Artem Lutsenko, PhD student

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Education

2023-10 – present
PhD, University of Padua, Italy Astronomy.
Project title: *The structure of the Milky Way disk using large surveys.*
Supervisor: Prof. Antonella Vallenari and Prof. Giovanni Carraro

2020-10 – 2023-06
M.Sc., University of Padua, Italy Astrophysics and cosmology.
Thesis title: *Milky Way thin and thick disk kinematics with GAIA data.*
Supervisor: Prof. Giovanni Carraro
Grade: 107/110

2016-09 – 2020-07
B.Sc., Southern Federal University, Russia Physics.
Thesis title: *Simulation of the influence of the degree of multilayer structure on the temperature of the superconducting transition and the properties of cuprates.*
Supervisor: Prof. Anna Myasnikova
Grade: excellent (5/5)

Employment History

2020-04 – 2022-04
Junior Research Fellow Southern Federal University's Research Institute of Physics.
Project title: *Cosmomicrophysical studies of the structure and dynamics of the Galaxy*

Research Publications

Journal Articles

1. Tkachenko, R., Vieira, K., **Lutsenko**, **A.**, Korchagin, V., & Carraro, G. (2025). Determining the scale length and height of the milky way's thick disc using rr lyrae. *Universe*, *11*(4). doi:10.3390/universe11040132
2. Korchagin, V., **Lutsenko**, **A.**, Tkachenko, R., Carraro, G., & Vieira, K. (2023). Resonant effects of a bar on the galactic disk kinematics perpendicular to its plane. *Galaxies*, *11*(5), 97. doi:10.3390/galaxies11050097
3. Vieira, K., Korchagin, V., Carraro, G., & **Lutsenko**, **A.** (2023). Vertical structure of the milky way disk with gaia dr3. *Galaxies*, *11*(3), 77. doi:10.3390/galaxies11030077
4. Vieira, K., Carraro, G., Korchagin, V., **Lutsenko**, **A.**, Girard, T. M., & van Altena, W. (2022). Milky way thin and thick disk kinematics with gaia edr3 and rave dr5. *The Astrophysical Journal*, *932*(1), 28. doi:10.3847/1538-4357/ac6b9b
5. Doronkina, S., Myasnikova, A., Dzhantemirov, A., & **Lutsenko**, **A.** (2022). Topological pseudogap in highly polarizable layered systems with 2d hole-like dispersion. *Physica E: Low-dimensional Systems and Nanostructures*, *136*, 115052. doi:https://doi.org/10.1016/j.physe.2021.115052
6. Vieira, K., Korchagin, V., & **Lutsenko**, **A.** (2021). Kinematics of the milky way thick disk in solar neighborhood. *International Journal of Modern Physics D*, *30*(16), 2140010. doi:10.1142/S0218271821400101. eprint: https://doi.org/10.1142/S0218271821400101

7. Myasnikova, A. E., Nazdracheva, T. F., **Lutsenko**, **A.**, Dmitriev, A. V., Dzhantemirov, A. H., Zhileeva, E. A., & Moseykin, D. V. (2019). Strong long-range electron–phonon interaction as possible driving force for charge ordering in cuprates. *Journal of Physics: Condensed Matter*, *31*(23), 235602. doi:10.1088/1361-648x/ab0d6c

Conference Proceedings

1. **Lutsenko**, **A.**, & Myasnikova, A. (2019). Simulation of resonant x-ray elastic scattering (rexs) on charge ordering in cuprates. In *Proceedings of the 25th russian scientific conference of physics students and young scientists* (pp. 193–194).
2. Myasnikova, A., **Lutsenko**, **A.**, Dzhantemirov, A., Nazdracheva, T., & Moseykin, D. (2018). Modeling the resonant x-ray scattering on the charge ordering and pseudogap formation in a system with high density of correlated carriers strongly interacting with phonon field. In *Proceedings of the 38th meeting on low temperature physics (ht-38)* (p. 233).
3. Myasnikova, A., Nazdracheva, T., **Lutsenko**, **A.**, Dzhantemirov, A., Dmitriev, A., Zhileeva, E., & Moseykin, D. (2018). Strong electron-phonon interaction at high carrier density as possible driving force for charge ordering in cuprate superconductors. In *Proceedings of the 38th meeting on low temperature physics (ht-38)* (p. 185).

Honours and Awards

2020 **Excellence scholarship**, University of Padua, Italy.

2019 **Increased scholarship for noteworthy scientific activity**, Southern Federal University, Russia.
First-degree diploma in the section " 7- physics of low temperature, superconductivity», Twenty-fifth Russian scientific conference of physics students and young scientists

2018 **Winner of the competition "Smart scholarship"**, Rostov-on-Don, Russia

Skills

Languages Russian (native), English (C1), Italian (A2).

Coding Python, C♯

Tools TopCat, LaTeX, R, SQL

Searching tools Aladin, SIMBAD.