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ARMENIAN  
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# ArAS Newsletter



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## LOCAL NEWS

### Press Conference Dedicated to the Byurakan Astrophysical Observatory Activities

On January 22, the Byurakan Astrophysical Observatory (BAO) called a press conference dedicated to the scientific and organizational activities of 2023 and the 2024 programs. The speaker of the press conference was BAO director Areg Mickaelian.

At the end of the conference, the 2023 award ceremony of the annual Scientific (Astronomical) Journalism Competition was held. This year, an award was given in 1 category. Hasmik Dilanyan, a senior journalist of the Public Radio, was recognized “The most active journalist of the year”. The winner was awarded a certificate and the prize of 75,000 AMD.

After the award ceremony, the participants of the press conference had the opportunity to visit Viktor Ambartsumian house-museum and the largest telescope of BAO.

BAO is the initiator of scientific journalism in Armenia and has been organizing the annual scientific (astronomical) journalism competition since 2009, with the aim of contributing to the development of scientific journalism in Armenia and encouraging journalists of the field.



Press Conference. BAO. 2024

## INTERNATIONAL NEWS

### European Astronomical Society Meeting in the United Kingdom

On January 9-10, the business meeting of the European Astronomical Society (EAS) was held at the Oxford University Christ Church Research Center (United Kingdom), to which the current president of the Armenian Astronomical Society Areg Mickaelian was invited. These meetings are traditional and are held with the participation of the EAS leadership and presidents of national astronomical societies.

EAS President Roger Davies (United Kingdom), Vice-Presidents Lex Capper (Netherlands) and Sara Lucatello (Italy), EAS Executive Secretary Mark Godard (Switzerland) and others were present.

The meeting tackled various issues on European astronomy such as: EAS membership, annual congresses, awards, support for young astronomers, contact with national astronomical societies and so forth.

After seven years of presidency, Roger Davies left his position, and in his place Sara Lucatello, the first woman among the presidents of the EAS since its foundation, will be the interim president until 2026.

Areg Mickaelian reported on the activities and events of the last year of Armenian astronomy, as well as presented suggestions in the direction of more effective functioning of the EAS. In particular, he suggested that, similar to the International Astronomical Union, the EAS could have scientific committees and organize EAS conferences. He also expressed the wish that EAS should have brief information on national astronomical societies on its website and the societies should have the opportunity to organize an exchange of experience on the EAS platform.

Moreover, EAS President Roger Davies reminded the audience of Areg Mickaelian's letter concerning the events in Artsakh, expressing his concern and support for the current situation of Artsakh Armenians.

*EAS annual meeting 2024 will be held in Padua, Italy on July 1-5, and the 2025 congress will be held in Cork, Ireland.*

EAS *annual meeting* 2007 was held in Armenia. It was an exceptional phenomenon in terms of its significance and scale.



Areg Mickaelian and Roger Davies

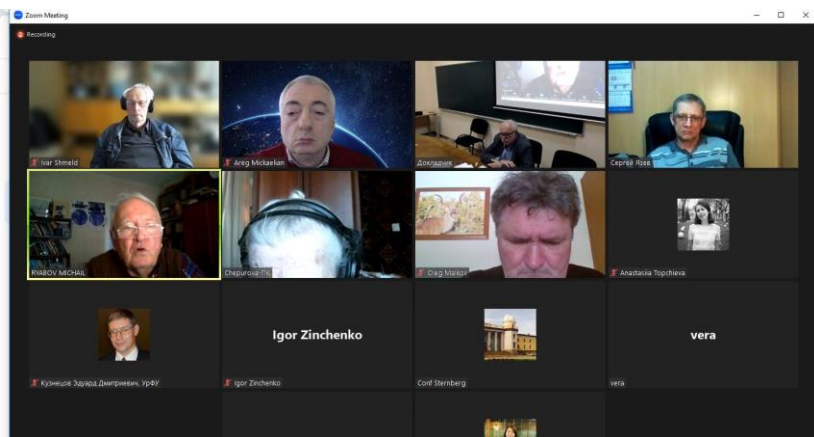
## Armenia's Participation to EAAS Board Meeting 2024

On January 19, the Council meeting of the board of the Eurasian Astronomical Society (EAAS) was held online. Areg Mickaelian, vice-president of the EAAS and acting president of the Armenian Astronomical Society (AAS), also participated in the meeting.

The topics discussed at the EAAS board meeting were - 1. Last year's report, 2. EAAS 2024 preparation of the congress, 3. EAAS membership fees, 4. Acceptance of new members, 5. Astronomical Olympiads, etc.

It should be noted that the EAAS is the legal successor of the former Soviet Union

Astronomical Society, uniting astronomers from a number of European and Asian countries, as well as many other countries. ArAS actively cooperates with EAAS and is its official representative in Armenia.



## ANNIVERSARIES

### Marat Arakelian's 95<sup>th</sup> Anniversary

*Author of famous Arakelian galaxies and distinguished specialist in the theoretical astrophysics and extragalactic astronomy*

Prof. Arakelian was one of the prominent astronomers of the Byurakan Astrophysical Observatory, the author of famous Arakelian galaxies, which at present are target for multifaceted studies with ground-based and space telescopes.

Marat Arsen Arakelian was born on January 15, 1929, in Goris, Armenia, USSR (1929-1983). He studied at the Physical-Mathematical Department of the Yerevan State University (YSU) and graduated from it in 1951, being among the first students specialized in Astrophysics. He was directed to the Byurakan Astrophysical Observatory (BAO), where he worked first as an assistant astronomer, and as a junior research associate later. Soon he became a postgraduate student at the Leningrad State University (LSU, presently, St. Petersburg). He finished his studies in 1955, and successfully passed his Ph.D. thesis devoted to "Spectrophotometric investigation of Algol" in 1956 under the supervision of Prof. O.A. Melnikov at the LSU.

In 1957-1959 Arakelian combined his work with senior teacher position at the Department of Astrophysics of the YSU. From 1960 to 1966 he was a junior researcher and lectured at the LSU. He was awarded the title of Associate Professor. Later on, since 1966 Arakelian again worked at BAO and combined his research with a position of a lecturer at the Department of Astrophysics of the YSU. In 1967, he became a senior researcher at BAO and led an important direction in the extragalactic astronomy.

Since 1967, Arakelian completely devoted himself to the research work and during a short period performed a fantastic productivity for those times, publishing 62 papers in 1968-1983, and giving important scientific results in almost each of these works. Here's the list of some of his results and achievements:

- 1968, Study of the luminosity function and the stellar space density in the solar neighborhood. The results were published in *Astrophysics*.
- 1968-1969, Study of the luminosity evolution of quasars based on the evolutionary effects associated with them. The results were published in *Astrophysics*



Marat Arakelian

(Астрофизика, 2 papers in 1969-1970), in Soviet Astronomical Circular (Астрономический циркуляр), and a summary of these works was published in the prestigious journal Nature in 1970 (vol. 225, p. 358-359).

- 1969-1970, Statistical study of flare stars in the solar vicinity. The results were published in Communications of the Konkoly Observatory, Communications of BAO, and were reported at the conference “Non-periodic phenomena in variable stars” in 1969.
- 1970, Derivation of the luminosity function of field galaxies (together with A.T. Kalloghlian). The results were published in Soviet Astronomy (Астрономический журнал).
- 1970-1971, The proof of the extragalactic origin of quasars. The results were published in Astrophysics and Вестник АН СССР (Bulletin of the USSR Acad. Sci.).
- 1970-1973, Spectroscopic observations and studies of a few hundred Markarian galaxies and discovery of more than 40 new Seyferts among them (together with Russian astronomers E.A. Dibai and V.F. Esipov). The results were published in series of 8 papers in Astrophysics and 5 papers in the Soviet Astronomical Circular.
- 1972-1974, Analysis of the surface brightness of emission-line galaxies (including Seyfert and Markarian ones) and development of method for revealing galaxies with high surface brightness. The results were published in 3 papers in Astrophysics
- 1973, Suggestion of a new method for definition of space density of extragalactic objects and estimation of the mean density of matter in the Metagalaxy. The results were published in Astrophysics.
- 1975, Compilation and publication of the catalogue of “Galaxies of high surface brightness” (named Arakelian galaxies, A<sub>k</sub>n), a list of 621 objects with surface brightness at least 22.0 magnitudes from an area of 1 sq. arcsec. The sample contained 4% of all galaxies in an area of with  $d > -3^\circ$  and  $|b| > 20^\circ$ . Arakelian catalog became a source for many new AGN (Communications of BAO, No. 47, p. 3-42, 1975).
- 1975, Derivations of the luminosity function and space density of galaxies with UV continuum (Markarian galaxies). The results were published in Soviet Astronomy.

And many more. Continue reading about Arakelian’s biography and scientific work on his [personal webpage](#).

## OTHER NEWS

### Space Salad

A team of scientists have developed a so called “space salad” made of ingredients that not only can be grown on a spacecraft, but also provide optimal nutrition.



According to the *Astronomy* journal, the salad consists of seven ingredients — soybeans, poppy seeds, barley, kale, peanuts, sunflower seeds, and sweet potatoes, all in carefully measured amounts — that can be grown in small enclosures on a spacecraft and fulfill the nutritional needs of astronauts on long-duration trips.

The scientists from Australia, the U.K., and the U.S. chose the ingredients based on different criteria, including nutritional value,

growth rate, water and space requirements, and the amount of inedible waste produced.

“Mars exploration will be only possible with fresh grown plants [because] food payload for two to three years isn’t possible,” [Shu Liang](#), a doctoral student at the University of Adelaide who led the new research, tells *Astronomy*.

While the ingredients selected for this space salad are the best options available at this time the team is actively engaged in selectively breeding these components. This effort aims to enhance their nutritional content, decrease their required growing space, and increase their ability to quickly grow using hydroponic fertilizers. Learn [more here](#).



*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](mailto:melin.asryan@gmail.com). They will be reviewed for the publication in ArAS Newsletters next issues.

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