



23rd Young Scientists' Conference on Astronomy and Space Physics

April 25–30, 2016

Kyiv, Ukraine

PROGRAMME

Registration, poster section, morning coffee and tea-breaks will take place in the poster-hall

Monday, April, 25

09.00-14.00 - Registration

14.00-14.30 - Official opening

Section 'Solar Physics & Heliosphere'

Chair: Olena Torbaniuk

Room 200

14.30-15.15 Oleksiy Agapitov, F. Mozer (*University of California, Berkeley, USA*) *Nonlinear wave-particle interactions in the outer radiation belts: Van Allen Probes results (invited)*

15.15-15.45 tea-break

15.45-16.00 Yaroslav Volvach, A. A. Stanislavsky, A. A. Konovalenko, A. A. Koval, V. V. Dorovskyy (*Institute of Radio Astronomy of the National Academy of Sciences of Ukraine, Kharkiv, Ukraine*) *A comparative study of decameter "drift pair" bursts observed in 2002 and 2015 (12+3)*

16.00-16.15 Dima Balalaev, V. Olshevsky (*Taras Shevchenko National University of Kyiv, Kyiv, Ukraine*) *Modeling Kelvin-Helmholtz instability with Fluid Particle-in-Cell method (12+3)*

- 16.15-16.20** Andrij Prysiaznyi (*Ivan Franko National University of Lviv, Lviv, Ukraine*) *Data processing of 2D spectral observations of the Sun* (**poster**)
- 16.20-16.25** Valeria Lyakh (*Taras Shevchenko National University of Kyiv, Kyiv, Ukraine*) *Intensity and velocity variations along the solar atmosphere above the facular region* (**poster**)
- 18.30-21.00** **Excursion to the Main Astronomical Observatory of the National Academy of Sciences of Ukraine**

Tuesday, April, 26

Section ‘Stellar Astrophysics and Interstellar Medium’

Chair: Olena Torbaniuk
Room 103

09.00-10.00 morning coffee

- 10.00-10.15** Ihor Kravtsov, V. V. Zakharenko, I. Y. Vasylieva, S. S. Mykhailova, O. M. Ulyanov, A. I. Shevtsova, A. O. Skoryk, P. Zarka, O. O. Konovalenko (*Institute of Radio Astronomy of the National Academy of Sciences of Ukraine, Kharkiv, Ukraine*) *Search for transient signals in the data of decameter survey of Northern Sky* (**12+3**)
- 10.15-10.30** Iryna Kushniruk, Ya. Pavlenko, J. Jenkins, O. Ivanyuk (*Taras Shevchenko National University of Kyiv, Kyiv, Ukraine*) *Metallicity of the Beta Pictoris moving group* (**12+3**)
- 10.30-10.45** Jaime Andrés Rosales Guzmán (*University of Concepción, Concepción, Chile*) *Spectroscopic study of the system V495 Centauri* (**12+3**)
- 10.45-11.00** Nikolay Britavskiy, A. Bonanos, A. Mehner (*Astronomical Observatory, Odessa I. I. Mechnikov National University, Odessa, Ukraine*) *Dusty massive stars in the Local Group* (**12+3**)
- 11.00-11.15** Vitalii Breus (*Odessa National Maritime University, Odessa, Ukraine*) *Detection of new variable stars using CCD photometry: improved algorithm* (**12+3**)
- 11.15-11.45 tea-break**
- 11.45-12.00** Marina Galunka (*Odessa Mariinsky High School, Odessa, Ukraine*) *Modeling of five newly discovered eclipsing binary stars* (**12+3**)
- 12.00-12.05** Viktor Kudak, Š. Parimucha (*Institute of Physics, Faculty of Natural Sciences, University of P. J. Šafárik, Košice, Slovakia*) *O-C diagrams of Algol types binary stars* (**poster**)
- 12.05-12.10** Mert Acar, A. Devlen (*ISTEK Belde Schools Observatory, Uskudar, Istanbul, Turkey; Department of Astronomy and Space Sciences, University of Ege, Bornova, Izmir, Turkey*) *Period Change and Evolutionary Status of SW Tau* (**poster**)
- 12.10-12.15** Volodymyr Vasylenko, A. O. Simon, N. V. Metlova (*Taras Shevchenko National University of Kyiv, Kyiv, Ukraine*) *Photometric variability of the 1H1936+541 star in 2008–2014* (**poster**)
- 12.15-12.20** Oleksii Patoka, O. V. Antyufeyev, V. M. Shulga (*Institute of Radio Astronomy of the National Academy of Sciences of Ukraine, Kharkiv, Ukraine*) *Bipolar Outflows in the Star Forming Regions 34.403+0.233, 77.462+1.759 and 121.28+0.65.* (**poster**)
- 12.20-12.25** Alisa Shchurova, E. Pavlenko, S. Shugarov, Yu. Babina, A. Simon, V. Vasylenko (*Taras Shevchenko National University of Kyiv, Kyiv, Ukraine*) *Colorimetric investigations of V1006 Cyg* (**poster**)

12.30-13.30 lunch

Wednesday, April, 27

Section 'Extragalactic Astrophysics & Cosmology'

Chair: Margaryta Sobolenko

Room 103

09.00-10.00 morning coffee

10.00-10.45 Antonino Del Popolo (*Department of Physics and Astronomy, Catania University, Catania, Italy*) *A unified solution to the small scale problems of the LambdaCDM model (invited)*

10.45-11.00 Mykhailo Illiashyk, V. S. Akhmetov, P. N. Fedorov, A. B. Velichko (*V.N. Karazin Kharkiv National University, Kharkiv, Ukraine*) *The kinematics research of the Galaxy using of XPM catalogue data (12+3)*

11.00-11.15 Andrii Maliuk (*Taras Shevchenko National University of Kyiv, Kyiv, Ukraine*) *Comparison of different methods oxygen abundances measurements in galaxies from the SDSS (12+3)*

11.15-11.30 Inna Yatsun, I. Zinchenko (*Taras Shevchenko National University of Kyiv, Kyiv, Ukraine*) *Oxygen and nitrogen abundance in galaxies from the SDSS data (12+3)*

11.30-12.00 tea-break

12.00-12.15 Nadiia Maslova (*Odessa Mariinsky High School, Odessa, Ukraine*) *Does Cepheids' Kinematics Indicate the Presence of Dark Matter? (12+3)*

12.15-12.30 Maksym Vasylenko, Y. M. Kudria (*Taras Shevchenko National University of Kyiv, Kyiv, Ukraine*) *Multiparameter Tully-Fisher relation for 2MFGC galaxies (12+3)*

12.30-12.45 Olena Torbaniuk, G. Ivashchenko (*Main Astronomical Observatory of the National Academy of Sciences of Ukraine, Kyiv, Ukraine*) *Measurement of the Ly α -forest transmission from the SDSS DR10 quasar spectra (12+3)*

13.00-14.00 lunch

14.00-18.00 City tour (walking tour)

18.00-22.00 Organ hall / opera hall / etc.

Thursday, April, 28

Section ‘High Energy Astrophysics’

Chair: Iurii Sushch

Room 103

09.00-10.00 morning coffee

10.00-10.45 Iurii Sushch (*Centre for Space Research, North-West University, Potchefstroom, South Africa*) *Gamma-ray binaries (invited)*

10.45-11.00 Taras Kuzyo, O. Petruk (*Pidstryhach Institute for Applied Problems of Mechanics and Mathematics, Lviv, Ukraine*) *Post-Adiabatic Supernova Remnants in the Non-Uniform Interstellar Medium and Magnetic Field (12+3)*

11.00-11.15 Anton Dmytriiev, A. Neronov (*Taras Shevchenko National University of Kyiv, Kyiv, Ukraine; University of Geneva, Geneva, Switzerland*) *Observations of the Crab Nebula at TeV energies with the FACT Cherenkov Telescope (12+3)*

11.15-11.30 Vadim Voytsekhovskiy, A. V. Tugay, V. V. Tkachuk (*Taras Shevchenko National University of Kyiv, Kyiv, Ukraine*) *X-ray emission of ICRF sources (12+3)*

11.30-11.45 Roman Gnatyk (*Taras Shevchenko National University of Kyiv, Kyiv, Ukraine*) *Search of the galactic sources of the cosmic ray triplet with energies above 10^{20} eV (12+3)*

11.45-11.50 Lidiia Zadorozhna, B. Hnatyk, M. Khelashvili (*Taras Shevchenko National University of Kyiv, Kyiv, Ukraine*) *The explanation of Fast Radio Burst phenomenon as electromagnetic radiation from cusps on superconducting cosmic strings (poster)*

12.00-13.00 Lunch

Section ‘Atmospheric studies and space geophysics’

Chair: Andrii Bovchaliuk

Room 103

13.00-13.45 Gennadi Milinevsky (*Taras Shevchenko National University of Kyiv, Main Astronomical Observatory of the National Academy of Sciences of Ukraine, Kyiv, Ukraine*) *Future space missions for aerosol remote sensing in the Earth atmosphere (invited)*

13.45-14.00 Vladyslav Mogylchak (*Taras Shevchenko National University of Kyiv, Kyiv, Ukraine*) *Temporal features of stratosphere ozone distribution over Kyiv by 2011-2014 satellite and ground-based data (12+3)*

14.00-14.15 Andrew Prokhorenkov, L. Kozak, A. T. Y. Lui, E. Grigorenko, E. Kronberg (*Taras Shevchenko National University of Kyiv, Kyiv, Ukraine*) *Methods and approaches to characterize turbulent environment (12+3)*

14.15-14.30 Eugen Tkachenko, Yu. Rapoport, Yu. Selivanov, V. Ivchenko, V. Grimalsky (*Taras Shevchenko National University of Kyiv, Kyiv, Ukraine*) *Magnetohydrodynamic waves: excitation and propagation with initial mechanical perturbation, MHD large-scale structures. The comparison for the different points of the Earth’s ionosphere (12+3)*

14.30-14.45 Sofiya Doskich (*Lviv Polytechnic National University, Lviv, Ukraine*) *Geodynamics and Troposphere research using the software GAMIT-GLOBK (12+3)*

14.45-15.00 Leonid Olifer, V. Choliy (*Institute of Physics and Technology, National Technical University of Ukraine “Kyiv Polytechnic Institute”, Kyiv, Ukraine*) *On the analysis of multistep-out-of-grid method for celestial mechanics tasks (12+3)*

15.00-15.05 Yuliya Yukhimchuk, G. Milinevsky (*Taras Shevchenko National University of Kyiv, Kyiv, Ukraine*) *Pollution of Kyiv atmosphere by aerosol from fires according to lidar sensing and transfer modeling* (**poster**)

17.45-22.00 Organ hall / opera hall / etc.

Friday, April, 29

Section ‘Solar System & Exoplanets’

Chair: Olena Shubina
Room 103

09.00-10.00 morning coffee

10.00-10.15 Pablo Antonio Moreno Casares, A. M. Montero Martínez (*Faculty of Science, University of Extremadura, Cáceres, Spain; Institute of Astrophysics, University of Zielona Góra, Zielona Góra, Poland*) *On detection methods of habitable exoplanets* (**12+3**)

10.15-10.30 Viktor Kudak, Š. Parimucha (*Institute of Physics, Faculty of Natural Sciences, University of P. J. Šafárik, Košice, Slovakia*) *Project DWARF – Using Of Eclipsing Binaries For Searching Of Exoplanets And Brown Dwarfs* (**12+3**)

10.30-10.45 Vadym Kostiuk, A. Bazyey (*Odessa I. I. Mechnikov National University, Odessa, Ukraine*) *Thermal activity of Enceladus* (**12+3**)

10.45-11.00 Olena Shubina, N. Kiselev, V. Rosenbush, O. Ivanova (*Main Astronomical Observatory of the National Academy of Sciences of Ukraine, Kyiv, Ukraine*) *Upgrade to a newer version the Database of comet polarimetry* (**12+3**)

11.00-11.15 Dmytro Shymkiv, I. G. Slyusarev (*V. N. Karazin Kharkiv National University, Kharkiv, Ukraine*) *Analysis of albedo distribution of large asteroid families* (**12+3**)

11.15-11.30 Vasyl Vovk, M. O. Kaliuzhnyi (*Research Institute “Nikolaev Astronomical Observatory”, Mykolaiv, Ukraine*) *Radio Meteors Observations facilities at RI NAO* (**12+3**)

11.30-11.45 Mykola Kulichenko, O. V. Shulga, Y. S. Sibiryakova (*Research Institute “Nikolaev Astronomical Observatory”, Mykolaiv, Ukraine*) *Observation of faint meteors in Nikolaev Astronomical Observatory* (**12+3**)

11.45-11.50 Koctiantyn Radchenko, S. O. Yasenev (*National Technical University of Ukraine “Kyiv Polytechnic Institute”, Kyiv, Ukraine*) *Peculiarities in limits of the possible existence of the satellite in the gravitational field of planets* (**poster**)

11.50-11.55 Vasyl Ponomarenko, A. O. Simon, K. I. Churyumov (*Astronomical Observatory, Taras Shevchenko National University of Kyiv, Kyiv, Ukraine*) *Spectral researches gas and dust atmosphere of the comets C/2014 Q2 (Lovejoy) and C/2013 US10 (Catalina)* (**poster**)

12.00-13.00 Poster section + tea-break

13.00-13.30 Official closure

14.00-15.00 lunch

17.45-22.00 Organ hall / opera hall / etc.