

## ARMENIAN ASTRONOMICAL SOCIETY

# **ArAS Newsletter**

IAU SOUTH WEST AND CENTRAL ASIAN REGIONAL OFFICE OF ASTRONOMY FOR DEVELOPMENT

## SECOND REGIONAL ASTRONOMICAL SUMMER SCHOOL

13-17 September 2021, Byurakan, Armenia Virtual School

DEDICATED TO THE 75th ANNIVERSARY OF THE BYURAKAN ASTROPHYSICAL OBSERVATORY

"Astronomy in the Crossroads of Interdisciplinary and Multidisciplinary Sciences"

> International Virtual Conference 20-24 September 2021, Byurakan, Armenia

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### **LOCAL NEWS**

## The International Scientific Events of the Byurakan Astrophysical Observatory

In September, NAS RA Byurakan Astrophysical Observatory after V. A. Ambartsumian (BAO) will host two international scientific events: The Second Regional Astronomical Summer School (2RASS) and "Astronomy in the Crossroads of Interdisciplinary and Multidisciplinary Sciences" international conference dedicated to the 75th anniversary of BAO (#ByurakanAstrophysicalObservatory75, #BAO75).

IAU SOUTH WEST AND CENTRAL ASIAN REGIONAL OFFICE OF ASTRONOMY FOR DEVELOPMENT

SECOND REGIONAL

## SECOND REGIONAL ASTRONOMICAL SUMMER SCHOOL

13-17 September 2021, Byurakan, Armenia Virtual School

"The Second Regional Astronomical Summer School (2RASS)" will be held on 13-17 September. It aims to bring together beginner astronomers and related MSc and PhD students and teach the principles of scientific work. The deadline for applications is **25 August**.

More on 2RASS here: https://www.bao.am/meetings/meetings/2RASS/index.html

DEDICATED TO THE 75th ANNIVERSARY OF THE BYURAKAN ASTROPHYSICAL OBSERVATORY

"Astronomy in the Crossroads of Interdisciplinary and Multidisciplinary Sciences"

> International Virtual Conference 20-24 September 2021, Byurakan, Armenia

The international conference "Astronomy in the Crossroads of Interdisciplinary and Multidisciplinary Sciences" will be held on 20-24 September and dedicated to the leading role of astronomy in science and culture, as well as in other areas of human activity. The aim of the conference is to establish better cooperation between all natural and social sciences with benefits for all of them. The participation of scientists working in the field of Astrophysics with heavy usage of knowledge from chemistry, biology, geology and other sciences is encouraged. The deadline for applications is **5 September**.

More about the conference here: https://www.bao.am/meetings/meetings/BAO75/index.html

## The First Issue of "Communications of the Byurakan Astrophysical Observatory" 2021 is Released

The 1<sup>st</sup> issue of "Communications of the Byurakan Astrophysical Observatory" 2021 (ComBAO) is already out.

The issue is included in "ComBAO" Volume 68 and is dedicated to the 75th anniversary of the Byurakan Astrophysical Observatory (BAO). It begins with an article titled "Byurakan

ORIGINAL PAPERS

Byurakan Astrophysical Observatory: 75 years of outstanding achievements 20.7 MB

A. M. Mickaelian

Pages: 1-11

Abstract. The Byurakan Astrophysical Observatory (BAO) is one of the most famous observatories of the Soviet Union and may be of the world. It was founded in 1946 by the outstanding scientist Viktor Ambartsumian (1908-1996) and became the leader of studies on instability phenomena in the Universe. Many discoveries have been carried out at BAO Celtad to stars, star clusters and other systems, nebulae, galaxies and systems of galaxies; instruments; In Schmidt and 2.6m classical telescopes. Together with V. Ambartsumian, outstanding scientists Beniamin Markarian, Grigor Gurzadyan, Marat Arakelian and others have worked at BAO. Many important international meetings and schools for young astronomures have been laded. Many important poles, including State authorities, Nobel Prize Winners and others have visited BAO. BAO has statuses of RA National Value, Regional Astronomical Centre, it has UNESCO Documentary Heritage item, its garden is recognized as Dendrarium, and there is RA National Hero Viktor Ambartsumian's house-museum.

On the kinematic interpretation of cosmological redshifts 20.7 MB
O. Tor-Kazarian

Abstract. We describe what is essentially a correct solution to the kinematic interpretation of cosmological model. In the firmwork of "stretching of space" point of view of the spatially homogeneous and isotropic Robertson-Walker space-time of standard cosmological model, we study so-called "lookforward" hintory of expanding universe, subject to certain rules, in order to overcome the ambiguity of the parallel transport of source four-velocity along the mild counterpart the commological redshifts as the accumulation of a series of infinitesimal "relative" spectral shifts along the part of order one more, so that it does not violate the fundamental physical principle of causality, Cur analysis estibles a straightforward kinematic relationship of overall cosmological redshift and kine

Screenshot of ComBAO's Current Issue

Astrophysical Observatory:
75 years of outstanding achievements" by BAO
Director and Leading
Research Associate Areg
Mickaelian.

All in all, the issue comprises 14 articles, 11 of which are authored by BAO researchers.

#### **Notes**

"ComBAO" was founded in 1946 by Victor Ambartsumian, who was the editor-in-chief of the journal until 1985. The publication of the journal was terminated in 1991-2016, however, already in 2017, BAO administration decided to restart it as an e-journal.

Now it's a scientific e-journal that publishes 2 issues a year. It contains original and 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.

Read ComBAO here: https://combao.bao.am/publhistory.php

### Summer Math Camp for Children from Artsakh Came to Its End

The summer math camp, organised for children and teenagers from Artsakh (particularly Hadrut and Shushi regions) came to its end on 1 July.

The camp was held at the Byurakan Astrophysical Observatory (BAO) on the initiative of Victor Ambartsumian's granddaughters, Anna Ambartsumian and mathematician Gayane Panina with the sponsorship of Aurora Humanitarian Initiative and BAO.

During the camp, the children participated in Math classes conducted by famous Russian mathematicians, got acquainted with the activity and achievements of BAO, visited the telescopes, Victor Ambartsumian House-Museum, and had night observations with telescopes. Moreover, the participants had meetings with people of other professions, and made visits to nearby sights.



Math Camp Participants. BAO.

The aim of the camp was to deepen the mathematical knowledge of the participants, assist them in professional orientation, introduce the Russian methodology of teaching mathematics in Armenia and Artsakh, improve the moral and psychological condition of children affected by the hostilities, as well as to promote Armenian-Russian relations in science and education.

## Joint Seminar of the Byurakan Astrophysical Observatory, the Institute for Physical Research and the Institute of Radiophysics & Electronics

On 16 July, NAS RA Byurakan Astrophysical Observatory after V. A. Ambartsumian (BAO) held a seminar in cooperation with Institute for Physical Research (IPR) and The Institute of Radiophysics & Electronics (IRPE) of NAS RA. During the seminar the current status, main research fields and achievements of the institutions were discussed aiming at getting acquainted with the scientific activities of each institute, promoting interdisciplinary research, as well as discussing possible collaborations.



Joint Seminar of BAO, IPR and IRPE. BAO.

On the agenda there was a seminar of institutions' directors with the participation of Areg Mickaelian (the director of BAO), Aram Papoyan (the director of IPR) and Tigran Zakaryan (the director of IRPE), which was followed by the excursions in the territory of BAO. The delegations of the above-mentioned institutes - members of the directorate, heads of research departments, leading and young scientists visited Victor Ambartsumian House-Museum, 1m Schmidt telescope and 2.6m telescope.

At the end of the visit, the participants expressed hope that such meetings would be continuous.

## **Areg Mickaelian – Editorial Board Member of the Iranian Journal of Astronomy and Astrophysics**

Director of the Byurakan Astrophysical Observatory (BAO) Areg Mickaelian has been invited by the President of the Iranian Astronomical Society (ASI) Moyen Mosleh, to become a member of the editorial board of the Iranian Journal of Astronomy and Astrophysics (IJAA).

IJAA (http://ijaa.du.ac.ir/) is a peer reviewed international Journal devoted to the publication of original research papers from various fields of astronomy and astrophysics.

The IJAA publishes quality original research papers, comprehensive review articles, short papers in



Screenshot of IJAA Website

astronomy and astrophysics and its applications in the broadest sense.

#### **Notes**

Areg Mickaelian is also a member of a number of international scientific organizations and commissions, as well as the editorial board member of many other scientific journals such as "Communications of BAO" (ComBAO), international "Astronomical & Astrophysical Transactions" (AApTr), "The Open Astronomy Journal" (TOAJ), "Frontiers in Astronomy and Space Sciences" (FASS), "Mediterranean Journal of Physics" (MJP), "American Journal of Modern Physics" (AJMP), as well as a member of the board of directors of "Astronomy & Astrophysics" (A&A), one of the high impact factor European journals.

### ANSEF Award Winners 2021 at the Byurakan Astrophysical Observatory

On 21 July, the Byurakan Astrophysical Observatory (BAO) hosted the winners of the Armenian National Science and Education Fund award (ANSEF). The meeting was dedicated to the discussion of interdisciplinary, multidisciplinary sciences and possible cooperation, as well as aimed at establishing connection between active scientists of the Republic of Armenia. At this meeting Deputy Minister of Education, Science, Culture and Sports of the Republic of Armenia (RA) Karen Trchunyan, Academician-Secretary of the National Academy of Sciences of RA Arthur Ishkhanyan and ANSEF Executive Board member (USA) Anna Ohanyan had the opening speeches and supported the idea of science development in Armenia.

During the first part of the visit, the participants had an opportunity to attend lectures by BAO Director Areg Mickaelian and deputy-director of the Fund for Armenian relief (FAR) Eduard Karapetyan. Later, they visited Victor Ambartsumian House-Museum, 1m Schmidt telescope and 2,6m telescope.



ANSEF Award Winners 2021. BAO.

It should be noted that among the ANSEF award winners 2021 were projects on Astronomy namely BAO Leading Research Associate Areg Mickaelian and BAO Junior Research Associate Naira Azatyan.

### Hasmik Andreasyan Received Her PhD in Astrophysics

On 27 July, Hasmik Andreasyan, Junior Research Associate at NAS RA Byurakan Astrophysical Observatory after V. A. Ambartsumian (BAO), defended her PhD thesis ("A.03.02 – Astrophysics, Radio Astronomy").

The thesis topic submitted for the doctoral degree in Physical and Mathematical Sciences was "The study of young eruptive stars".



Hasmik Andreasyan at her PhD Thesis Defence. BAO.

The scientific supervisor of the thesis was the Principal Research Associate at BAO, D.Sci. Tigran Magakian, and the official opponents were Doctor of Science, Professor Aram Saharyan (Yerevan State University) and Senior Research Associate, PhD Kamo Gigoyan.

The leading organization was Sternberg Astronomical Institute (Moscow State University). More on the thesis:

https://www.bao.am/staff/specialcouncil/AndreasyanHasmik/Andreasyan.php?lang=1

It should be noted that Hasmik is one of the recipients of the Armenian Astronomical Society 2020 Award (ArAS). She has authored various scientific articles and participated in many conferences, presenting reports.

### **INTERNATIONAL NEWS**

### **International Astronomical Union Offices Family Meeting**

On 20-22 July, the International Astronomical Union (IAU) Offices Family Meeting was held.

IAU has the Office of Astronomy for Development (OAD) in Cape Town (South Africa) and 11 regional offices and language expertise centres including the Office for Astronomy Outreach (OAO) and the Office of Astronomy for Education (OAE). All these together form the IAU "family" and coordinate the development of astronomy, astronomical education and the popularization of astronomy in the world.

The Offices Family Meeting was dedicated to the 10th anniversary of the establishment of the OAD Africa. Issues of in South astronomy coordination, IAU Strategic Plan 2020-2030, various astronomy programs were discussed during the meeting. It was attended by IAU president **Ewine** F. van Dishoeck



Screenshot of the IAU Offices Family Meeting

(Netherlands) and General Secretary Maria Teresa Lago (Portugal).

As it is known, Armenia is one of the regional offices. It was established in 2015 and is called the South West and Central Asian Regional Office of Astronomy for Development (SWCA ROAD). IAU SWCA ROAD Director Areg Mickaelian was among the participants of IAU meeting.

**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 <u>melin.asryan@gmail.com</u>. They will be reviewed for the publication in ArAS Newsletters next issues.

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