

# CAMK Annual Meeting 2024



## Report of Contributions

Contribution ID: 12

Type: **not specified**

# Hyper-Kamiokande

*Wednesday, 31 January 2024 11:30 (10 minutes)*

**Presenter:** ZIEMBICKI, Marcin (Nicolaus Copernicus Astronomical Centre, Polish Academy of Sciences)

**Session Classification:** Large Scale Projects

Contribution ID: 13

Type: **not specified**

## **LIGO-Virgo-KAGRA**

*Wednesday, 31 January 2024 11:40 (10 minutes)*

**Presenter:** BEJGER, Michał (CAMK)

**Session Classification:** Large Scale Projects

Contribution ID: 14

Type: **not specified**

## **CUBES and WST**

*Wednesday, 31 January 2024 11:50 (10 minutes)*

**Presenter:** SMILJANIC, Rodolfo (CAMK)

**Session Classification:** Large Scale Projects

Contribution ID: 15

Type: **not specified**

## ARAUKARIA

*Wednesday, 31 January 2024 12:00 (10 minutes)*

**Presenter:** PIETRZYNSKI, Grzegorz (CAMK)

**Session Classification:** Large Scale Projects

Contribution ID: 16

Type: **not specified**

## **BRITE-PL**

*Wednesday, 31 January 2024 12:10 (10 minutes)*

**Presenter:** HANDLER, Gerald

**Session Classification:** Large Scale Projects

Contribution ID: 17

Type: **not specified**

## **SOLARIS**

*Wednesday, 31 January 2024 12:20 (10 minutes)*

**Presenter:** KONACKI, Maciej

**Session Classification:** Large Scale Projects

Contribution ID: **18**

Type: **not specified**

## **HESS/CTA**

*Wednesday, 31 January 2024 12:30 (10 minutes)*

**Presenter:** MODERSKI, Rafał (Centrum Astronomiczne im. M. Kopernika PAN)

**Session Classification:** Large Scale Projects



Contribution ID: **19**

Type: **not specified**

## **New-ATHENA**

*Wednesday, 31 January 2024 12:40 (10 minutes)*

**Presenter:** ROZANSKA, Agata (CAMK PAN)

**Session Classification:** Large Scale Projects

Contribution ID: 20

Type: **not specified**

## **The dormant BH binaries discovered by Gaia - how they could have been formed?**

*Wednesday, 31 January 2024 17:10 (5 minutes)*

**Presenter:** KOTKO, Iwona (Nicolaus Copernicus Astronomical Centre of the Polish Academy of Sciences)

**Session Classification:** Stellar evolution and gravitational waves

Contribution ID: 21

Type: **not specified**

## Annual Report

*Wednesday, 31 January 2024 17:20 (5 minutes)*

**Presenter:** FIGURA, Przemysław (Nicolaus Copernicus Astronomical Center)

**Session Classification:** Stellar evolution and gravitational waves

Contribution ID: 22

Type: **not specified**

# Annual Report

*Wednesday, 31 January 2024 17:25 (5 minutes)*

**Presenter:** ROMAGNOLO, Amedeo

**Session Classification:** Stellar evolution and gravitational waves

Contribution ID: 23

Type: **not specified**

## Annual Report

*Wednesday, 31 January 2024 17:30 (5 minutes)*

**Presenter:** SUYAMPRAKASAM, Sudhagar (Nicolaus Copernicus Astronomical Center)

**Session Classification:** Stellar evolution and gravitational waves

Contribution ID: 24

Type: **not specified**

# Observational signatures of merging massive black holes

*Wednesday, 31 January 2024 17:35 (5 minutes)*

**Presenter:** BULIK, Tomasz (Obserwatorium Astronomiczne UW)

**Session Classification:** Stellar evolution and gravitational waves

Contribution ID: 25

Type: **not specified**

# Annual Report

*Wednesday, 31 January 2024 16:45 (5 minutes)*

**Presenter:** GRACZYK, Dariusz (CAMK)

**Session Classification:** Eclipsing binaries

Contribution ID: 26

Type: **not specified**

## Annual Report

*Wednesday, 31 January 2024 16:50 (5 minutes)*

**Presenter:** ROJAS GARCÍA, Gonzalo (Nicolaus Copernicus Astronomical Centre, PAN)

**Session Classification:** Eclipsing binaries



Contribution ID: 27

Type: **not specified**

## Annual Report

*Wednesday, 31 January 2024 16:55 (5 minutes)*

**Presenter:** TAORMINA, Mónica (CAMK PAN)

**Session Classification:** Eclipsing binaries

Contribution ID: 28

Type: **not specified**

## **Parameters and chemical composition of binary systems components from spectroscopic analysis**

*Wednesday, 31 January 2024 17:00 (5 minutes)*

**Presenter:** GAŁAN, Cezary (NCAC PAS, Warsaw, Poland)

**Session Classification:** Eclipsing binaries

Contribution ID: 34

Type: **not specified**

## **Formation and evolution of the Nuclear Star Cluster in the Milky Way and other spiral galaxies on the cosmological time scale.**

*Wednesday, 31 January 2024 14:00 (5 minutes)*

**Presenter:** Prof. BERTSYK, Peter (Nicolaus Copernicus Astronomical Centre Polish Academy of Sciences, ul. Bartycka 18, 00-716 Warsaw, Poland; Main Astronomical Observatory, National Academy of Sciences of Ukraine, 27 Akademika Zabolotnoho St., 03143 Kyiv, Ukraine.)

**Session Classification:** Stellar Clusters

Contribution ID: 35

Type: **not specified**

## **Stellar Dynamics and Star Cluster Evolution**

*Wednesday, 31 January 2024 14:10 (5 minutes)*

**Presenter:** GIERSZ, Mirek (Nicolaus Copernicus Astronomical Center, Polish Academy of Sciences)

**Session Classification:** Stellar Clusters

Contribution ID: 36

Type: **not specified**

## **Multiple stellar populations in globular star clusters**

*Wednesday, 31 January 2024 14:05 (5 minutes)*

**Presenter:** HYPKI, Arkadiusz (Nicolaus Copernicus Astronomical Center Polish Academy of Sciences)

**Session Classification:** Stellar Clusters

Contribution ID: 37

Type: **not specified**

## **Synthetic populations of ultraluminous X-ray sources in globular clusters**

*Wednesday, 31 January 2024 14:15 (5 minutes)*

**Presenter:** WIKTOROWICZ, Grzegorz

**Session Classification:** Stellar Clusters

Contribution ID: **38**

Type: **not specified**

## **DWD binaries in MOCCA GC simulations - comparisons to observations**

*Wednesday, 31 January 2024 14:20 (5 minutes)*

**Presenter:** HELLSTRÖM, Lucas

**Session Classification:** Stellar Clusters

Contribution ID: 39

Type: **not specified**

## **Novae and related binaries**

*Wednesday, 31 January 2024 16:30 (5 minutes)*

**Presenter:** MIKOŁAJEWSKA, Joanna

**Session Classification:** Symbiotic stars



Contribution ID: 40

Type: **not specified**

## **Growing Black Holes in Stellar Clusters**

*Wednesday, 31 January 2024 14:25 (5 minutes)*

**Presenter:** ASKAR, Abbas (Nicolaus Copernicus Astronomical Center, Warsaw, Poland)

**Session Classification:** Stellar Clusters

Contribution ID: 41

Type: **not specified**

## Compact Hierarchical Triples

*Wednesday, 31 January 2024 15:45 (5 minutes)*

**Presenter:** MOHARANA, Ayush (Nicolaus Copernicus Astronomical Center, Toruń)

**Session Classification:** Binary stars

Contribution ID: 42

Type: **not specified**

## **Detached Eclipsing Binaries as a PLATO Benchmark Stars**

*Wednesday, 31 January 2024 15:50 (5 minutes)*

**Presenter:** Mr PAWAR, Ganesh N. (Nicolaus Copernicus Astronomical Center)

**Session Classification:** Binary stars

Contribution ID: 43

Type: **not specified**

## Annual Report

*Wednesday, 31 January 2024 15:40 (5 minutes)*

**Presenter:** HEŁMINIAK, Krzysztof (CAMK Toruń)

**Session Classification:** Binary stars

Contribution ID: 44

Type: **not specified**

## Annual Report

*Wednesday, 31 January 2024 15:55 (5 minutes)*

**Presenter:** PAWAR, Tilaksingh (NCAC, Torun)

**Session Classification:** Binary stars

Contribution ID: 45

Type: **not specified**

## ULXs are beamed

*Wednesday, 31 January 2024 15:00 (5 minutes)*

**Presenter:** LASOTA-HIRSZOWICZ, Jean-Pierre (N. Copernicus Astronomical Center)

**Session Classification:** Accretion/ejection

Contribution ID: 46

Type: **not specified**

## Disks, Planets and Auroras

*Wednesday, 31 January 2024 14:35 (5 minutes)*

**Presenter:** ČEMELJIĆ, Miljenko (CAMK & SU & ASIAA)

**Session Classification:** Accretion/ejection

Contribution ID: 47

Type: **not specified**

## **Magnetic reconnection at the base of relativistic jets**

*Wednesday, 31 January 2024 14:30 (5 minutes)*

**Presenter:** NALEWAJKO, Krzysztof (Nicolaus Copernicus Astronomical Center, PAS, Warsaw, Poland)

**Session Classification:** Accretion/ejection



Contribution ID: 48

Type: **not specified**

## From bubble to hole

*Wednesday, 31 January 2024 14:40 (5 minutes)*

**Presenter:** KRAJEWSKI, Tomasz (Centrum Astronomiczne im. Mikołaja Kopernika)

**Session Classification:** Accretion/ejection

Contribution ID: 49

Type: **not specified**

## **Accretion onto compact objects - models**

*Wednesday, 31 January 2024 14:55 (5 minutes)*

**Presenter:** KLUŻNIAK, Wlodek (CAMK)

**Session Classification:** Accretion/ejection

Contribution ID: 50

Type: **not specified**

## **Beamed emission of accreting magnetized neutron star**

*Wednesday, 31 January 2024 14:45 (5 minutes)*

**Presenter:** KAYANIKHOO, Fatemeh (Nicolaus Copernicus Astronomical Center)

**Session Classification:** Accretion/ejection

Contribution ID: 51

Type: **not specified**

## Annual Report

*Wednesday, 31 January 2024 14:50 (5 minutes)*

**Presenter:** KARAKONSTANTAKIS, Angelos

**Session Classification:** Accretion/ejection

Contribution ID: 52

Type: **not specified**

## **X-ray-Detected SMBH transients with eROSITA**

*Wednesday, 31 January 2024 15:05 (5 minutes)*

**Presenter:** MARKOWITZ, Alex (CAMK-PAN)

**Session Classification:** X-ray astrophysics

Contribution ID: 53

Type: **not specified**

## **Multiwavelength Study of Extreme Variability Changing Look AGNs**

*Wednesday, 31 January 2024 15:10 (5 minutes)*

**Presenter:** SAHA, Tathagata (Nicholaus Copernicus Astronomical Center of the Polish Academy of Sciences)

**Session Classification:** X-ray astrophysics

Contribution ID: 54

Type: **not specified**

## **The challenges of the modeling Changing Look Active Galactic Nuclei and nuclear transients phenomena**

*Wednesday, 31 January 2024 15:15 (5 minutes)*

**Presenter:** SNIEGOWSKA, Marzena (CAMK PAN, CFT PAN)

**Session Classification:** X-ray astrophysics

Contribution ID: 55

Type: **not specified**

## **X-ray studies of accretion**

*Wednesday, 31 January 2024 15:20 (5 minutes)*

**Presenter:** ZYCKI, Piotr

**Session Classification:** X-ray astrophysics



Contribution ID: 56

Type: **not specified**

# Annual Report

*Wednesday, 31 January 2024 15:25 (5 minutes)*

**Presenter:** ZDZIARSKI, Andrzej

**Session Classification:** X-ray astrophysics

Contribution ID: 57

Type: **not specified**

# Annual Report

*Wednesday, 31 January 2024 15:30 (5 minutes)*

**Presenter:** Mr PALIT, Biswaraj (CAMK PAN)

**Session Classification:** X-ray astrophysics

Contribution ID: 58

Type: **not specified**

## Annual Report

*Wednesday, 31 January 2024 15:35 (5 minutes)*

**Presenter:** WOJACZYŃSKI, Rafał (AstroCeNT CAMK)

**Session Classification:** X-ray astrophysics

Contribution ID: **60**

Type: **not specified**

# Annual Report

*Thursday, 1 February 2024 09:30 (5 minutes)*

**Presenter:** MOBEEN, Muhammad Zain

**Session Classification:** Stars

Contribution ID: **62**

Type: **not specified**

# Annual Report

*Thursday, 1 February 2024 09:35 (5 minutes)*

**Presenter:** STEINMETZ, Thomas (Nicolaus Copernicus Centre for Astronomy)

**Session Classification:** Stars

Contribution ID: **63**

Type: **not specified**

## Annual report

*Thursday, 1 February 2024 09:40 (5 minutes)*

**Presenter:** SCHMIDT, Mirosław (Nicolaus Copernicus Astronomical Center of the Polish Academy of Sciences, Department of Astrophysics, Toruń)

**Session Classification:** Stars

Contribution ID: 64

Type: **not specified**

## **Neutron Capture Element Abundance Rich Stars in the GALAH survey**

*Thursday, 1 February 2024 09:45 (5 minutes)*

**Presenter:** DA SILVA, André Rodrigo (Centrum Astronomiczne im. Mikołaja Kopernika - PAN)

**Session Classification:** Galactic archeology

Contribution ID: 65

Type: **not specified**

# Annual Report

*Thursday, 1 February 2024 09:50 (5 minutes)*

**Presenter:** MARTÍNEZ FERNÁNDEZ, John Eduard (CAMK-PAN)

**Session Classification:** Galactic archeology



Contribution ID: **66**

Type: **not specified**

# Annual Report

*Thursday, 1 February 2024 09:55 (5 minutes)*

**Presenter:** ÖZDEMİR, Sergen

**Session Classification:** Galactic archeology

Contribution ID: 67

Type: **not specified**

## **Impact of the stellar evolution adopting hydrodynamically consistent winds**

*Wednesday, 31 January 2024 17:15 (5 minutes)*

**Presenter:** GORMAZ-MATAMALA, Alex (CAMK)

**Session Classification:** Stellar evolution and gravitational waves

Contribution ID: **68**

Type: **not specified**

## **Cepheids in binary systems - new discoveries**

*Wednesday, 31 January 2024 16:35 (5 minutes)*

**Presenter:** Dr PILECKI, Bogumił (Centrum Astronomiczne im. M. Kopernika PAN)

**Session Classification:** Cepheids in binary systems

Contribution ID: **69**

Type: **not specified**

# Annual Report

*Wednesday, 31 January 2024 16:40 (5 minutes)*

**Presenter:** ESPINOZA, Felipe (CAMK)

**Session Classification:** Cepheids in binary systems

Contribution ID: 71

Type: **not specified**

# Annual Report

*Thursday, 1 February 2024 10:00 (5 minutes)*

**Presenter:** MOSKALIK, Paweł

**Session Classification:** Stellar pulsations

Contribution ID: 72

Type: **not specified**

## Annual Report

*Thursday, 1 February 2024 10:05 (5 minutes)*

**Presenter:** SMOLEC, Radoslaw (Nicolaus Copernicus Astronomical Center)

**Session Classification:** Stellar pulsations

Contribution ID: 73

Type: **not specified**

## **Non-evolutionary effects on Period change in Magellanic Cepheids**

*Thursday, 1 February 2024 10:10 (5 minutes)*

**Presenter:** RATHOUR, Rajeev Singh (Nicolaus Copernicus Astronomical Center, Warsaw)

**Session Classification:** Stellar pulsations

Contribution ID: 74

Type: **not specified**

## **Evolutionary modelling of medium-mass stars**

*Thursday, 1 February 2024 10:15 (5 minutes)*

**Presenter:** ZIÓLKOWSKA, Oliwia (CAMK)

**Session Classification:** Stellar pulsations



Contribution ID: 75

Type: **not specified**

## Annual Report

*Thursday, 1 February 2024 10:20 (5 minutes)*

**Presenter:** EZE, Christian (CAMK PAN)

**Session Classification:** Stellar pulsations

Contribution ID: 76

Type: **not specified**

## **Circumstellar matter around RR Lyrae stars**

*Thursday, 1 February 2024 10:35 (5 minutes)*

**Presenter:** HAJDU, Gergely (Nicolaus Copernicus Astronomical Center)

**Session Classification:** Stellar pulsations

Contribution ID: 77

Type: **not specified**

## Upgrade of the OCM observatory

*Thursday, 1 February 2024 10:40 (5 minutes)*

**Presenter:** GÓRSKI, Marek (camk)

**Session Classification:** Stellar pulsations

Contribution ID: 78

Type: **not specified**

## **Upgrade of the OCM Observatory - New Control Software**

*Thursday, 1 February 2024 10:45 (5 minutes)*

**Presenter:** KAŁUSZYŃSKI, Mikołaj (Nicolaus Copernicus Astronomical Centre, Polish Academy of Sciences, Warsaw, Poland)

**Session Classification:** Stellar pulsations

Contribution ID: 79

Type: **not specified**

## Upgrade of the OCM Observatory

*Thursday, 1 February 2024 10:50 (5 minutes)*

**Presenter:** KICIA, Mirosław (Nicolaus Copernicus Astronomical Centre of the Polish Academy of Sciences)

**Session Classification:** Stellar pulsations

Contribution ID: **80**

Type: **not specified**

## **The Baade-Wesselink analysis of Type II Cepheids**

*Thursday, 1 February 2024 10:55 (5 minutes)*

**Presenter:** WIELGORSKI, Piotr (Nicolaus Copernicus Astronomical Center Warsaw)

**Session Classification:** Stellar pulsations

Contribution ID: **82**

Type: **not specified**

## **Neutron stars**

**Presenter:** HAENSEL, Pawel

**Session Classification:** Neutron stars and pulsars

Contribution ID: 83

Type: **not specified**

## Neutron Stars

*Thursday, 1 February 2024 11:05 (5 minutes)*

**Presenter:** ZDUNIK, Julian Leszek (CAMK)

**Session Classification:** Neutron stars and pulsars



Contribution ID: 84

Type: **not specified**

## **Superfluid neutron stars and gravitational waves**

*Thursday, 1 February 2024 11:15 (5 minutes)*

**Presenter:** HASKELL, Brynmor (CAMK PAN)

**Session Classification:** Neutron stars and pulsars

Contribution ID: 85

Type: **not specified**

## **Improving fundamental astrophysics with eclipsing binary stars**

*Wednesday, 31 January 2024 17:05 (5 minutes)*

**Presenter:** MILLER, Nikki (CAMK PAN, Warsaw)

**Session Classification:** Eclipsing binaries

Contribution ID: **86**

Type: **not specified**

## Annual Report

*Thursday, 1 February 2024 10:25 (5 minutes)*

**Presenter:** MISZUDA, Amadesuz (CAMK PAN, Warsaw, Poland)

**Session Classification:** Stellar pulsations

Contribution ID: 87

Type: **not specified**

## Radio pulsars

*Thursday, 1 February 2024 11:20 (5 minutes)*

**Presenter:** DYKS, Jaroslaw

**Session Classification:** Neutron stars and pulsars

Contribution ID: **88**

Type: **not specified**

# Annual Report

*Thursday, 1 February 2024 11:25 (5 minutes)*

**Presenter:** LOKAS, Ewa (Copernicus Center)

**Session Classification:** Galaxies and cosmology

Contribution ID: **90**

Type: **not specified**

## Annual Report

**Presenter:** ROSZKOWSKI, Leszek (CAMK PAN)

**Session Classification:** AstroCENT

Contribution ID: **91**

Type: **not specified**

# Annual Report

*Thursday, 1 February 2024 12:00 (5 minutes)*

**Presenter:** KUŹNIAK, Marcin (AstroCeNT / CAMK PAN)

**Session Classification:** AstroCENT

Contribution ID: 92

Type: **not specified**

## **Modeling of Infrasound Sound Inside the Virgo Building**

**Presenter:** YADAV, Nikesh (Nicolaus Copernicus Astronomical Center of the Polish Academy of Sciences)

**Session Classification:** AstroCENT



Contribution ID: 93

Type: **not specified**

## Annual Report

*Thursday, 1 February 2024 12:05 (5 minutes)*

**Presenter:** HUGUES, Theo (CAMK PAN)

**Session Classification:** AstroCENT

Contribution ID: 94

Type: **not specified**

## Seismic and infrasound sensors

*Thursday, 1 February 2024 12:10 (5 minutes)*

**Presenter:** SUCHENEK, Mariusz (Astrocent)

**Session Classification:** AstroCENT

Contribution ID: 95

Type: **not specified**

## **Liquid Argon Technology for Dark Matter Direct Detection and Medical Application**

*Thursday, 1 February 2024 12:20 (5 minutes)*

**Presenter:** WADA, Masayuki (AstroCent)

**Session Classification:** AstroCENT

Contribution ID: 96

Type: **not specified**

## **A Novel Total-Body PET Scanner Using Xenon-Doped Liquid Argon Scintillator for Outstanding Detection**

*Thursday, 1 February 2024 12:25 (5 minutes)*

**Presenter:** ZABIHI, Azam (ASTROCeNT)

**Session Classification:** AstroCENT

Contribution ID: 97

Type: **not specified**

## **Study of low-energy events in liquid argon for dark matter searches**

*Thursday, 1 February 2024 12:30 (5 minutes)*

**Presenter:** SUNNY, Clea (CAMK PAN)

**Session Classification:** AstroCENT

Contribution ID: **98**

Type: **not specified**

# Annual Report

*Thursday, 1 February 2024 12:35 (5 minutes)*

**Presenter:** ZAKHARY, Paul (AstroCeNT)

**Session Classification:** AstroCENT

Contribution ID: 99

Type: **not specified**

## Annual Report

*Thursday, 1 February 2024 12:15 (5 minutes)*

**Presenter:** PIETRZAK, Mateusz

**Session Classification:** AstroCENT

Contribution ID: **100**

Type: **not specified**

# Annual Report

*Thursday, 1 February 2024 12:40 (5 minutes)*

**Presenter:** AHMAD, Iftikhar (Astrocent, Poland)

**Session Classification:** AstroCENT



Contribution ID: **101**

Type: **not specified**

## Annual Report

*Thursday, 1 February 2024 12:45 (5 minutes)*

**Presenter:** ALHASSAN, Wathela (CAMK)

**Session Classification:** AstroCENT

Contribution ID: 102

Type: **not specified**

## **Scientific Computing & Information Technology Group Scientific Computing & Information Technology Group activities at AstroCeNT**

*Thursday, 1 February 2024 12:50 (5 minutes)*

**Presenter:** Prof. GAWRON, Piotr (CAMK PAN)

**Session Classification:** AstroCeNT

Contribution ID: **103**

Type: **not specified**

# Quantum Machine Learning for Earth Observation

*Thursday, 1 February 2024 12:55 (5 minutes)*

**Presenter:** GUPTA, Manish Kumar

**Session Classification:** AstroCENT

Contribution ID: **104**

Type: **not specified**

# Annual Report

*Thursday, 1 February 2024 11:10 (5 minutes)*

**Presenter:** SANJINEZ ORTIZ, Monica

**Session Classification:** Neutron stars and pulsars

Contribution ID: **105**

Type: **not specified**

# Annual Report

*Thursday, 1 February 2024 13:00 (5 minutes)*

**Presenter:** CHOUDHARY, Sarthak (AstroCeNT)

**Session Classification:** AstroCENT

Contribution ID: **106**

Type: **not specified**

## **Study of cosmic ray muons with KM3NeT**

*Thursday, 1 February 2024 13:05 (5 minutes)*

**Presenter:** KALACZYŃSKI, Piotr (AstroCeNT)

**Session Classification:** AstroCENT

Contribution ID: **107**

Type: **not specified**

# Annual Report

*Thursday, 1 February 2024 13:10 (5 minutes)*

**Presenter:** OLSZEWSKI, Michal

**Session Classification:** AstroCENT

Contribution ID: **108**

Type: **not specified**

## **Annual Report**

*Thursday, 1 February 2024 10:30 (5 minutes)*

**Presenter:** SAHOO, Sumanta Kumar (Nicolaus Copernicus Astronomical Center, Warsaw, Poland)

**Session Classification:** Stellar pulsations



Contribution ID: **110**

Type: **not specified**

## **Interstellar Extinction**

*Thursday, 1 February 2024 11:00 (5 minutes)*

**Presenter:** CHINI, Rolf (CAMK)

**Session Classification:** Stellar pulsations