



Issue 144/ August 2021

ARMENIAN ASTRONOMICAL SOCIETY

ArAS Newsletter



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LOCAL NEWS

ARMENIAN ASTRONOMICAL SOCIETY Marks Its 20TH ANNIVERSARY



On 30 August, the Byurakan Astrophysical Observatory (BAO) held an event on the 20th anniversary of the Armenian Astronomical Society (ArAS).

Director of BAO and acting president of ArAS introduced 20 years of ArAS activities at the opening seminar.

On the occasion many astronomical societies had sent written and video congratulatory messages, which were introduced during the meeting. Among them were European Astronomical Society, American astronomical society, Eurasian Astronomical Society, German astronomical society, Ukrainian astronomical society, Hellenic Astronomical society and Georgian



Areg Mickaelian, Director of BAO

Astronomical Society. The messages will be available on BAO's Facebook page.

Participants of the event were ArAS members and BAO research associates, including Armen Sedrakyan, the head of BAO "Cosmic compact objects and relativistic gravity" research department and foreign member of NAS RA who came from Germany.




Seminar on the 20th anniversary of ArAS. BAO.

ArAS is a non-governmental organization (NGO) founded in 1999 and officially registered in 2001 (<https://www.aras.am>).

ArAS aims at development of astronomy in Armenia, promotion of collaboration between the Armenian and foreign astronomical institutions, strengthening contacts and collaboration between the Armenian and other astronomers, as well

as supporting astronomical education and popularization of science in Armenia.

Yet Another International Conference with the Participation of the Byurakan Astrophysical Observatory Research Associates



BAK-2021

Москва, 23-28 августа 2021 года

On 23 - 28 August, All-Russian Astronomical Conference 2021 was held at the State Astronomical Institute named after P.K. Sternberg (Moscow State University) in a mixed (hybrid) format.

Among the international participants were the Byurakan Astrophysical Observatory's Director and Leading Research Associate Areg Mickaelian ("Discovery and study of new white dwarfs using Gaia precision astrometry") and Principal Research Associate Tigran Magakian ("Collimated flows of molecular hydrogen in Mon R1 association").

If you would like to learn more about the reports, they will be published among with the other papers in the conference proceedings by the end of 2021, and will be indexed in the NASA / ADS database as well.

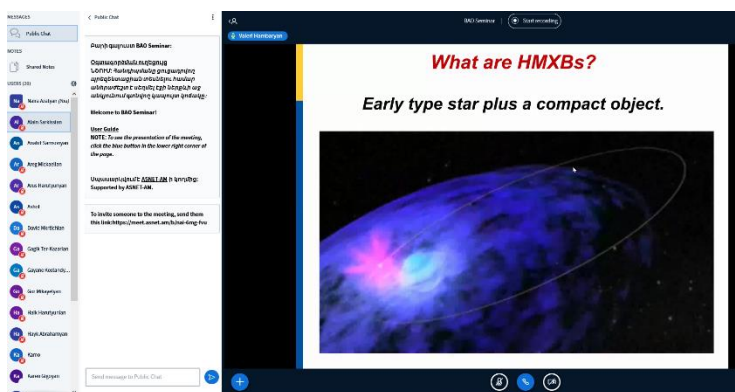
Notes

BAO has collaborations with several Russian observatories, astronomical institutes and universities including the State Astronomical Institute named after P.K. Sternberg.

Seminar by Valeri Hambaryan

On 2 August, a seminar was held at the Byurakan Astrophysical Observatory (BAO) within a series of seminars launched by BAO in 2021. The speaker was Senior Research Associate at Astrophysical Institute of University Jena and Scientific Consultant at the Byurakan Astrophysical Observatory Valeri Hambaryan.

As was mentioned in the previous ArAS news issues, these are scientific, review, technical, report and informational seminars held every Monday and Thursday by not only BAO but also other, foreign scientists.



Screenshot of Seminar by Valeri Hambaryan

V. Hambaryan presented a report titled “The origin of the high-mass X-ray binary 4U 2206+543”, at which he mentioned that by analysis of the traceback motion study of the high-mass X-ray binary 4U 2206+543 based on its Gaia EDR3 astro-kinematic parameters and systemic radial

velocity, they propose that it most probably originates with the subgroup of stars in Cep OB1 association. The kinematic age of 4U 2206+543 is about 2.8 ± 0.4 million years, at the distance of 3.1-3.3 kpc and space velocity of 75-90 km/s with respect to this subgroup. Moreover, various parameters of the progenitor binary system are estimated and some constraints on the evolutionary history of 4U 2206+543 are discussed.

Seminar by Igor Chilingarian

On 16 August, BAO hosted another seminar. This time the speaker was Igor Chilingarian, an astronomer at Harvard-Smithsonian Center for Astrophysics.

In his report, entitled “Intermediate-mass black holes and their host galaxies”, I. Chilingarian presented how they identified hundreds of IMBH candidates, which reside in galaxy centers and are currently accreting gas that creates optical signatures of type-I AGN, using data mining in wide-field sky surveys and applying dedicated analysis to optical spectra.



Igor Chilingarian delivering a seminar at BAO

He also highlighted the fact there are open questions on intermediate-mass black holes, but their existence raises almost no doubts.

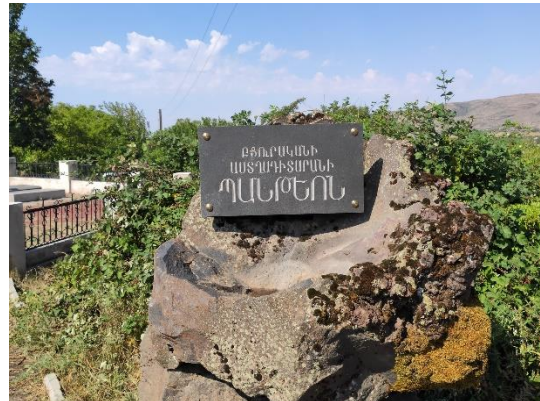
During his visit to BAO he met with BAO researchers and talked over possible collaborations in different fields.

Viktor Ambartsumian Memorial Day

This year marked the 25th anniversary of the death of Viktor Ambartsumian, the prominent Armenian astrophysicist and founder of the School of Theoretical Astrophysics in the Soviet Union.

On 12 August, which is considered as Viktor Ambartsumian Memorial Day, the Byurakan Astrophysical Observatory's researchers visited Pantheon to pay their respects.

It should be noted that BAO's pantheon, which was created in 1965, received the status of a newly discovered monument of local significance by the decision of the expert commission of the Ministry of Education, Science, Culture and Sports of the Republic of Armenia only in 2021.



Pantheon of BAO

V. Ambartsumian was born on 18 September, 1908. He is one of the greatest scientists of the XX century, the greatest Soviet astrophysicist and the founder of the theoretical astrophysics school in the USSR that has fundamentally contributed to various fields of astronomy and astrophysics, cosmogony, theoretical physics, mathematics, and philosophy. His revolutionary works on stellar evolution and activity of galactic nuclei turned over the development of astrophysics.

Ambartsumian was also a great organizer of science, important political and public figure.

Summer School for The National Polytechnic University of Armenia

The Byurakan Astrophysical Observatory (BAO) organized a summer school for engineers, namely for the students of the National Polytechnic University of Armenia.

The aim of the school was to create an opportunity for the future engineers to be in the working environment, meet directly with the experts of the field and learn about different collaboration possibilities.

At the opening ceremony the students were greeted by Director of BAO Areg Mickaelian, Chief Engineer Ashot Petrosyan, Engineer Henrik Datumyan and Head of the Public Relations Department Gayane Baleyan.



Areg Mickaelian welcoming the Summer School students

It should be noted that the participants of the program were students with high academic activity.

During the stay at the Observatory, the students took part in various lectures, practical trainings in the mechanical workshop, as well as had the opportunity to get acquainted with the activities of the observatory, learn more about telescopes and had night sky observations.

HISTORY PAGES

15 Years Since the Establishment of the Byurakan International Summer Schools

15 years ago on 15 August, Byurakan International Summer Schools were established.

In 2018, the International Astronomical Union (IAU) announced Byurakan International Summer School (BISS), which is held once per 2 years, as one of the 3 best astronomical schools in the world.

The First Byurakan International Summer School for Young Astronomers: Observational Astrophysics, was devoted to the 60th anniversary of BAO. It was held on August 26 – September 3 in Byurakan, Armenia. The School was linked to the International Conference “Active Universe” (Sep 1-3, 2006), so that the students could also participate in it.

Main topics of the school included: Observations of Active Galactic Nuclei and Starburst galaxies, Astronomical Surveys and Future Giant Projects, 3D spectroscopy, Computers for Astronomy: Astronomical Data Reduction, Archives, Databases, and Virtual Observatories, Observations of Stars and Nebulae and Extrasolar planets.



BISS 2006

Although it was the first attempt, 12 lecturers from 6 countries (USA, Germany, France, Italy, Russia and Armenia) and 30 students from 8 countries (Armenia, Russia, Ukraine, Georgia, Italy, Serbia, Romania, and Jordan) participated in the school (14 Armenian students and 16 foreign ones).

Among the lecturers were such famous scientists as Daniel Weedman, Daniel Kunth, Massimo Turatto, Dieter Engels, and Michel Dennefeld.

So far, 7 Summer schools were held (2006, 2008, 2010, 2012, 2016, 2018 and 2020).

The 8th Byurakan International Summer School will be held in 2022!

Byurakan Astrophysical Observatory's UNESCO Heritage Item Marks Its 10th Anniversary

This year marked the 10th anniversary of the Byurakan Astrophysical Observatory's (BAO) UNESCO Heritage Item. On 5 August, a seminar was held at BAO on this special occasion at which Director of BAO Areg Mickaelian presented a report titled "10 years of the UNESCO heritage item of the Byurakan Astrophysical Observatory".



The First Byurakan Survey (FBS or Markarian survey) was accepted in the UNESCO "*Memory of the World*" international register documentary heritage items in 2011.

It was created at BAO and is the only scientific heritage UNESCO item in Armenia and one of the rare scientific heritage UNESCO items in the world.

The First Byurakan Survey (FBS or Markarian survey) contains the records of a unique astronomical survey carried out at BAO by the great Armenian astronomer Benjamin Markarian and his colleagues in 1965-1988. The survey involved the largest ever astronomical spectroscopic study of the nearby universe and is considered as one of the most important achievements of the 20th century astrophysics. It provides data on 40,000,000 low dispersion spectra for 20,000,000 objects. The records were carried out on BAO 1m Schmidt telescope. They cover the whole Northern Sky and part of the Southern Sky at high galactic latitudes and some part in the Milky Way areas. The FBS was conducted originally for search of galaxies with UV-excess (UVX). The discovery of 1515 UVX galaxies by Markarian and colleagues (later called Markarian galaxies) was the first and the most important work based on the FBS plates.

The survey was digitized in 2002-2007 by Areg Mickaelian and his team and the Digitized First Byurakan Survey (DFBS) was created, the largest low-dispersion spectroscopic database in the world, and the first digitization project in Armenia in all spheres (<https://www.aras.am/Dfbs/dfbs.html>).

Visit our website, to learn about the whole list of UNESCO items in Armenia:

<https://www.bao.am/about/unesco/unesco.php>

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: <https://www.aras.am/ArasNews/arasnews.html>