

Ivan Morozov: Publication list

- [1] Y. Maltseva and I. Morozov. “Aperture limitation localization using beam position and beam loss monitor measurements”. In: *Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment* (2025), p. 170825. ISSN: 0168-9002. DOI: <https://doi.org/10.1016/j.nima.2025.170825>. URL: <https://www.sciencedirect.com/science/article/pii/S0168900225006278>.
- [2] Y. Maltseva and I. Morozov. *Aperture limitation localization using beam position and beam loss monitor measurements*. 2025. arXiv: [2507.03333](https://arxiv.org/abs/2507.03333) [physics.acc-ph]. URL: <https://arxiv.org/abs/2507.03333>.
- [3] P. P. et al. “Y(1S)-meson rest mass measurement on the VEPP-4M collider”. English. In: *Proc. 16th International Particle Accelerator Conference* (Taipei, Taiwan). IPAC’25 - 16th International Particle Accelerator Conference 16. JACoW Publishing, Geneva, Switzerland, June 2025, pp. 568–570. ISBN: 978-3-95450-248-6. DOI: [10.18429/JACoW-IPAC25-MOPM115](https://doi.org/10.18429/JACoW-IPAC25-MOPM115). URL: <https://indico.jacow.org/event/81/contributions/7325>.
- [4] V. V. Anashin et al. “Measurement of the Masses of Neutral and Charged D Mesons with the KEDR Detector”. In: *Physics of Particles and Nuclei* 56.3 (June 2025), pp. 802–808. ISSN: 1531-8559. DOI: [10.1134/S1063779624702320](https://doi.org/10.1134/S1063779624702320). URL: <https://doi.org/10.1134/S1063779624702320>.
- [5] V. V. Anashin et al. *The branching fraction measurements of J/ψ decay into $c\bar{q}$ and $q\bar{q}$ final states*. 2025. arXiv: [2506.08453](https://arxiv.org/abs/2506.08453) [hep-ex]. URL: <https://arxiv.org/abs/2506.08453>.
- [6] V. V. Anashin et al. *New measurement of $D0$ and $D+$ meson masses with the KEDR detector*. 2025. arXiv: [2506.02421](https://arxiv.org/abs/2506.02421) [hep-ex]. URL: <https://arxiv.org/abs/2506.02421>.
- [7] T. Zolkin, S. Nagaitsev, I. Morozov, and S. Kladov. *Geometry of Almost-Conserved Quantities in Symplectic Maps. Part III: Approximate Invariants in Nonlinear Accelerator Systems*. 2025. arXiv: [2505.07225](https://arxiv.org/abs/2505.07225) [nlin.CD]. URL: <https://arxiv.org/abs/2505.07225>.
- [8] T. Zolkin, S. Nagaitsev, I. Morozov, and S. Kladov. *Geometry of Almost-Conserved Quantities in Symplectic Maps. Part II: Recovery of approximate invariant*. 2025. arXiv: [2505.07224](https://arxiv.org/abs/2505.07224) [nlin.CD]. URL: <https://arxiv.org/abs/2505.07224>.
- [9] T. Zolkin, S. Nagaitsev, I. Morozov, and S. Kladov. *Geometry of Almost-Conserved Quantities in Symplectic Maps. Part I: Perturbation Theory*. 2025. arXiv: [2505.07223](https://arxiv.org/abs/2505.07223) [nlin.CD]. URL: <https://arxiv.org/abs/2505.07223>.
- [10] T. Zolkin, S. Nagaitsev, I. Morozov, S. Kladov, and Y.-K. Kim. “Isochronous and period-doubling diagrams for symplectic maps of the plane”. In: *Chaos, Solitons Fractals* 198 (2025), p. 116513. ISSN: 0960-0779. DOI: <https://doi.org/10.1016/j.chaos.2025.116513>. URL: <https://www.sciencedirect.com/science/article/pii/S0960077925005260>.
- [11] T. Zolkin, S. Nagaitsev, and I. Morozov. “Dynamics of McMillan mappings I. McMillan multipoles”. In: *Physica D: Nonlinear Phenomena* (2025), p. 134620. ISSN: 0167-2789. DOI: <https://doi.org/10.1016/j.physd.2025.134620>. URL: <https://www.sciencedirect.com/science/article/pii/S0167278925000995>.
- [12] I. Morozov and Y. Maltseva. “Coupled twiss parameters estimation from turn-by-turn data”. In: *Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment* 1066 (2024), p. 169646. ISSN: 0168-9002. DOI: <https://doi.org/10.1016/j.nima.2024.169646>. URL: <https://www.sciencedirect.com/science/article/pii/S0168900224005722>.
- [13] T. Zolkin, S. Nagaitsev, I. Morozov, S. Kladov, and Y.-K. Kim. *Isochronous and period-doubling diagrams for symplectic maps of the plane*. 2024. arXiv: [2412.05541](https://arxiv.org/abs/2412.05541) [nlin.CD]. URL: <https://arxiv.org/abs/2412.05541>.
- [14] T. Zolkin, S. Nagaitsev, I. Morozov, S. Kladov, and Y.-K. Kim. *Dynamics of McMillan mappings III. Symmetric map with mixed nonlinearity*. 2024. arXiv: [2410.10380](https://arxiv.org/abs/2410.10380) [nlin.SI]. URL: <https://arxiv.org/abs/2410.10380>.
- [15] T. Zolkin, S. Nagaitsev, and I. Morozov. *Dynamics of McMillan mappings I. McMillan multipoles*. 2024. arXiv: [2405.05652](https://arxiv.org/abs/2405.05652) [nlin.SI]. URL: <https://arxiv.org/abs/2405.05652>.
- [16] V. Gauzshtein et al. “Measurement of the tensor analyzing power T20 for incoherent photoproduction on a deuteron above the first resonance region”. In: *Physics Letters B* 860 (2025), p. 139166. ISSN: 0370-2693. DOI: <https://doi.org/10.1016/j.physletb.2024.139166>. URL: <https://www.sciencedirect.com/science/article/pii/S037026932400724X>.

- [17] Y. V. Shestakov et al. “Photodisintegration of tensor polarized deuteron: Status of the experiment at the VEPP-3 storage ring”. In: *International Journal of Modern Physics E* 0.0 (0), p. 2441023. DOI: [10.1142/S0218301324410234](https://doi.org/10.1142/S0218301324410234). eprint: <https://doi.org/10.1142/S0218301324410234>. URL: <https://doi.org/10.1142/S0218301324410234>.
- [18] I. M. T. Zolkin and S. Nagaitsev. “Understanding sextupole”. English. In: *Proc. IPAC’24* (Nashville, TN). IPAC’24 - 15th International Particle Accelerator Conference 15. JACoW Publishing, Geneva, Switzerland, May 2024, pp. 725–728. ISBN: 978-3-95450-247-9. DOI: [10.18429/JACoW-IPAC2024-MOPS13](https://indico.jacow.org/event/63/contributions/3720). URL: <https://indico.jacow.org/event/63/contributions/3720>.
- [19] I. Morozov and Y. Maltseva. *Coupled Twiss Parameters Estimation from TbT Data*. 2023. arXiv: [2311.14287](https://arxiv.org/abs/2311.14287) [physics.acc-ph].
- [20] I. Morozov and Y. Maltseva. *Combining Methods for Localization of Linear Focusing Errors*. 2023. arXiv: [2311.10570](https://arxiv.org/abs/2311.10570) [physics.acc-ph].
- [21] V. V. Anashin et al. “Experiments with the KEDR Detector at the e^+e^- Collider VEPP-4M in the Energy Range $\sqrt{s} = 1.84\text{--}3.88$ GeV”. In: *Physics of Particles and Nuclei* 54.1 (Feb. 2023), pp. 185–226. DOI: [10.1134/s1063779623010033](https://doi.org/10.1134/s1063779623010033).
- [22] V. V. Anashin et al. “Measurement of J/ψ decays into final states $2(\pi^+\pi^-)\pi^0$, $K^+K^-\pi^+\pi^-\pi^0$, $2(\pi^+\pi^-)$ and $K^+K^-\pi^+\pi^-$ ”. In: *The European Physical Journal C* 82.10 (Oct. 2022). DOI: [10.1140/epjc/s10052-022-10879-9](https://doi.org/10.1140/epjc/s10052-022-10879-9).
- [23] T. Zolkin, S. Nagaitsev, and I. Morozov. “McMillan map and nonlinear Twiss parameters”. In: (2022). DOI: [10.48550/ARXIV.2204.12691](https://doi.org/10.48550/ARXIV.2204.12691).
- [24] V. V. Anashin et al. “Measurement of the branching fraction of $J/\psi \rightarrow$ at KEDR”. In: (2022). DOI: [10.48550/ARXIV.2211.13520](https://doi.org/10.48550/ARXIV.2211.13520).
- [25] G. Baranov, A. Bogomyagkov, I. Morozov, S. Sinyatkin, and E. Levichev. “Lattice optimization of a fourth-generation synchrotron radiation light source in Novosibirsk”. In: *Physical Review Accelerators and Beams* 24.12 (Dec. 2021). DOI: [10.1103/physrevaccelbeams.24.120704](https://doi.org/10.1103/physrevaccelbeams.24.120704).
- [26] I. Morozov and P. Piminov. “Detection of Anomalies in BPM Signals at the VEPP-4M”. en. In: *Proceedings of the 27th Russian Particle Accelerator Conference RuPAC2021* (2021), Russia. DOI: [10.18429/JACoW-RUPAC2021-WEPSC40](https://doi.org/10.18429/JACoW-RUPAC2021-WEPSC40).
- [27] I. Morozov, P. Piminov, and I. Yakimov. “Precise Analysis of Beam Optics at the VEPP-4M by Turn-by-Turn Betatron Phase Advance Measurement”. en. In: *Proceedings of the 27th Russian Particle Accelerator Conference RuPAC2021* (2021), Russia. DOI: [10.18429/JACoW-RUPAC2021-WED04](https://doi.org/10.18429/JACoW-RUPAC2021-WED04).
- [28] P. Piminov et al. “VEPP-4M Collider Operation at High Energy”. en. In: *Proceedings of the 12th International Particle Accelerator Conference IPAC2021* (2021), Brazil. DOI: [10.18429/JACoW-IPAC2021-MOPAB034](https://doi.org/10.18429/JACoW-IPAC2021-MOPAB034).
- [29] P. Piminov et al. “VEPP-4M Electron Positron Collider Operation at High Energy”. en. In: *Proceedings of the 27th Russian Particle Accelerator Conference RuPAC2021* (2021), Russia. DOI: [10.18429/JACoW-RUPAC2021-TUA01](https://doi.org/10.18429/JACoW-RUPAC2021-TUA01).
- [30] V. Anashin et al. “Precise measurement of R_{uds} and R between 1.84 and 3.72 GeV at the KEDR detector”. In: *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics* 788 (2019), pp. 42–51. DOI: [10.1016/j.physletb.2018.11.012](https://doi.org/10.1016/j.physletb.2018.11.012).
- [31] V. Anashin et al. “Measurement of $\Gamma_{ee} \times B_{B\mu\mu}$ for $(2S)$ meson”. In: *arXiv* (2018).
- [32] V. Anashin et al. “Measurement of $\Gamma_{ee} \times B_{B\mu\mu}$ for $(2S)$ meson”. In: *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics* 781 (2018), pp. 174–181. DOI: <https://doi.org/10.1016/j.physletb.2018.03.079>.
- [33] V. Anashin et al. “Precise measurement of R_{uds} and R between 1.84 and 3.72 GeV at the KEDR detector”. In: *arXiv* (2018).
- [34] I. Morozov and E. Levichev. “Dynamical Aperture Control in Accelerator Lattices With Multipole Potentials”. en. In: *CERN Proceedings* (2017), Vol 1 (2017): CERN–BINP Workshop for Young Scientists in e^+e^- . DOI: [10.23727/CERN-PROCEEDINGS-2017-001.195](https://doi.org/10.23727/CERN-PROCEEDINGS-2017-001.195).
- [35] I. Morozov and E. Levichev. “Dynamical Aperture Control in Accelerator Lattices With Multipole Potentials”. In: *IPAC 2016 - Proceedings of the 7th International Particle Accelerator Conference* (2016), pp. 3455–3457.
- [36] Y. Maltseva and I. Morozov. “Model-dependent accelerator lattice fit based on BPM data and generating functions”. In: *IPAC 2016 - Proceedings of the 7th International Particle Accelerator Conference* (2016), pp. 3311–3313.

- [37] T. Zolkin, Y. Kharkov, I. Morozov, and S. Nagaitsev. “A Model Ring With Exactly Solvable Nonlinear Motion”. In: (Sept. 2013).
- [38] G. Stancari et al. “Beam halo dynamics and control with hollow electron beams”. In: *HB 2012 - Proceedings of the 52nd ICFA Advanced Beam Dynamics Workshop on High-Intensity and High-Brightness Hadron Beams* (2013), pp. 466–470.
- [39] T. Zolkin, Y. Kharkov, I. Morozov, and S. Nagaitsev. “Nonlinear Accelerator with Transverse Motion Integrable in Normalized Polar Coordinates”. In: *IPAC 2012 - International Particle Accelerator Conference 2012* (2012), pp. 1116–1118.
- [40] I. Morozov, G. Stancari, A. Valishev, and D. Shatilov. “Simulation of Hollow Electron Beam Collimation in the Fermilab Tevatron Collider”. In: *IPAC 2012 - International Particle Accelerator Conference 2012* (2012), pp. 94–96.
- [41] I. Morozov. *i-a-morozov/elementary: v0.1.0*. Version v0.1.0. June 2025. DOI: [10.5281/zenodo.15771385](https://doi.org/10.5281/zenodo.15771385). URL: <https://doi.org/10.5281/zenodo.15771385>.
- [42] I. Morozov. *i-a-morozov/sympint: v0.2.0*. Version v0.2.0. Apr. 2025. DOI: [10.5281/zenodo.15265930](https://doi.org/10.5281/zenodo.15265930). URL: <https://doi.org/10.5281/zenodo.15265930>.
- [43] I. Morozov. *i-a-morozov/model: v0.2.0*. Version v0.2.0. Oct. 2024. DOI: [10.5281/zenodo.13933324](https://doi.org/10.5281/zenodo.13933324). URL: <https://doi.org/10.5281/zenodo.13933324>.
- [44] I. Morozov. *i-a-morozov/tohubohu: v0.1.1*. Version v0.1.1. Apr. 2025. DOI: [10.5281/zenodo.15265932](https://doi.org/10.5281/zenodo.15265932). URL: <https://doi.org/10.5281/zenodo.15265932>.
- [45] i-a-morozov. *i-a-morozov/square: v0.1.0*. Version v0.1.0. Nov. 2024. DOI: [10.5281/zenodo.14064955](https://doi.org/10.5281/zenodo.14064955). URL: <https://doi.org/10.5281/zenodo.14064955>.
- [46] I. Morozov. *i-a-morozov/twiss: v0.2.6*. Version v0.2.6. Aug. 2024. DOI: [10.5281/zenodo.13327959](https://doi.org/10.5281/zenodo.13327959). URL: <https://doi.org/10.5281/zenodo.13327959>.
- [47] I. Morozov. *i-a-morozov/ndmap: v0.1.0*. Version v0.1.0. Nov. 2023. DOI: [10.5281/zenodo.10158382](https://doi.org/10.5281/zenodo.10158382). URL: <https://doi.org/10.5281/zenodo.10158382>.
- [48] I. Morozov. *i-a-morozov/harmonica: v0.1.1*. Version v0.1.1. Nov. 2023. DOI: [10.5281/zenodo.10206000](https://doi.org/10.5281/zenodo.10206000). URL: <https://doi.org/10.5281/zenodo.10206000>.
- [49] I. Morozov. *i-a-morozov/SIGNAL: 2021 release update*. Version v1.2.0. May 2021. DOI: [10.5281/zenodo.4741546](https://doi.org/10.5281/zenodo.4741546). URL: <https://doi.org/10.5281/zenodo.4741546>.
- [50] I. Morozov. *i-a-morozov/PROPAGANDA v1.0.1*. Version v1.0.1. Oct. 2020. DOI: [10.5281/zenodo.4075909](https://doi.org/10.5281/zenodo.4075909). URL: <https://doi.org/10.5281/zenodo.4075909>.