

Публикации Лаборатории барионной физики ОФВЭ за 2025 год

В рамках сотрудничества LHCb

1. *Amplitude analysis of $B^+ \rightarrow \psi(2S)K^+\pi^+\pi^-$ decays*, JHEP 01 (2025) 054
2. *Amplitude analysis of the $\Xi_c^+ \rightarrow pK\pi^+$ decay and Ξ_c^+ baryon polarization measurement in semileptonic beauty-hadron decays*, Phys.Rev.D 112 (2025) 9, 092003
3. *Angular analysis of $B^0 \rightarrow K^{*0}e^+e^-$ decays*, JHEP 06 (2025) 140
4. *Angular analysis of the decay $B_s^0 \rightarrow \phi e^+e^-$* , JHEP 07 (2025) 069
5. *Branching fraction measurement of the decay $B^+ \rightarrow \psi(2S)\phi(1020)K^+$* , Phys.Rev.D 111 (2025) 9, 092008
6. *Constraints on the photon polarisation in $b \rightarrow sy$ transitions using $B_s^0 \rightarrow \phi e^+e^-$ decays*, JHEP 03 (2025) 047
7. *Evidence for $B^- \rightarrow D^{*0}\tau^- \nu_\tau$ Decays*, Phys. Rev. Lett. 135 (2025) 2, 021802
8. *First Determination of the Spin-Parity of $\Xi_c(3055)^{+0}$ Baryons*, Phys.Rev.Lett. 134 (2025) 8, 081901
9. *First Evidence for Direct CP Violation in Beauty to Charmonium Decays*, Phys.Rev.Lett. 134 (2025) 10, 101801
10. *First measurement of b-jet mass with and without grooming*, Phys.Lett.B 869 (2025) 139854
11. *First observation of the $\Lambda_b^0 \rightarrow \Lambda_c^+ D_s^- K^+ K^-$ decay and search for pentaquarks in the $\Lambda_c^+ D_s^-$ system*, Phys.Rev.D 112 (2025) 5, 052013
12. *Improved measurement of η/η' mixing in $B_{(s)}^0 \rightarrow J/\psi \eta^{(\prime)}$ decays*, JHEP 10 (2025) 113
13. *Inclusive B-meson flavour-tagging algorithm at LHCb*, JHEP 11 (2025) 041
14. *Measurement of branching fractions and CP asymmetries in $\Lambda_b^0(\Xi^{b0}) \rightarrow pK_s^0 h^-$ decays*, JHEP 10 (2025) 169
15. *Measurement of CP asymmetry in $B_s^0 \rightarrow D^{*\mp} K^\pm$ decays*, JHEP 03 (2025) 139
16. *Measurement of CP asymmetries in $\Lambda_b^0 \rightarrow p h^-$ decays*, Phys.Rev.D 111 (2025) 9, 092004
17. *Measurement of CP violation in $B^0 \rightarrow D^+ D^-$ and $B_s^0 \rightarrow D_s^+ D_s^-$ decays*, JHEP 01 (2025) 061
18. *Measurement of D^0 - D^{*0} mixing and search for CP violation with $D^0 \rightarrow K^+ \pi^-$ decays*, Phys.Rev.D 111 (2025) 1, 012001
19. *Measurement of exclusive J/ψ and $\psi(2S)$ production at $s=13$ TeV*, SciPost Phys. 18 (2025) 2, 071
20. *Measurement of $\phi(1020)$ meson production in fixed-target pNe collisions at $\sqrt{s_{NN}} = 68.5$ GeV*, JHEP 03 (2025) 151
21. *Measurement of the Branching Fraction Ratios $R(D^+)$ and $R(D^{*+})$ Using Muonic τ Decays*, Phys.Rev.Lett. 134 (2025) 6, 061801
22. *Measurement of the branching fraction ratio R_K at large dilepton invariant mass*, JHEP 07 (2025) 198
23. *Measurement of the CKM angle γ in $B^\pm \rightarrow DK^*(892)^\pm$ decays*, JHEP 02 (2025) 113

24. *Measurement of the Lund plane for light- and beauty-quark jets*, Phys.Rev.D 112 (2025) 7, 072015
25. *Measurement of the multiplicity dependence of Y production ratios in pp collisions at $\sqrt{s} = 13$ TeV*, JHEP 05 (2025) 011
26. *Measurement of the Ω_c^0 and Ξ_c^0 baryon lifetimes using hadronic b-baryon decays*, JHEP 09 (2025) 157
27. *Measurement of the Z-Boson Mass*, Phys.Rev.Lett. 135 (2025) 16, 161802
28. *Measurements of charmed meson and antimeson production asymmetries at $\sqrt{s}=13.6$ TeV*, JHEP 10 (2025) 050
29. *Observation of charge-parity symmetry breaking in baryon decays*, Nature 643 (2025) 8074, 1223-1228
30. *Observation of Exotic $J/\psi\phi$ Resonant Structure in Diffractive Processes in Proton-Proton Collisions*, Phys.Rev.Lett. 134 (2025) 3, 031902
31. *Observation of the decay $B_s^0 \rightarrow K^0 p \bar{p}$ and measurement of the $B_{(s)}^0 \rightarrow K^0 p \bar{p}$ branching fractions*, JHEP 07 (2025) 121
32. *Observation of the doubly-charmed-baryon decay $\Xi_{cc}^{++} \rightarrow \Xi_c^0 \pi^+ \pi^+$* , JHEP 10 (2025) 136
33. *Observation of the $\Lambda_b^0 \rightarrow J/\psi \Xi^- K^+$ and $\Xi_b^0 \rightarrow J/\psi \Xi^- \pi^+$ decays*, Eur.Phys.J.C 85 (2025) 812
34. *Observation of the Open-Charm Tetraquark Candidate $T_{cso}^*(2870)^0$ in the $B^- \rightarrow D^- D^0 K_S^0$ Decay*, Phys.Rev.Lett. 134 (2025) 10, 101901
35. *Observation of the very rare $\Sigma^+ \rightarrow p \mu^+ \mu^-$ decay*, Phys.Rev.Lett. 135 (2025) 5, 051801
36. *Precision measurement of the Ξ_b^0 baryon lifetime*, Phys.Rev.D 112 (2025) 5, 052012
37. *Rapidity and multiplicity dependence of charged-particle flow in pPb collisions at $\sqrt{s_{NN}}=8.16$ TeV*, JHEP 10 (2025) 124
38. *Search for $B_{(s)}^{*0} \rightarrow \mu^+ \mu^-$ in $B_c^+ \rightarrow \pi^+ \mu^+ \mu^-$ decays*, Eur.Phys.J.C 85 (2025) 1, 20
39. *Search for charge-parity violation in semileptonically tagged $D^0 \rightarrow K^+ \pi^-$ decays*, JHEP 03 (2025) 149
40. *Search for D^0 meson decays to $\pi^+ \pi^- e^+ e^-$ and $K^+ K^- e^+ e^-$ final states*, Phys.Rev.D 111 (2025) 9, L09110
41. *Search for resonance-enhanced CP and angular asymmetries in the $\Lambda_c^+ \rightarrow p \mu^+ \mu^-$ decay at LHCb*, Phys.Rev.D 111 (2025) 9, L091102
42. *Search for the $B_c^+ \rightarrow \chi_{c1}(3872) \pi^+$ decay*, JHEP 06 (2025) 013
43. *Study of $D_{s1}(2460)^+ \rightarrow D_s^+ \pi^+ \pi^-$ in $B \rightarrow D^{(*)} D_s^+ \pi^+ \pi^-$ decays*, Sci.Bull. 70 (2025) 1432-1444
44. *Study of Λ_b^0 and Ξ_b^0 Decays to $\Lambda h^+ h^-$ and Evidence for CP Violation in $\Lambda_b^0 \rightarrow \Lambda K^+ K^-$ Decays*, Phys.Rev.Lett. 134 (2025) 10, 101802
45. *Study of light-meson resonances decaying to $K_S^0 K \pi$ in the $B \rightarrow (K_S^0 K \pi) K$ channels*, Phys.Rev.D 111 (2025) 9, 092009
46. *Test of Lepton Flavor Universality with $B_s^0 \rightarrow \phi \ell^+ \ell^-$ Decays*, Phys.Rev.Lett. 134 (2025) 12, 121803
47. *Three-pion Bose-Einstein correlations measured in proton-proton collisions*, JHEP 08 (2025) 174
48. *Updated measurement of CP violation and polarisation in $B_s^0 \rightarrow J/\psi K^{*-}(892)^0$ decays*, JHEP 10 (2025) 173
49. *Branching fraction measurement of the decay $B^+ \rightarrow \psi(2S) \phi(1020) K^+$* , Phys.Rev.D 111 (2025) 9, 092008

50. *Measurement of the multiplicity dependence of Y production ratios in pp collisions at $\sqrt{s} = 13$ TeV*, JHEP 05 (2025) 011
51. *Search for D^0 meson decays to $\pi^+\pi^-e^+e^-$ and $K^+K^-e^+e^-$ final states*, Phys.Rev.D 111 (2025) 9, L09110
52. *Search for resonance-enhanced CP and angular asymmetries in the $\Lambda_c^+ \rightarrow p\mu^+\mu^-$ decay at LHCb*, Phys.Rev.D 111 (2025) 9, L091102
53. *Study of $D_{s1}(2460)^+ \rightarrow D_s^+\pi^+\pi^-$ in $B \rightarrow D^{(*)}D_s^+\pi^+\pi^-$ decays*, Sci.Bull. 70 (2025) 1432-1444
54. *Study of light-meson resonances decaying to $K_S^0K\pi$ in the $B \rightarrow (K_S^0K\pi)K$ channels*, Phys.Rev.D 111 (2025) 9, 092009

Другие направления исследований

1. G. E. Gavrilo, M. E. Buzoveria, A. Radulović, A. A. Dzyuba, O. E. Maev, I. A. Karpov, M. V. Tatsenko, D. Bajuk-Bogdanović, and H. Begović, *A New Source of Spontaneous Self-Sustaining Currents in Multiwire Proportional Chambers*, Physics of Particles and Nuclei, 2025, Vol. 56, No. 2, pp. 210–218