Aleksandr Mosenkov

Curriculum Vitae

Contact details

Department of Physics and Astronomy
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Research interests

Formation and evolution of galaxies. Structure of galaxies, including 2D/3D fitting of surface brightness distribution and deep photometric and kinematic analysis of galaxy features. Surveys and catalogues of extragalactic objects. Scaling relations of galaxies. Interstellar medium in galaxies. Low-surface brightness Universe. Structure of the Milky Way galaxy. Polar-ring galaxies, low-surface brightness galaxies, superthin galaxies, active galactic nuclei, spiral structure. Globular clusters.

Positions

08/2021–current time **Assistant Professor**, *Brigham Young University*, Provo, UT, USA.

05/2019–05/2021 **Part-time Researcher**, *Ton Duc Thang University*, Ho Chi Minh City, Vietnam.

04/2019–05/2020 **Unofficial Lecturer**, *Saint Petersburg State University*, Saint Petersburg, Russia.

10/2017–07/2021 **Senior Researcher**, *Central (Pulkovo) Observatory of Russian Academy of Sciences*, Saint Petersburg, Russia.

05/2015–04/2017 **Postdoctoral Researcher**, *Astronomical Observatory*, Ghent University, Belgium.

06/2011–04/2015 **Junior Researcher**, *Central (Pulkovo) Observatory of Russian Academy of Sciences*, Saint Petersburg, Russia.

05/2008–12/2017 **Part-time Research Fellow**, *Saint Petersburg State University*, Saint Petersburg, Russia.

Education

05/2011–04/2014 **Candidate of Physical and Mathematical Sciences (Ph.D. in Physics and Mathematics)**, *Saint Petersburg State University*, Saint Petersburg, Russia.
December 17, 2013

09/2003–06/2008 **Qualification of Astronomer (specialist level 5A in ISCED classification of UNESCO) with honors (Master of Science Degree in Astronomy)**, *Saint Petersburg State University*, Saint Petersburg, Russia.
June 30, 2008

Ph.D. Thesis

Title *Study of the Structure and Dynamics of Edge-on Galaxies*

Advisors Professor Vladimir P. Reshetnikov & Dr. Natalja Ya. Sotnikova

Masters Thesis

Title *Structure of Edge-on Galaxies*

Advisors Prof. Vladimir P. Reshetnikov & Dr. Natalja Ya. Sotnikova

Honours, Awards & Prizes

2019 **Struve Award**, *Pulkovo Observatory of Russian Academy of Sciences, 1st place*, Saint Petersburg, Russia.

2017 **Struve Award**, *Pulkovo Observatory of Russian Academy of Sciences, 1st place*, Saint Petersburg, Russia.

2013 **Struve Award**, *Pulkovo Observatory of Russian Academy of Sciences, 3d place*, Saint Petersburg, Russia.

2008 **Best Diploma Work**, *Saint Petersburg State University*, Saint Petersburg, Russia.

Grants/Fellowships

2022 **RSF-project 22-22-00483 "A study of the properties of galaxy spiral structure using deep photometric data" (co-PI, ~$30k)**, *Central Astronomical Observatory of the RAS*, Saint Petersburg, Russia.

2020-2021 **RSF-project 20-72-10052 "A study of the distribution and properties of dust in galaxies" (PI, ~$200k)**, *Central Astronomical Observatory of the RAS*, Saint Petersburg, Russia.

2018–2020 **RFBR-project "Investigation of the spiral structure of disc galaxies based on the multi-wavelength (UV-IR) observations"**, *Saint Petersburg State University*, Saint Petersburg, Russia.

2018 **Short-term fellowship in the frame of the project "Russian Platform"**, *Ghent University*, Ghent, Belgium.

2015–2017 **Beneficiary of a postdoctoral grant from the Belgian Federal Science Policy Office**, *Ghent University*, Ghent, Belgium.

2014–2016 **RFBR-project "Study of the Vertical Structure of Disc Galaxies"**, *Saint Petersburg State University*, Saint Petersburg, Russia.

2011–2013 **RFBR-project "Study of Characteristics of Different Galaxy Dark Halos"**, *Saint Petersburg State University*, Saint Petersburg, Russia.

2009–2011 **RFBR-project "Study of Structure and Dynamics of Edge-on Spiral Galaxies"**, *Saint Petersburg State University*, Saint Petersburg, Russia.

Professional Collaborations

2023+ **LSST collaboration**, *Co-investigator*.

2022+ **All-sky Survey of Galaxies with Polar Structures**, *Founder, Chair*.

2022+ **APO Astrophysical Research Consortium 3.5-meter Telescope**, *Board member*.

2021+ **Catalog of Edge-on Galaxies**, *Co-investigator*, P.I. D. Makarov.

2021+ **NGC891 JWST collaboration**, *Co-investigator*.

2021+ **LSST collaboration**, *Member*.

2017+ **HERON project**, *Co-investigator*, P.I. M. Rich.

2015+ **3D Extinction Map**, *Co-investigator*, P.I. G. Gontcharov.

2015-2021 **Deep Imaging of Edge-on Galaxies**, *Co-investigator*, P.I. N. Brosch.

2015-2017 **DustPedia**, *Co-investigator*, P.I. J. Davies.

2015-2017 **Disc Galaxies with Optical Warps**, *Co-investigator*, P.I. V.P. Reshetnikov.

2015-2017 **Herschel Observations of Edge-on Spirals**, *Co-investigator*, P.I. M. Baes.

2012-2014 **Edge-on Galaxies in the Sloan Digital Sky Survey**, *Co-investigator*, P.I. D. Bizyaev.

Professional Organizations

2021+ **Member of the American Astronomical Society**.

2018+ **Member of the International Astronomical Union**.

Computer Proficiencies

Languages	Python, Fortran, C++, Julia, Unix shell scripts, HTML, LaTeX
Applications	Image Reduction and Analysis Facility IRAF, ESO-MIDAS, DS9, GAIA, Montage, OpenOffice and Microsoft Office software
Photometric decomposition codes	Galfit, Imfit, BUDDA, SKIRT
Statistics	R
Engineering software	Mapple, Mathematica
Operating systems	Unix/Linux, Windows, MacOS
Developed software for astronomical community	DECA & IMAN (see `https://bitbucket.org/mosenkov/iman_new/src/master/`)

Teaching Experience

Assistant Professor, Brigham Young University
Physics 127: Descriptive Astronomy (GE), Fall 2021, 2022, 2023
Physics 228: Stellar and Extragalactic Astronomy, Winter 2024
Physics 529: Advanced Observational Astronomy, Winter 2022, 2023
Physics 727: Extragalactic Astrophysics and Cosmology 1, Winter 2023

Lecturer, Saint Petersburg State University
Mini-course "Galaxy Formation and Evolution", Winter 2019
Lectures on Astronomical Software, Winter 2011, 2012, 2013, 2014

Other Teaching Experience
Course Instructor at High School # 564 for gifted math students, Saint Petersburg, Russia

Training

Physics and Astronomy New Faculty Workshop, November 11-14 2021

Mentoring Students

BYU Undergraduate Students
Isaac Jensen, Lydia Klopf, Nefi Pineda, Thea Spigarelly, Kade Vickers, Jacob Guerrette, Jonah Seguine, William Roque, Raymond Kelly, Gibson Campbell, Brent Bowler, Noah Hebdon, Zac Shakespear, Denzil Watts, Mckenna Myckowiak, Logan Chambers (REU, University of Missouri)

BYU Graduate Students
Kyle Adams, Seneca Bahr, Jacob Guerrette

Graduate Committee Member for BYU Gaduate Students
Crystal-Lynn Bartier, Nonnie Bash, Jared Davidson, Dallin Spencer, Savanah Turner

SPbU
Andrey Panasyuk, Maria Skriabina, Pavel Usachev, Polina Smirnova

Other students
Rubén Arjona (Universidad Autónoma de Madrid)

Projects include REU projects and Mosenkov-grant-funded projects.

University Citizenship Assignments

2022+ **Undergraduate Committee Member**, *Department of Physics and Astronomy*, Brigham Young University, Provo, Utah.
USA

2021+ **Computational Lab Committee member**, *Department of Physics and Astronomy*, Brigham Young University, Provo, Utah.
USA

Astronomy Community Service

2024 **Guest Editor for the "Galaxies" journal in the Special Issue "From Tides to Waves: Understanding the Formation Mechanisms of Galactic Spirals"**.

2023 **Subject-matter expert reviewer in a NASA peer review**.

2022+ **Astrophysical Research Consortium Board member**, *Apache Point Observatory*, NM, USA.

2019+ **Regular referee for MNRAS, Astrophysical Bulletin, and Frontiers in Astronomy and Space Sciences**.

2019-2021 **Organizer of regular working colloquia at the Laboratory of Observational Astrophysics**, *Saint Petersburg State University*, Saint Petersburg, Russia.

Conferences, Workshops & Colloquia

2024 **VAK-2024**, *Nizhnij Arkhyz*, Russia, Oral presentation: The outer structure of galaxies in modern deep sky surveys.

2024 **Rubin Community Workshop**, *Menlo Park*, USA, Oral presentation: Galactic Cirrus in Deep Optical Observations.

2024 **AAS meeting #244**, *Madison*, USA, Oral presentation: The Influence of environment on the morphology of spiral structures in galaxies: insights from deep optical imaging.

2024 **AAS meeting #244**, *Madison*, USA, Co-author of the oral presentation: An updated occurrence rate for galaxies with polar structures.

2023 **AAS meeting #243**, *New Orleans*, USA, Co-author of the oral presentation: Faint Features Around Edge-On Galaxies In Deep Optical Surveys.

2023 **AAS meeting #243**, *New Orleans*, USA, Co-author of the poster presentation: Deep optical observations of UGC 10043 and UGC 9560/9562.

2023 **AAS meeting #243**, *New Orleans*, USA, Co-author of the poster presentation: Deep Observations of Galaxies at Apache Point Observatory.

2023 **AAS meeting #243**, *New Orleans*, USA, Co-author of the poster presentation: Comparison of Stellar Disk Profiles from TNG50 to Observed Galaxies.

2023 **Rubin Galaxies Collaboration meeting**, *Paris*, France, Oral presentation: Deep Imaging of Galaxies and Galactic Cirrus.

2023 **AAS meeting #242**, *Seattle*, USA, Oral presentation: Dust emission versus dust attenuation in edge-on galaxies.

2023 **The Physics of ISM: from local clouds up to early galaxies**, *Moscow*, Russia, Oral presentation: Thin and thick dust disks in edge-on galaxies.

2023 **The Physics of ISM: from local clouds up to early galaxies**, *Moscow*, Russia, Co-author in the oral presentation: Our new maps and models of the spatial variations of dust extinction in the Galaxy.

2023 **MSA-2023**, *Volgograd*, Russia, Co-author in the oral presentation: Multi-wavelength decomposition of galaxies with spiral structure: M51.

2023 **AAS meeting #241**, *Seattle*, USA, Oral presentation: Edge-on galaxies in deep optical surveys.

2023 **AAS meeting #241**, *Seattle*, USA, Co-author in the poster presentation: Tidal features around edge-on galaxies in the SDSS Stripe 82.

2023 **AAS meeting #241**, *Seattle*, USA, Co-author in the poster presentation: How the Milky Way's Structure Measures Up to the Local Universe.

2022 **DECam at 10 years — Looking Back, Looking Forward**, *Tucson*, USA, Oral presentation: Edge-on galaxies in the DESI Legacy Imaging Surveys.

2022 **AAS meeting #240**, *Pasadena*, USA, Oral presentation: The dust distribution in edge-on galaxies based on Herschel observations.

2022 **AAS meeting #240**, *Pasadena*, USA, Co-author of the poster presentation: Galaxies with polar structures in the SDSS Stripe 82.

2021 **VAK-2021 (on-line)**, *Moscow*, Russia, Co-author in the oral presentation: Geometrical properties of Galactic cirri in the optical.

2021 **VAK-2021 (on-line)**, *Moscow*, Russia, Co-author in the oral presentation: Interstellar extinction at high Galactic latitudes across the whole dust layer in the Galaxy.

2021 **VAK-2021 (on-line)**, *Moscow*, Russia, Co-author in the oral presentation: Investigation of Galactic cirri based on SDSS Stripe 82 images.

2021 **VAK-2021 (on-line)**, *Moscow*, Russia, Co-author in the oral presentation: The properties of Galactic globular clusters from Gaia EDR3 and other data compared with theoretical isochrones.

2021 **VAK-2021 (on-line)**, *Moscow*, Russia, Co-author in the poster presentation: Studying the characteristics of spiral galaxies.

2021 **VAK-2021 (on-line)**, *Moscow*, Russia, Co-author in the oral presentation: An analysis of methods for determining corotation radii in galaxies.

2021 **VAK-2021 (on-line)**, *Moscow*, Russia, Co-author in the oral presentation: Dust discs in edge-on galaxies: case of NGC 4437.

2021 **VAK-2021 (on-line)**, *Moscow*, Russia, Co-author in the oral presentation: Bulge-disk decomposition of ultra-thin galaxies.

2021 **VAK-2021 (on-line)**, *Moscow*, Russia, Co-author in the oral presentation: The catalog of edge-on galaxies based on Pan-STARRS1 survey .

2021 **VAK-2021 (on-line)**, *Moscow*, Russia, Co-author in the oral presentation: Properties of diffuse light in compact groups of galaxies.

2021 **VAK-2021 (on-line)**, *Moscow*, Russia, Co-author in the oral presentation: Deep images of galaxies with polar rings.

2020 **The Rise of Metals and Dust in Galaxies through Cosmic Time (online)**, *Marseille*, France, Poster: Dust and stellar emission in edge-on galaxies.

2019 **Diversity of the Local Universe**, *Nizhnij Arkhyz*, Russia, Talk: Deep imaging of low surface brightness structures near galaxies.

2019 **Modern Stellar Astronomy**, *Nizhnij Arkhyz*, Russia, Talk: Investigation of the parameters of spiral structure based on a multi-band photometry.

2019 **Modern Stellar Astronomy**, *Nizhnij Arkhyz*, Russia, Talk (co-author): Co-rotation radii in grand-design galaxies.

2019 **Modern Stellar Astronomy**, *Nizhnij Arkhyz*, Russia, Talk (co-author): A 3D model of dust distribution in the nearest kiloparsec.

2019 **EWASS 2019**, *Lyon*, France, Poster (co-author): Photometry of the superthin edge-on galaxy FGC2441.

2019 **IAU Symposium 355**, *Tenerife*, Spain, Talk (co-author): Low-surface-brightness features in Hickson compact groups.

2019 **IAU Symposium 355**, *Tenerife*, Spain, Poster (co-auther): Deep imaging of edge-on disks.

2019 **Modern Problems of Extragalactic Astronomy**, *Puschino*, Russia, Talk (co-author): Investigation of the parameters of the spiral pattern on the basis of the imaging for disc galaxies.

2018 **Modern Stellar Astronomy**, *Moscow*, Russia, Talk (co-author): Interstellar polarization in the Local Bulb and Gould Belt from the GAIA DR2.

2018 **Modern Stellar Astronomy**, *Moscow*, Russia, Talk (co-author): Characteristics of the MW globular clusters from the comparison with theoretical isochrones.

2018 **Modern Stellar Astronomy**, *Moscow*, Russia, Talk (co-author):Reddening and extinction for the GAIA stars.

2018 **Modern Stellar Astronomy**, *Moscow*, Russia, Talk: The dust distribution in galaxies.

2018 **Pulkovo 2018 for young scientists**, *St. Petersburg*, Russia, Talk: The dust distribution in galaxies.

2018 **EWASS 2018**, *Liverpool*, UK, Poster (co-author): The interstellar extinction of the Gaia stars.

2018 **EWASS 2018**, *Liverpool*, UK, Poster: Faint extended structures near edge-on galaxies.

2018 **EWASS 2018**, *Liverpool*, UK, Poster: DECA: A new Python package for galaxy image decomposition.

2017 **Stars: From Collapse to Collapse**, *Nizhnij Arkhyz*, Russia, Talk (co-author): 3D Reddening and Extinction Maps at the Beginning of the Gaia Era.

2016 **SKIRT days 2016**, *Ghent*, Belgium, Talk: Modeling the HEROES galaxies.

2016 **DustPedia meeting**, *Florence*, Italy, Talk: Photometric decomposition of the DustPedia sample.

2016 **IAU Symposium**, *Toledo*, Spain, Poster (co-author): Faint Extended Structures Near Galaxies: Preliminary Results from the Wise Observatory.

2016 **227th Meeting of AAS**, *Kissimmee, FL*, USA, Poster (co-author): Spectral Observations of Superthin Galaxies.

2014 **Journées 2014 "Systèmes de référence spatio-temporels"**, *Saint Petersburg*, Russia, Poster: Decomposition of Galaxy Images and Galaxy Rotation Curves.

2014 **Modern Problems of Extragalactic Astronomy**, *Puschino*, Russia, Talk (co-author): Mass Decomposition of Galaxy Images by Means of the New DECA-TK package.

2013 **Deconstructing Galaxies: Structure and Morphology in the Era of Large Surveys**, *Santiago*, Chile, Poster: Structural Properties of Edge-on Galaxies.

2013 **Science and Progress**, *Saint Petersburg*, Russia, Talk (co-author): Spiral Structure and Bulge/Disc Decomposition Analysis.

2013 **VAK-2013**, *Saint Petersburg*, Russia, Talk: Structural Characteristics of Edge-on Galaxies.

2013 **Modern Stellar Astronomy**, *Pulkovo, Saint Petersburg*, Russia, Talk: Structure and Dynamics of Edge-on Galaxies.

2013 **Modern Problems of Extragalactic Astronomy**, *Puschino*, Russia, Talk: Mass Decomposition of Galaxy Images by Means of the DECA Package.

2012 **The All-Russian Astrometry Conference "Pulkovo-2012"**, *Saint Petersburg*, Russia, Talk: Bar in Our Galaxy: Structure, Kinematics and Photometry.

2012 **Galaxies: Origin, Dynamics, Structure and Astrophysical Disks**, *Sochi*, Russia, Talk: Ambiguous Correlations Between Disc and Bulge Structural Parameters.

2012 **Modern Problems of Extragalactic Astronomy**, *Puschino*, Russia, Talk: Catalogue of Edge-on Galaxies in the Sloan Digital Sky Survey.

2012 **220th Meeting of AAS**, *Anchorage, TX*, USA, Poster (co-author): The Catalog of Edge-on Disk Galaxies Found in SDSS.

2011 **Fifty years of Cosmic Era: Real and Virtual Studies of the Sky**, *Yerevan*, Armenia, Talk: Photometry of Edge-on Spiral Galaxies: Structural Parameters and Scaling Relations of Bulges.

My publications

[1] Maria N. Skryabina, Kyle R. Adams, and **Aleksandr V. Mosenkov**. Tidal features and disc thicknesses of edge-on galaxies in the SDSS Stripe 82. MNRAS, 532(1):883–902, July 2024.

[2] G. A. Gontcharov, S. S. Savchenko, A. A. Marchuk, C. J. Bonatto, O. S. Ryutina, M. Yu. Khovritchev, V. B. Il'in, **A. V. Mosenkov**, D. M. Poliakov, and A. A. Smirnov. Isochrone Fitting of Galactic Globular Clusters—VI. High-latitude Clusters NGC 5024 (M53), NGC 5053, NGC 5272 (M3), NGC 5466, and NGC 7099 (M30). *Research in Astronomy and Astrophysics*, 24(6):065014, June 2024.

[3] Jacob A. Guerrette, **Aleksandr V. Mosenkov**, Dallin Spencer, and Zacory D. Shakespear. Comparing the Structural Parameters of the Milky Way to Other Spiral Galaxies. *Research in Astronomy and Astrophysics*, 24(3):035002, March 2024.

[4] Maarten Baes, **Aleksandr Mosenkov**, Raymond Kelly, Abdurro'uf, Nick Andreadis, Sena Bokona Tulu, Peter Camps, Abdissa Tassama Emana, Jacopo Fritz, Andrea Gebek, Inja Kovačić, Antonio La Marca, Marco Martorano, Angelos Nersesian, Vicente Rodriguez-Gomez, Crescenzo Tortora, Ana Trčka, Bert Vander Meulen, Arjen van der Wel, and Lingyu Wang. The TNG50-SKIRT Atlas: Wavelength dependence of the effective radius. A&A, 683:A182, March 2024.

[5] Maarten Baes, Andrea Gebek, Ana Trčka, Peter Camps, Arjen van der Wel, Abdurro'uf, Nick Andreadis, Sena Bokona Tulu, Abdissa Tassama Emana, Jacopo Fritz, Raymond Kelly, Inja Kovačić, Antonio La Marca, Marco Martorano, **Aleksandr Mosenkov**, Angelos Nersesian, Vicente Rodriguez-Gomez, Crescenzo Tortora, Bert Vander Meulen, and Lingyu Wang. The TNG50-SKIRT Atlas: Post-processing methodology and first data release. A&A, 683:A181, March 2024.

[6] Alexander A. Marchuk, Ilia V. Chugunov, George A. Gontcharov, **Aleksandr V. Mosenkov**, Vladimir B. Il'in, Sergey S. Savchenko, Anton A. Smirnov, Denis M. Poliakov, Jonah Seguine, and Maxim I. Chazov. Galaxies decomposition with spiral arms - II. A multiwavelength case study of M 51. MNRAS, 528(2):1276–1295, February 2024.

[7] **Aleksandr V. Mosenkov**, Andrey D. Panasyuk, Savanah Turner, Crystal-Lynn Bartier, Maria N. Skryabina, Alexander A. Marchuk, Sergey S. Savchenko, Jakob Bergstedt, Vladimir P. Reshetnikov, and Ilia V. Chugunov. A multiwavelength study of spiral structure in galaxies. II. Spiral arms in deep optical observations. MNRAS, 527(4):10615–10631, February 2024.

[8] Ilia V. Chugunov, Alexander A. Marchuk, **Aleksandr V. Mosenkov**, Sergey S. Savchenko, Ekaterina V. Shishkina, Maxim I. Chazov, Aleksandra E. Nazarova, Maria N. Skryabina, Polina I. Smirnova, and Anton A. Smirnov. Galaxies decomposition with spiral arms - I: 29 galaxies from S^4G. MNRAS, 527(4):9605–9624, February 2024.

[9] Alexander A. Marchuk, **Aleksandr V. Mosenkov**, Ilia V. Chugunov, Valeria S. Kostiuk, Maria N. Skryabina, and Vladimir P. Reshetnikov. A new, purely photometric method for determination of resonance locations in spiral galaxies. MNRAS, 527(1):L66–L70, January 2024.

[10] Daniil V. Smirnov, **Aleksandr V. Mosenkov**, and Vladimir P. Reshetnikov. Polar-ring galaxies in the Illustris TNG50 simulation. MNRAS, 527(2):4112–4128, January 2024.

[11] **A. V. Mosenkov**, S. K. H. Bahr, V. P. Reshetnikov, Z. Shakespear, and D. V. Smirnov. The occurrence rate of galaxies with polar structures may be significantly underestimated. A&A, 681:L15, January 2024.

[12] George A. Gontcharov, Charles J. Bonatto, Olga S. Ryutina, Sergey S. Savchenko, **Aleksandr V. Mosenkov**, Vladimir B. Il'in, Maxim Yu Khovritchev, Alexander A. Marchuk, Denis M. Poliakov, Anton A. Smirnov, and Jonah Seguine. Isochrone fitting of Galactic globular clusters - V. NGC 6397 and NGC 6809 (M55). MNRAS, 526(4):5628–5647, December 2023.

[13] V. B. Il'in, D. G. Turichina, V. G. Farafonov, S. I. Laznevoi, G. A. Gontcharov, A. A. Marchuk, **A. V. Mosenkov**, D. M. Poliakov, S. S. Savchenko, A. A. Smirnov, and M. S. Prokopjeva. A new practical approach to light scattering by spheroids with the use of spheroidal and spherical function bases. J. Quant. Spec. Radiat. Transf., 311:108759, December 2023.

[14] G. A. Gontcharov, A. A. Marchuk, M. Yu. Khovrichev, **A. V. Mosenkov**, S. S. Savchenko, V. B. Il'in, D. M. Poliakov, and A. A. Smirnov. New Interstellar Extinction Maps Based on Gaia and Other Sky Surveys. *Astronomy Letters*, 49(11):673–696, December 2023.

[15] V. P. Reshetnikov, A. A. Marchuk, I. V. Chugunov, P. A. Usachev, and **A. V. Mosenkov**. The possible evolution of pitch angles of spiral galaxies. A&A, 680:L14, December 2023.

[16] K. Aditya, Arunima Banerjee, Peter Kamphuis, **Aleksandr Mosenkov**, Dmitry Makarov, and Sviatoslav Borisov. H I 21cm observations and dynamical modelling of the thinnest galaxy: FGC 2366. MNRAS, 526(1):29–42, November 2023.

[17] **Aleksandr V. Mosenkov**, R. Michael Rich, Michael Fusco, Julia Kennefick, David Thilker, Alexander Marchuk, Noah Brosch, Michael West, Michael Gregg, Francis Longstaff, Andreas J. Koch-Hansen, Shameer Abdeen, and William Roque. The haloes and environments of nearby galaxies (HERON) - III. A 45-kpc spiral structure in the GLSB galaxy UGC 4599. MNRAS, 525(2):3016–3031, October 2023.

[18] Sergey S. Savchenko, Denis M. Poliakov, **Aleksandr V. Mosenkov**, Anton A. Smirnov, Alexander A. Marchuk, Vladimir B. Il'in, George A. Gontcharov, Jonah Seguine, and Maarten Baes. The problem of dust attenuation in photometric decomposition of edge-on galaxies and possible solutions. MNRAS, 524(3):4729–4745, September 2023.

[19] Anton A. Smirnov, Sergey S. Savchenko, Denis M. Poliakov, Alexander A. Marchuk, **Aleksandr V. Mosenkov**, Vladimir B. Il'in, George A. Gontcharov, Javier Román, and Jonah Seguine. Prospects for future studies using deep imaging: analysis of individual Galactic cirrus filaments. MNRAS, 519(3):4735–4752, March 2023.

[20] George A. Gontcharov, Maxim Yu Khovritchev, **Aleksandr V. Mosenkov**, Vladimir B. Il'in, Alexander A. Marchuk, Denis M. Poliakov, Olga S. Ryutina, Sergey S. Savchenko, Anton A. Smirnov, Pavel A. Usachev, Jae-Woo Lee, Conner Camacho, and Noah Hebdon. Isochrone fitting of Galactic globular clusters - IV. NGC 6362 and NGC 6723. MNRAS, 518(2):3036–3054, January 2023.

[21] Viviana Casasola, Simone Bianchi, Laura Magrini, **Aleksandr V. Mosenkov**, Francesco Salvestrini, Maarten Baes, Francesco Calura, Letizia P. Cassarà, Christopher J. R. Clark, Edvige Corbelli, Jacopo Fritz, Frédéric Galliano, Elisabetta Liuzzo, Suzanne Madden, Angelos Nersesian, Francesca Pozzi, Sambit Roychowdhury, Ivano Baronchelli, Matteo Bonato, Carlotta Gruppioni, and Lara Pantoni. The resolved scaling relations in DustPedia: Zooming in on the local Universe. A&A, 668:A130, December 2022.

[22] **Aleksandr V. Mosenkov**, Vladimir P. Reshetnikov, Maria N. Skryabina, and Zacory Shakespear. Unveiling the Nature of Polar-ring Galaxies from Deep Imaging. *Research in Astronomy and Astrophysics*, 22(11):115003, November 2022.

[23] V. P. Reshetnikov, A. A. Marchuk, I. V. Chugunov, P. A. Usachev, and **A. V. Mosenkov**. Evolution of the Spiral Structure of Galaxies from HST COSMOS Field Data. *Astronomy Letters*, 48(11):644–652, November 2022.

[24] **Aleksandr V. Mosenkov**, Pavel A. Usachev, Zacory Shakespear, Jacob Guerrette, Maarten Baes, Simone Bianchi, Emmanuel M. Xilouris, George A. Gontcharov, Vladimir B. Il'in, Alexander A. Marchuk, Sergey S. Savchenko, and Anton A. Smirnov. The distribution of dust in edge-on galaxies: I. The global structure. MNRAS, 515(4):5698–5717, October 2022.

[25] G. A. Gontcharov, **A. V. Mosenkov**, S. S. Savchenko, V. B. Il'in, A. A. Marchuk, A. A. Smirnov, P. A. Usachev, D. M. Polyakov, and N. Hebdon. A Three-Dimensional Analytical Model of the Interstellar Extinction within the Nearest Kiloparsec. *Astronomy Letters*, 48(10):578–600, October 2022.

[26] G. A. Gontcharov, **A. V. Mosenkov**, S. S. Savchenko, V. B. Il'in, A. A. Marchuk, A. A. Smirnov, P. A. Usachev, D. M. Polyakov, and Z. Shakespear. Interstellar Extinction in Galactic Cirri in SDSS Stripe 82. *Astronomy Letters*, 48(9):503–516, September 2022.

[27] Simone Bianchi, Viviana Casasola, Edvige Corbelli, Frédéric Galliano, Laura Magrini, Angelos Nersesian, Francesco Salvestrini, Maarten Baes, Letizia P. Cassarà, Christopher J. R. Clark, Ilse De Looze, Anthony P. Jones, Suzanne C. Madden, **Aleksandr Mosenkov**, and Nathalie Ysard. Dust emissivity in resolved spiral galaxies. A&A, 664:A187, August 2022.

[28] D. Makarov, S. Savchenko, **A. Mosenkov**, D. Bizyaev, V. Reshetnikov, A. Antipova, I. Tikhonenko, P. Usachev, S. Borisov, L. Makarova, S. Kautsch, A. Marchuk, and E. Rubtsov. The edge-on Galaxies in the Pan-STARRS survey (EGIPS). MNRAS, 511(2):3063–3075, April 2022.

[29] K. Aditya, Peter Kamphuis, Arunima Banerjee, Sviatoslav Borisov, **Aleksandr Mosenkov**, Aleksandra Antipova, and Dmitry Makarov. H I 21 cm observation and mass models of the extremely thin galaxy FGC 1440. MNRAS, 509(3):4071–4093, January 2022.

[30] Alexander A. Marchuk, Anton A. Smirnov, **Aleksandr V. Mosenkov**, Vladimir B. Il'in, George A. Gontcharov, Sergey S. Savchenko, and Javier Román. Fractal dimension of optical cirrus in Stripe82. MNRAS, 508(4):5825–5841, December 2021.

[31] George A. Gontcharov, Maxim Yu Khovritchev, **Aleksandr V. Mosenkov**, Vladimir B. Il'in, Alexander A. Marchuk, Sergey S. Savchenko, Anton A. Smirnov, Pavel A. Usachev, and Denis M. Poliakov. Isochrone fitting of Galactic globular clusters - III. NGC 288, NGC 362, and NGC 6218 (M12). MNRAS, 508(2):2688–2705, December 2021.

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