



ARMENIAN ASTRONOMICAL SOCIETY

ArAS Newsletter



EDITOR: MELINE ASRYAN

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LOCAL NEWS

18th Ambartsumian Readings

On November 28, the 18th edition of the Ambartsumian Readings took place at the Byurakan Astrophysical Observatory (BAO). This annual event brought together experts from the fields of astronomy and related sciences for engaging discussions and presentations.

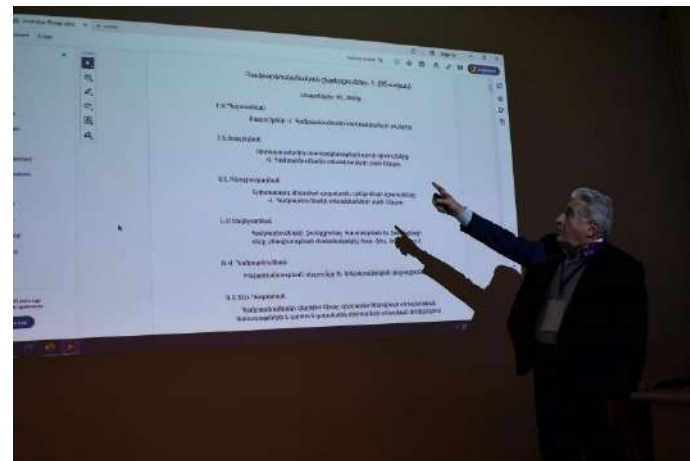


18th Ambartsumian Readings

This year's event featured a variety of insightful talks, highlighting different aspects of science and history. Among the distinguished speakers were Academician Ashot Melkonyan (Director of the Institute of History of the National Academy of Sciences of the Republic of Armenia), Astronomer Hovhannes Pikichyan (BAO senior researcher), Hayk Malkhasyan (BAO researcher, head of the Department of Archaeoastronomy and Cultural Astronomy), Archaeologist Hakob Simonyan (Scientific Research Center of Historical and Cultural

Heritage of RA MoESCS), Architect Ashot Grigoryan (National Museum-Institute of Architecture after Alexander Tamanyan), Archaeologist Boris Gasparyan (Archeology and Ethnography Institute of the National Academy of Sciences of the Republic of Armenia, YSU), Linguist Leyla Stepanyan (Bryusov State University), Arthur Armin ("Ardini" Armenological Research Institute), historians Gohar Vardumyan (Institute of History of the National Academy of Sciences of the Republic of Armenia) and Karen Tokhatyan (Institute of History of the National Academy of Sciences of the Republic of Armenia).

Later, students from the Yerevan State University (YSU) Cultural Center joined the event. Areg Mickaelian, director of the BAO, presented the BAO's activities and Viktor Ambartsumian's most important scientific results.



Hovhannes Pikichyan

Gayane Kostandyan's 20-Year Activity

On November 21, a jubilee seminar was held at the Byurakan Astrophysical Observatory (BAO) to celebrate Gayane Kostandyan's remarkable 20-year career as a researcher in the BAO's "Astronomical Surveys" Research Department.

Gayane Kostandyan, a Candidate of Physical and Mathematical Sciences, presented the key achievements and scientific contributions from her two decades of work at the BAO.

G. Kostandyan studied at the Department of Astrophysics within the Faculty of Physics at

Yerevan State University. Since 2003, she has been a part of the Observatory team, starting as a senior laboratory assistant. In 2010, she advanced to the role of junior researcher, and in 2022, she was awarded the scientific degree of Candidate of Physical and Mathematical Sciences. She is currently a researcher at BAO.

G. Kostandyan's primary research focuses on DFBS late-type stars and carbon stars at high galactic latitudes and studies of periodic variable stars using data from the Catalina and LINEAR databases.

G. Kostandyan has authored 39 peer-reviewed articles, many of which have been published in prestigious international journals. Notably, in 2021, at the invitation of Dmitry Bisikalo, Director of the Institute of Astronomy of the Russian Academy of Sciences, Kostandyan delivered a report titled "Study of DFBS Late-Type Stars at High Galactic Latitudes." In this presentation, she highlighted the methods used for the classification and study of stars selected from the first digitized database of Byurakan (DFBS).

Kostandyan has participated in the research grants supported by the Armenian National Science and Education Fund (ANSEF) in 2011, 2017, and 2019.

Kostandyan is also an active member of the Armenian Astronomical Society (ArAS) and the European Astronomical Society (EAS).



Gayane Kostandyan

Intersection of Astronomy and Computer Sciences

From November 10 to 14, the ADASS XXXIV conference on Astronomical Data Analysis Software and Systems was held at the University of Malta in La Valletta.

This prestigious interdisciplinary event, which explores the intersection of astronomy and computer science, has been a cornerstone of scientific collaboration for many years. The conference attracted 275 participants from around the world, including Areg Mickaelian, Director of the Byurakan Astrophysical Observatory (BAO), who presented his report on “The Database of Markarian Galaxies and the Classification of Low-Dispersion Spectra.”

Among other Armenian participants was Igor Chilingaryan from the USA, a recognized specialist in this field.

Immediately after ADASS, the Interoperability Meeting of the International Virtual Observatory Alliance (IVOA) took place. Areg Mickaelian participated in the event as a member of the IVOA executive committee.

Astronomy is perhaps the most important field related to Big Data, with the Universe generating the largest datasets known to humanity. On the edge of these two sciences, the interdisciplinary science of Astroinformatics, Virtual Observatories, digitization, digital systems, computer simulations, modeling, machine learning (ML), deep learning (DL), and artificial intelligence (AI) are widely used in astronomy.

From 2002 to 2007, the first digitization project in Armenia was carried out at the Byurakan Astrophysical Observatory — the digitization of Markarian's astrophotographic plates (Markarian Survey) and the DFBS database was created. Armenian Virtual Observatory was established in 2005, and in 2017 the infrastructural department of Astroinformatics was founded.



15th Anniversary of Scientific (Astronomical) Journalism

On October 29, the jubilee event dedicated to the 15th anniversary of scientific journalism was held at the Byurakan Astrophysical Observatory, with the participation of journalists and photographers. 15 years ago, the Observatory established a group of scientific journalists of Armenia to facilitate the promotion of scientific, mainly astronomical, publications in the mass media.

The event highlighted the journey of scientific journalism over the past years, largely made possible through the efforts of the Armenian Astronomical Society (ArAS) and BAO. It included discussions on scientific journalism and guided tours of the BAO's facilities.

Journalists and professional photographers had the opportunity to visit the largest 2.6 m and 1 m Schmidt telescopes as well as explore V. Ambartsumian's house-museum.

Additionally, the participants were introduced to the topics that were encouraged for participation in this year's science journalism competition.



15th Anniversary of Scientific Journalism. BAO.

ANNIVERSARIES

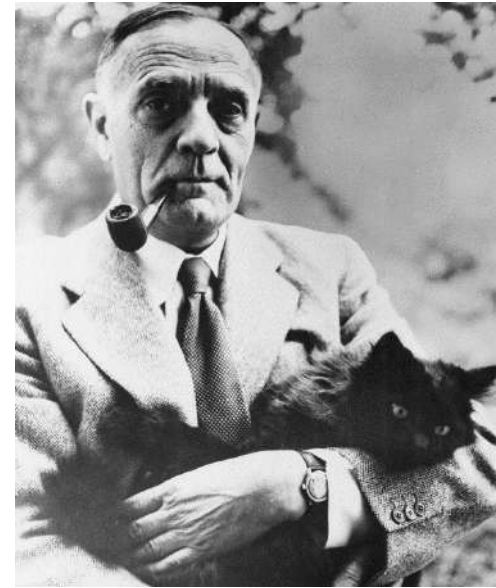
Edwin Hubble's 135th Anniversary

This year we commemorate 135th anniversary of Dr. Edwin Powell Hubble.

E. Hubble, after whom the renowned Hubble Space Telescope is named, was a prominent astronomer of the twentieth century. He was born on November 20, 1889.

E. Hubble was an American astronomer who played a crucial role in establishing the field of extragalactic astronomy. He was the first to establish the extragalactic scale and to classify galaxies; his morphological classification is widely used till now. He's generally regarded as the leading observational cosmologist of the 20th century. His discoveries in the 1920s, including that countless galaxies exist beyond our own Milky Way, revolutionized our understanding of the universe, and our small place within it.

E. Hubble died in 1959, aged 63.



Dr. Edwin Powell Hubble

INTERNATIONAL NEWS

World Science Day

World Science Day serves to highlight the crucial role of science in society and underscores the importance of knowledge in fostering peace and advancing sustainable development.

On November 11, a scientific and educational event was held at the National Academy of Sciences of Armenia in celebration of World Science Day. Within the framework of public seminars, Hayk Abrahamyan, Deputy Director of the Byurakan Astrophysical Observatory, presented a talk on Astrophysics.

Attendees were also introduced to the workings of telescopes and their applications. Practical demonstrations were conducted by researchers and engineers Derenik Andreasyan, Andranik Sukiasyan, Alexey Grave, and Arshaluys Andreasyan.

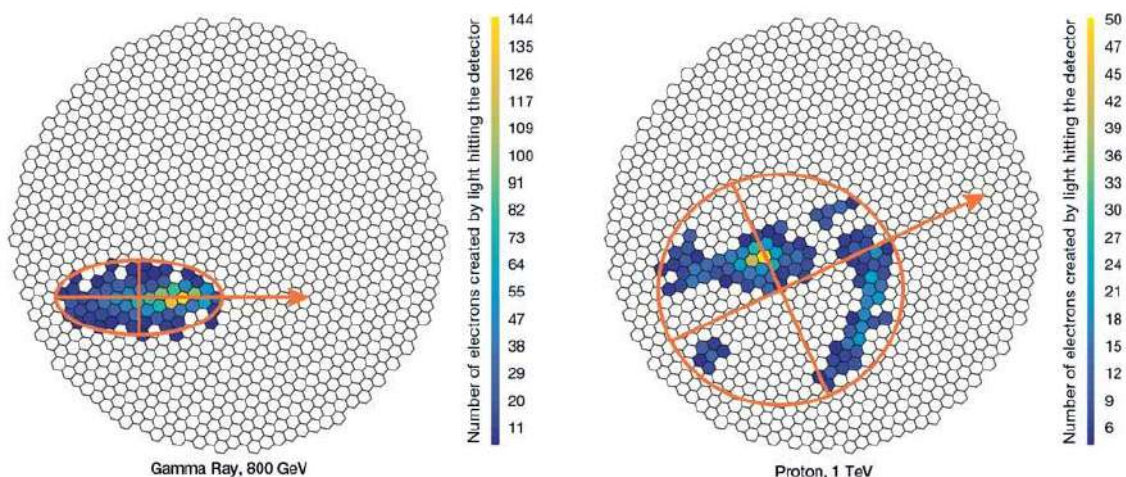


OTHER NEWS

New Telescopes to Detect High-Energy Gamma Rays From the Ground

Famous astroparticle physicist Razmik Mirzoyan played a pivotal role in the development of Cherenkov telescopes for detecting high-energy gamma rays. As we learn from [Javier Barbuzano's article](#) in Sky & Telescope Magazine, Mirzoyan, starting his work in Armenia, faced numerous challenges, including the collapse of the Soviet Union, which forced him to relocate his project to La Palma. Despite initial skepticism from colleagues, his perseverance and collaboration with German astronomers helped secure the funding and resources necessary for groundbreaking advancements in gamma-ray detection.

However primitive the array might have looked, it worked very well. In 1992, after just two months of operations with a single telescope, it detected the Crab Nebula's emission — the first independent confirmation of the Whipple results. Mirzoyan attributes the success to the maturity of the Cherenkov technology. "We measured it in two months because everything was ready, the know-how was ready, everything was understood," he says. Named HEGRA (High Energy Gamma Ray Astronomy), the completed array included six 5-meter telescopes and operated for 10 years, detecting 10 additional sources. HEGRA's success led Mirzoyan and his colleagues to plan for a more capable instrument. They spearheaded the Major Atmospheric Gamma-ray Imaging Cherenkov (MAGIC) project, a 17-meter telescope also constructed on La Palma. "Our competitors only wanted to do proven things, but we wanted to go below 100 GeV, maybe 20 or 30 GeV," Mirzoyan says.



ArAS News is the electronic newsletter of the Armenian Astronomical Society. It was distributed to all ArAS members from the beginning of 2002, 4 times a year, typically at the end of each trimester. In 2009-2014, 8 issues annually and since 2015, 12 issues annually have been released.

ArASNews publishes information materials on ArAS, Byurakan Astrophysical Observatory and the Armenian astronomy in general, reports on ArAS Annual Meetings and participation of the Armenian astronomers in important international meetings, articles on occasion of anniversaries of famous Armenian astronomers and ArAS members, acceptance of new ArAS members, achievements of the Armenian astronomers, astronomical education in Armenia, Armenian archaeoastronomy, as well as science articles (reviews) on important studies.

So, if you want to share your studies with the scientific community, send us your articles to melin.asryan@gmail.com. They will be reviewed for the publication in ArAS Newsletters next issues.

[ArAS Newsletter issues](#) are available online.