PERSONAL INFORMATION

Family name, first name **Ivanova, Oleksandra**
Date of birth **18.07.1978**
Nationality **Ukraine**
Researcher unique identifier (s):

Researcher ID: **C-5788-2017**
Scopus Author ID: **15131906800**
Scopus Author ID: **57216439603**
https://scholar.google.com/citations?user=EMxqwv0AAAAJ&hl=uk
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RESEARCH INTERESTS

- CCD photometry, spectroscopy and polarimetry of active small bodies;
- Physical properties of selected small bodies;
- Activity of small bodies of the Solar System in a wide range of heliocentric distances;
- Physical properties of cometary dust and regolith on the surfaces of atmosphereless bodies of the Solar System;

EDUCATION

2021	**DrSc. degree in Heliophysics and Physics of the Solar System** - Main Astronomical Observatory of NASU, Ukraine – DrSc dissertation: " Physical and dynamic properties of active small bodies of the Solar system"
2004	**PhD. degree in Heliophysics and Physics of the Solar System** – Main Astronomical Observatory of NASU, Ukraine – PhD dissertation: "Physical model of active local areas on cometary nuclei" supervisor: Dr. Leonid Shulman
2000	**Mgr. degree in Astronomy** – Kyiv Taras Shevchenko National University (KNU), Ukraine – diploma thesis: "Comparative characteristics of the light curves of selected comets" supervisor: Prof. Klim Churyumov

CURRENT POSITIONS

2021 - present	deputy head of the Department of Interplanetary Matter AI SAS
2019 - present	Senior researcher IIa, Department of Interplanetary Matter AI SAS
2009 – present	Senior researcher, at the Main Astronomical Observatory of NASU

PREVIOUS POSITIONS

2016 - 2018	Visiting researcher (SASPRO grant), Department of interplanetary matter AI SAS
2015	Visiting researcher (RFFI grant), Special Astrophysical Observatory RAS
2015	Visiting researcher (SAIA grant), Department of Interplanetary Matter AI SAS
2013	Visiting researcher (SAIA grant), Department of Interplanetary Matter AI SAS
2013	Visiting researcher (DAAD grant), Physics Institut für Geophysik und Extraterrestrische Physik, Braunschweig, Germany
2009	Visiting researcher (DAAD grant), Physics Institut für Geophysik und Extraterrestrische Physik, Braunschweig, Germany
2007-2009	Researcher, Main Astronomical Observatory of NASU
2004-2007	Junior scientist, Main Astronomical Observatory of NASU
2000-2004	PhD student, Main Astronomical Observatory of NASU

FELLOWSHIPS

2020-2024	**APVV-19-0072 project** „The relationship between color and polarization in comets: clues to understanding microphysical properties of cometary dust and mechanisms of its ejection“ - head
2017-2019	**Interacademic Agreement (MAD) (Slovakia–Ukraine)** "Physical properties of cometary dust from photometric, spectral and polarimetic observations" – head
2016-2018	**SASPRO grant** (**Mobility Programme of Slovak Academy of Sciences: Supportive Fund for Excellent Scientists) 1287/03/01 – b** – "Investigation of development of the physical activity of dynamical new comets over the wide range of heliocentric distances", Astronomical Institute of the Slovak Academy of Sciences - head
2015	**SAIA grant**, Tatranska Lomnica, Astronomical institute of SAS
2013	**DAAD grant**, Braunschweig, Physics Institut für Geophysik und Extraterrestrische Physik
2013	**SAIA grant**, Tatranska Lomnica, Astronomical institute of SAS
2010	Scholarship for young scientists from the President of Ukraine
2009	**DAAD grant**, Braunschweig, Physics Institut für Geophysik und Extraterrestrische Physik
2007 – 2008	Scholarship for young scientists from the National academy of science of Ukraine
2006	Scholarship for young scientists from the President of Ukraine
2002 – 2004	Scholarship for young scientists from the National academy of science of Ukraine

AWARDS

2019	The L'Oréal Prize for Women in Science (Ukraine)
2016	The Barabashov Prize for a series of scientific publications in the field of physics of comets, National Academy of Science of Ukraine
2010	The premium of Kyiv Mayor for talented young scientists
2006	The premium of Yu. Drogobych for young scientists, UAA

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

2013 – present	Number of Postdocs/PhD./master students **1/2/2** (1-Posdoc) Astronomical Observatory of SAS, Slovakia (1-PhD) Main Astronomical Observatory of NASU, Ukraine (1-Mgr) Pavol Jozef Šafárik University in Košice faculty of sciences, Slovakia (1-Mgr, 1- PhD) Comenius University Bratislava, Slovakia (1-Mgr) Kyiv Taras Shevchenko National University (KNU), Ukraine

TEACHING ACTIVITIES

2012-2015	Associate Professor, Lectures of "Physics and Chemistry of comets" / Taras Shevchenko National University, Physical Department / Ukraine

ORGANISATION OF SCIENTIFIC MEETINGS

2000-2002	The local committee of the Young Science Conference / Ukraine
2011	The local committee of NATO ASI "Special Detection Technique (Polarimetry) and Remote Sensing"/ Ukraine
2018	Workshop „Physics of comets after the Rosetta mission: Unresolved problems„ / Slovakia
2022	EPSC2022, section "Tools for characterizing planetary and small bodies surfaces, atmospheres, and dust particles (Imagery, photometry, spectroscopy, spectrophotopolarimetry)" / Spain

2023 Workshop “Active small bodies in the Solar System over a wide range of heliocentric distances” / Slovakia

2024 EPSC2024, section “Advances in Photopolarimetry of Solar System Small Bodies” / Germany

INSTITUTIONAL RESPONSIBILITIES

2022 Member of the specialized scientific board D 26.208.01 for the award of the scientific rank of doctor of physical and mathematical sciences (candidate of physical and mathematical sciences) in the fields: 01.03.01 "Astrometry and celestial mechanics", Main Astronomical Observatory of NASU, Ukraine

2021 – 2025 Member of Global Talent Mentoring

2020 – 2023 Member of Europlanet telescope network scientific advisory panel, UK

REVIEWING ACTIVITITES

2023 – present Member of the scientific council section «Nuclear physics, radiophysics and astronomy» of the Ministry of Education of Ukraine

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

2012 - present Member of the International Astronomical Union

2006 - present Member of the European Astronomical Society

2004 - present Member of the Astronomical Association of Ukraine

MAJOR COLLABORATIONS

1. **Dennis Bodewits**, Auburn University, USA
2. **Jürgen Blum**, Physics Institut für Geophysik und Extraterrestrische Physik, Braunschweig, Germany
3. **Colin Snodgrass**, Royal Observatory, Edinburgh, UK
4. **Holger Sirks**, Max-Planck Institute for Solar System Research, Germany
5. **Ludmilla Kolokolova**, The Astronomy Department is located on the College Park campus of the University of Maryland
6. **Gulchehra Kokhirova**, Institute of Astrophysics of the Academy of Sciences of Tajikistan, Tajikistan

CAREER BREAKS

2010-2011 Maternity Leave and Child Care Leave (12 months)

PUBLICATION TRACK RECORD

As first author:

Active asteroids (first Polarimetric observation of active asteroid)

1. IVANOVA, Oleksandra** - LICANDRO, Javier** - MORENO, Fernando** - LUKYANYK, Igor - MARKKANEN, Johannes - TOMKO, Dušan - HUSÁRIK, Marek - CABRERA-LAVERS, Antonio - POPESCU, Marcel - SHABLOVINSKAYA, Elena - SHUBINA, Olena. Long-lasting activity of asteroid (248370) 2005 QN_173. In Monthly Notices of the Royal Astronomical Society, 2023, vol. 525, no. 1, p. 402-414. (2022: 4.8 - IF, Q1 - JCR, 1.734 - SJR, Q1 - SJR, karentované - CCC). (2023 - Current Contents, WOS, SCOPUS, NASA ADS). ISSN 0035-8711. https://doi.org/10.1093/mnras/stad2294 (total citation:3)

First quasi-simultaneous observation of comet at heliocentric distance more 9 au

2. IVANOVA, Oleksandra - ROSENBUSH, Vera - LUKYANYK, Igor - MARKKANEN, Johannes - KLESHCHONOK, Valery - KOLOKOLOVA, Ludmilla O. - HUSÁRIK, Marek - KISELEV, Nikolai - ANDREEV, Maksim V. - AFANASIEV, Viktor. Quasi-simultaneous photometric, polarimetric, and spectral observations of distant comet C/2014 B1 (Schwartz). In Astronomy and Astrophysics, 2023, vol. 672, article no. A76, p. 1-18. (2022: 6.5 - IF, Q1 - JCR, 1.999 - SJR, Q1 - SJR, karentované - CCC).

(2023 - Current Contents, WOS, SCOPUS, NASA ADS). ISSN 0004-6361. https://doi.org/10.1051/0004-6361/202244686 (total citation:3)

Observations of active centaurs

3. IVANOVA, Oleksandra** - PICAZZIO, Enos - LUKYANYK, Igor V. - CAVICHIA, Oscar - ANDRIEVSKY, Sergei M. Spectroscopic observations of the comet 29P/Schwassmann-Wachmann 1 at the SOAR telescope. In Planetary and Space Science, 2018, vol. 157, p. 34-38. (2017: 1.820 - IF, Q3 - JCR, 1.065 - SJR, Q2 - SJR, karentované - CCC). (2018 - Current Contents, WOS, SCOPUS, NASA ADS). ISSN 0032-0633. https://doi.org/10.1016/j.pss.2018.04.003. (total citation: 50)

Detecting of rapid dust color variation in comet

4. IVANOVA, Oleksandra - ZUBKO, Evgenij - VIDEEN, Gorden - MOMMERT, Michael - HORA, Joseph L. - SEMAN KRIŠANDOVÁ, Zuzana - SVOREŇ, Ján - NOVICHONOK, Artyom - BORYSENKO, Serhii - SHUBINA, Olena. Colour variations of Comet C/2013 UQ4 (Catalina). In Monthly Notices of the Royal Astronomical Society, 2017, vol. 469, no. 3, p. 2695-2703. (2016: 4.961 - IF, Q1 - JCR, 2.388 - SJR, Q1 - SJR, karentované - CCC). (2017 - Current Contents, WOS, SCOPUS, NASA ADS). ISSN 0035-8711. Dostupné na: https://doi.org/10.1093/mnras/stx1004 (total citation:40)

Detecting circular polarization in long-period comet

5. IVANOVA, Oleksandra - ROSENBUSH, Vera - AFANASIEV, Viktor - KISELEV, Nikolai. Polarimetry, photometry, and spectroscopy of comet C/2009 P1 (Garradd). In Icarus, 2017, vol. 284, p. 167-182. (2016: 3.131 - IF, Q2 - JCR, 2.380 - SJR, Q1 - SJR, karentované - CCC). (2017 - Current Contents, WOS, SCOPUS, NASA ADS). ISSN 0019-1035. https://doi.org/10.1016/j.icarus.2016.11.014 (total citation:20)

Pioneer work about Quasi-simultaneous photometric, polarimetric, and spectral observations of distant comet (with perihelion more 4 au)

6. IVANOVA, Oleksandra - NESLUŠAN, Luboš - SEMAN KRIŠANDOVÁ, Zuzana - SVOREŇ, Ján - KORSUN, Pavlo - AFANASIEV, Viktor - RESHETNYK, Volodymyr - ANDREEV, Maksim V. Observations of comets C/2007 D1 (LINEAR), C/2007 D3 (LINEAR), C/2010 G3 (WISE), C/2010 S1 (LINEAR), and C/2012 K6 (McNaught) at large heliocentric distances. In Icarus, 2015, vol. 258, p. 28-36. (2014: 3.038 - IF, Q2 - JCR, 2.182 - SJR, Q1 - SJR, karentované - CCC). (2015 - Current Contents, WOS, SCOPUS, NASA ADS). ISSN 0019-1035. https://doi.org/10.1016/j.icarus.2015.06.026 (total citation:18)
7. Ivanova, O. V., Skorov, Y. V., Korsun, P. P., Afanasiev, V. L., & Blum, J. (2011). Observations of the long-lasting activity of the distant Comets 29P Schwassmann–Wachmann 1, C/2003 WT42 (LINEAR) and C/2002 VQ94 (LINEAR). *Icarus*, *211*(1), 559-567. https://doi.org/10.1016/j.icarus.2010.10.02 (total citation: 55)

In co-authors

Rosetta mission ground-based supporting

8. ROSENBUSH, Vera - IVANOVA, Oleksandra - KISELEV, Nikolai - KOLOKOLOVA, Ludmilla O. - AFANASIEV, Viktor. Spatial variations of brightness, colour and polarization of dust in comet 67P/Churyumov-Gerasimenko. In Monthly Notices of the Royal Astronomical Society, 2017, vol. 469, suppl. 2, p. S475-S491. (2016: 4.961 - IF, Q1 - JCR, 2.388 - SJR, Q1 - SJR, karentované - CCC). (2017 - Current Contents, WOS, SCOPUS, NASA ADS). ISSN 0035-8711. https://doi.org/10.1093/mnras/stx2003 (total citation: 48)
9. SNODGRASS, Colin – et al. The 67P/Churyumov-Gerasimenko observation campaign in support of the Rosetta mission. In Philosophical transactions - Royal Society A : Mathematical, Physical and engineering sciences, 2017, vol. 375, no. 2097, article no. 20160249, p. 1-22. (2016: 2.970 - IF, Q1 - JCR, 0.986 - SJR, Q1 - SJR, karentované - CCC). (2017 - Current Contents). ISSN 1364-503X. https://doi.org/10.1098/rsta.2016.024 (total citation: 56)

Pioneer works about photometric and spectral observations of distant comet (with perihelion more 5 au)

10. Korsun, P. P., Ivanova, O. V., & Afanasiev, V. L. (2008). C/2002 VQ94 (LINEAR) and 29P/Schwassmann–Wachmann 1—CO+ and N+ 2 rich comets. Icarus, 198(2), 465-471. https://doi.org/10.1016/j.icarus.2008.08.010 (total citation: 55)

TECHNOLOGY TRANSFER ACTIVITIES IN THE LAST 5 YEARS

The proposed project is fundamental, with the highest value being the scientific results that contribute to the advancement of both global and domestic science. The expected outcomes will foster the development of one of the most fundamental areas of planetary astronomy, specifically the study of the origin and evolution of the Solar System, where active objects and the dust they produce play a key role. Overall, the project will enable the study of the evolution of Solar System material, its transformation, and possible transport processes.

However, the project also has practical significance. In particular, modeling the properties of dust in comets and active asteroids, which are sources of interplanetary dust and meteoric material, will have great practical importance. The developed models and corresponding databases can be used to study natural (space-origin) and anthropogenic aerosol particles in the Earth's atmosphere, which play a significant role in the thermal balance of the atmosphere and the formation of the Earth's climate, which is crucial for the protection of the planet.

The scientific and methodological results of the project will be integrated into the higher education system's learning process. They will form the basis for the development of specialized courses on topics such as "Origin of the Solar System," "Physics and Chemistry of Comets," and "Small Bodies of the Solar System." Additionally, the results will be used in the preparation of undergraduate and master's theses by students.