

08:00-09:00 REGISTRATION

09:00-09:30

OFFICIAL OPENING

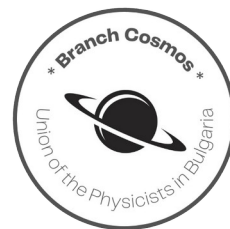
Stefan Lalkovski [*Branch Cosmos*]

Kamen Kozarev [*IANA0-BAS*]

Lubomir Baburov [*RATIO*]

Vladimir Bozhilov [*Sofia University*]

Chairperson: Stefan Lalkovski



SPONSOR SESSION

09:30-10:00 **Dimitar Dimitrov** [*Wiser Technology*]

10:00-10:30 **Zdravko Dimitrov** [*Sfera Technologies*]

10:30-11:00 **Viktor Danchev** [*Endurosat*]

Chairperson: Stefan Lalkovski



11:00-11:30 COFFEE BREAK

11:30-12:00 Deputy Minister Prof. Dr. **George Angelov** [*Ministry of Innovation and Growth*]

Session: SPACE APPLICATIONS

12:00-12:30 **Georgi Kaludov** [*IBM*] Quantum Computing and AI for the next era of Space Exploration

12:30-13:00 **Stela Tkatchova** [*European Innovation Council*] (Invited) - Breakthrough research and innovations for space debris mitigation, remediation and in space servicing and future space technology "game changers"

Chairperson: Irina Gancheva

PRESENT

DAY 1

of NaFSKI-V

22 OCT 2024

13:00-14:00 LUNCH BREAK

Session: SPACE INDUSTRY

14:00-14:30 **Jennifer Ngo-Anh** [*ESA*]

14:30-15:00 **Simon Jenner** [*Axiom Space*]

15:00-15:30 **Petko Dinev** [*Imperx*]

15:30-16:00 **Freddy Geyer** [*Thales Alenia*]

Chairperson: Lubomir Baburov

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16:00-16:30 COFFEE BREAK

16:30-18:00

DISCUSSION PANEL

WHAT NICHE IN THE SPACE INDUSTRY SHOULD WE FOCUS ON AS A COUNTRY?

Viktor Danchev [*Endurosat*]

Stela Tkatchova [*EIC*]

Kais Barmawi [*ESA*]

Petko Dinev [*Imperx*]

Moderator: Petko Zhelyazov



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18:00-20:00 SOCIAL EVENT

08:00-09:00 REGISTRATION

Session: NEW INFRASTRUCTURE & INSTRUMENTATION

Chairperson: Rositsa Miteva

09:00-09:30 **Zoran Simic** [*Astronomical Observatory Belgrade*] (invited talk) Urban Observatory – Light Pollution

09:30-10:00 **Dragomir Marchev** [*University of Shumen*] (invited talk) The new instrumentation at the Astronomical center of Shumen University

10:00-10:15 **Milen Minev** [*IANA O – BAS*] New 1.5 m telescope at NAO-Rozhen

10:15-10:30 **Stanimir Kolev** [*Sofia University*] Plasma Physics and Technologies at the Faculty of Physics, Sofia University

10:30-10:45 **Kiril Kirilov** [*Petascale Supercomputer Bulgaria*] Discoverer supercomputer

10:45-11:00 **Marusja Buchvarova** [*SRTI – BAS*] Space Physics Group: From Intercosmos to Star Wars

11:00-11:30 COFFEE BREAK

Session: ASTROPHYSICS

Chairperson: Vladimir Bozhilov

11:30-12:00 **Trifon Trifonov** [*Sofia University*] (invited talk) Searching for Exoplanets in the 21st Century

12:00-12:30 **Oliver Roberts** [*NASA Marshall Space Flight Center / USRA Science and Technology Institute*] (invited talk) Cosmic Fireworks: Revealing the Mysteries of the High-Energy Universe

12:30-12:45 **Yuliya Mutafchieva** [*INRNE – BAS*] Neutron star crusts and the influence of strong magnetic fields on their structure and composition

12:45-13:00 **Vladislav Marchev** [*IANA O – BAS*] Evolution of the mass accretion rate in symbiotic stars - MWC 560, Rs Oph and T Cr B

13:00-14:00 LUNCH BREAK

Session: NEAR EARTH & SOLAR SYSTEM

Chairperson: Rositsa Miteva

14:00-14:30 **Adrian Sonka** [*Astronomical Institute of the Romanian Academy*] (invited talk) Rotational and physical properties of resonant minor planets

14:30-15:00 **Diana Besliu-Ionescu** [*Astronomical Institute of the Romanian Academy*] (invited talk) High Speed Streams: Cataloguing and Understanding Geoeffectiveness

15:00-15:15 **Antoaneta Antonova** [*IANA O – BAS*] The Dark and Quiet Skies initiative

15:15-15:30 **Guergana Guerova** [*Sofia University*] GNSS Radio Occultation use for atmospheric remote sensing

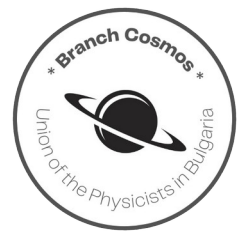
15:30-15:45 **Kolyo Dankov** [*Sofia University*] Exploring the heterogenic mineral composition of diverse set of meteorites by XRF and Micro-Raman Spectroscopy

15:45-16:00 **Plamen Fiziev** [*Foundation for Theoretical and Computational Physics and Astrophysics*] New Methods for Using Spherical Harmonics in Analysis of Satellite Data

16:00-16:30 COFFEE BREAK

16:30-18:00 e-POSTER SESSION

Chairperson: Yuliya Mutafchieva



PRESENT

DAY 2

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23 OCT 2024

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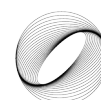


ФОНД
НАУЧНИ
ИЗСЛЕДВАНИЯ



ENDUROSAT

wiser



SFERA
TECHNOLOGIES

e-POSTERS

16:30-16:35 **Nestor Arsenov** [IANA0-BAS] The power of cosmic nothingness - using the emptiest spaces to figure out the evolution of the universe

16:35-16:40 **Veronika Asova & Galin Bistrev** [Sofia University] Study of the position reconstruction with monolith CeBr₃ crystal and segmented photodetector array

16:40-16:45 **Momchil Dechev** [IANA0-BAS] Bulgarian-Serbian Cooperation in Active Events On The Sun, Catalogs Of Proton Events and Electron Signatures in X-Ray, UV and Radio Diapason.

16:45-16:50 **Kalina Dimitrova** [Sofia University] Cluster Reconstruction in Electromagnetic Calorimeters Using Machine Learning Methods

16:50-16:55 **Mainara Gouveia** [Sofia University] Lagrangian characterization of the Black Sea

16:55-17:00 **Dimana Grigorova** [Sofia University] X-ray tests of lead loaded plastic scintillators for space applications

17:00-17:05 **Daniel Ivanov, Mira Gencheva, Yavor Nedelchev** [Sofia University] Design and performance of position sensitive charged particle trigger on cosmic rays

17:05-17:10 **Kostadinka Koleva** [SRTI-BAS] Halo CME deflection associated with a flare and filament eruption

17:10-17:15 **Adelina Miteva** [SRTI-BAS] Aluminium alloys in aerospace applications

17:15-17:20 **Adelina Miteva** [SRTI-BAS] Utilization of Nanomaterials in Aerospace Engineering

17:20-17:25 **Radoslav Simeonov** [Sofia University] The Forward Calorimeter of the ALICE experiment at CERN LHC

17:25-17:30 **Stefan Stefanov, Emona Ilieva, Chavdar Nenov** [IANA0-BAS / Sofia University] A Decade of Youth-Driven Research at the "Beli Brezi" Summer School

17:30-17:35 **Denitza Stoeva** [Sofia University] Automated analysis of exoplanetary orbits (EXO-RESTART)

17:35-17:40 **Petya Tabakova** [SRTI-BAS] Hardness influence on the adhesion of thin protective coatings for aerospace applications

17:40-17:45 **Veselin Vasilev** [Sofia University] In-situ oxygen production on Mars by means of magnetically stabilized arc discharge and solid oxide electrolysis cells.

17:45-17:50 **Yancho Yordanov** [Sofia University] Space Quantum Communication: Applications and challenges for building Global Quantum Network

17:50-17:55 **Evelina Zaharieva** [Sofia University] The most complete exoplanet host stellar properties (Exo-Restart)

17:55-18:00 **Radoslav Zamanov** [IANA0-BAS] MWC 656 - interaction of a black hole with the Be disc



PRESENT

DAY 2

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23 OCT 2024

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08:00-09:00 REGISTRATION

Session: SPACE WEATHER RESEARCH

Chairperson: Kamen Kozarev

09:00-09:30 **Mark Dierckxsens** [*Royal Belgian Institute for Space Aeronomy*] (invited talk) Space Weather and Space Physics Research at the Royal Belgian Institute for Space Aeronomy

09:30-09:45 **Artem Epifanov** [*IAAO – BAS*] Constraining the SEP Source Population in Global Transport Modeling Using Parker Solar Probe Measurements

Session: SOLAR OBSERVATIONS

Chairperson: Kamen Kozarev

09:45-10:00 **Werner Poetzi** [*Kanzelhöhe Observatory, University of Graz*] Kanzelhöhe Space Weather data products and possible future contributions (cancelled) {presented by Rositsa Miteva}

10:00-10:15 **Rositsa Miteva** [*IAAO – BAS*] Geo-efficiency of solar active regions

10:15-10:30 **Tsvetan Tsvetkov** [*IAAO – BAS*] Research on the solar corona during total solar eclipses

10:30-11:00 COFFEE BREAK

Session: RADIO ASTRONOMY

Chairperson: Guergana Guerova

11:00-11:15 **Kamen Kozarev** [*IAAO – BAS*] The LOFAR Telescope Upgrade and LOFAR-BG Station - Current Status and Future Developments

11:15-11:30 **Vergil Yotov** [*IAAO – BAS*] Characterizing solar activity using LOFAR observations

11:30-11:45 **Peter Petkov** [*Technical University of Sofia*] Antennas for Solar observations in Low and High Frequency Bands

11:45-12:00 **Pavlina Alexieva** [*Technical University of Sofia*] Performance comparison of low frequency antenna elements

Session: MACHINE LEARNING

Chairperson: Guergana Guerova

12:00-12:30 **Oleg Stepanyuk** [*IAAO – BAS*] (invited) Segmentation and Tracking of Eruptive Solar Phenomena with Convolutional Neural Networks (CNN) and beyond

12:30-12:45 **Christoph Schirninger** [*University of Graz*] Deep learning image burst stacking to reconstruct high-resolution ground-based solar observations

12:45-13:00 **Mariana Filipova** [*UniBIT*] Developing a machine learning algorithm for classifying space objects using open data sources

13:00-14:00 LUNCH BREAK

Session: SPACE EDUCATION

Chairperson: Lubomir Baburov

14:00-14:30 **Tsvetelina Yordanova** [*Endurosat*]

14:30-15:00 **Stoil Ivanov** [*Sofia University*]

15:00-15:30 **Milen Simeonov** [*Bulgarian Air Force Academy “Georgi Benkovski”*]

15:30-16:00 COFFEE BREAK

16:00-17:30

DISCUSSION PANEL

Moderator: Petko Zhelyazov

NEW APPROACHES IN SPACE EDUCATION, INNOVATIVE EDUCATION, LEARNING BY DOING

Tsvetelina Yordanova [*Endurosat*]

Stoil Ivanov [*Sofia University*]

Milen Simeonov [*Bulgarian Air Force Academy “Georgi Benkovski”*]

17:30 CLOSING THE FORUM



PRESENT

DAY 3

of NaFSKI-V

24 OCT 2024

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