат  
гранта ОИЯИ для молодых ученых за 2019 год

 / Апарин А.А. / 01.04.22

# Список на 7 месяцев

## Апарин Алексей Андреевич,

(Отделение №4 Физики на встречных пучках - Научно-экспериментальный отдел физики тяжелых ионов на RHIC - Сектор №1 исследований структуры ядер и частиц при экстремальных условиях, старший научный сотрудник)

### Список научных работ

за период с 2019 по 2024гг. (данные на 01.04.2024)

#### Публикации в рецензируемых журналах (зарубежные):

1. Measurement of inclusive J/psi suppression in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV through the dimuon channel at STAR  
*J. Adam ... A.A. Aparin et al. (STAR Collaboration)*, Phys.Lett. B, Изд:Elsevier, 797, 134917-134945, 2019
2. Longitudinal double-spin asymmetry for inclusive jet and dijet production in pp collisions at  $\sqrt{s} = 510$  GeV  
*J. Adam, ... A. Aparin et al. (STAR Collaboration)*, Phys.Rev. D, Изд:APS, 100, 5, 052005-052032, 2019
3. Underlying event measurements in p+p collisions at  $\sqrt{s} = 200$  GeV at RHIC  
*J. Adam ... A. Aparin ... et al. (STAR collaboration)*, Phys Rev D, 101, 5, 052004-052013, 2019
4. Beam energy dependence of (anti-)deuteron production in Au + Au collisions at the BNL Relativistic Heavy Ion Collider  
*J. Adam ... G.S. Averichev et al. (STAR Collaboration)*, Phys.Rev.C, 6, C99, 064905-064922, 2019
5. Measurement of the longitudinal spin asymmetries for weak boson production in proton-proton collisions at  $s = 510$  GeV  
*J. Adam ... A.A. Aparin et al. (STAR Collaboration)*, Phys.Rev. D, Изд:APS, 99, 5, 051102-051111, 2019
6. Collision-energy dependence of second-order off-diagonal and diagonal cumulants of net-charge, net-proton, and net-kaon multiplicity distributions in Au + Au collisions  
*J. Adam ... A.A. Aparin et al. (STAR Collaboration)*, Phys.Rev. C, 100, 1, 014902-014914, 2019
7. Azimuthal Harmonics in Small and Large Collision Systems at RHIC Top Energies  
*J. Adam ... A.A. Aparin et al. (STAR Collaboration)*, Phys.Rev.Lett., 122, 17, 172301-172309, 2019
8. Observation of excess J/psi yield at very low transverse momenta in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV and U+U collisions at  $\sqrt{s_{NN}} = 193$  GeV  
*J. Adam ... A.A. Aparin et al. (STAR Collaboration)*, Phys.Rev.Lett., 123, 13, 132302-132310, 2019

9. First observation of the directed flow of D0 and bar-D0 in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV

*J. Adam ... A.A. Aparin et al. (STAR collaboration)*, Phys.Rev.Lett., 123, 16, 162301-162309, 2019

10. Measurements of the transverse-momentum-dependent cross sections of J/psi production at mid-rapidity in proton+proton collisions at  $\sqrt{s_{NN}} = 510$  and 500 GeV with the STAR detector

*J. Adam ... A.A. Aparin et al. (STAR collaboration)*, Phys.Rev. D, Изд:APS, 100, 5, 052009-052024, 2019

11. Polarization of Lambda (Lambda-bar) hyperons along the beam direction in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV

*J. Adam ... A.A. Aparin et al. (STAR collaboration)*, Phys.Rev.Lett., 123, 13, 132301-132309, 2019

12. Centrality and transverse momentum dependence of D0-meson production at mid-rapidity in Au+Au collisions at  $\sqrt{s_{NN}}=200$ GeV

*J. Adam ... A.A. Aparin et al. (STAR Collaboration)*, Phys.Rev. C, 99, 3, 034908-034916, 2019

13. Results on total and elastic cross sections in proton-proton collisions at  $\sqrt{s_{NN}} = 200$  GeV

*J. Adam ... A. Aparin, et al. (STAR collaboration)*, Phys.Lett. B, Изд:Elsevier, 808, 135663\1-135663\9, 2020

14. Comparison of transverse single-spin asymmetries for forward pi0 production in polarized pp, pAl and pA collisions at nucleon pair c.m. energy  $\sqrt{s_{NN}}=200$  GeV

*J. Adam ... A. Aparin, et al. (STAR collaboration)*, Phys.Rev.D, 103, 7, 072005-072005/20, 2020

15. Measurement of transverse single-spin asymmetries of pi0 and electromagnetic jets at forward rapidity in 200 and 500 GeV transversely polarized proton-proton collisions

*J. Adam ... A. Aparin, et al. (STAR collaboration)*, Phys.Rev.D, 103, 9, 092009-092009/14, 2020

16. Measurement of D<sup>0</sup> meson + hadron two-dimensional angular correlations in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV

*J. Adam ... A. Aparin, et al. (STAR collaboration)*, Phys.Rev.C, 102, 1, 014905\1-014905\15, 2020

17. Measurement of the central exclusive production of charged particle pairs in proton-proton collisions at  $\sqrt{s} = 200$  GeV with the STAR detector at RHIC

*J. Adam ... A. Aparin, et al. (STAR collaboration)*, JHEP, 07, 178-224, 2020

18. Measurement of inclusive charged-particle jet production in Au + Au collisions at  $\sqrt{s_{NN}} = 200$  GeV

*J. Adam ... A. Aparin, et al. (STAR collaboration)*, Phys.Rev.C, 102, 5, 054913\1-054913\25, 2020

19. First measurement of  $\Lambda_c$  baryon production in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV  
*J. Adam ... A. Aparin, et al. (STAR collaboration)*, Phys.Rev.Lett., 124, 17, 172301\1-172301\8, 2020
20. Beam energy dependence of net- $\Lambda$  fluctuations measured by the STAR experiment at the BNL Relativistic Heavy Ion Collider  
*J. Adam ... A. Aparin, et al. (STAR collaboration)*, Phys.Rev.C, 102, 2, 024903\1-024903\11, 2020
21. Measurement of inclusive  $J/\psi$  polarization in p+p collisions at  $\sqrt{s} = 200$  GeV by the STAR experiment  
*J. Adam ... A. Aparin, et al. (STAR collaboration)*, Phys.Rev.D, 102, 9, 092009\1-092009\15, 2020
22. Measurement of groomed jet substructure observables in p+p collisions at  $\sqrt{s} = 200$  GeV with STAR  
*J. Adam ... A. Aparin, et al. (STAR collaboration)*, Phys.Lett. B, Изд:Elsevier, 811, 135846\1-135846\24, 2020
23. Investigation of the linear and mode-coupled flow harmonics in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV  
*J. Adam ... A. Aparin, et al. (STAR collaboration)*, Phys.Lett. B, Изд:Elsevier, 809, 135728\1-135728\9, 2020
24. Beam-energy dependence of the directed flow of deuterons in Au+Au collisions  
*J. Adam ... A. Aparin, et al. (STAR collaboration)*, Phys.Rev.C, 102, 4, 044906\1-044906\8, 2020
25. Measurement of the mass difference and the binding energy of the hypertriton and antihypertriton  
*J. Adam ... A. Aparin, et al. (STAR collaboration)*, Nature Physics, ISSN:1745-2473, eISSN:1745-2481, Изд:Macmillan Publishers Limited., 16, 4, 409-412, 2020
26. Bulk properties of the system formed in Au+Au collisions at  $\sqrt{s_{NN}} = 14.5$  GeV at the BNL STAR detector  
*J. Adam ... A. Aparin, et al. (STAR collaboration)*, Phys.Rev.C, 101, 2, 024905-024930, 2020
27. Observation of enhancement of charmed baryon-to-meson ratio in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV  
*J. Adam ... A. Aparin, et al. (STAR collaboration)*, Phys.Rev.Lett., 124, 17, 172301-172308, 2020
28. Cumulants and correlation functions of net-proton, proton, and antiproton multiplicity distributions in Au+Au collisions at energies available at the BNL Relativistic Heavy Ion  
*M. Abdallah ... A. Aparin, et al. (STAR collaboration)*, Phys.Rev.C, 104, 2, 024902/1-024902/34, 2021

29. Global Lambda-hyperon polarization in Au+Au collisions at  $\sqrt{s_{NN}} = 3$  GeV  
*M. Abdallah ... A. Aparin, et al. (STAR collaboration)*, Phys.Rev.C, 104, 6,  
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30. Investigation of the beam energy dependence of particle production in  
gold-gold collisions performed at NICA energy range  
*Elena A. Pervyshina, Alexey Aparin*, AIP Conf.Proc, 2377, 1, 030012-030017,  
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31. Observation of  $D^{\pm s}/D^0$  enhancement in Au+Au collisions at  $\sqrt{s_{NN}} =$   
200 GeV  
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32. Invariant Jet Mass Measurements in pp Collisions at  $\sqrt{s} = 200$  GeV at  
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*M. Abdallah ... A. Aparin, et al. (STAR collaboration)*, Phys.Rev.D, 104, 5,  
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33. Cumulants and correlation functions of net-proton, proton, and antiproton  
multiplicity distributions in Au+Au collisions at energies available at the BNL  
Relativistic Heavy Ion Collider  
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34. Longitudinal double-spin asymmetry for inclusive jet and dijet production  
in polarized proton collisions at  $\sqrt{s} = 200$  GeV  
*M. Abdallah ... A. Aparin, et al. (STAR collaboration)*, Phys.Rev.D, 103, 9,  
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35. Measurements of W and Z/ $\gamma$  cross sections and their ratios in p+p  
collisions at RHIC  
*J. Adam ... A. Aparin, et al. (STAR collaboration)*, Phys.Rev.D, 103, 012001/1-  
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36. Azimuthal anisotropy measurements of strange and multistrange hadrons in  
U+U collisions at  $\sqrt{s_{NN}} = 193$  GeV at the BNL Relativistic Heavy Ion  
Collider  
*M. Abdallah ... A. Aparin, et al. (STAR collaboration)*, Phys.Rev.C, 103, 6,  
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37. Global Polarization of Xi and Omega Hyperons in Au+Au Collisions at  
 $\sqrt{s_{NN}} = 200$  GeV  
*J. Adam ... A. Aparin, et al. (STAR collaboration)*, Phys.Rev.Lett., 126, 16,  
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38. Probing strangeness canonical ensemble with K-,  $\phi$  (1020) and  $\Xi^-$ -  
production in Au+Au collisions at  $\sqrt{s_{NN}} = 3$  GeV  
*M. Abdallah ... A. Aparin, et al. (STAR collaboration)*, Phys.Lett.B, 831,  
137152/1-137152/9, 2022

39. Collision-System and Beam-Energy Dependence of Anisotropic Flow

## Fluctuations

*M. Abdallah ... A.A. Aparin et al (STAR collaboration), Phys.Rev.Lett., 129, 25, 252301/1-252301/9, 2022*

40. Measurement of cold nuclear matter effects for inclusive J/psi in p+Au collisions at  $\sqrt{s_{NN}}=200$  GeV

*M. Abdallah ... A. Aparin, et al. (STAR collaboration), Phys.Lett.B, 825, 136865/1-136865/31, 2022*

41. Measurements of Proton High Order Cumulants in  $\sqrt{s_{NN}} = 3$  GeV Au+Au Collisions and Implications for the QCD Critical Point

*M. Abdallah ... A. Aparin, et al. (STAR collaboration), Phys.Rev.Lett., 128, 20, 202303/1-202303/9, 2022*

42. Measurement of inclusive electrons from open heavy-flavor hadron decays in p+p collisions at  $\sqrt{s} = 200$  GeV with the STAR detector

*M. Abdallah ... A. Aparin, et al. (STAR collaboration), Phys.Rev.D, 105, 3, 032007/1-032007/11, 2022*

43. Disappearance of partonic collectivity in  $\sqrt{s_{NN}} = 3$  GeV Au+Au collisions at RHIC

*M. Abdallah ... A. Aparin, et al. (STAR collaboration), Phys.Lett.B, 827, 137003/1-137003/8, 2022*

44. Search for the chiral magnetic effect with isobar collisions at  $\sqrt{s_{NN}} = 200$  GeV by the STAR Collaboration at the BNL Relativistic Heavy Ion Collider

*M. Abdallah ... A. Aparin, et al. (STAR collaboration), Phys.Rev.C, 105, 1, 014901/1-014901/45, 2022*

45. Measurements of  $H_{\Lambda^3}$  and  $H_{\Lambda^4}$  Lifetimes and Yields in Au+Au Collisions in the High Baryon Density Region

*M. Abdallah ... A. Aparin, et al. (STAR collaboration), Phys.Rev.Lett., 128, 20, 202301/1-202301/8, 2022*

46. Centrality Determination in MPD at NICA

*A. Aparin, P.A. Nieto-Marin, Phys.Part.Nucl.Lett., 19, 5, 489-492, 2022*

47. Probing the Gluonic Structure of the Deuteron with J/ψ Photoproduction in d+Au Ultraperipheral Collisions

*M. Abdallah ... A. Aparin, et al. (STAR collaboration), Phys.Rev.Lett., 128, 12, 122303/1-122303/9, 2022*

48. Longitudinal double-spin asymmetry for inclusive jet and dijet production in polarized proton collisions at  $\sqrt{s} = 510$  GeV

*M. Abdallah ... A. Aparin, et al. (STAR collaboration), Phys.Rev.D, 105, 9, 092011/1-092011/18, 2022*

49. Light nuclei collectivity from  $\sqrt{s_{NN}} = 3$  GeV Au+Au collisions at RHIC

*M. Abdallah ... A. Aparin, et al. (STAR collaboration), Phys.Lett.B, 827, 136941/1-136941/8, 2022*

50. Centrality and transverse momentum dependence of higher-order flow

- harmonics of identified hadrons in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV  
*M. Abdallah ... A. Aparin, et al. (STAR collaboration)*, Phys.Rev.C, 105, 6, 064911/1-064911/15, 2022
51. Projections of two-particle correlations onto transverse rapidity in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV at STAR  
*M. Abdallah ... A. Aparin, et al. (STAR collaboration)*, Phys.Rev.C, 106, 4, 044906/1-044906/23, 2022
52. Evidence for Nonlinear Gluon Effects in QCD and Their Mass Number Dependence at STAR  
*M. Abdallah ... A. Aparin, et al. (STAR collaboration)*, Phys.Rev.Lett., 129, 092501/1-092501/9, 2022
53. STAR Recent Results on Heavy Ion Collisions  
*A. Aparin for the STAR collaboration*, Phys.Part.Nucl., 53, 2, 127-134, 2022
54. Status and initial physics performance studies of the MPD experiment at NICA  
*MPD Collaboration*, Eur.Phys.J. A, 58, 140-189, 2022
55. Multilayer Perceptron Neural Model for Particle Identification in MPD  
*A. Aparin, A. Korobitsin and G. Tolkachev*, Physics of Atomic Nuclei, ISSN:1063-7788, Изд:Pleiades Publishing, Ltd., 86, 845–849, 2023
56. Pattern of global spin alignment of  $\phi$  and  $K^*_0$  mesons in heavy-ion collisions  
*M.S. Abdallah ... A.A. Aparin et al (STAR collaboration)*, Nature, ISSN:0028-0836, eISSN:1476-4687, Изд:Springer Nature Limited, 614, 7947, 244-248, 2023
57. Tomography of ultrarelativistic nuclei with polarized photon-gluon collisions  
*M. Abdallah ... A.A. Aparin et al (STAR collaboration)*, Science Advances, ISSN:2375-2548, Изд:American Association for the Advancement of Science, 9, 1, eabq3903/1-eabq3903/39, 2023
58. Beam Energy Dependence of Triton Production and Yield Ratio ( $N_t/N_p/N_d$ ) in Au+Au Collisions at RHIC  
*M. Abdulhamid ... A.A. Aparin et al (STAR collaboration)*, Phys.Rev.Lett., 130, 202301/1-202301/6, 2023
59. Pion, kaon, and (anti)proton production in U+U collisions at  $\sqrt{s_{NN}} = 193$  GeV measured with the STAR detector  
*M.S. Abdallah ... A.A. Aparin et al (STAR collaboration)*, Phys.Rev.C, 107, 2, 024901/1-024901/17, 2023
60. Event-by-event correlations between  $\Lambda$  ( $\bar{\Lambda}$ ) hyperon global polarization and handedness with charged hadron azimuthal separation in Au+Au collisions at  $\sqrt{s_{NN}}=27$  GeV from STAR  
*M.I. Abdulhamid ... A.A. Aparin et al (STAR collaboration)*, Phys.Rev.C, 108, 1, 014909/1-014909/11, 2023




61. Measurement of electrons from open heavy-flavor hadron decays in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV with the STAR detector  
*M.I. Abdulhamid ... A.A. Aparin et al (STAR collaboration)*, JHEP, 6, 176-197, 2023
62. Observation of Directed Flow of Hypernuclei  $H3_{\Lambda}$  and  $H4_{\Lambda}$  in  $\sqrt{s_{NN}} = 3$  GeV Au+Au Collisions at RHIC  
*B. Aboona ... A.A. Aparin et al (STAR collaboration)*, Phys.Rev.Lett., 130, 21, 212301/1-212301/11, 2023
63. Beam energy dependence of the linear and mode-coupled flow harmonics in Au+Au collisions  
*B. Aboona ... A.A. Aparin et al (STAR collaboration)*, Phys.Lett.B, 839, 137755/1-137755/8, 2023
64. Search for the chiral magnetic wave using anisotropic flow of identified particles at energies available at the BNL Relativistic Heavy Ion Collider  
*M.I. Abdulhamid ... A.A. Aparin, et al (STAR collaboration)*, Phys.Rev. C, 108, 1, 014908/1-014908/11, 2023

**Публикации в рецензируемых журналах (русские):**

1. Machine Learning Application for Particle Identification in MPD  
*V. Papoyan, A. Aparin, A. Ayriyan, H. Grigorian, A. Korobitsin, and A. Mudrokh*, Physics of atomic nuclei, ISSN:1063-7788, eISSN:1562-692X, Изд:МАИК Nauka/Interperiodica, Pleiades Publishing, Ltd, 86, 5, 869-873, 2023



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