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### Список научных работ

за период с 2013 по 2018гг. (данные на 12.03.2018)

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

1. z-Scaling of cumulative hadron production in pA collisions at high energies  
A. A. Aparin, M. V. Tokarev, Nuclear Physics B - Proceedings Supplements, ISSN:0920-5632, eISSN:1873-3832, Изд:Elsevier Science Limited, 245, 149-152, 2013
2. Experimental studies of di-jets in Au+Au collisions using angular correlations with respect to back-to-back leading hadrons  
L. Adamczyk, G. Agakishiev, M.M. Aggarwal, ... L.G. Efimov et al. (STAR collaboration), Physical Review C, Nuclear Physics, ISSN:0556-2813, eISSN:1089-490X, Изд:The American Physical Society, 87, 4, 044903/1-044903/13, 2013
3. Freeze-out dynamics via charged kaon femtoscopy in  $\sqrt{s_{NN}} = 200$  GeV central Au+Au collisions  
L. Adamczyk, J.K. Adkins, G. Agakishiev, ... L.G. Efimov et al. (STAR collaboration), Physical Review C, Nuclear Physics, ISSN:0556-2813, eISSN:1089-490X, Изд:The American Physical Society, 88, 3, 034906/1-034906/8, 2013
4. Fluctuations of charge separation perpendicular to the event plane and local parity violation in  $\sqrt{s_{NN}}=200$  GeV Au+Au collisions at the BNL Relativistic Heavy Ion Collider  
L. Adamczyk, J.K. Adkins, G. Agakishiev, ... L.G. Efimov et al. (STAR collaboration), Physical Review C, Nuclear Physics, ISSN:0556-2813, eISSN:1089-490X, Изд:The American Physical Society, 88, 6, 064911/1-064911/10, 2013
5. Energy Dependence of Moments of Net-Proton Multiplicity Distributions at RHIC  
L. Adamczyk, J.K. Adkins, G. Agakishiev, ... L.G. Efimov et al. (STAR collaboration), Physical Review Letters, ISSN:0031-9007, eISSN:1079-7114, Изд:The American Physical Society, 112, 3, 032302/1-032302/7, 2014
6. Neutral pion cross section and spin asymmetries at intermediate pseudorapidity in polarized proton collisions at  $\sqrt{s} = 200$  GeV  
L. Adamczyk, J.K. Adkins, G. Agakishiev, ... L.G. Efimov et al. (STAR collaboration), Physical Review D, particles, fields, gravitation, and cosmology, ISSN:1550-7998, eISSN:1550-2368, Изд:The American Physical Society, 89, 1, 012001/1-012001/11, 2014
7. Jet-Hadron Correlations in  $\sqrt{s_{NN}} = 200$  GeV p+p and Central Au+Au Collisions  
L. Adamczyk, J.K. Adkins, G. Agakishiev, ... L.G. Efimov et al. (STAR collaboration), Physical Review Letters, ISSN:0031-9007, eISSN:1079-7114, Изд:The American Physical Society, 112, 12,

122301/1-122301/7, 2014

8. Measurement of charge multiplicity asymmetry correlations in high-energy nucleus-nucleus collisions at  $\sqrt{s_{NN}} = 200$  GeV

*L. Adamczyk, J.K.Adkins, G.Agakishiev, ... L.G.Efimov et al. (STAR collaboration)*, Physical Review C, Nuclear Physics, ISSN:0556-2813, eISSN:1089-490X, Изд:The American Physical Society, 89, 4, 044908/1-044908/24, 2014

9. Beam-Energy Dependence of the Directed Flow of Protons, Antiprotons, and Pions in Au+Au Collisions

*L. Adamczyk, J.K.Adkins, G.Agakishiev, ... L.G.Efimov et al. (STAR collaboration)*, Physical Review Letters, ISSN:0031-9007, eISSN:1079-7114, Изд:The American Physical Society, 112, 16, 162301/1-162301/7, 2014

10. Measurements of dielectron production in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV from the STAR experiment

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11. Beam-energy-dependent two-pion interferometry and the freeze-out eccentricity of pions measured in heavy ion collisions at the STAR detector

*L. Adamczyk, J.K.Adkins, G.Agakishiev, ... L.G.Efimov et al. (STAR collaboration)*, Physical Review C, Nuclear Physics, ISSN:0556-2813, eISSN:1089-490X, Изд:The American Physical Society, 92, 1, 014904/1-014904/27, 2015

12. Observation of Charge Asymmetry Dependence of Pion Elliptic Flow and the Possible Chiral Magnetic Wave in Heavy-Ion Collisions

*L. Adamczyk, J.K.Adkins, G.Agakishiev, ... L.G.Efimov et al. (STAR collaboration)*, Physical Review Letters, ISSN:0031-9007, eISSN:1079-7114, Изд:The American Physical Society, 114, 25, 252302/1-252302/6, 2015

13. Precision Measurement of the Longitudinal Double-Spin Asymmetry for Inclusive Jet Production in Polarized Proton Collisions at  $\sqrt{s} = 200$  GeV

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14. Azimuthal Anisotropy in U+U and Au+Au Collisions at RHIC

*L. Adamczyk, J.K.Adkins, G.Agakishiev, ... L.G.Efimov et al. (STAR collaboration)*, Physical Review Letters, ISSN:0031-9007, eISSN:1079-7114, Изд:The American Physical Society, 115, 22, 222301/1-222301/7, 2015

15. Charged-to-neutral correlation at forward rapidity in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV

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16. Measurement of interaction between antiprotons

*L. Adamczyk, J.K.Adkins, G.Agakishiev, ... L.G.Efimov et al. (STAR collaboration)*, Nature, ISSN:0028-0836, eISSN:1476-4687, Изд:Nature Publishing Group, a division of Macmillan Publishers Limited, 527, 7578, 345-348, 2015

17. Isolation of flow and nonflow correlations by two- and four-particle cumulant measurements of azimuthal harmonics in  $\sqrt{s_{NN}} = 200$  GeV Au+Au collisions  
*N.M.Abdelwahab, L.Adamczyk, J.K.Adkins, ... L.G.Efimov et al. (STAR collaboration)*, Physics Letters B, ISSN:0370-2693, eISSN:1873-2445, Изд:Elsevier Science Limited, 745, 40-47, 2015
18. Di-hadron correlations with identified leading hadrons in 200 GeV Au+Au and d+Au collisions at STAR  
*L. Adamczyk, J.K.Adkins, G.Agakishiev, ... L.G.Efimov et al. (STAR collaboration)*, Physics Letters B, ISSN:0370-2693, eISSN:1873-2445, Изд:Elsevier Science Limited, 751, 233-240, 2015
19. Energy dependence of K-pi, p-pi, and K-p fluctuations in Au+Au collisions from  $\sqrt{s_{NN}} = 7.7$  to 200 GeV  
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20. Effect of event selection on jetlike correlation measurement in d+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV  
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21. Energy dependence of acceptance-corrected dielectron excess mass spectrum at mid-rapidity in Au+Au collisions at  $\sqrt{s_{NN}} = 19.6$  and 200 GeV  
*L. Adamczyk, J.K.Adkins, G.Agakishiev, ... L.G.Efimov et al. (STAR collaboration)*, Physics Letters B, ISSN:0370-2693, eISSN:1873-2445, Изд:Elsevier Science Limited, 750, 64-71, 2015
22. Long-range pseudorapidity dihadron correlations in d+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV  
*L. Adamczyk, J.K.Adkins, G.Agakishiev, ... L.G.Efimov et al. (STAR collaboration)*, Physics Letters B, ISSN:0370-2693, eISSN:1873-2445, Изд:Elsevier Science Limited, 747, 265-271, 2015
23. Lambda Lambda Correlation Function in Au+Au Collisions at  $\sqrt{s_{NN}} = 200$  GeV  
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24. Observation of Transverse Spin-Dependent Azimuthal Correlations of Charged Pion Pairs in p+p at  $\sqrt{s} = 200$  GeV  
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25. Measurement of elliptic flow of light nuclei at  $\sqrt{s_{NN}} = 200, 62.4, 39, 27, 19.6, 11.5,$  and 7.7 GeV at the BNL Relativistic Heavy Ion Collider  
*L. Adamczyk, J.K.Adkins, ... G.S. Averichev et al. (STAR collaboration)*, Physical Review C, Nuclear Physics, ISSN:0556-2813, eISSN:1089-490X, Изд:The American Physical Society, 94, 3, 034908/1-034908/12, 2016
26. Beam Energy Dependence of the Third Harmonic of Azimuthal Correlations in Au+Au Collisions at RHIC  
*L. Adamczyk, J.K.Adkins, ... G.S. Averichev et al. (STAR collaboration)*, Phys.Rev.Lett., 116, 11, 112302/1-112302/9, 2016
27. Measurement of the transverse single-spin asymmetry in  $p+^8594;W_{\pm}/Z_0$  at RHIC

*L. Adamczyk, J.K.Adkins, ... G.S. Averichev et al. (STAR collaboration)*, Phys.Rev.Lett., 116, 13, 132301/1-132301/7, 2016

28. J/psi production at low transverse momentum in p+p and d+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV  
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29. Upsilon production in U + U collisions at  $\sqrt{s_{NN}} = 193$  GeV measured with the STAR experiment  
*L. Adamczyk, ... A. Aparin et al. (STAR Collaboration)*, Physical Review C, Nuclear Physics, ISSN:0556-2813, eISSN:1089-490X, Изд:American Physical Society, 94, 6, 064904/1-064904/9, 2016

30. Centrality dependence of identified particle elliptic flow in relativistic heavy ion collisions at  $\sqrt{s_{NN}} = 7.7 - 62.4$  GeV  
*L. Adamczyk, J.K.Adkins, G.Agakishiev, ... L.G.Efimov et al. (STAR collaboration)*, Physical Review C, Nuclear Physics, ISSN:0556-2813, eISSN:1089-490X, Изд:The American Physical Society, 93, 1, 014907/1-014907/13, 2016

31. Centrality and Transverse Momentum Dependence of Elliptic Flow of Multistrange Hadrons and Phi Meson in Au+Au Collisions at  $\sqrt{s_{NN}} = 200$  GeV  
*L. Adamczyk, J.K.Adkins, G.Agakishiev, ... L.G.Efimov et al. (STAR collaboration)*, Physical Review Letters, ISSN:0031-9007, eISSN:1079-7114, Изд:The American Physical Society, 116, 6, 062301/1-062301/7, 2016

32. Jet-like Correlations with Direct-Photon and Neutral-Pion Triggers at  $\sqrt{s_{NN}} = 200$  GeV  
*STAR Collaboration (L. Adamczyk (AGH-UST, Cracow) et al.)*, Phys. Lett. B, 760, 689-696, 2016

33. Probing parton dynamics of QCD matter with omega and phi production  
*L. Adamczyk, J.K.Adkins, ... G.S. Averichev et al. (STAR collaboration)*, Physical review. C, nuclear physics, ISSN:0556-2813, eISSN:1089-490X, Изд:American Physical Society, 93, 22, 021903/1-021903/6, 2016

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*L. Adamczyk, J.K.Adkins, ... G.S. Averichev et al. (STAR collaboration)*, Physical Review C, Nuclear Physics, Изд:American Physical Society, 94, 2, 024909/1-024909/7, 2016

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*L. Adamczyk, J.K.Adkins, ... G.S. Averichev et al. (STAR collaboration)*, Phys.Lett.B, 760, 689-696, 2016

36. Near-side azimuthal and pseudorapidity correlations using neutral strange baryons and mesons in d+Au, Cu+Cu and Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV  
*L. Adamczyk, J.K.Adkins, ... G.S. Averichev et al. (STAR collaboration)*, Physical Review C Nuclear Physics, ISSN:0556-2813, eISSN:1089-490x, Изд:American Institute of Physics, USA, 94, 1, 014910/1-014910/9, 2016

37. Coherent diffractive photoproduction of  $\eta$  mesons on gold nuclei at 200 GeV/nucleon-pair at the Relativistic Heavy Ion Collider  
*L. Adamczyk ... A.A. Aparin ... et al. (STAR collaboration)*, Physical Review C, Изд:American

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38. Bulk Properties of the Medium Produced in Relativistic Heavy-Ion Collisions from the Beam Energy Scan Program

*L. Adamczyk ... A.A. Aparin et al. (STAR Collaboration)*, Physical Review C, Изд:American physical society, 96, 4, 044904/1-044904/34, 2017

39. Charge-dependent directed flow in Cu+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV

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40. Measurement of the cross section and longitudinal double-spin asymmetry for di-jet production in polarized pp collisions at  $\sqrt{s} = 200$  GeV

*L. Adamczyk, J.K.Adkins, ... G.S. Averichev et al. (STAR collaboration)*, Physical Review D, Изд:The American Physical Society., 95, 7, 071103-071110, 2017

41. Measurement of D0 Azimuthal Anisotropy at Midrapidity in Au+Au Collisions at  $\sqrt{s_{NN}}=200$ GeV

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42. Global Lambda hyperon polarization in nuclear collisions: evidence for the most vortical fluid

*L. Adamczyk, J.K.Adkins, ... G.S. Averichev et al. (STAR collaboration)*, Nature, ISSN:0028-0836, eISSN:1476-4687, Изд:Nature Publishing Group, 548, 7665, 62-65, 2017

43. Measurements of jet quenching with semi-inclusive hadron+jet distributions in Au+Au collisions at  $\sqrt{s_{NN}}= 200$ GeV

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

1. Self-similarity of low-pT cumulative pion production in proton-nucleus collisions at high energies

*A. A. Aparin, M. V. Tokarev*, Physics of Particles and Nuclei Letters , ISSN:1547-4771 , Изд:Pleiades Publishing, 11, 2, 91-100, 2014

2. Self-similarity of high-pT cumulative hadron production in p+A collisions at high energies at U70

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3. Self-similarity of low-pT cumulative pion production in proton-nucleus collisions at U70

*A. A. Aparin, M. V. Tokarev*, Physics of Particles and Nuclei Letters , ISSN:1547-4771 , Изд:Pleiades Publishing, 11, 4, 391-403, 2014

4. Fractal structure of hadrons in processes with polarized protons at SPD NICA (Proposal for experiment)

*A. A. Aparin, M. V. Tokarev, I. Zborovsky*, Physics of Particles and Nuclei Letters , ISSN:1547-4771 , Изд:Pleiades Publishing, 12, 1, 48-58, 2015

5. Self-similarity of hard cumulative processes in fixed target experiment for BES-II at STAR  
A.A. Aparin, I. Zborovsky, M.V. Tokarev, Physics of Particles and Nuclei Letters , ISSN:1547-4771 ,  
Изд:Pleiades Publishing, 12, 2, 221-229, 2015

**Материалы научных мероприятий (международные, устный доклад):**

1. Sixteenth Lomonosov Conference on Elementary Particle Physics, Moscow State University,  
Moscow, Russia

*Self-similarity of high- $p_T$  cumulative hadron production in  $pA$  collisions*, Aparin A.A., 2013

2. Hadron Structure `13, Institute of Physics, Slovak Academy of Sciences, Tatranske Matliare,  
Slovakia

*z-Scaling of cumulative hadron production in  $pA$  collisions at high energies*, Aparin A.A., 2013

3. 18 Международная научная конференция молодых ученых и специалистов (ОМУС-2014),  
ОИЯИ, Дубна, Россия

*Scaling features of cumulative charged particle production in  $pA$  collisions at high energies*, A. A.  
Aparin, 2014

4. XXII International Baldin Seminar on High Energy Physics Problems

*Self-similarity of high- $p_T$  hadron production in  $pA$  collisions*, A. A. Aparin, M. V. Tokarev, 2014

5. The 9th joint International HADRON STRUCTURE `15 Conference, Slovak scientific  
Institutions, Petersburg Nuclear Physics Institute, Hornэ Smokovec, Slovak Republic

*Cumulative hadron production in  $pA$  collisions in the framework of z-scaling*, Aparin A.A., 2015

6. 17th Lomonosov Conference on Elementary Particle Physics, Moscow State University,  
Moscow, Russian Federation

*On possibility to study hard cumulative processes in the fixed target experiment at RHIC*,  
A.A.Aparin, M.V.Tokarev, I.Zborovsky, 2015

7. V ежегодная конференция молодых ученых и специалистов Алушта-2016, ОМУС,  
Алушта, Россия

*Скейлинговые закономерности в рождении кумулятивных частиц и частиц с большими  
поперечными импульсами в протон ядерных столкновениях при высоких энергиях.*, Апарин  
А.А., 2016

**Материалы научных мероприятий (международные, стендовый доклад):**

1. Quark Matter 2014, XXIV International Conference on Ultrarelativistic Nucleus-Nucleus  
Collisions, , Darmstadt, Germany

*Cumulative Particle Production in  $p+A$  Collisions and z-Scaling*, A. A. Aparin, 2014

**Препринты:**

1. Self-similarity of low- $p_T$  cumulative pion production in proton-nucleus collisions at U70

*E2-2013-139, A.A. Апарин, М.В. Токарев, 2013*

2. Self-similarity of high- $p_T$  cumulative hadron production in  $pA$  collisions at high energies at U70  
*E2-2013-104, A.A. Апарин, М.В. Токарев, 2013*

3. Self-similarity of low- $p_T$  cumulative pion production in proton-nucleus collisions at high energies  
*E2-2013-56, A. A. Апарин, М. В. Токарев, 2013*

4. fractal structure of hadrons in processes with polarized protons at SPD NICA  
*E2-2014-35, A.A. Апарин, М.В. Токарев, И. Зборовски, 2014*

5. Self-similarity of hard cumulative processes in fixed target experiment for BES-II at STAR  
*E2-2014-73, A. A. Апарин, М. В. Токарев, И. Зборовски, 2014*