

# Program of the XLI PTA Meeting

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## Monday 11th September 2023

<b>10:00 – 12:00</b>	<b>Opening</b> (see <a href="#">online</a> )
10:00 – 10:15	Welcome address
10:15 – 11:00	Invited guest addresses
<b>11:00 – 11:15</b>	<b>Short break</b>
11:15 – 12:00	Opening Lecture: <b>Kazimierz Stępień</b> (OA UW) <i>100 lat Polskiego Towarzystwa Astronomicznego</i>
<b>12:00 – 13:00</b>	<b>Award ceremony I</b>
12:00 – 12:15	Bohdan Paczyński Medal ceremony
12:15 – 12:30	Laudacja
12:30 – 13:00	Bohdan Paczyński Medal Lecture
<b>13:00 – 14:30</b>	<b>Lunch</b>
<b>14:30 – 15:45</b>	<b>Award ceremony II</b>
14:30 – 14:45	Award ceremony: Włodzimierz Zonn Prize and Polish Astronomical Society Youth Prize
14:45 – 15:15	Włodzimierz Zonn Prize Lecture
15:15 – 15:45	Polish Astronomical Society Youth Prize Lecture
<b>15:45 – 16:00</b>	<b>Coffee break / Poster session</b>
<b>16:00 – 18:00</b>	<b>Session I: Historical Session</b>
16:00 – 16:30	<b>Jerzy M. Kreiner</b> (OA UP) <i>Astronomia w niepodległej Polsce: lata 1923-1973</i>

- 16:30 – 17:00      **Marek J. Sarna** (CAMK PAN)  
*Astronomia w Polsce: drugie 50 lat: 1973-2023*
- 17:00 – 17:20      **Andrzej Pigulski** (IA UWŕ)  
*Polskie Obserwatoria w ostatnim stuleciu*
- 17:20 – 17:40      **Michał Tomczak** (IA UWŕ)  
*Edukacja astronomiczna*
- 17:40 – 18:00      **Marek Zawilski** (PTMA)  
*Wkład polskich miłośników astronomii w poznawanie Wszechświata*
- 18:15 – 19:15**      **Meeting with SKAO representatives** ([agenda](#))

## Tuesday 12th September 2023

- 9:00 – 11:00**      **Session II: The Sun and heliosphere**
- 9:00 – 9:30      **Janusz Sylwester** (CBK PAN)  
*Badania plazmy koronalnej w Zakładzie Fizyki Słońca CBK: Od kamery pin-hole na Verical-1 (1970) do teleskopu STIX na Solar Orbiter (2020)*
- 9:30 – 10:00      **Paweł Swaczyna** (CBK PAN)  
*Interstellar Medium Surrounding the Heliosphere*
- 10:00 – 10:15      **Dorota Przepiórka** (CBK PAN)  
*The Low-Frequency Array (LOFAR) interferometer: a unique tool for Solar-Earth interaction studies. Possibilities and perspectives*
- 10:15 – 10:30      **Kamil Bicz** (IA UWŕ)  
*Starspot and flare activity – differences and similarities between stars with different inner structure*
- 10:30 – 10:45      **Krzysztof Radziszewski** (IA UWŕ)  
*The first comparison of the MSDP spectroscopic observations of a solar flare recorded in the hydrogen H-alpha line with the results of RHD modeling obtained from the FLARIX code*
- 10:45 – 11:00      **Petr Heinzel** (Center of Excellence UWŕ)  
*Large eruptive prominences observed by Metis onboard Solar Orbiter*

- 11:00 – 16:00**      **Session III: Planetary systems and small bodies**
- 11:00 – 11:30      **Piotr Guzik** (OA UJ)  
*Interstellar minor bodies in the Solar System*
- 11:30 – 11:45      **Mikołaj Sabat** (OA UJ)  
*New Constraints on Cometary Activity of 'Oumuamua from Lyman-Alpha Images Obtained by SOHO/SWAN*
- 11:45 – 12:15      *Coffee break / Poster session*
- 12:15 – 12:45      **Przemysław Mróz** (OA UW)  
*Free-floating planets and other beasts*
- 12:45 – 13:15      **Krzysztof Goździewski** (IA UMK)  
*Analiza orbitalna obserwacji gwiazd z układami planet jowiszowych*
- 13:15 – 13:30      **Gracjan Maciejewski** (IA UMK)  
*Search for small planets in hot Jupiter systems*
- 13:30 – 13:45      **Jan Golonka** (IA UMK)  
*Probing planet-star tidal interactions with precise transit timing of hot Jupiters*
- 13:45 – 14:00      **Hanna Rothkeahl** (CBK PAN)  
*Juice-ESA mission, challenge for Jupiter system exploration*
- 14:00 – 15:00      *Lunch*
- 15:00 – 15:15      **Agnieszka Kryszczyńska** (IOA UAM)  
*Application of machine learning algorithms in asteroid taxonomic classification*
- 15:15 – 15:30      **Andrzej Maciejewski** (IA UZ)  
*Niecałkowalność zagadnienia n ciał*
- 16:00 – 23:30**      **The Inauguration of the Toruń events of the World Copernican Congress** (CKK Jordanki, see [online](#))
- 16:00 – 18:00      Plenary Session – Lectures for the Opening of the World Copernican Congress: by **Rev. Prof. Michał Heller** and by **prof. Andrzej Udalski**
- 18:00 – 19:30      Early music concert performed by Ars Cantus directed by Tomasz Dobrzański

# Wednesday 13th September 2023

## 9:00 – 11:00 **Session IV: Compact objects and multi-messenger astronomy**

9:00 – 9:30 **Brynmor Haskell**

*Multi-messenger astrophysics in the age of gravitational wave discoveries*

9:30 – 9:45 **Paweł Szewczyk** (OA UW)

*Dynamical stability of hypermassive neutron stars*

9:45 – 10:00 **Marcin Gawroński** (IA UMK)

*Digging in noise and interferences – FRB observations in Piwnice*

10:00 – 10:15 **Agnieszka Janiuk** (CFT PAN)

*What we can learn about compact binary mergers from their kilonova signals*

10:15 – 10:30 **Mariusz Tarnopolski** (IA UMK)

*Quasi-periodic oscillations in gamma-ray bursts" prompt light curves*

10:30 – 10:45 **Łukasz Wyrzykowski** (OA UW)

*Hunting for black holes with Gaia space mission and a network of small telescopes*

10:45 – 11:00 **Andrzej Szary** (UZ)

*Inner Acceleration Region in pulsars and direction of plasma drift*

## 11:00 – 13:30 **Session V: High Energy astrophysics**

11:00 – 11:30 **Bożena Czerny** (CFT PAN)

*Accretion processes onto black holes – theoretical problems, constraints from the optical data*

11:30 – 11:45 **Krzysztof Nalewajko** (CAMK PAN)

*Initialization of magnetic flux eruptions at accreting black holes*

11:45 – 12:15 **Coffee break / Poster session**

12:15 – 12:45 **Bronisław Rudak** (CAMK PAN)

*The Universe in Very High Energy Gamma Rays*

12:45 – 13:00 **Aditya Narendra** (OA UJ)

*Gamma ray burst Light Curve Reconstruction*

- 13:00 – 13:15 **Gerardo Urrutia** (CFT PAN)  
*Following the Jet Interaction with a post-merger outflow*
- 13:15 – 13:30 **Benito Marcote** (Joint Institute for VLBI ERIC)  
*Unveiling the Transient Universe at the highest resolution with Very Long Baseline Interferometry*
- 11:00 – 14:00** **Session IX: Session for popular science and education**  
*(Parallel session organized by K. Czart and S. Soberski)*
- 11:00 – 11:30 **Stefan Janta**  
*Odnowione Planetarium Śląskie*
- 11:30 – 11:45 **Grzegorz Stachowski**  
*XVI Międzynarodowa Olimpiada z Astronomii i Astrofizyki*
- 11:45 – 12:15 *Coffee break / Poster session*
- 12:15 – 12:30 **Krzysztof Czart**  
*Przewodnik astronomiczny po Polsce w wersji online*
- 12:30 – 12:45 **Sylwester Kołomański**  
*Ochrona obserwatoriów astronomicznych przed zanieczyszczeniem światłem w dobie rewolucji oświetleniowej LED*
- 12:45 – 13:00 **Joanna Molenda-Żakowicz**  
*O strukturze wiedzy studentów pierwszego roku astronomii*
- 13:15 – 13:30 **Monika Maślaniec**  
*Astronomia dla najmłodszych*
- 13:30 – 13:45 **Justyna Średzińska**  
*Europejskie Biuro Edukacji Kosmicznej (ESERO Polska) – międzynarodowa współpraca na rzecz edukacji kosmicznej*
- 13:45 – 14:00 **Krzysztof Kowalczyk**  
*Śladami Kopernika*
- 13:30 – 16:00** **Session VI: Stars, star systems and interstellar matter**
- 13:30 – 14:00 **Sławomir Ruciński** (University of Toronto)  
*Astrophysics of stars and interstellar medium. The first half century: 1923 – 1973*
- 14:00 – 15:30 *Lunch*

- 15:30 – 15:45 **Marek Górski** (CAMK PAN)  
*Distance measurements in the Araucaria Project*
- 15:45 – 16:00 **Krzysztof Hełminiak** (CAMK PAN Toruń)  
*12 years of "CREME de la creme" of eclipsing binaries*
- 16:00 – 18:30 **General Assembly of PTA members** ([invitation](#))
- 19:00 – 24:00 **Visiting the Astronomical Observatory in Piwnice & BBQ**

## Thursday 14th September 2023

- 9:00 – 12:00 **Session VI: Stars, star systems and interstellar matter**
- 9:00 – 9:30 **Jadwiga Daszyńska-Daszkiewicz** (IA UWr)  
*Seismic probing of stellar interiors: past achievements and future goals*
- 9:30 – 9:45 **Ambra Nanni** (NCBJ)  
*Dust formation around carbon-rich stars: the role of metallicity and implications for dust-driven winds*
- 9:45 – 9:58 **Miguel Figueira** (NCBJ)  
*Induced star-formation towards the HII region RCW120*
- 9:58 – 10:11 **Tomasz Kamiński** (CAMK PAN Toruń)  
*Observing stellar mergers*
- 10:11 – 10:24 **Ayush Moharana** (CAMK PAN)  
*Evolution of Compact Hierarchical Triples*
- 10:24 – 10:37 **Piotr Kołaczek-Szymański** (IA UWr)  
*Why is the loudest stellar heartbeat so loud?*
- 10:37 – 10:50 **Rajeev Singh Rathour** (CAMK PAN)  
*Insights from O-C study of 7000+ Magellanic Cepheids from OGLE survey: Census of irregular period changes and binary Cepheids candidates*
- 10:50 – 11:15 [Coffee break / Poster session](#)
- 11:15 – 11:28 **Felipe Espinoza Arancibia** (CAMK PAN)  
*Empirical constraints for the instability strip from the analysis of LMC Cepheids*

- 11:28 – 11:41 **Gergely Hajdu** (CAMK PAN)  
*Circumstellar matter around RR Lyrae stars*
- 11:41 – 11:54 **Anna Bartkiewicz** (IA UMK)  
*Bursting methanol masers in high-mass star-forming regions – a need for high quality counterpart data*
- 12:00 – 13:00 Poster presentations
- 13:00 – 14:00 Lunch
- 14:00 – 17:36 Session VII: Cosmology and evolution of galaxies**
- 14:00 – 14:30 **Agnieszka Pollo** (NCBJ)  
*Evolution of galaxies in the cosmic web*
- 14:30 – 14:45 **Dariusz Graczyk** (CAMK PAN)  
*The Hubble tension*
- 14:45 – 15:00 **Marius Peper** (IA UMK)  
*Detecting cosmic voids via maps of geometric-optics parameters*
- 15:00 – 15:15 **Jakub Nadolny** (IAO UAM)  
*Main Sequence to Starburst Transitioning Galaxies: Gamma-ray Burst Hosts at  $z \sim 2$*
- 15:15 – 15:30 **Junais** (NCBJ)  
*Exploring the dust content of low surface brightness galaxies: Implications for the LSST survey*
- 15:30 – 15:45 **Oliver Newton** (CFT PAN)  
*The undiscovered ultra-diffuse galaxies of the Local Group*
- 15:45 – 16:00 Coffee break / Poster session
- 16:00 – 16:12 **Magdalena Kunert-Bajraszewska** (IA UMK)  
*Radio transient phenomenon – the moment of birth of the radio source?*
- 16:12 – 16:24 **Mahmoud Hamed** (NCBJ)  
*Decoding the IRX- $\beta$  dust attenuation relation in star-forming galaxies at intermediate redshift*
- 16:24 – 16:36 **Michael Romano** (NCBJ)  
*The impact of galactic outflows on the baryon cycle of local dwarf galaxies*

- 16:36 – 16:48 **Prasad Sawant** (NCBJ)  
*Investigating the Early Universe: A Study of Dusty Star-Forming Galaxies at high redshift to understand the baryonic evolution*
- 16:48 – 17:00 **Hareesh Thuruthipilly** (NCBJ)  
*Enlightening the Low Surface Brightness Universe with Transform*
- 17:00 – 17:12 **Anjitha John William Mini Latha** (CFT PAN)  
*Deep learning based photometric redshifts of galaxies in Kilo-Degree Survey*
- 17:12 – 17:24 **Luis Suelves** (NCBJ)  
*Merger identification through photometric bands, colours, and their errors*
- 17:24 – 17:36 **Mateusz Bronikowski**  
(University of Nova Gorica Center for Astrophysics and Cosmology)  
*Strongly-lensed supernovae in upcoming surveys*
- 18:00 – 20:00 **Piano recital** (Aula UMK)  
Piano recital by Mateusz Krzyżowski — winner of the 12th International Paderewski Piano Competition in Bydgoszcz

## Friday 15th September 2023

- 9:00 – 13:15** **Session VIII: Instrumental programs**
- 9:00 – 9:30 **Piotr Orleański** (CBK PAN)  
*Aktualnie przygotowywane w Polsce naukowe misje kosmiczne*
- 9:30 – 10:00 **Grzegorz Pietrzyński** (CAMK PAN)  
*Polskie Obserwatorium Astronomiczne w Chile*
- 10:00 – 10:30 **Krzysztof Katarzyński** (IA UMK)  
*Polish contribution to the research of the Universe at radio wave*
- 10:30 – 10:45 **Michał Drahus** (OA UJ)  
*HYADES mission: In search of the cosmic origins of Earth's oceans and new reservoirs of water in our and other planetary systems*
- 10:45 – 11:15 [Coffee break / Poster session](#)
- 11:15 – 11:30 **Adam Dobrzycki** (ESO)  
*ESO Archive*



- 11:30 – 11:45 **Danuta Dobrzycka** (ESO)  
*ESO Science Data Products*
- 11:45 – 12:00 **Rodolfo Smiljanic** (CAMK PAN)  
*The Cassegrain U-Band Efficient Spectrograph (CUBES) – Status and Opportunities*
- 12:00 – 12:15 **Andrzej Niedzielski** (IA UMK)  
*Spektrograf ANDES*
- 12:15 – 12:30 **Jacek Niemiec** (IFJ PAN)  
*Development of new technologies for composite mirror production for ground-based very-high-energy gamma-ray astronomy*
- 12:30 – 12:45 **Maciej Bilicki** (CFT PAN)  
*Vera Rubin Observatory – LSST – present status*
- 12:45 – 13:00 **Andrzej Krankowski** (UW-M)  
*POLish Low Frequency Array – POLFAR. Rozwój systemu: LOFAR2.0 oraz praca w ramach LOFAR-ERIC*
- 13:00 – 13:15 **Mateusz Olech** (UW-M)  
*LOFAR-VLBI obrazowanie wysokiej rozdzielczości na niskich częstotliwościach*
- 13:15 – 14:30 Lunch
- 14:30 – 15:30 Summary, Poster Competition Award, closure**
- 16:00 – 23:00 The Closing Gala of the World Copernican Congress**  
(CKK Jordanki, see [online](#))
- 16:00 – 18:00 Closing Lecture by **Prof. Ewine van Dishoeck** (Leiden University Observatory, the former president of the International Astronomical Union)
- 18:00 – 19:30 Concert by Anna Maria Jopek & Kroke