

ArAS News

NEWSLETTER

ARMENIAN ASTRONOMICAL SOCIETY (A r A S)













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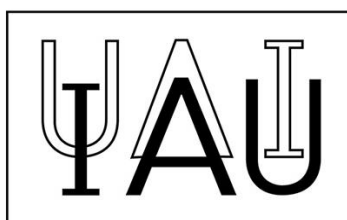
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IAU Code of Conduct

The mission of the International Astronomical Union (IAU) is to promote and safeguard astronomy in all its aspects (including research, communication, education and development) through international cooperation. The IAU embraces scientists from all backgrounds who are united in the common goal of promoting and advancing the astronomical sciences. Science is best advanced when there is mutual trust, respect and integrity, and when it is conducted in environments free from harassment. The IAU Executive Committee has a responsibility to set the norms for the professional behaviour of its members, especially as they pertain to IAU-related activities. This IAU Code of Conduct includes an Ethics Policy and an Anti-harassment Policy.



It is implicit that all IAU members and junior members have read this Code of Conduct and agree to abide by it. In addition, everyone who registers for an IAU meeting or activity agrees implicitly to abide by the Code of Conduct and accepts the prescribed protocols therein.

The Code of Conduct includes the following points: Conduct toward others, Harassment, Research, Publication, Peer Review, Conflicts of Interest, Anti-harassment Policy for IAU Meetings and Activities, Statement of Anti-harassment Policy, Definition of Harassment, Scope of Anti-harassment Policy, Acknowledgement of Acceptance of Anti-Harassment Policy, Advertisement of Anti-harassment Policy at IAU Meetings and Activities.

Within the larger astronomical community, everyone bears responsibility for upholding a set of common scientific and ethical standards in professional activities, and for assigning consequences when these standards are breached. The IAU does not have the authority nor the means to accept responsibility for investigating and adjudicating suspected breaches of ethics that are the rightful jurisdiction and responsibility of other community stakeholders. All members should familiarize themselves with their own institutional guidelines, policies and procedures related to the oversight and maintenance of ethical standards for research and conduct, and share this information with their colleagues and students.

IAU Code of Conduct may be found in the following link:

<https://www.iau.org/static/archives/announcements/pdf/ann16007a.pdf>

COVID-19

BAO work organization



Due to the pandemic situation in almost the whole world during the last 2 months, many countries have introduced emergency states or quarantines. Armenia is also one of the affected countries; at present (30.04.2020) there are 2066 infected and among them 32 deaths. In this lockdown situation, most of the organizations have applied new approaches. Remote online work and communications are the most popular options. The scientific organizations in Armenia work remotely and hopefully continue to accomplish high-level research and projects, including many international ones.

The Byurakan Astrophysical Observatory (BAO) has established special order and schedule for this period, till May 31. All researchers have been set up to work remotely from home. Regular contacts are being organized by teleconferences and other remote meetings (zoom or similar). Particularly, BAO Scientific Council sittings are being held every Monday and various matters are being discussed, first of all the links between all researchers and their work organization. Heads of Research Departments report the current state of their staff members, ongoing affairs and results. At the last meeting, two Russian-Armenian joint projects were approved for submission. BAO seminars will also be restarted on May 4. There will be a review seminar by Dr. Ararat Yeghikyan on “Gas-dynamical flows in astrophysics: accretion flows and outflows”. Of course, all important services at BAO continue to work as before: the security service, accountancy, other offices. BAO bus does not work at present, as well as all meetings and gatherings are forbidden. The excursion service does not work as well and no tourists are being accepted at the Observatory.

Hopefully, very soon everything will return to its proper state and the work at BAO will be fully reset.



INTERNATIONAL DAY OF COSMONAUTICS

In 2011, 12 April was declared as the International Day of Human Space Flight in dedication of the first manned space flight made on 12 April 1961 by the 27-year-old Russian Soviet cosmonaut Yuri Gagarin. Gagarin circled the Earth for 1 hour and 48 minutes aboard the Vostok 1 spacecraft.



Gagarin's flight was a triumph for the Soviet space program, and opened a new era in the history of space exploration. Gagarin became a national hero of the Soviet Union and Eastern Bloc and a famous figure around the world. Major newspapers around the globe published his biography and details of his flight. Moscow and other cities in the USSR held mass demonstrations, the scale of which was second only to World War II Victory Parades. Gagarin was escorted in a long motorcade of high-ranking officials through the streets of Moscow to the Kremlin where, in a lavish ceremony, he was awarded the highest Soviet honour, the title of Hero of the Soviet Union, by the Soviet leader Nikita Khrushchev.

Since 2001, Yuri's Night, also known as the "World's Space party", is held every 12 April worldwide to commemorate milestones in space exploration.

On 12 April 2017, the United Nations commemorated the "International Day of Human Space Flight" to celebrate the 56th anniversary of the first human space flight, which ushered in the beginning of the space era for mankind.



Viktor Ambartsumian International Science Prize

Research Projects 2020

As informed before, since 2018, there were some changes in the by-laws of Viktor Ambartsumian International Science Prize. Instead of former USD 500,000 the Prize monetary award was reduced to USD 300,000. In addition, it was decided to share this amount between the Winner(s), USD 200,000 and the rest of money (USD 100,000) to allocate for 1. Ambartsumian Research Projects, 2. Ambartsumian Foreign Fellowships for Armenian scientists to world leading scientific centres, 3. Organization of Scientific Meetings in Armenia, 4. MSc studies for astrophysics students at the Yerevan State University (YSU) and 5. Astronomy Outreach Projects.



The Research Projects started in 2019, and 7 of them were accomplished. The following research projects were approved for 2020, all from BAO (those that were approved for 2 years and started in 2019, are marked as 2019-2020). The Principal Investigators and the subjects are listed below:

- Abrahamyan, Hayk V. – Optical classification of variable radio sources, 2 researchers, 2019-2020
- Andreev, Ruben R. – Multi Wavelength Investigation of Different Type Radio Galaxies. Morphological and Physical Differences in Radio Galaxies, 3 researchers, 2019-2020
- Broutian, Grigor H. – The Astronomical Heritage of Armenia and its Presentation, 2 researchers, 2019-2020

- Gigoyan, Kamo S. – Search and Study of Faint High Galactic Latitude Carbon Stars Discovered from SDSS and LAMOST Surveys with Gaia DR2 Data. New Approaches, 2 researchers, 2020
- Harutyunian, Haik A. – Study the young stellar population in three extended star-forming regions, 3 researchers, 2019-2020
- Magakian, Tigran Yu. – Unstable phenomena in the early stages of stellar evolution, 3 researchers, 2020
- Mikayelyan, Gor A. – Optical Properties of Infrared Galaxies, 3 researchers, 2019-2020
- Yeghikyan, Ararat G. – Perspective protobiomolecules in active galaxies and exoplanets, 3 researchers, 2019-2020

At present Viktor Ambartsumian International Science Prize 2020 Call has been announced and a number of new excellent nominations have been submitted. According to the rules, they have been sent to independent referees for reviews. Any nomination can be further discussed by the Steering Committee, in case it receives at least 2 positive reviews. This will be known in a month and then, after the discussion and selection by the Steering Committee, the Winner(s) will be announced on July 18. The official Award Ceremony will happen on September 18, on Viktor Ambartsumian's birthday. USD 200,000 will be awarded to the Winner(s) and USD 100,000 will be allocated for new research projects (\$50,000), foreign fellowships for Armenian scientists (\$25,000), organization of scientific meetings (\$15,000), MSc studies at the Yerevan State University (YSU, \$7,200) and astronomy outreach project (\$2,800).



ANSEF ANNOUNCES 2020 GRANT WINNERS

The Armenian National Science and Education Fund, operating under the auspices of the Fund for Armenian Relief (FAR), provides financial and other material resources to support scientific research, advanced technology development and scholarly work in the Republic of Armenia.

The ANSEF Review Board - with the help of 20+ referees - has finished a six-month long review of a total of 189 submitted proposals. The Board has identified the 24 proposals with the highest scores as the recipients of the Yervant Terzian ANSEF 2020 awards. The Board has also identified 28 additional proposals deemed meritorious — ANSEF 2020 finalists — but that could not be given awards due to limited funding. This year we have only one funded project on Astronomy:



Principal Investigator: Gor Mikayelyan

Project Title: Optical Properties of Infrared Galaxies

Project Team: Dr. Areg Mickaelian, Hayk Abrahamyan, Gurgen Paronyan

The list of awards can be downloaded at [The Yervant Terzian ANSEF 2020 awards](#).

The list of finalists can be downloaded at [The Yervant Terzian ANSEF 2020 finalists](#).



A.N.S.E.F.

ANSEF's objectives are:

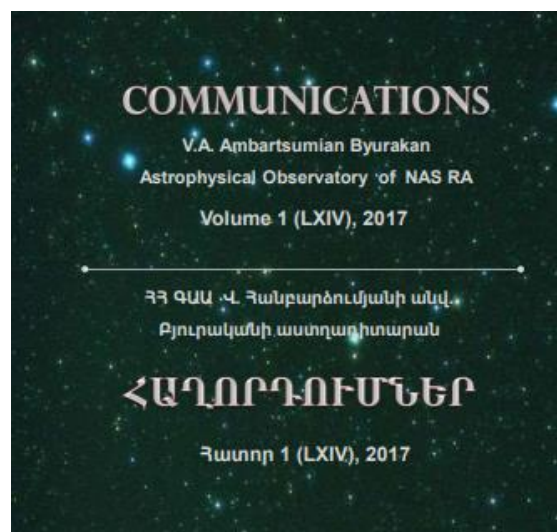
- To perpetuate Armenia's tradition of excellence in research and scholarship.
- To foster and nourish all aspects of Armenia's scientific, and intellectual capabilities.
- To promote modern scientific, technological and scholarly study in Armenia.
- To facilitate collaboration between Armenian scholars and scientists and their colleagues around the world, and to encourage their participation in the international exchange of ideas.
- To contribute to the general improvement of Armenia's quality of life by supporting research essential to the economic, social, scientific and cultural development of the country and its academic and technical institutions.

DIGITIZATION AND TRANSLATION OF ComBAO and BulYerAO



The abstracts of **Communications of the Byurakan Astrophysical Observatory (ComBAO) (1946-1990)** and **Communications of Yerevan Observatory (BulYerAO)** are translated and available at **Astrophysics Data System (ADS) (1938-1945)**.

ComBAO is a peer-reviewed scientific journal, which publishes research in observational and theoretical astronomy/astrophysics and presents recent advances in these fields. It is being published by the NAS RA V. Ambartsumian Byurakan Astrophysical Observatory (BAO) in English in electronic form. The journal publishes original papers, review papers, brief reports, book reviews, special communications, observational and theoretical results in various fields of astronomy and related sciences, and some editorial notes, including anniversaries and obituaries. Under the heading “Legacy”, the renewed magazine will republish some old articles of high value in English. The heading “Guest articles” will bring to the attention of readers the articles of researchers who are not employees of BAO.



ComBAO was founded in 1946 and regularly published in 1946-1990. However, the publication was interrupted because of the economic situation after the disintegration of the Soviet Union in 1991. In 2017, the administration of the Byurakan Astrophysical Observatory decided to recommence publication of the “Communications of the Byurakan Astrophysical Observatory” in electronic form. In order to preserve traditions, the first issue of the new version is given as Issue LXIV (#64).

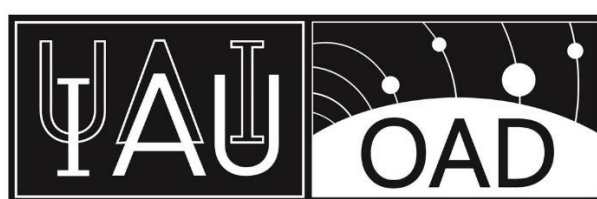
Recently there was an initiative to digitize and translate all previous Communications of the Byurakan Observatory (Բյուրականի աստղադիտարանի հաղորդումներ, Сообщения Бюраканской обсерватории) Russian version papers of issues ## 1-63 (published in 1946-1990) abstracts. BAO young researchers added ComBAO 461 abstracts, as well as all 26 papers abstracts of issues of the Yerevan Observatory Bulletin from 1938-1945. All they are now available online at Astrophysical Data System (ADS).

Follow the link to find more about the journal:

<https://www.aras.am//combao/>

Call of IAU OAD Grant

The global Office of Astronomy for Development (OAD) is a joint partnership between the International Astronomical Union (IAU) and the South African National Research Foundation (NRF) with the support of the Department of Science and Technology (DST). The mission of the OAD is to further the use of astronomy, in all its aspects, as a tool for development. One of the primary ways the OAD implements its mission is through the Annual Call for Proposals. Every year, the OAD invites proposals for projects that use astronomy as a tool to address an issue or issues related to sustainable development. The call is open to anyone from anywhere in the world. Since 2017, the OAD Call for Proposals is a two-stage process, where only a limited number of proposals from Stage 1 will be invited to submit a Stage 2 proposal.



International Astronomical Union	Office of Astronomy for Development
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The Call for Proposals is divided into two stages of application. The first stage is open to everyone while only selected proposals from Stage 1 will be invited to Stage 2. Detailed information is provided below for the Stage 1 process; more information for Stage 2 will be provided after the end of Stage 1 in August 2020. Selected proposals will be invited to submit a more comprehensive Stage 2 application, incorporating the feedback received in Stage 1. Once the Stage 2 applications are submitted, the OAD and the Regional Offices will engage with the proposers through this period to help refine the project. The Regional Offices will be able to suggest ways of improving a proposal to be locally relevant, thus ensuring support from possible local collaborators who could strengthen the project. The OAD, alongside the Regional Offices, will check whether the projects are truly innovative (checking previously funded OAD projects and other initiatives addressing similar concerns) and/or whether the project idea is supported by current evidence. The OAD and Regional Offices may suggest potential collaborators if applicable. External experts, consulted by the OAD where necessary, would provide useful additional guidance on the assessment of projects, including a perspective on which projects are most likely to make an impact on development.

Based on the discussions with OAD and the Regional Offices, proposers modify their Stage 2 applications and submit them by the final deadline. An independent review panel then scores these modified Stage 2 proposals and makes the final recommendations on the projects to be funded and the funding amounts for each project. Upon approval by the OAD Steering Committee, all applicants are notified of the results.

Follow the link to apply online: <http://www.astro4dev.org/2020-stage1-application/>

Agop Terzan Obituary



One of the most important persons of Armenian Diaspora and French astronomy Agop Terzan passed away on April 4, 2020. The stellar clusters revealed by Terzan and named after him are known to all astronomers. With his perennial activity and essential results he had a serious contribution in observational astrophysics. Agop Terzan was born on October 31, 1927 in Constantinople (Istanbul). He graduated from the Constantinople University (he got

his Bachelor degree on Mathematics in 1945 and Masters on Astronomy in 1949) and worked as a teacher of mathematics at Central Lyceum of Istanbul. In 1956 he moved to France. In 1957-1959 Terzan worked as a teacher of mathematics at technical lyceum and in 1959-1965 as an assistant astronomer, later as a scientist. In 1967-1998 he worked at the Lyon Observatory, in 1982-1983 he was the Deputy Director of that observatory. In 1965 he was awarded a doctorate of mathematical sciences by Lyon University; in 1980 he was awarded a professorship. Terzan's works mainly refer to variable stars, stellar clusters and problems of physics of stars. Since 1963 he made observations by a number of most significant telescopes of the world. He discovered 710 variable stars in the immediate vicinity of 14 globular clusters, 11 new globular clusters (named Terzan 1, etc. till Terzan 11), 158 diffuse nebulae, 124 galaxies (from which 25% appeared to be active galaxies of Sy2 type), 4430 red variable stars in direction to the Galactic center (including 458 ones which were later identified with the IRAS infrared sources), 1428 high proper motion stars ($\mu > 0''.1$ per year). 26 planetary nebulae, 122 diffuse galaxies in direction to the center of Our Galaxy. Later it was found out that those galaxies discovered by Terzan formed the cluster of galaxies of Ophiucus constellation, as well as the super-cluster of Sagittarius-Ophiucus, which was essentially discovered due to Terzan. On the basis of the observations recently made by European astronomers it was found out that Terzan 5 cluster was one of the main formations of the center of Our Galaxy; on its basis the Galaxy was formed. In essence it is the protogalaxy, which formed its central part (bulge) joining the Milky Way. As a result of the above mentioned works Terzan published more than 100 scientific papers in the most important astronomical journals. Terzan also had a serious contribution in the working out of astronomical devices (devices and photometers for comparing eclipses). He also had a considerable contribution in editorial and administrative works. Terzan was a member of International Astronomical Union (1967), European Astronomical Society and French National Astronomy Committee. In 1968-1978 he was the Head of Lyon Astronomical Society. He was awarded a Henry Rey prize of the French Astronomical Society (1977), prizes of French Ministry of Education (1979) and a number of medals. He was a Corona Prize winner of the French Academy of Sciences (1988). Agop Terzan visited Armenia for many times, including his official missions to the Byurakan Astrophysical Observatory in 1971, 1973, 1977, 1984 and 1989 on purpose of participating in conferences and scientific discussions.

Margaret Burbidge Obituary



British-American astronomer Eleanor Margaret Burbidge passed away on April 5, 2020 at the age of 100. Eleanor Margaret Peachey was born in Davenport, Stockport, UK, nine months after the Armistice of 11 November 1918 that ended the First World War. She was the daughter of Marjorie Stott Peachey and Stanley John Peachey. She first became interested in astronomy aged 3 or 4, after seeing the stars on a ferry trip across the English Channel. By age 12, she was reading astronomy textbooks by James Jeans, a distant relative of her mother.

In the 1950s, she was one of the founders of stellar nucleosynthesis and was first author of the influential B2FH paper. During the 1960s and 70s

she worked on galaxy rotation curves and quasars, discovering the most distant astronomical object then known. In the 1980s and 90s she helped develop and utilise the Faint Object Spectrograph on the Hubble Space Telescope. Burbidge was well known for her work opposing discrimination against women in astronomy. Burbidge held several leadership and administrative posts, including Director of the Royal Greenwich Observatory (1973–75), President of the American Astronomical Society (1976–78), and President of the American Association for the Advancement of Science (1983). Burbidge worked at the University of London Observatory, Yerkes Observatory of the University of Chicago, the Cavendish Laboratory of the University of Cambridge, the California Institute of Technology, and the University of California San Diego (UCSD). From 1979 to 1988 she was the first director of the Center for Astronomy and Space Sciences at UCSD, where she worked from 1962 until her retirement.

At UCSD she helped develop the Faint Object Spectrograph for the Hubble Space Telescope, which launched in 1990. With this instrument, she and her team discovered that the galaxy Messier 82 contains a supermassive black hole at its center. As professor emerita at UCSD she continued to be active in research until the early 21st century. Burbidge authored over 370 research papers. Burbidge campaigned in opposition to discrimination against women in astronomy and was also opposed to positive discrimination. In 1972 she turned down the Annie J. Cannon Award of the American Astronomical Society (AAS) because it was awarded to women only: "It is high time that discrimination in favor of, as well as against, women in professional life be removed". Her letter declining the prize caused the AAS to set up its first committee on the status of women in astronomy. In 1976, she became the first female president of the AAS, during which she convinced the members to ban AAS meetings in states which had not ratified the Equal Rights Amendment to the US Constitution. In 1984 the AAS awarded her its highest honor, regardless of gender, the Henry Norris Russell Lectureship.

ASTRONOMICAL CALENDAR MAY, 2020

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
				1 Lunar crescent (first quarter)	2	3
4 Eta Aquarids Meteor Shower	5	6	7 Full Moon	8 Vladimir Airapetyan 60th anniversary	9	10
11	12	13	14 Lunar crescent (last quarter)	15	16	17
18	19	20	21	22 Conjunction of Venus and Mercury New Moon	23	24
25	26	27	28	29	30 Lunar crescent (first quarter)	31