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ArAS Newsletter



Byurakan Astrophysical Observatory 75

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LOCAL NEWS

BYURAKAN ASTROPHYSICAL OBSERVATORY: 75 YEARS OF UNIVERSAL ACHIEVEMENTS

Solemn Meeting

As it was announced in the previous newsletter issue, this year *the Byurakan Astrophysical Observatory marks its 75th anniversary.*

On this occasion the solemn meeting was held at the National Academy of Sciences of the Republic of Armenia on 22 September. It was attended by the NAS RA presidium members, directors of different scientific institutions, heads of creative unions, scientists and other guests.



At the beginning Armen Sargsyan, President of Armenia; Ashot Saghyan, President of NAS RA, and Radik Martirosyan, NAS RA former President welcomed the participants.

During the first part of the meeting, BAO director Areg Mickaelian presented the activities of BAO in his report titled “Byurakan Astrophysical Observatory. 75 Years of Universal Achievements”.

After, the congratulatory messages of the heads of international astronomical institutions and scientists were introduced. Among them were President of the International Astronomical Union (IAU) Debra Elmegreen; Nobel Prize winner 2006 in Physics and NASA Prof. John Mather; Nobel Prize winner 2020 in Physics and Director of the Max Planck Institute for Extraterrestrial Physics Prof. Reinhard Genzel; Director General of the European Southern Observatory (ESO) Xavier Barcons; Viktor Ambartsumian International Science Prize winners 2012 and 2014 Jaan Einasto and Brent Tully, President of the International Virtual Observatory Alliance (IVOA) Chenzhou CUI; Director of the Institute of Astronomy of the Russian Academy of Sciences (INA SAN) Dmitri Bisikalo; Director of the Wide-Field Plate Database (WFPDB) Milcho Tsvetkov, Director of IAU Office of Astronomy for Development Kevin Govender; Stanford university Prof. Vahe Petrosian (USA), Italian coordinator of the

Armenian-Italian astronomical collaboration Prof. Enrico Massaro, Vice President of the Academy of Sciences of Tajikistan, Director of the Institute of Astrophysics Messages of Gulchehra Kohirova (the above-mentioned messages will be available soon on the BAO website).

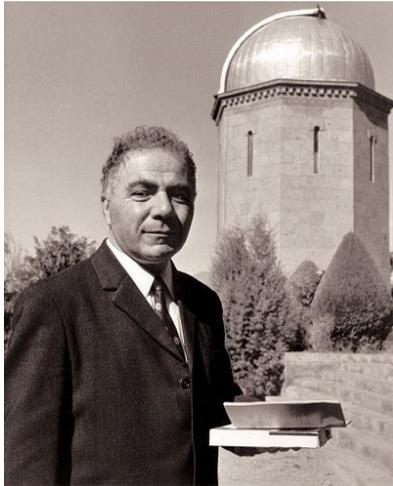


Representatives of the Armenian scientific community present also congratulated BAO on its 75th anniversary. Among them were the Dean of YSU Faculty of Physics Prof. Rafik Hakobyan, Director of the Institute of Radiophysics and Electronics of NAS RA Tigran Zakaryan, Vice-Rector of the

Armenian-Russian (Slavonic) University Pargev Avetisyan, President of the Union of Architects of the Republic of Armenia Mkrtych Minasyan.

It should be noted that the solemn meeting also marked the beginning of another scientific event dedicated to the 75th anniversary of the Observatory: the International Conference “Astronomy in the Crossroads of Interdisciplinary and Multidisciplinary Sciences” (see page 6).

Viktor Ambartsumian's 113th Anniversary and Astronomy Day in Armenia



Viktor Ambartsumian

As always 18 September was a festive day at the Byurakan Astrophysical Observatory.

The observatory celebrated the great Armenian scientist V. Ambartsumian's 113th anniversary and Astronomy Day in Armenia.

Since 2009, V. Ambardzumian's birthday has been celebrated in Armenia as Astronomy Day, according to the decision of the RA Government.

So, the day started with traditional visit to BAO's pantheon, where the staff of the Observatory and the participants of the day's scientific event went to pay their respects to the scientist. Later during the day BAO hosted a scientific event, while in the evening a public event was held for citizens.



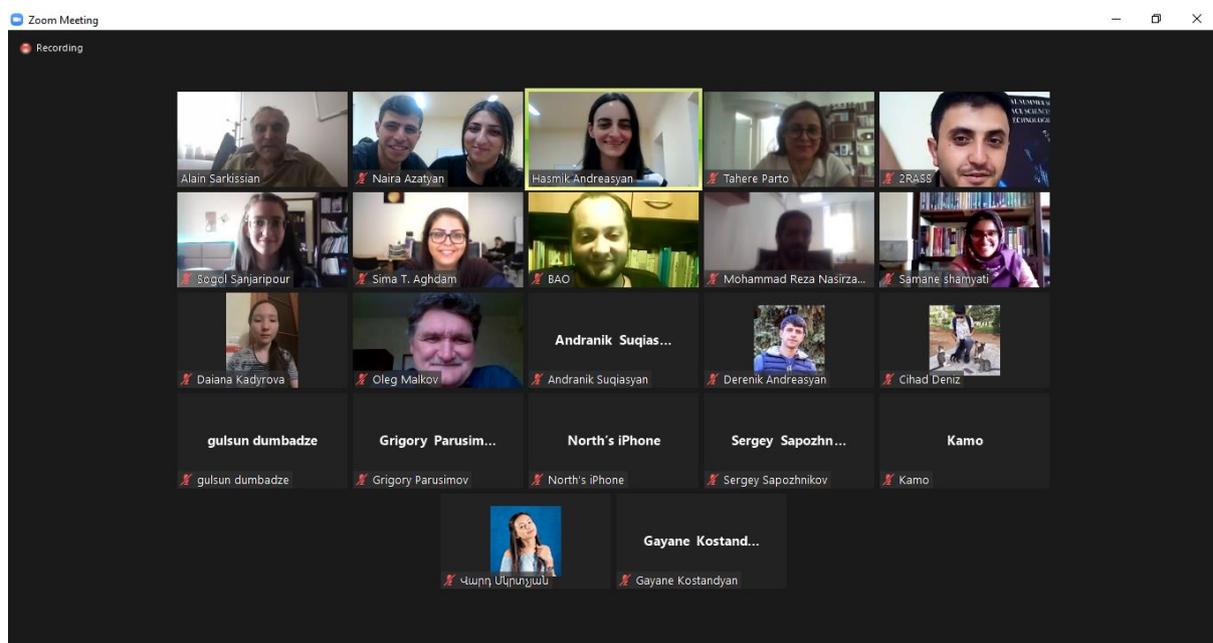
V. Ambartsumian (1908-1996) was born on 18 September, 1908. He is one of the greatest scientists of the XX century, the greatest Soviet astrophysicist and the founder of the theoretical astrophysics school in the USSR that has fundamentally contributed to various fields of astronomy and astrophysics, 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, an important political and public figure. He is the author of more than 700 articles and more than 20 books

The Second Regional Astronomical Summer School

On 13-17 September, the Byurakan Astrophysical Observatory hosted the Second Regional Astronomical Summer School (2RASS). The school aimed at attracting beginner astronomers and related MSc and PhD students to the field of scientific research and introducing them to the principles of scientific work. The first school was held 2 years ago in 2019.

Topics of the school were Astronomical Telescopes and Other Instruments, Observational Methods and Technique, Data Reduction and Analysis, Astronomical Surveys and Catalogs, Archives and Databases, Big Data in Astronomy, Virtual Observatories (VOs), Astroinformatics, Space Sciences and Technologies.

As the school was international, 36 participants from 8 countries took part in the school (Armenia, Georgia, Iran, Russia, Ukraine, Kazakhstan, Tajikistan, Turkey), while topics were introduced by 14 lecturers from the following countries Armenia, France, Russia, Ukraine, Georgia, Iran, Kazakhstan, Tajikistan. All in all, there were 18 presentations.



Screenshot of the 2RASS

BAO plays a leading role in this region and offers opportunities for young people in the region to participate in high-level lectures and practical courses as there are not many opportunities for participating in European and American schools. Students in the region also have a wide range of opportunities to communicate, to make new acquaintances, which is very useful for their further advancement.

ASTRONOMY IN THE CROSSROADS OF INTERDISCIPLINARY AND MULTIDISCIPLINARY SCIENCES

International Conference Dedicated to the 75th Anniversary of the Byurakan Astrophysical Observatory

On 22-27 September, International Conference “Astronomy in the Crossroads of Interdisciplinary and Multidisciplinary Sciences” took place at the Byurakan Astrophysical Observatory (BAO).

The symposium was dedicated to the 75th Anniversary of BAO and the leading role of Astronomy in science, culture and other fields of human activity and development of these fields.

It aimed at achieving better collaboration between all



Screenshot of the Symposium

natural and social sciences, the development of problems of interdisciplinary sciences and preparation of a basis for further possible cooperation by means of presenting available modern knowledge in various areas by experts from different professions.

Over 37 scientists from around the world participated at the symposium and covered various topics, including but not limited to Astronomy as a link to connect all sciences in the Space, Cosmic Data for all Sciences, Astrophysics and Cosmology for High-Energy and Particle Physics, Astrochemistry and Astrobiology; Exoplanets and Life in the Universe Earth.

The Proceedings of the symposium will be published in *Communications of BAO* (ComBAO) refereed journal, Volume 68, Issue II (Dec 2021).

In modern era, astronomy is probably a field of science, that plays the most important role in the formation and development of interdisciplinary sciences.

Cooperation Agreement Between the Byurakan Astrophysical Observatory and the French University in Armenia

On 15 September, an agreement was signed between the Byurakan Astrophysical Observatory and the French University in Armenia, with the aim of establishing cooperation in the fields of education and science.

According to the agreement, issues of common interest will be discussed jointly, joint research and courses will be organised, as well as the internship opportunity for the University students from the faculty of Informatics and Applied Mathematics (ICU) in particular will be provided at the observatory.

Within the framework of the agreement, it is also planned to organize annual visits to the observatory.



Left: Areg Mickaelian. Right: Bertrand Venard

14th Ambartsumian Readings Dedicated to The Memory of Grigor Broutian

On 18 September, “14th Ambartsumian Readings” was held at the Byurakan Astrophysical Observatory. The scientific event was dedicated to the memory of Grigor Broutian, senior researcher, the former head of the BAO Archaeoastronomy and Cultural Astronomy research department.

It should be noted that according to the tradition, the above-mentioned event is held every year on Ambartsumian's birthday.

At the event specialists of different fields were invited to have talks on the



latest achievements of their field. The programme included the following speeches: “Victor Ambartsumian's hypothesis of the galaxy activity” by BAO Director Areg Mickaelian, by Hayk Malkhasyan (BAO researcher), “The reverse problem in natural sciences” Hovhannes Pikichyan (BAO Senior Researcher), “Modern Confirmation of Some Ambartsumian’s Hypotheses” by Armen Gyulbudaghyan (BAO Senior Researcher), “Necropolis of Teishebaini” Archaeologist Hakob Simonyan (independent researcher), "Sumerian-Armenian astronomy" by Armen Davtyan and “Armenian-Polynesian relations” by linguist Leyla Stepanyan (Karahunj cultural union).

After the presentations, the participants had an opportunity to visit Victor Ambartsumian House-Museum and 2.6m telescope.

HISTORY PAGES

The 50TH ANNIVERSARY of the First International Symposium on the Problem of Extraterrestrial Civilizations and Communication with Them

50 years ago on 6-11 September, 1971, “Communication with Extraterrestrial Intelligence” (CETI) the first international symposium on the problem of extraterrestrial civilizations and communication with them was held at the Byurakan Astrophysical Observatory. The symposium was organized jointly by the USSR Academy of Sciences and USA National Academy of Sciences on the institute of Cosmic Research of the USSR Academy of Sciences initiative.



CETI Participants at BAO

Competent scientists, working in various fields, concerning the considered complex problem, were present at the symposium: astronomers, physicists, radiophysicists, cyberneticists, biologists, chemists, archaeologists, linguists, anthropologists, historians, and sociologists. 32 Soviet and 19 American scientists, as well as representatives from UK, Hungary, and Czechoslovakia participated in the works of the symposium. There were 9 representatives of the Academy of Sciences of Armenian SSR among the Soviet delegation, including 6 from the Byurakan Astrophysical Observatory. Moreover, three Nobel Prize winners: biologist F. Crick (UK) and physicists F.W. Dyson and C. Towns (USA) and other prominent scientists such as F. Drake, T. Gold, C.E. Sagan, D. Heesch, K. Kellermann (USA), and F. Morrison (UK) took part in the symposium.

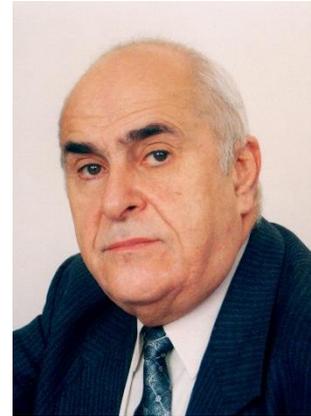
Many aspects of the problem of extraterrestrial intelligence were discussed at the ten scientific sessions of the symposium. Questions of plurality of planetary systems in the Universe, origin of life on the Earth and its possibility on other cosmic objects, rise and evolution of intelligent life, rise and development of technological civilization, problems of search for signals of extraterrestrial civilizations and traces of astroengineer activity, problems of establishment of communication with extraterrestrial intelligence, as well as their possible consequences were discussed in details.

For more visit <https://www.bao.am/meetings/meetings/ceti1971.php?lang=1>

OBITUARY

Physicist Edward Chubaryan Passed Away

It is with great sorrow we announce that Edward V. Chubaryan, theoretical physicist, one of the founders of the Armenian school of physics of superdense celestial bodies, Honored Scientist, Academician of NAS of Armenia, Doctor of Physical and Mathematical Sciences, Professor, Honorary Head of the Theoretical Physics Department of Yerevan State University, passed away on September 27 at the age of 85.



Edward Chubaryan

Prof. Edward Chubaryan was born on May 5, 1936 in Spitak, Armenia. In 1958 he graduated from the Department of Physics of the Faculty of Physics and Mathematics of Yerevan State University. After graduating from the University, in 1958–1961 E. Chubaryan continued his postgraduate studies at the Department of Theoretical Physics. After defending his PhD thesis in 1964 he began working at the same department, first as a senior lecturer and from 1967 as an Associate professor and since the defense of his doctoral dissertation in 1972 he was a professor of the Chair of Theoretical Physics.

Edward Chubaryan's scientific research is devoted to thermodynamics of degenerate superdense matter and the theory of superdense celestial bodies, whose bases in the early 1960s were laid by academicians Victor Ambartsumian and Gurgen Sahakian.

In 1970, for his research work in this field, Edward Chubaryan together with Davit Sedrakyan and Vladimir Papoyan was awarded the Prize of Lenin Komsomol. In subsequent years Edward Chubaryan together with the staff members of the Department of Theoretical Physics carried out a series of works devoted to the theory of pulsars, rotating magnetized neutron stars.

Edward Chubaryan is the author of more than 150 scientific papers published in national and international journals. He is the coauthor (with academician Gurgen Sahakian) of the textbook "Quantum Mechanics" in Russian and Armenian languages, "Collected Problems in Theoretical Physics", as well as of "Collected Problems in Physics" for University entrants.

Professor Chubaryan was awarded by: Khachatur Abovian Medal, Gold Medal of YSU, Medal of Nansen.

He taught a course in "Quantum Mechanics", as well as special courses in theoretical physics at the Faculty of Physics. Six PhD theses were defended under his supervision.

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.

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