



**21-th Gamow International Astronomical Conference-School
"ASTRONOMY AND BEYOND: ASTROPHYSICS,
COSMOLOGY AND GRAVITATION, HIGH ENERGY PHYSICS,
ASTROPARTICLE PHYSICS, RADIOASTRONOMY
AND ASTROBIOLOGY"**



PROGRAM

August 15-21, 2021
Odessa, Ukraine

21-th Gamow International Astronomical Conference-School
"ASTRONOMY AND BEYOND: ASTROPHYSICS, COSMOLOGY AND GRAVITATION,
HIGH ENERGY PHYSICS, ASTROPARTICLE PHYSICS, RADIOASTRONOMY
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PROGRAM

SCIENTIFIC ORGANIZING COMMITTEE:

Chair of SOC: **V.M.Shulga**

Vice-chair: **M.I.Ryabov**

Secretary: **S.M.Melikyants**

Members of SOC: **V.M.Adamyan (ONU, Odessa), S.M.Andrievsky (ONU, Odessa), I.L.Andronov (ONMU, Odessa), Felix Aharonian (Germany), N.G.Bochkarev (SAI MSU, Moscow), M.Capaccioli (Naples University, Italy), A.M.Cherepashchuk (SAI MSU, Moscow), S.V.Chebotar (ONU, Odessa), L.L.Jenkovszky (ITP, Kyiv), K.Georgieva (Sofia, Bulgaria), A.A.Konovalenko (IRA NASU), N.I.Koshkin (ONU, Odessa), I.Kudzej (Humenne, Slovakia), T.V.Mishenina (ONU, Odessa), V.N.Obridko (IZMIRAN, Moscow), Tsvi Piran (Izrael), I.Shmeld (VIRAC, Latvia), S.Silich (Puebla, Mexico), A.V.Stepanov (Pulkovo Observatory RAS, Saint-Petersburg), O.M.Ulyanov (IRANASU, Kharkov), I.B.Vavilova (MAO NANU, Kyiv), Y.S.Yatskiv (President of UAA, Kyiv), V.V.Zakharenko (IRA NASU, Kharkov), A.I.Zhuk (ONU, Odessa)**

LOCAL ORGANIZING COMMITTEE:

Chair of LOC: **V.I.Truba**

Vice-Chairs: **M.I.Ryabov, V.P.Olyeynik**

Secretary: **A.A.Pilipenko**

Members of LOC: **A.Yu.Burgazli, A.V.Chopovsky, A.V.Dragunova, T.I.Kabanova, V.G.Komendant, N.I.Koshkin, L.S.Kudashkina, S.M.Melikyants, B.A.Murnikov, L.I.Sobitnyak, S.L.Strakhova, A.L.Sukharev, V.O.Yushchenko**

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RADIOASTRONOMY AND ASTROBIOLOGY”**

15-21 August, 2021, Odessa, Ukraine



The 21-th Gamow conference-school is devoted to:

- the 150th anniversary of the Astronomical Observatory of Odessa I.I.Mechnikov National University;
- the 90th anniversary of the registration by K.Jansky of cosmic radio emission and of the beginning of radio astronomy;
- the 60th anniversary of the beginning of the Era of space flights;
- the 125th anniversary of the Odessa astronomer V.S.Zhardetsky;
- the memory of Prof. A.D.Chernin, the member of the SOC and the participant of all Gamow conferences-schools in Odessa.

SCIENTIFIC ORGANIZING COMMITTEE:

Chair of SOC: *V.M.Shulga* (IRA NASU, Kharkov, Ukraine, shulga@rian.kharkov.ua)

Vice-chair: *M.I.Ryabov* (IRA NASU, Odessa, Ukraine, ryabov-uran@ukr.net)

Secretary: *S.M.Melikyants* (AO ONU, Odessa, Ukraine, sedamelikk@gmail.com)

Members of SOC: V.M.Adamyán (ONU, Odessa), S.M.Andrievsky (ONU, Odessa), I.L.Andronov (ONMU, Odessa), Felix Aharonian (Germany), N.G.Bochkarev (SAI MSU, Moscow), M.Capaccioli (Naples University, Italy), A.M.Cherepashchuk (SAI MSU, Moscow), S.V.Chebotar (ONU, Odessa), L.L.Jenkovszky (ITP, Kyiv), K.Georgieva (Sofia, Bulgaria), A.A.Konovalenko (IRA NASU), N.I.Koshkin (ONU, Odessa), I.Kudzej (Humenne, Slovakia), T.V.Mishenina (ONU, Odessa), V.N.Obridko (IZMIRAN, Moscow), Tsvi Piran (Israel), I.Shmeld (VIRAC, Latvia), S.Silich (Puebla, Mexico), A.V.Stepanov (Pulkovo Observatory RAS, Saint-Petersburg), O.M.Ulyanov (IRA NASU, Kharkov), I.B.Vavilova (MAO NANU, Kyiv), Y.S.Yatskiv (President of UAA, Kyiv), V.V.Zakharenko (IRA NASU, Kharkov), A.I.Zhuk (ONU, Odessa).

LOCAL ORGANIZING COMMITTEE

Chair of LOC: *V.I.Truba* (Rector of ONU)

Vice-Chairs of LOC: *M.I.Ryabov* (ryabov-uran@ukr.net),

V.P.Olyeynik (olyeyvp@onu.edu.ua)

Secretary: *A.A.Pilipenko* (plpnko@ukr.net)

Members of LOC: A.Yu.Burgazli, A.V.Chopovsky, A.V.Dragunova, T.I.Kabanova, V.G.Komendant, N.I.Koshkin, L.S.Kudashkina, S.M.Melikyants, B.A.Murnikov, L.I.Sobitnyak, S.L.Strakhova, A.L.Sukharev, V.O.Yushchenko.

SCIENTIFIC TOPICS:

Cosmology, gravitation, astroparticle physics, high energy physics, astrophysics, plasma astrophysics, radioastronomy, solar activity, solar system, astrobiology.

SECTIONS:

- 1. Cosmology, Gravitation, Astroparticle Physics, High Energy Physics, Cosmomicrophysics**
(Convener – A.I.Zhuk) **August, 17**
- 2. Astrophysics** (Conveners – I.L.Andronov, T.V.Mishenina) **August, 18**
Subsection «Astroinformatics» (Convener – I.B.Vavilova) **August, 18**
- 3. Radioastronomy** (Conveners – O.M.Ulyanov, O.A.Litvinenko) **August, 19**
- 4. Sun, Solar Activity, Solar-terrestrial Relations and Astrobiology**
(Convener – M.I.Ryabov) **August, 19**
- 5. Solar System and Space Environment**
(Convener – N.I.Koshkin) **August, 18**
- 6. Biology Section** (Convener – S.V.Chebotar) **August, 17**

SCHEDULE OF THE PLENARY AND SECTION SESSIONS

Memorial and Plenary sessions:

16 August

10.00 – 14.00 Conference Hall – “Grand Physical Auditorium”

Session of Ukrainian Astronomical Association:

15.00 – 17.00 Conference Hall – “Grand Physical Auditorium”

Section sessions (17–20 August):

Conference Hall (Auditoriums № 16, 27 Faculty of Biology)

Data	17.08	18.08	19.08
Section 1. Cosmology, gravitation, astroparticle physics, high energy physics	09.30–14.00		
Section 2. Astrophysics		09.30–13.00	
Subsection “Astroinformatics”		13.00–14.15	
Section 3. Radio-astronomy			09.30–13.20
Section 4. Sun, Solar activity and Astrobiology			13.20–14.30
Section 5. Solar System and Space Environment		09.30 – 14.00	

EVENTS

Monday, 16.08.2021

- 09.00 – 10.00 REGISTRATION OF PARTICIPANTS** (Entrance the Conference Hall “*Grand Physical Auditorium*”)
- 10.00 – 14.00 OPENING OF THE CONFERENCE, MEMORIAL REPORTS AND PLENARY TALKS** (Conference Hall “*Grand Physical Auditorium*”)
- 14.10** *Photographing of participants after plenary sessions*
- 14.30 – 15.30 Lunch**
- 16.00 – 17.30 SESSION OF UKRAINIAN ASTRONOMICAL ASSOCIATION**
- 19.00 – 21.00** *Sea walk and Welcome Party buffet on a boat*

Tuesday, 17.08.2021

- 09.30 – 14.00 SECTION SESSION** (*Faculty of Biology*)

Wednesday, 18.08.2021

- 09.30 – 14.00 SECTION SESSION** (*Faculty of Biology*)
- 18.00 – 19.00 Visit to the University’s Astronomical Observatory and Planetarium**
- 19.00 – 21.00** *Conference Dinner*

Thursday, 19.08.2021

- 09.30 – 14.30 SECTION SESSION** (*Faculty of Biology*)
- 13.00 – 13.30 CLOSING OF THE CONFERENCE** (*Faculty of Biology*)

Friday, 20.08.2021

Excursions day

PROGRAM

Monday, 16.08.2021

09:00 – 10:00 **Registration of participants** (*Conference Hall Grand physical Auditorium*)
10:00 – 10:40 **OPENING OF THE CONFERENCE, MEMORIAL REPORTS AND GREETING TALKS** (*Conference Hall “Grand physical Auditorium”*)

Greetings of the Rector of the Odessa I.I. Mechnikov National University *V.I.Truba*

Greetings of the President of the Ukrainian Astronomical Association *Ya.S.Yatskiv* “*Astronomy today in Ukraine*”

Greetings of the SOC *V.M.Shulga*

10:40 – 11:30 **MEMORIAL SESSION** (*Conference Hall “Grand physical Auditorium”*)

Karetnikov V.G. ASTRONOMY IN ODESSA I.I.MECHNIKOV NATIONAL UNIVERSITY – 150 YEARS OF HISTORY – 35 min

Andrievsky S.M. TODAY AND FUTURE ODESSA ASTRONOMICAL OBSERVATORY – 10 min

Ryabov M.I. MEMORY OF PROF. A.D.CHERNIN, THE MEMBER OF THE SOC AND THE PARTICIPANT OF ALL GAMOW CONFERENCES-SCHOOLS IN ODESSA – 10 min

11:35 – 12:00 *Coffee break*

12:00 – 13:40 **PLENARY SESSION** (*Conference Hall “Grand Physical Auditorium”*)

Convener – *S.M.Andrievsky*

Fedorov O.P. SPACE OBSERVATIONS AND SUSTAINABLE DEVELOPMENT OF UKRAINE – 25 min

Pankov A.A. UPDATED CONSTRAINTS ON HEAVY RESONANCES USING THE RUN 2 ATLAS DATA AT LHC – 25 min

Eingorn M., Yükselci A.E., Zhuk A. COSMOLOGICAL SIMULATION CODE COMPETITION: SCREENING VS. GEVOLUTION – 25 min

Andronov I.L., Andrych K.D., Breus V.V., Chinarova L.L., Kolesnikov S.V., Kudashkina L.S., Marsakova V.I., Tvardovskyi D.E. MATEMATICAL MODELING OF PHYSICAL VARIABILITY OF STARS – 25 min

13.40- 14.10 Presentation new projects and initiatives:

Ulyanov O.M., Sukharev A., Bezrukovs V., Ryabov M., Zakharenko V., Konovalenko O., Orbidans A., Ozhinskyi V., Vlasenko V., Bakun D. STUDY OF VARIABILITY PROPERTIES OF PECULIAR EXTRAGALACTIC RADIO SOURCES WITH FEATURES OF DOUBLE NUCLEI – 10 min

Ryabov M.I., Bezrukovs V., Orlyuk M.I., Sukharev A.L., Sobitnyak L.I., Galanin V.V., Ivantyshyn O.L. “STRUVE ARC” AS INDICATOR OF THE MANIFESTATION OF SOLAR AND GEOMAGNETIC ACTIVITY – 10 min

Ryabov M.I. ESTABLISHMENT OF THE INTERNATIONAL DAY OF THE COMET – 10 min

14:10 – 14:30 **CONFERENCE PHOTO** (after the Plenary session)

14:30 – 15:30 **LUNCH**

16:00 – 18:00 **SESSION OF UKRAINIAN ASTRONOMICAL ASSOCIATION**

19:00 – 20:30 **Sea walk and Welcome Party buffet on a boat**

17.08.2021 – 19.08 2021

09:30 – 14:00 **SECTION SESSION** (*Faculty of Biology*)

Thursday, 19.08.2021

13:00 – 13:30 **CLOSING OF THE CONFERENCE** (*Faculty of Biology*)

SECTION SESSIONS

COSMOLOGY, GRAVITATION, HIGH ENERGY PHYSICS, ASTROPARTICLE PHYSICS

Tuesday, 17.08.2021

09:30 – 11:30 Section session (*Auditorium №27 Faculty of Biology*)

Convener – *V.P.Olyeynik*

1. *Novosyadlyj B., Kulinich Yu., Shulga V.* DISTORTION OF COSMIC MICROWAVE BACKGROUND IN THE DARK AGES AND COSMIC DAWN EPOCHS
2. *Kulinich Yu., Novosyadlyj B.* HOW THE PRIMORDIAL MAGNETIC FIELD AFFECTS THE PRIMORDIAL CHEMISTRY AND FIRST MOLECULES EMISSIVITY
3. *Sergijenko O., Neomenko R.* DARK-AGE 21 CM POWER SPECTRUM IN COSMOLOGICAL MODELS WITH INTERACTING DARK MATTER AND DARK ENERGY
4. *Tsizh M., Zhenylenko V.* MODELING COSMIC VOIDS PROFILES IN MULTIDARK COSMOLOGICAL SIMULATION
5. *Tugay A., Shevchenko S., Zadorozhna L.* TOPOLOGY OF LARGE SCALE STRUCTURE OF THE UNIVERSE
6. *Beshley V., Petruk O., Kuzyo T.* NUMERICAL SIMULATIONS OF THE MORPHOLOGIES OF SUPERNOVA REMNANTS IN NON-UNIFORM MEDIUM
7. *Panko E., Yemelianov S.* NEARBY GALAXY CLUSTERS: EVOLUTIONARY CHANGES
8. *Kompaniits O., Vasylenko A.* X-RAY PROPERTIES OF NGC 3081 OBTAINED FROM CHANDRA OBSERVATIONAL DATA

11:30 – 12:00 Coffee break

12:00 – 14:00 Section session (*Auditorium №27 Faculty of Biology*)

Convener – *A.I.Zhuk*

9. *Pelykh V., Shulga V., Taistra Y.* ON ANGULAR DISTRIBUTION OF ELECTROMAGNETIC RADIATION FROM KERR BLACK HOLE
10. *Minaiev P., Skalozub V.* THE SCAN OF PARAMETRIC SPACE FOR H2HDM WITH DIFFERENT EXPERIMENTAL CONDITIONS
11. *Olyeynik V.P.* ON SCHOUTEN'S GEOMETRIES IN METRIC GRAVITATION THEORIES
12. *Yushkevych T., Chudak N., Potiienko O., Sharph I.* LAPLACE METHOD FOR SINGLE-LOOP DIAGRAMS OF ELASTIC PROTON SCATTERING
13. *Ryazantsev G., Vysotskii V., Lavrenchenko G., Nedovesov S., Ryazantsev D.* OBTAINING NEUTRON MATTER AND HYPERHEAVY NUCLEI. POSSIBLE INSTRUMENTAL APPROACH

POSTERS

1. *Kvashnin L., Shcherbyna M., Neboha H., Kosenko S.* ABSENCE OF LORENTZ CONTRACTION AS A RESULT OF LORENTZ TRANSFORM
2. *Mileva A., Chudak N., Sherstneva O., Stremenovskii V.* CALCULATION OF MULTI-LOOP DIAGRAMS OF ELASTIC SCATTERING BY THE LAPLACE

ASTROPHYSICS

(stellar atmospheres, interacting binary systems, variable stars)

Wednesday, 18.08.2021

09:30 – 11:30 Section session (*Auditorium №16 Faculty of Biology*)

Convener – *T.V.Mishenina*

1. *Doikov D.N., Yuschchenko A.V.* THE γ -RAY'S DIAGNOSTICS BY THERMONUCLEAR FLARES IN POLARS WITH MASSIVE WHITE DWARFS
2. *Gopka V.F., Shavrina A.V., Yushchenko V.A., Yushchenko A.V., Pavlenko Ya.V.* ACTINIUM ABUNDANCE IN THE ATMOSPHERES OF CEPHEID HIP13962
3. *Mishenina T., Usenko I., Kniazev A., Kovtyukh V.* TYC5594-576-1: r-PROCESS ENRICHMENT METAL-POOR STAR
4. *Dmytrenko A.M., Fedorov P.N., Akhmetov V.S., Velichko A.B.* THE COORDINATES ESTIMATION OF THE GALACTIC VERTEX BY MEAN OF KINEMATIC ANALYSIS OF THE RED GIANTS AND SUBGIANTS VELOCITY FIELD CONTAINING IN THE GAIA EDR3 CATALOGUE
5. *Nodyarov A.S., Miroshnichenko A.S., Khokhlov S.A., Zharikov S.V., Manset N., Klochkova V.G., Usenko I.A.* HIGH-RESOLUTION SPECTROSCOPY OF THE B[E] STAR MWC 645
6. *Usenko I.A., Kniazev A.Yu., Miroshnichenko A.S., Danford S., Kovtyukh V.V., Mishenina T.V.* SPECTROSCOPIC INVESTIGATIONS OF GALACTIC OPEN CLUSTER Collinder 394 – NEW RESULTS
7. *Usenko I.A., Kniazev A.Yu., Miroshnichenko A.S., Danford S., Kovtyukh V.V., Mishenina T.V.* THREE REMARKABLE OBJECTS IN GALACTIC OPEN CLUSTER Collinder 394 – HD 174403 (V4088 Sgr, HD 174652 and BB Sgr)

11:00 – 11:30 *Coffee break*

11:30 – 13:00 Section session (*Auditorium №16 Faculty of Biology*)

Convener – *I.L.Andronov*

8. *Nahurna A., Solomakha M., Lobodenko M., Baransky O.* INVESTIGATION OF PLANETARY SYSTEMS
9. *Hontarenko M., Marsakova V., Andronov I.L.* VARIABILITY PARAMETERS OF CEPHEIDS AND W VIRGO VARIABLES
10. *Hontarenko M., Marsakova V.* PERIOD CHANGES OF FOUR CEPHEID VARIABLES
11. *Breus V., Andronov I.L., Dubovsky P., Petrik K.* SPIN PERIOD VARIABILITY IN INTERMEDIATE POLARS: RECENT RESULTS
12. *Keir L., Udovichenko S.* SOME FEATURES OF VARIABILITY OF THE LIGHT CURVE OF THE RR LYR-TYPE PULSATING VARIABLE FI SGE
13. *Kudashkina L.S., Andronov I.L.* MATEMATICAL MODELING OF PHYSICAL VARIABILITY OF SEMI-REGULAR STAR RX BOO WITH MASER EMISSION
14. *Andronov I.L., Chinarova L.L.* MATEMATICAL MODELING OF THE PHYSICAL VARIABILITY. SEMI-REGULAR PULSATING STARS.

SUBSECTION “ASTROINFORMATICS”

Wednesday, 18.08.2021

13:00 – 14:15 Section session (Auditorium №16 Faculty of Biology)

Convener – I.B.Vavilova

1. *Diachenko N.M., Elyiv A.A., Vavilova I.B., Dobrycheva D.V., Vasylenko M.Yu., Melnyk O.V.* REDSHIFT RECONSTRUCTION WITH MACHINE LEARNING METHODS FOR THE SDSS GALAXIES
2. *Kuznyetsova Y., Krushevskaya V., Romanyuk Y., Andreev M.* REREARCHES OF HOST STAR CHROMOSPHERIC ACTIVITY VARIATIONS IN EXOPLANET SYSTEMS HD 189733 AND HD 68988
3. *Vasylenko M., Pavlenko Ya., Kulyk I., Shubina O., Dobrycheva D., Korsun P.* THE ALGORITHM FOR AUTOMATIC IDENTIFICATION OF ASYMMETRIC TRANSITS IN THE TESS DATABASE
4. *Shatokhina S., Kazantseva L.* ANALYSIS AND REPROCESSING OF EARLY KYIV OBSERVATIONS OF ASTEROIDS WITH MODERN REFERENCE CATALOGUES
5. *Protsyuk Yu.I., Maigurova N.V., Kovalchuk O.M.* SOFTWARE FOR DETERMINING OF THE OPEN CLUSTERS 3D STRUCTURE
6. *Yizhakevych O., Andruk V., Pakuliak L.* PRELIMINARY RESULTS OF THE SEARCH FOR ASTEROIDS AND COMETS ON THE PLATES OF THE TAUTENBURG OBSERVATORY (1963-1965)
7. *Kokhirova G., Relke H., Yuldoshev Q., Protsyuk Yu., Andruk V.* FON-DUSHANBE CATALOG. RESULTS OF PROCESSING IN THE TYCHO-2 SYSTEM
8. *Andruk V., Pakuliak L.* FIRST RESULTS OF PROCESSING DIGITIZED V-PLATES TAKEN WITH THE TAUTENBURG 2M SCHMIDT TELESCOPE
9. *Artemenko T.G.* ASTROMETRIC RESEARCH IN UKRAINE AT THE END OF XIX – BEGINNING OF XX CENTURIES

SOLAR SYSTEM AND SPACE ENVIRONMENT

Wednesday, 18.08.2021

09:30 – 11:30 Section session (*Auditorium №27 Faculty of Biology*)

Convener – *O.M.Kozhukhov*

1. *Kasianchuk A., Baransky O., Korniyshuk P., Semenchuk N.* ASTROMETRY AND PHOTOMETRY OBSERVATIONS OF THE TROJAN ASTEROID (624) HEKTOR IN LISNYKY
2. *Luk'yanyk I., Baransky O., Solomakha M., Sokoliuk O.* PHOTOMETRIC OBSERVATION OF COMET C/2017 K2 (PANSTARRS) WITH THE AZT-8 TELESCOPE AT OBSERVATION STATION LISNYKY
3. *Miroshnik N., Volosova N., Pysarevskyi Z.* DETERMINATION AND ANALYSIS OF DISTRIBUTION OF COMETS OF THE SOLAR SYSTEM
4. *Maigurova Nadiia, Pomazan Anton, Shulga Olexandr, Tang Zheng-Hong.* RESULTS OF OBSERVATIONS OF NEW DISCOVERED NEAs DURING CLOSE APPROACH TO THE EARTH
5. *Troianskyi V., Oszkiewicz D., Kankiewicz P.* DYNAMICAL PROPERTIES OF BASALTIC ASTEROIDS OUTSIDE THE VESTA FAMILY
6. *Zhilyaev B.E., Petukhov V.N., Reshetnyk V.N., Vid'machenko A.P.* COLORIMETRY OF METEORS
7. *Zhilyaev B.E., Petukhov V.N., Reshetnyk V.N., Vid'machenko A.P., Buriak I.R.* DAYTIME OBSERVATIONS OF SPACE INTRUSIONS
8. *Kaliuzhnyi M., Bushuev F., Kulichenko M., Shulga O.* RESULTS OF CLARIFYING OF ORBITAL ELEMENTS OF LOW-ORBIT SATELLITES BY MODERNIZED DOPPLER STATION OF THE RI "MAO"
9. *Kulichenko M., Kryuchkovskiy V., Maigurova N., Shulga O.* ORBITAL ELEMENTS CATALOG OF GEO SATELLITES BASED ON OBSERVATIONS AT RI MAO IN 2020-2021

11:30 – 12:00 Coffee break

12:00 – 14:00 Section session (*Auditorium №27 Faculty of Biology*)

Convener – *Ya.O.Romanyuk*

10. *Kozhukhov O.M., Prysiazhnyi V.I., Ozeryan A.P., Poihalo A.V., Brukhno I.V., Iluchok O.M., Piskun O.M., Kozhukhov D.M., Mamarev V.M.* NSFCTC'S SENSORS FOR SPACE SURVEILLANCE – RESULTS OF WORK IN 2020-2021
11. *Kulichenko M., Kozyryev Y., Kryuchkovskiy V., Maigurova N., Phillips C., Shulga O.* PECULIARITIES OF OBSERVATIONS OF SATELLITES ON MOLNIYA-LIKE ORBITS
12. *Shakun L.S., Kozhukhov O.M.* THE ANALYSIS OF OPTICAL MEASUREMENTS EXCHANGE FORMATS IN THE SPACE SURVEILLANCE AND TRACKING DOMAIN
13. *Koshkin N., Shakun L., Melikyants S., Korobeynikova E., Strakhova S., Romanyuk Ya., Ryabov A., Terpan S., Dragomiretsky V., Golubovskaya T.* MULTI-SITE SIMULTANEOUS RSO PHOTOMETRY TO CHARACTERIZE THEIR ROTATION STATE
14. *Romanyuk YA.O., Shulga O.V., Koshkin M.I., Vovchik Ye.B., Bilinsky A.I., Kozyryev Y.S., Kulichenko M.O., Kriuchkovsky V.F., Shakun L.S., Melikyants S.M., Terpan S.S., Ryabov A.V., Martyniuk-Lototskiy K.A., Nogacz R.T., Epishev V.P., Kudak V.I., Neubauer I.F., Perig V.M., Prysiazhnyi V.I., Ozeryan A.P., Kozhukhov O.M., Kozhukhov D.M., Ivaschenko Yu.M.* MONITORING OF THE ORBITAL COORDINATES OF ARTIFISIAL SPACE OBJECTS WITH UKRAINIAN NETWORK OF OPTICAL STATIONS (UMOS)
15. *Podlesnyak S.V., Fashchevsky N.N., Bondarenko Yu.N., Andrievsky S.M.* USE OF THE MAIN SPHERICAL MIRROR IN TELESCOPES WITH COMPLEX OPTICAL SYSTEMS
16. *Sukhov P.P., Yepishev V.P., Motrunich I.I., Sukhov K.P.* USING PHOTOMETRIC DATA TO DESCRIBE THE BEHAVIOUR OF OBJECTS IN GEOSTATIONARY ORBIT

RADIO ASTRONOMY

Thursday, 19.08.2021

09:30 – 11:30 Section session (*Auditorium №27 Faculty of Biology*)

Convener – *O.A.Litvinenko*

1. *Vavilova I.B., Pulatova N.G.* PROPERTIES OF THE LOW-REDSHIFT ISOLATED GALAXIES WITH ACTIVE NUCLEI IN THE RADIO SPECTRAL RANGE
2. *Ulyanov O.M., Shevtsova A.I., Yerin S.M., Bubnov I.M., Kravtsov I.P.* IONOSPHERE VARIABILITY AS A TOOL FOR PULSAR ROTATION MEASURE SIGN DETERMINATION
3. *Vasilenko N.M., Sidorchuk M.A.* THE UTR-2 LOW FREQUENCY NORTHERN SKY CONTINUUM SURVEY. Part III
4. *Sukharev A., Bezrukovs V., Ryabov M., Ulyanov O., Zakharenko V., Konovalenko O., Orbidans A., Ozhinskyi V., Vlasenko V., Bakun D.* PROPERTIES OF INTRA-DAY VARIABILITY OF THE RADIO GALAXY PTRSEUS A (3C 84) ACCORDING TO COORDINATED OBSERVATIONS IN LATVIA AND UKRAINE WITH RT-32 RADIO TELESCOPES IN THE 4.5 - 8.8 GHz RANGE
5. *Ulyanov O., Sukharev A., Bezrukovs V., Ryabov M., Zakharenko V., Konovalenko O., Orbidans A., Ozhinskyi V., Vlasenko V., Bakun D.* STUDY OF VARIABILITY PROPERTIES OF PECULIAR EXTRAGALACTIC RADIO SOURCES WITH FEATURES OF DOUBLE NUCLEI
6. *Gorbynov A., Sukharev A., Ryabov M., Bezrukovs V., Orbidans A.* SECULAR CHANGES IN THE FLUX DENSITY OF THE CAS A SUPERNOVA REMNANT, FROM CENTIMETER TO DECAMETER WAVELENGTHS
7. *Zabora D., Ryabov M., Sukharev A., Petrenko M.* ON THE PERSPECTIVES FOR SEPARATING THE CONTRIBUTION OF THE NUCLEUS AND THE JET TO THE FLUX RADIO VARIATIONS OF ACTIVE GALACTIC NUCLRI BASED ON DATA FROM MONITORING PROGRAMS AND VLBI OBSERVATIONS
8. *Ozhinskyi V., Vlasenko V., Mamarev V., Ulyanov O., Zakharenko V., Palamar M., Chaikovskiy A., Fryz S.* THE METHOD FOR RT-32 RADIOTELESCOPE ERROR MATRIX CONSTRUCTION IN AUTOMATIC MODE. AUTOMATIC ASSESMENT OF TRACKING ERRORS

11:30 – 12:00 *Coffee break*

12:00 – 13:20 Section session (*Auditorium №27 Faculty of Biology*)

Convener – *O.M.Ulyanov*

9. *Lytvynenko O.A., Shepelev V.A., Panishko S.K., Derevyagin V.G., Podgorny G.S.* SIMULTANEOUS OBSERVATIONS OF IONOSPHERIC SCINTILLATION WITH SPATIALLY SEPARATED URAN RADIO TELESCOPES
10. *Orlov V.V., Lytvynenko O.A., Galanin V.V.* PROCESSING OF RADIO ASTRONOMY SIGNALS IN CONDITIONS OF SHORT-TERM INTERFERENCE
11. *Kolomiyets S., Kyrychenko I.* RADIO METEOR INFORMATION AND ITS PROCESSING
12. *Galanin V.V.* OBSERVATION CONTROL DEVICE FOR THE URAN-4 DECAMETER RADIO TELESCOPE
13. *Derevyagin V., Lytvynenko O.* MONITORING OF THE INTERFERENCE SITUATION AT THE URAN-4 RADIO TELESCOPE
14. *Kravtsov I.P., Zakharenko V.V., Shevtsova A.I., Yerin S.M., Ulyanov O.M., Konovalenko O.O.* NEW DETECTIONS IN THE SECOND DECAMETRE PULSAR CENSUS AT UTR-2 RADIO TELESCOPE

POSTERS

1. *Kablak N., Rózsa Sz., Turák B., Khaldi A.* NEAR REAL-TIME TOMOGRAPHY OF THE ATMOSPHERE ESTIMATION USING GPS, GLONASS AND GALILEO OBSERVATIONS
2. *Petkov P.* THE BULGARIAN LOFAR PROJECT

SUN, SOLAR ACTIVITY, SOLAR-TERRESTRIAL RELATIONS AND ASTROBIOLOGY

Thursday, 19.08.2021

13:20 – 14:30 Section session (*Auditorium №27 Faculty of Biology*)

Convener – *M.I. Orlyuk*

1. *Ryabov M.I., Bezrukovs V., Orlyuk M.I., Sukharev A.L., Sobitnyak L.I., Galanin V.V., Ivantyshyn O.L.* “STRUVE ARC” AS INDICATOR OF THE MANIFESTATION OF SOLAR AND GEOMAGNETIC ACTIVITY
2. *Orlyuk M.I., Romenets A.A.* ON THE RELATIONSHIP OF TEMPORARY CHANGES IN THE GEOMAGNETIC FIELD AND TEMPERATURE ON THE EARTH'S SURFACE WITH SOLAR ACTIVITY
3. *Ryabov M.I., Sukharev A.L., Sobitnyak L.I., Orlyuk M.I.* ABOUT FEATURES OF GEOMAGNETIC FIELD VARIATION IN THE ZONE ODESSA MAGNETIC ANOMALY IN QUIET AND DISTURBANCE CONDITIONS SPACE WEATHER
4. *Komendant V.H.* THE SOLAR ACTIVITY, COSMIC RAY INTENSITY AND GEOMAGNETIC CHANGES DURING SOLAR CYCLES 16 – 25 AND OUR PREVISIONS ABOUT 26 CYCLE.
5. *Isaeva E.A.* CONNECTION OF THE INTENSITY OF THE FLUX OF SCR PROTONS WITH THE VELOCITY OF THE CME AND WITH THE FADING OF THE RADIO EMISSION OF THE SUN IN THE DECAMETER RANGE

13:00 – 13:30 CLOUSING CONFERENCE

**SECTION “THE IMPORTANCE OF G. GAMOW'S IDEAS FOR BIOLOGY
OF THE 21st CENTURY” (online)**

Tuesday, 17.08.2021

11:00 OPENING OF THE BIOLOGICAL SESSION

1. *Chebotar S.* OPENING OF THE BIOLOGICAL SESSION
2. *Delbruck T.* "OUT OF THIS WORLD": RECOUNTING MAX'S DELBRUCK MEMORIES OF GEORGE GAMOW
3. *Korzun V.N.* APPLICATIONS OF GENETIC AND GENOMIC RESEARCH IN CEREALS

11:50 – 12:00 *Coffee break*

4. *Rebets Yu.* DNA-PROTEIN INTERACTIONS AS A TOOL OF SYNTHETIC BIOLOGY
5. *Simirski V.V., Kostiuk S.A., Poluyan O.S., Simirski M.V.* USING THE G.A.GAMOW'S IDEAS FOR MOLECULAR GENETIC DIAGNOSTICS OF INFECTIOUS AND SOMATIC HUMAN DISEASES AT THE CURRENT STAGE OF MEDICAL DEVELOPMENT

13:05 – 14:00 *Lunch*

6. *Monczak Yu.* TARGETED THERAPY, DNA SEQUENCE AND THE RACE AGAINST NEOPLASIA
7. *Ishchenko O.O., Yurashek A.M., Volkov R.A.* ORGANIZATION OF 5S RIBOSOMAL DNA OF THE *AESCULUS* GENUS (FAMILY SAPINDACEAE)
8. *Roman I.I., Tistechok S.I., Luzhetskyy A.M., Gromyko O.M.* GENETIC CHARACTERISATIONS OF ANTARCTIC ACTINOBACTERIA
9. *Dolya B., Ostash B.O.* MUTATION SPECTRA IN *STREPTOMYCES* AS INFERRED FROM GENOMIC ANALYSIS OF NINE *S. ALBUS* J1074 STRAINS
10. *Pydiura N., Breviario D., Blume Ya.* UTILISATION OF GENOME EDITING METHODS IN DIAGNOSTICS AND GENETIC ENGINEERING, A REVIEW

15:30 – 15:40 *Coffee break*

11. *Roshka N.M., Volkov R.A.* STRUCTURAL ORGANIZATION AND POLYMORPHISM OF 5S RDNA IGS IN THE CARPATHIAN HONEYBEE
12. *Chubyk I.Yu., Stadnichenko S.V., Chebotar S.V.* POLYMORPHISM IN *ME15/ME16* AND MICROSATELLITE LOCI OF *MYTILUS GALLOPROVINCIALIS* IN THE NORTH REGION OF BLACK SEA
13. *Popovych Yu.A., Blagodarova O.M., Chebotar S.V.* ASSOCIATION BETWEEN ALLELIC VARIANTS OF *GLI-B1* GENES AND POLYMORPHISM IN TAGLGAP – MICROSATELLITE LOCUS IN GENOTYPES OF THE MODERN UKRAINIAN BREAD WINTER WHEAT VARIETIES
14. *Toporash M.K., Motsnyy I.I., Sourdille P., Chebotar S.V.* KASP-ANALYSIS OF THE INTROGRESSIVE WHEAT LINES WITH RYE CHROMATINE
15. *Zharikova D.O., Chebotar G.O., Temchenko I.V., Chebotar S.V.* ALLELE-SPECIFIC ANALYSIS OF THE PHOTOPERIOD SENSITIVE *E3* AND *E4* GENES, IN UKRAINIAN SOYBEAN VARIETIES AND PERSPECTIVE LINES

17:00 CLOSING OF THE BIOLOGICAL SESSION

Відповідальний за випуск: М. І. Рябов

Верстка: С. Л. Страхова

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