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PUBLICATIONS

Papers reported in reverse chronological order

Preprints & Working Papers

- [1] LHCb Collaboration, R. Aaij *et al.*, *Evidence for the decays $B^0 \rightarrow \bar{D}^{(*)0}\phi$ and updated measurements of the branching fractions of the $B^0 \rightarrow \bar{D}^{(*)0}\phi$ decays*, [arXiv:2306.02768](#)
- [2] LHCb Collaboration, R. Aaij *et al.*, *Associated production of prompt J/ψ and Υ mesons in pp collisions at $\sqrt{s} = 13$ TeV*, [arXiv:2305.15580](#)
- [3] LHCb Collaboration, R. Aaij *et al.*, *Measurement of the mass difference and relative production rate of the Ω_b^- and Ξ_b^- baryons*, [arXiv:2305.15329](#)
- [4] LHCb Collaboration, R. Aaij *et al.*, *The LHCb upgrade I*, [arXiv:2305.10515](#)
- [5] LHCb Collaboration, R. Aaij *et al.*, *Measurement of Ξ_c^+ production in pPb collisions at $\sqrt{s_{NN}} = 8.16$ TeV at LHCb*, [arXiv:2305.06711](#)
- [6] LHCb Collaboration, R. Aaij *et al.*, *Test of lepton flavour universality using $B^0 \rightarrow D^{*-}\tau^+\nu_\tau$ decays with hadronic τ channels*, [arXiv:2305.01463](#)
- [7] LHCb Collaboration, R. Aaij *et al.*, *Study of charmonium decays to $K_S^0 K\pi$ in the $B \rightarrow (K_S^0 K\pi)K$ channels*, [arXiv:2304.14891](#)
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- [12] LHCb Collaboration, *Search for CP violation in $D_{(s)}^+ \rightarrow K^-K^+K^+$ decays*, [arXiv:2303.04062](#)
- [13] LHCb Collaboration, *Observation of the $B_s^0 \rightarrow \chi_{c1}(3872)\pi^+\pi^-$ decay*, [arXiv:2302.10629](#)
- [14] LHCb Collaboration, *Measurement of the $\Lambda_b^0 \rightarrow \Lambda(1520)\mu^+\mu^-$ differential branching fraction*, [arXiv:2302.08262](#)
- [15] LHCb Collaboration, *Observation of new Ω_c^0 states decaying to the $\Xi_c^+K^-$ final state*, [arXiv:2302.04733](#)
- [16] LHCb Collaboration, *Measurement of the ratios of branching fractions $\mathcal{R}(D^*)$ and $\mathcal{R}(D^0)$* , [arXiv:2302.02886](#)

- [17] LHCb Collaboration, *A study of CP violation in the decays $B^\pm \rightarrow [K^+K^-\pi^+\pi^-]_D h^\pm$ ($h = K, \pi$) and $B^\pm \rightarrow [\pi^+\pi^-\pi^+\pi^-]_D h^\pm$* , [arXiv:2301.10328](#)
- [18] LHCb Collaboration, *Λ_c^+ polarimetry using the dominant hadronic mode*, [arXiv:2301.07010](#)
- [19] M. Barbetti and L. Anderlini, *Hyperparameter Optimization as a Service on INFN Cloud*, in *21st International Workshop on Advanced Computing and Analysis Techniques in Physics Research (ACAT 2022)*, [arXiv:2301.05522](#)
- [20] LHCb Collaboration, *Evidence of a $J/\psi K_S^0$ structure in $B^0 \rightarrow J/\psi \phi K_S^0$ decays*, [arXiv:2301.04899](#)
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- [23] LHCb Collaboration, *Search for rare decays of D^0 mesons into two muons*, [arXiv:2212.11203](#)
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- [25] LHCb Collaboration, *Test of lepton universality in $b \rightarrow s \ell^+ \ell^-$ decays*, [arXiv:2212.09152](#)
- [26] LHCb Collaboration, *Search for the rare decays $W^+ \rightarrow D_s^+ \gamma$ and $Z \rightarrow D^0 \gamma$ at LHCb*, [arXiv:2212.07120](#)
- [27] LHCb Collaboration, *Search for $K_{S(L)}^0 \rightarrow \mu^+ \mu^- \mu^+ \mu^-$ decays at LHCb*, [arXiv:2212.04977](#)
- [28] LHCb Collaboration, *Amplitude analysis of $B^0 \rightarrow \bar{D}^0 D_s^+ \pi^-$ and $B^+ \rightarrow D^- D_s^+ \pi^+$ decays*, [arXiv:2212.02717](#)
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- [30] LHCb Collaboration, *J/ψ and D^0 production in $\sqrt{s_{NN}} = 68.5$ GeV PbNe collisions*, [arXiv:2211.11652](#)
- [31] LHCb Collaboration, *Charmonium production in pNe collisions at $\sqrt{s_{NN}} = 68.5$ GeV*, [arXiv:2211.11645](#)
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- [34] LHCb Collaboration, *Searches for the rare hadronic decays $B^0 \rightarrow p \bar{p} p \bar{p}$ and $B_s^0 \rightarrow p \bar{p} p \bar{p}$* , [arXiv:2211.08847](#)
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- [36] LHCb Collaboration, *Study of the $B^- \rightarrow \Lambda_c^+ \bar{\Lambda}_c^- K^-$ decay*, [arXiv:2211.00812](#)
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- [38] LHCb Collaboration, *Observation of the $B_s^0 \rightarrow D^{*+} D^{*-}$ decay*, [arXiv:2210.14945](#)
- [39] LHCb Collaboration, *Measurement of the ratio of branching fractions $\mathcal{B}(B_c^+ \rightarrow B_s^0 \pi^+)/\mathcal{B}(B_c^+ \rightarrow J/\psi \pi^+)$* , [arXiv:2210.12000](#)

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- [41] LHCb Collaboration, *Observation of a $J/\psi\Lambda$ resonance consistent with a strange pentaquark candidate in $B^- \rightarrow J/\psi\Lambda\bar{p}$ decays*, [arXiv:2210.10346](#)
- [42] LHCb Collaboration, *Measurement of the Λ_c^+ to D^0 production cross-section ratio in peripheral PbPb collisions*, [arXiv:2210.06939](#)
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- [45] LHCb Collaboration, *Measurement of the CKM angle γ with $B^\pm \rightarrow D[K^\mp\pi^\pm\pi^\pm\pi^\mp]h^\pm$ decays using a binned phase-space approach*, [arXiv:2209.03692](#)
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- [47] LHCb Collaboration, *Multidifferential study of identified charged hadron distributions in Z-tagged jets in proton-proton collisions at $\sqrt{s}=13$ TeV*, [arXiv:2208.11691](#)
- [48] LHCb Collaboration, *Study of B_c^+ meson decays to charmonia plus multihadron final states*, [arXiv:2208.08660](#)
- [49] LHCb Collaboration, *Model-independent measurement of charm mixing parameters in $\bar{B} \rightarrow D^0(\rightarrow K_S^0\pi^+\pi^-)\mu^-\bar{\nu}_\mu X$* , [arXiv:2208.06512](#)
- [50] LHCb Collaboration, *Amplitude analysis of the $D^+ \rightarrow \pi^-\pi^+\pi^+$ decay and measurement of the $\pi^-\pi^+$ S-wave amplitude*, [arXiv:2208.03300](#)
- [51] LHCb Collaboration, *Amplitude analysis of the $\Lambda_c^+ \rightarrow pK^-\pi^+$ decay and Λ_c^+ baryon polarization measurement in semileptonic beauty hadron decays*, [arXiv:2208.03262](#)
- [52] LHCb Collaboration, *Search for the lepton-flavour violating decays $B^0 \rightarrow K^{*0}\mu^\pm e^\mp$ and $B_s^0 \rightarrow \phi\mu^\pm e^\mp$* , [arXiv:2207.04005](#)
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- [57] LHCb Collaboration, *Search for direct CP violation in charged charmless $B \rightarrow PV$ decays*, [arXiv:2206.02038](#)
- [58] LHCb Collaboration, *Measurement of antiproton production from antihyperon decays in pHe collisions at $\sqrt{s_{NN}} = 110$ GeV*, [arXiv:2205.09009](#)
- [59] LHCb Collaboration, *Search for CP violation using \hat{T} -odd correlations in $B^0 \rightarrow p\bar{p}K^+\pi^-$ decays*, [arXiv:2205.08973](#)
- [60] LHCb Collaboration, *Measurement of the prompt D^0 nuclear modification factor in pPb collisions at $\sqrt{s_{NN}} = 8.16$ TeV*, [arXiv:2205.03936](#)

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- [62] LHCb Collaboration, *Observation of sizeable ω contribution to $\chi_{c1}(3872) \rightarrow \pi^+\pi^- J/\psi$ decays*, [arXiv:2204.12597](#)
- [63] LHCb Collaboration, *Nuclear modification factor of neutral pions in the forward and backward regions in pPb collisions*, [arXiv:2204.10608](#)
- [64] LHCb Collaboration, *Search for the doubly heavy baryon Ξ_{bc}^+ decaying to $J/\psi \Xi_c^+$* , [arXiv:2204.09541](#)

Conference & Journal Articles

- [1] LHCb Collaboration, *Measurement of the Z boson production cross-section in proton-lead collisions at $\sqrt{s_{NN}} = 8.16$ TeV*, [JHEP 06 \(2023\) 022](#), [arXiv:2205.10213](#)
- [2] LHCb Collaboration, *Measurement of CP asymmetries in $D_{(s)}^+ \rightarrow \eta\pi^+$ and $D_{(s)}^+ \rightarrow \eta'\pi^+$ decays*, [JHEP 04 \(2023\) 081](#) [arXiv:2204.12228](#)
- [3] E. M. Abenavoli *et al.*, *Characterization of mediastinal bulky lymphomas with FDG-PET-based radiomics and machine learning techniques*, [Cancers 15 \(2023\) 1931](#)
- [4] L. Anderlini *et al.*, *Towards Reliable Neural Generative Modeling of Detectors*, in *20th International Workshop on Advanced Computing and Analysis Techniques in Physics Research (ACAT 2021)*, [J. Phys.: Conf. Ser. 2438 \(2023\) 012130](#), [arXiv:2204.09947](#)
- [5] F. Ratnikov *et al.*, *A full detector description using neural network driven simulation*, in *15th Pisa Meeting on Advanced Detectors*, [Nucl. Instrum. Meth. A 1046 \(2023\) 167591](#)
- [6] L. Anderlini *et al.*, *Lamarr: the ultra-fast simulation option for the LHCb experiment*, in *41st International Conference on High Energy Physics – PoS(ICHEP2022)*, [414 233, 2022](#)
- [7] LHCb Collaboration, R. Aaij *et al.*, *First measurement of the $Z \rightarrow \mu^+\mu^-$ angular coefficients in the forward region of pp collisions at $\sqrt{s} = 13$ TeV*, [Phys. Rev. Lett. 129 \(2022\) 091801](#), [arXiv:2203.01602](#)
- [8] LHCb Collaboration, R. Aaij *et al.*, *Constraints on the CKM angle γ from $B^\pm \rightarrow Dh^\pm$ decays using $D \rightarrow h^\pm h'^\mp \pi^0$ final states*, [JHEP 07 \(2022\) 099](#), [arXiv:2112.10617](#)
- [9] L. Anderlini and M. Barbetti, *scikinC: a tool for deploying machine learning as binaries*, in *Computational Tools for High Energy Physics and Cosmology – PoS(CompTools2021)*, [409 034, 2022](#)
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- [14] LHCb Collaboration, R. Aaij *et al.*, *Measurement of the charm mixing parameter $y_{CP} - y_{CP}^{K\pi}$ using two-body D^0 meson decays*, [Phys. Rev. D 105 \(2022\) 092013](#), [arXiv:2202.09106](#)

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