



2023

February 19

08.30–10.00	Mass at St. Johns' Cathedral and unveiling of the plaque
10.15–10.30	Laying flowers at the monument to M. Copernicus
10:30–10.50	Transfer to the Nicolaus Copernicus University (UMK) Auditorium
11:00–13.00	<b>Celebration of the Nicolaus Copernicus University and the first part of the opening of the Nicolaus Copernicus World Congress (UMK Auditorium)</b>
11.05	The Academic Choir will sing the national anthem
11.10	Welcoming of guests by the Rector, Prof. A. Sokala
11.20	Address by the Minister of Education and Science, Prof. Przemysław Czarnek
11.30	Ceremonial opening of the Nicolaus Copernicus World Congress - Part I (Rectors: Prof. A. Sokala, Prof. J. Popiel, Prof. J. Przyborowski)
11.45	Inaugural lecture by Prof. Jim Peebles
12.25	Commemorative speeches: – KRASP President, Prof. Arkadiusz Mężyk – Voivode of the Kuyavian-Pomeranian Voivodeship, Mikołaj Bogdanowicz – Marshal of the Kuyavian-Pomeranian Voivodship, Piotr Całbecki – Mayor of the City of Toruń, Michał Zaleski
12.40	Closing of the ceremony
12.45–13.00	Transfer to the Congress Centre Jordanki
12.30	Opening the entrance to the Congress Centre Jordanki
12.30–14.00	Lunch
14.00–16.15	<b>Inauguration of the Nicolaus Copernicus World Congress - Part II</b>  – Presentation of nominations for Copernican Academy members and for the General Secretary – Closing of the inauguration of the Congress
16.15–16.30	Break
16.30–18.00	Polish Science Gala, presentation of the Minister's awards
18.00–18.15	Break
18.15–20.00	Dies Natalis Copernici organized jointly with the District Museum
18.20–18.50	Lecture by Prof. P. James. E. Peebles
18.50–19.20	Lecture by Prof. Michel Mayor
19.20–20.00	Concert by Jakub Orliński
20.00–23.00	Dinner under the auspices of the Minister of Education and Science, Prof. Przemysław Czarnek

CKK Jordanki



## Astronomy/Natural Sciences Meeting – Day 1

Introductory remarks – Prof. Krzysztof M. Górski (Nicolaus Copernicus Academy, Astronomical Observatory of the University of Warsaw, Jet Propulsion Laboratory)

## Presentations by Nobel Prize Laureates

Prof. Barry C. Barish (Caltech), Prof. Arthur B. McDonald (Queen's University), and Prof. Didier Queloz (University of Cambridge, University of Geneva, ETH Zurich)

## Philosophical and Theological Debate

Moderator - Rev. Prof. Paweł Bortkiewicz

Cardinal Gerhard Müller, Rev. Prof. Nigel Biggar (University of Oxford), Prof. Tory K. Baucum (George Mason University), Rev. Prof. Bernardo Estrada (Universidad de la Sabana), Rev. Prof. Ermenegildo Manicardi

## SESSION Nr. 1 Astronomy/Natural Sciences

Chair – Prof. Beatriz Barbay (University of Sao Paolo) and Prof. Richard Wielebinski (Max-Planck Institute for Radio Astronomy, Bonn)

## Short addresses:

Prof. Marek Sarna (Astronomical Centre of the Nicolaus Copernicus Polish Academy of Sciences, and Polish Astronomical Society, President)

Prof. Willy Benz (University of Bern, and International Astronomical Union, President Elect)

Dr. Bruno Leibundgut (European Southern Observatory, Garching, and Technical University of Munich)

Prof. Guenther Hasinger (European Space Agency, Director of Science)

Prof. Michel Spiro (CERN, CEA, and IYBSSD – International Year of Basic Sciences for Sustainable Development)

Dr. Andreas Haungs (Karlsruhe Institute of Technology, and APPEC – Astroparticle Physics European Consortium)

## Coffee break

“Copernicus in Italy” – Prof. Gianfranco de Zotti (University of Padova)

“Is the Earth flat?” – Prof. Michael Perryman (University College Dublin)

Dwór Artusa

08.45

Dwór Artusa

08.45–08.50

Dwór Artusa

08.50–10.15

Dwór Artusa

Sala Malinowa

10.00–11.45

Dwór Artusa

10.20–12.45

Dwór Artusa

10.20–11.00

Dwór Artusa

11.00–11.15

Dwór Artusa

11.15–11.35

Dwór Artusa

11.35–11.55

Dwór Artusa	12.00–12.45	<p>Session “Universe Nearby” – part I          Prof. Andrzej Udalski (Astronomical Observatory of the University of Warsaw)          – „OGLE survey - over three decades of time domain astrophysics”</p> <p>Prof. Piotr Orleañski (Space Research Centre, PAN)          – „Polish participation in current satellite scientific missions”</p> <p>Prof. Yasushi Suto (Tokyo University)          – „Signatures of an inner binary black hole with a tertiary orbiting star”</p> <p>Prof. Grazina Tautvaisienne (Vilnius University)          – „CNO as key elements in stellar and galactic evolution”</p>
Dwór Artusa	12.45–13.25	Lunch
Dwór Artusa	13.30–15.30	<p>Panel Discussion of Nobel Prize Laureates:          Prof. Barry C. Barish, Prof. Michel Mayor, Prof. Arthur B. McDonald, Prof. P. James E. Peebles, Prof. Didier P. Queloz (invitation only)</p>
Dwór Artusa	15.30–16.30	<p>Session “Universe Nearby” – part II          Dr. Dorota Skowron (Astronomical Observatory of the University of Warsaw)          – „Long Secondary Periods in Pulsating Red Giants – Traces of Exoplanets”</p> <p>Dr. Przemek Mróz (Astronomical Observatory of the University of Warsaw)          – „Free Floating Planets”</p> <p>Prof. Christian Stegmann (DESY - Director in charge of Astroparticle Physics)          – “The high energy Universe seen in gamma rays”</p> <p>Prof. Ingunn Wehus (Oslo University)          – “Cosmoglobe: Connecting the near and far universethrough global modelling”</p> <p>Prof. Tsvi Piran (The Hebrew University of Jerusalem, The Racah Institute of Physics)          – “Neutron star mergers - cosmic furnaces of Gold “</p>
Dwór Artusa Sala Malinowa	15.00–16.45	<p>Legal debate „Old democracies, new democracies - equal rights, unequal obligations?”          Moderator - Prof. Andrzej Bryk (Jagiellonian University)          Prof. Fabrizio Giulimondi (Universita La Sapienza, Roma), Prof. Adrian Vermeule (Harvard University), Prof. Dariusz Dudek (Catholic University of Lublin)</p>
Dwór Artusa	16.45–17.00	Coffee break

Dwór Artusa

17.00–19.00

Central banks governors' debate „Central banks in times of pandemic and rising commodity prices”  
Moderator - David Marsh - Chairman of the Official Monetary and Financial Institutions Forum

Participants:

Prof. Adam Glapiński (Governor, Narodowy Bank Polski)  
Martin Schlegel (Vice Chairman of the Governing Board, Swiss National Bank)  
Sandra Švaljek (Deputy Governor, Croatian National Bank)  
Sergiy Nikolaychuk (Vice President, National Bank of Ukraine)  
Simonas Krėpšta (Member of the Board, Lietuvos bankas)  
Iliya Lingorski (Member of the Governing Council, Bulgarian National Bank)  
Cristian Popa (Member of the Board of Directors, National Bank of Romania)

Dwór Artusa

Sala Malinowa

17.15–19.00

Open debate of the Chamber of Medical Sciences  
Moderator - Prof. Adam Dziki

Ratusz Staromiejski

17.00–19.00

SESSION Nr. 2 Astronomy/Natural Sciences

Chair – Dr. Graca Rocha (Jet Propulsion Laboratory, Pasadena) and  
Prof. Marc Kamionkowski (Johns Hopkins University, Baltimore)

Ratusz Staromiejski

17.00–18.00

Session “Consistency(?) of the Near-and Far-Universe Probes”  
Prof. George Efsthathiou (University of Cambridge) – „CMB driver of the Hubble tension”

Dr. Bruno Leibundgut (ESO, TUM) - “Local  $H_0$  without a distance ladder”

Prof. Grzegorz Pietrzynski (CAMK, PAN) – “The Araucaria project. Geometrical distances - the first and most important step toward precise Hubble constant determination”

Dr. Bartłomiej Zgirski (CAMK, PAN) – “Precise standard candles - calibrators of SNIa brightness”

Ratusz Staromiejski

18.00–19.00

Panel discussion:

“Exploration of the Cosmic Microwave Background – the Future”

Participants: Prof. John Carlstrom (University of Chicago)

Prof. Masashi Hazumi (High Energy Accelerator Research Organization - KEK, and Kavli IPMU, Tokyo University)

Prof. Lyman Page (Princeton University)

Dr. Charles R. Lawrence (Jet Propulsion Laboratory, Pasadena)

Prof. Rafael Rebolo Lopez (Institute of Astrophysics of the Canary Islands)

Prof. Jens Chluba (University of Manchester)

CKK Jordanki

20.00–22.30

Dinner under the auspices of Prof. Adam Glapiński,  
Governor of Narodowy Bank Polski

Ratusz Staromiejski 09.30

Ratusz Staromiejski 09.30–11.30

## Astronomy/Natural Sciences Meeting – Day 2

## SESSION Nr. 3 Astronomy/Natural Sciences

Chair – Dr. Nabila Aghanim (Institut d'Astrophysique Spatiale, CNRS, Université Paris Sud) and Prof. Simon D.M. White (Max-Planck Institute for Astrophysics, Garching)

“Universe – the Far-side”

Prof. Douglas Scott (University of British Columbia)  
– „Testing the Copernican Principle on large scales”

Prof. Anthony Challinor (Director, Kavli Institute for Cosmology, Cambridge)  
– “Back-lighting large-scale structure with the cosmic microwave background”

Prof. Benjamin Wandelt (Sorbonne University, Institute Lagrange de Paris)  
– “Power beyond power spectra: from cosmic origins to cosmic fate”

Prof. Rashid Sunyaev (Director Emeritus of the Max-Planck Institute for Astrophysics, Garching)  
– “New Map of the whole sky in X-Rays with millions of resolved X-Ray Sources”

Prof. Rien van de Weygaert (Kapteyn Institute, University of Groningen)  
– „A catastrophic view of the Cosmic Web”

Dr. Nabila Aghanim (IAS, CNRS, Univ. Paris Sud)  
– „The hidden matter, some like it hot”

Prof. Guenther Hasinger (ESA Director of Science)  
– „Is Dark Matter made out of Primordial Black Holes”

Prof. Simon D.M. White (MPA, Garching)  
– „Prompt cusps and their astrophysical consequences”

Prof. Carlos Frenk (Durham University)  
– „A definitive test of LCDM”

Dwór Artusa 10.00–11.40

Debate: Does the constitutionalism of Western civilisation still exist?

Moderator - Dr. Krzysztof Szczucki

Manuel Vescovi (Senator of the Republic of Italy), Prof. Marius S. Ostrowski (European University Institute, Florence), Prof. Tomasz Grzegorz Grosse (University of Warsaw)

Hotel Copernicus 10.00–15.00

Debate on the Toruń Declaration (by special invitation only)

Ratusz Staromiejski 11.30–12.30

Break

Dwór Artusa 11.40–12.00

Break

Dwór Artusa 12.00–13.45

Panel: „What to do with this Russia?”

Moderator - Prof. Andrzej Nowak

Prof. Mark Bassin (Södertörn University, Stockholm),  
Prof. Darius Staliunas (Lietuvos istorijos institutas, Vilnius),  
Prof. Hiroaki Kuromiya (Indiana University)

Ratusz Staromiejski

12.30–14.00

SESSION Nr. 4 Astronomy/Natural Sciences  
Chair – Prof. Tsvi Piran (HUJ, Racah Institute of Physics) and  
Prof. Hans Kristian Eriksen (Oslo University)  
“Universe – the Near-side”

Dr. Grzegorz M. Madejski (Kavli Institute for Particle Astrophysics SLAC, Stanford University)  
– „New observational window for high-energy astrophysics: studying X-ray polarization of celestial sources”

Dr. Maciej Wielgus (Max-Planck Institute for Radio Astronomy, Bonn)  
– „Imaging black holes with the Event Horizon Telescope”

Prof. Włodzimierz Kuźniak (CAMK, PAN)  
– „The Puffy Disk and Ultraluminous X-ray Sources”

Ms. Ruchi Mishra (CAMK PAN)  
– „Sgr A\* : supermassive black hole or a naked singularity?”

Ms. Fatemeh Kayanikhoo (CAMK PAN)  
– „Magnetic and rotational deformation of strange quark stars”

Prof. Lukasz Stawarz (Astronomical Observatory of the Jagiellonian University)  
– “Jet in Activity of Supermassive Black Holes”

Prof. Bharat Ratra (Kansas State University)  
– „Measuring Hubble constant using lower redshift non-CMB data, and measuring spatial curvature”

Ratusz Staromiejski

14.00–15.00

Dwór Artusa

Lunch

Ratusz Staromiejski

15.00–16.15

SESSION Nr. 5 Astronomy/Natural Sciences  
Chair – Prof. Antoine Kouchner (Laboratoire AstroParticule et Cosmologie, Univ. Paris Cite) and Prof. Lyman Page (Princeton University)  
“Multimessenger exploration of the Universe - searching for new clues”

Prof. Marc Kamionkowski (Johns Hopkins University)  
– „The Hubble tension and new physics”

Prof. Joao Magueijo (Imperial College, London)  
– “New cosmologies”

Prof. Peter Quinn (International Centre for Radio Astronomy Research, Perth)  
– “The Quest for Dark Matter – finding new lamp posts”

Prof. Cristiano Galbiati (Princeton University)  
– “The underground search for dark matter”

Prof. Leszek Roszkowski (Astrocent, CAMK, PAN)  
– “New physics windows on the Universe”

Dr. Andreas Haungs (KIT and APPEC)  
– “The APPEC Roadmap on Large-Scale Facilities for Multimessenger Studies”

Hotel Copernicus	15.00–16.30	Signing ceremony of the „Toruń Declaration” Moderator- Prof. Grzegorz Górski
Dwór Artusa	15.00–16.45	Economic Debate „Sources of Poland’s economic success and challenges for the future” Moderator- Prof. Jakub Growiec  Prof. Leon Podkaminer (Vienna Institute for International Economic Comparisons)  Prof. Cezary Kochalski (Member of the Monetary Policy Council, Poznań University of Economics)  Prof. Jacek Kotłowski (Deputy Director, Department of Economic Analysis and Research, NBP)  Dr Magda Ciżkowicz-Pękała (Deputy Director of the Department of Economic Research and Analysis of the NBP)
Ratusz Staromiejski	16.15–17.10	„Impressions and Words of Wisdom for the Future (of, mostly, cosmology …)” Prof. J. Richard Bond (CITA, Toronto) and Prof. Joseph Silk (Institut d’Astrophysique de Paris, Johns Hopkins University)
Dwór Artusa	17.30–18.30	National Academic Exchange Agency discussion panel “Through academic mobility to strengthening scientific potential - how foreign scholars are changing the Polish scientific world” Moderator- Dr Dawid Kostecki, Director General of Polish National Agency for Academic Exchange Prof. Grzegorz Węgrzyn, Prof. Grzegorz Królczyk, Dr Lynne Bowker, Dr Nicoleta Cinpoes, Dr Munish Kumar Gupta
Dwór Artusa	18.30-19.00	Closing ceremony
Dwór Artusa	18.30–18.45	Speech by the Secretary General of the Nicolaus Copernicus Academy - overview of proposed lines of action, preferred research objectives supported by scholarships and grants
Dwór Artusa	18.45–19.00	Conclusions of the Nicolaus Copernicus World Congress – Address by the Minister of Education and Science, Prof. Przemysław Czarnek
Dwór Artusa	19.00	Dinner under the auspices of the National Agency for Academic Exchange