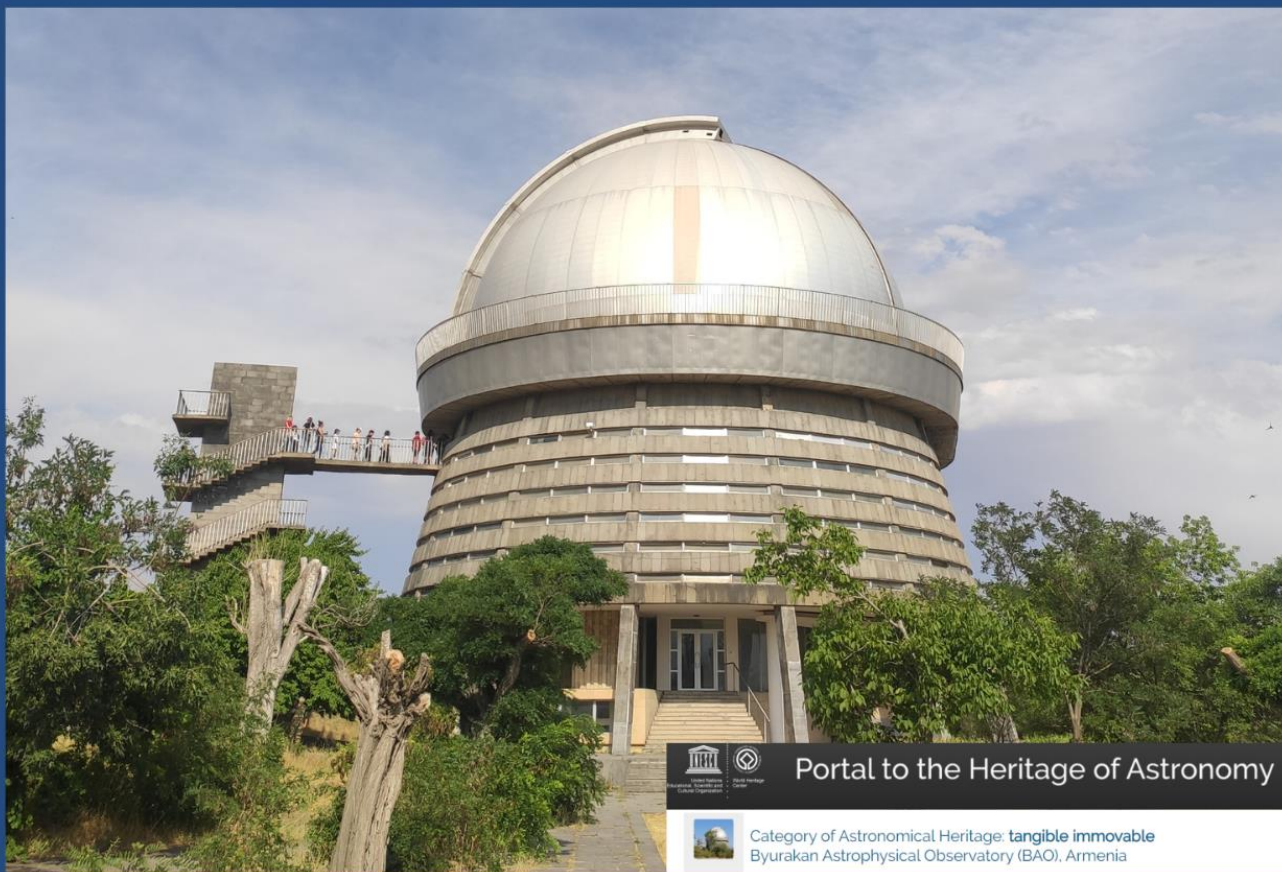




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ARMENIAN  
ASTRONOMICAL SOCIETY

# ArAS Newsletter



EDITOR: MELINE ASRYAN

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## LOCAL NEWS

### FROM SCHOOL TO SPACE

#### ArAS School Lectures Program 2022

This April was dedicated to School Lectures program entitled “From School to Space”. The program was jointly organized by the Byurakan Astrophysical Observatory (BAO) and Armenian Astronomical Society (ArAS).

The growing interest towards the program makes the selection process more challenging by a year.

This year BAO researchers visited 34 schools in Artsakh and different provinces of Armenia, namely Aragatzotn, Ararat, Armavir, Gegharkunik, Lori, Kotayq, Shirak and Tavush.

Among the lecturers were the

Director of BAO Areg Mickaelian, Senior Research Associate Ruben Andreyan, Junior Research Associate Naira Azatyan, Senior Research Associate Hovhannes Pikichian, Leading Research Associate Haik Harutyunian and Research Associate Hayk Malkhasyan.

As always children were introduced to the marvels of the universe and could quench their thirst for astronomy through their questions. During the visits astronomers also distributed popular astronomy materials to schools and schoolchildren (books, etc.). As promised, some schools received telescopes as well.

ArAS School Lectures program was initiated by the ArAS Co-President Prof. Yervant Terzian (Cornell University, N.Y., USA) to promote astronomy in the Armenian schools and facilitate interaction with professional astronomers. Typically, once in a year starting from 2012, professional astronomers visit 25-30 schools and deliver lectures on hot topics of astronomy, achievements of the Armenian astronomy, activities of the Byurakan Astrophysical Observatory, etc. The program also aims at revealing talented children especially in remote regions to unlock their potential in science.

The lecture program was supported by the Fund for Armenian Relief (FAR).



BAO Director Areg Mickaelian. School Lectures Program 2022

## List of Scientific Events 2022 Approved

The RA Science Committee approved the list of scientific events and youth schools 2022. Both scientific events submitted by the Byurakan Astrophysical Observatory (BAO) were approved:

- International Conference on “Space Sciences and Technologies”
- The 8th Byurakan International Summer School (8BISS).

The 8BISS will take place on September 12-16. The young participants of the school who are in Armenia will have the opportunity to participate in the international conference too, which will be held on September 19-23.

*The Byurakan International Summer School was established in 2006. In 2018, the International Astronomical Union (IAU) announced the Byurakan International Summer School (BISS) as one of the 3 best astronomical schools in the world.*



Space Sciences and Technologies have always been in the center of the observatory's attention. In 2019, a regional summer school on this topic was organized by the BAO to draw the attention of beginner astronomers and related MSc and PhD students towards the field.

Such scientific events play an important role in uniting experts of the field and creating a platform for communication, which in its turn contributes to the exchange of scientific experience and the development of science.



## Byurakan Astrophysical Observatory

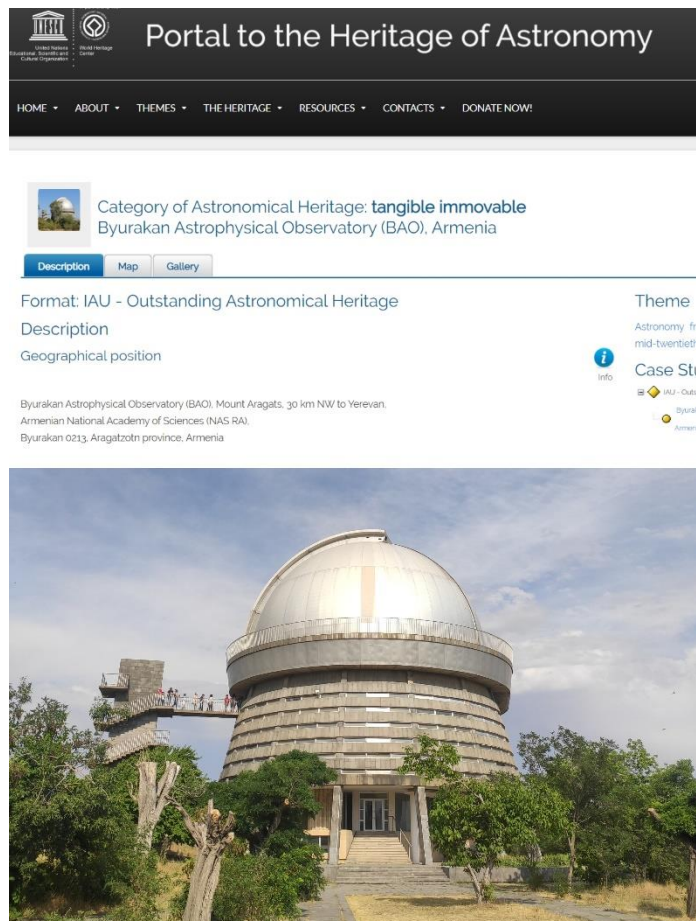
### OUTSTANDING ASTRONOMICAL HERITAGE

The Byurakan Astrophysical Observatory (BAO) has been included in the [“Outstanding Astronomical Heritage”](#) list of the International Astronomical Union (IAU). This international portal presents the history and the scientific activities of the BAO briefly.

The IAU C4 commission works together with UNESCO to implement the Astronomy and World Heritage Thematic Initiative. They’re currently developing an “Outstanding Astronomical Heritage” list to be nominated for UNESCO Values.

The list submitted by Armenia is being developed by the BAO. BAO director Areg Mickaelian is in the organizing committee.

The items to be presented include the ancient Armenian calendar, chronology, Armenian petroglyphs of astronomical content, Zorats Karer (Qarahunj) ancient observatory-monument, the astronomical platform of Metzamor hill, the astronomical heritage of Anania Shirakatsi and etc.



The screenshot shows the 'Portal to the Heritage of Astronomy' website. The header includes the IAU and UNESCO logos and the title 'Portal to the Heritage of Astronomy'. A navigation menu lists: HOME, ABOUT, THEMES, THE HERITAGE, RESOURCES, CONTACTS, and DONATE NOW!. The main content area features a small image of the observatory and the text: 'Category of Astronomical Heritage: tangible immovable' and 'Byurakan Astrophysical Observatory (BAO), Armenia'. Below this are tabs for 'Description', 'Map', and 'Gallery'. The 'Description' tab is active, showing the format 'IAU - Outstanding Astronomical Heritage', a 'Description' section, and a 'Geographical position' section. The geographical position text reads: 'Byurakan Astrophysical Observatory (BAO), Mount Aragats, 30 km NW to Yerevan, Armenian National Academy of Sciences (NAS RA), Byurakan 0213, Aragatzotn province, Armenia'. On the right side, there is a 'Theme' section with 'Astronomy, fr mid-twentieth' and a 'Case Study' section with 'IAU - Out' and 'Byurak Armenia'.



## ANNIVERSARIES

### Mamikon Mnatsakanian's 80<sup>th</sup> Anniversary



Mamikon Mnatsakanian

On April 17, Dr. Mamikon A. Mnatsakanian, an Armenian well-known astronomer, would celebrate his 80<sup>th</sup> anniversary (1942-2021).

Mamikon Mnatsakanian was born on April 17, 1942 in Yerevan, Armenia (former USSR). In 1965, he graduated from the Yerevan State University (YSU) and obtained B.Sc. degree. In 1969 he successfully defended the PhD thesis in the field of “Generalized General Theory of Relativity” at YSU and in 1984 obtained the degree of Doctor of Sciences in Physics and Mathematics in “Theoretical and Mathematical Physics and Astrophysics” (topic: “New Apparatus in Radiation Transfer Theory”) by USSR

Supreme Ministry' Highest Accreditation Commission, Moscow.

In 1985, he obtained a Diploma of Senior Scientific Researcher by USSR Academy of Sciences. In 1965-1991 he worked as a Researcher (Junior, Senior, Major, Leading, Laboratory Head) in Theoretical Astrophysics at Byurakan Astrophysical Observatory (BAO).

In 1972-1985 he was the Scientific Secretary of BAO, responsible for scientific projects, publications, conferences, external relationships of the Observatory. In 1975-1985 he was a Scientific Secretary of Specialized Board awarding USSR Doctoral Degrees in Astrophysics (over 50 cases). In 1977-1991 he worked as an Associate Professor, Professor at Departments of Theoretical Physics, Astrophysics, and Mathematical Modeling at YSU. In 1988-1991 he worked as Director of Center for Mathematical Modeling of Physical Processes at Armenian Academy of Sciences. He was the Founder and Head of Dept. of Mathematical Modeling at YSU (Division of Physics). In 1991-1992 he worked as a Mathematics Education Consultant, creating problems for CA Assessment Program at California State Department of Education, Sacramento.

In 1993-1996 he worked as a Researcher, co-author, creating problems and Investigations for High School Textbooks “CPM” (Eisenhower grant) at UC Davis, Davis, CA (Experimental teaching of own course “Visual Calculus” at UC Davis and Davis Senior High School). In 1996-1997 he was a Manipulative curriculum developer and experimental teacher of “Visual Calculus” for Elementary Schools, South Land Park Montessori School, Sacramento, CA.

Since January of 1997 he was a Project Associate, “Project Mathematics” at California Institute of Technology (Caltech) (Designing “Visual Calculus” and interactive educational animations).

He was awarded USSR Academy of Sciences Distinction Medal for Excellence in Sciences and AAS Distinction Award for "Generalized Theory of Gravity" in 1985, AAS Distinction Award for "Radiation Transfer Theory" in 1986, Lester Ford triple Award (Mathematical Association of America) for three papers in the American Mathematical Monthly in 2005, California Department of Energy Grant for development of the Mamikon Spinner in 2005, Lester Ford triple Award (Mathematical Association of America) for a paper in the American Mathematical Monthly in 2008 and Pearson “International Conference in use of Technology in Collegiate Mathematics” Award for computer interactive mathematics educational games and activities in 2011.

Mamikon Mnatsakanian published more than a hundred refereed papers in USSR and in USA on Generalized General Theory of Relativity with variable gravitational constant; Stellar Statistics and Dynamics of pulsars, flare stars, stellar associations and aggregates; New Methods and their Applications in Radiation Transfer Theory; Mathematics: visual calculus, geometry, integral and integro-differential equations; Popular mathematics, “Kvant” magazine of Soviet Academy of Sciences. He also published over 30 papers with Tom Apostol on new elementary solutions, with use of no formulas, equations or integration machinery, of advanced problems of calculus and their various generalizations. These works are included in “New Horizons in Geometry”, a 500-page book with 500 illustrations to be published by the Mathematical Association of America.

## **Greta Ohanian’s 75<sup>th</sup> Anniversary**

We congratulate ArAS member Ms. Greta Ohanyan with her 75<sup>th</sup> anniversary and wish her all the best.

Greta was born on April 28, 1947. She graduated from the Yerevan State University in 1970 and the same year she started working at the Byurakan Observatory as an assistant astronomer. In 1972, she became an assistant astronomer. Greta’s research interests include investigations of flare stars, clusters, etc. A number of flare stars were discovered thanks to Greta. Recent years she was the chief of the Byurakan Observatory photographic plate library. Greta is a member of ArAS since 2001. She is also a member of Euro-Asian Astronomical Society (EAAS).



Greta Ohanian

## INTERNATIONAL NEWS

### A&A Confirms Open Access in 2022 Through Subscribe-To-Open



Since April 4, like the announcement made in [October 2021](#) read, Astronomy & Astrophysics (A&A) international peer-reviewed journal has become Open Access.

Receiving the required level of support from the community, the journal is now published open access through the innovative approach offered by S2O.

As it follows from the [announcement](#), “From 4th of April 2022, newly accepted A&A articles will publish under a [CC-BY 4.0](#) license allowing authors to retain the copyright and others to share and adapt the content. A Creative Commons license also enables authors to be fully compliant with the open access requirements of their institution or funding organisation(s). With the release of other articles under embargo, all content will be freely available for everyone to access and read”.

*A&A Board of Directors meeting 2022 was planned to be held in Armenia, yet due to some circumstances it'll be hosted online.*

Astronomy & Astrophysics (A&A) is a peer-reviewed community journal that publishes original research in Astronomy and Astrophysics. It's an international consortium governed by a [Board of Directors](#) who set the policies for A&A including general guidelines for publishing, the selection of the Editors, the various financial aspects, as well as membership of new countries.

The Editors are astronomers that are independent of any government or administrative body associated with the journal.



## Earth Day

On April 22, we marked the 52nd anniversary of Earth Day.

With “Invest in Our Planet” as a theme, the holiday this year sought to encourage governments, corporations, and private citizens to take concrete steps toward following more sustainable practices, such as buying from responsible companies.

**Note:** The first Earth Day was celebrated in 1970. Since then a billion people celebrate the holiday to protect the planet from things like pollution and deforestation.

## International Dark Sky Week

International Dark Sky Week is a weeklong celebration of the night which in 2022 fell on April 22 to 30.

According to the International Dark-Sky Association (IDA) – founded in 1988 and based in Tucson, Arizona – light pollution is increasing at a rate two times that of population growth, and 83% of the global population lives under a light-polluted sky. That’s why the group has established an [International Dark Sky Week](#).



© IDA

Goals for the week include turning off unneeded exterior lights and considering leaving them off all year long.

There are different ways to celebrate the initiative. You can find [International Dark Sky Week events](#) all over the world, organized by astronomy clubs, schools, universities, communities and more.

*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.