



Issue 147/ November 2021

ARMENIAN
ASTRONOMICAL SOCIETY

ArAS Newsletter



Byurakan Astrophysical Observatory 75

EDITOR: MELINE ASRYAN

CONTENTS

Local News

Another Gold and Silver in the International Olympiad on Astronomy and Astrophysics	2
IAU Astronomy Development Center	3

History Pages

70 YEARS AGO: The 1 st International Conference at the Byurakan Astrophysical Observatory	4
--	---

Anniversaries

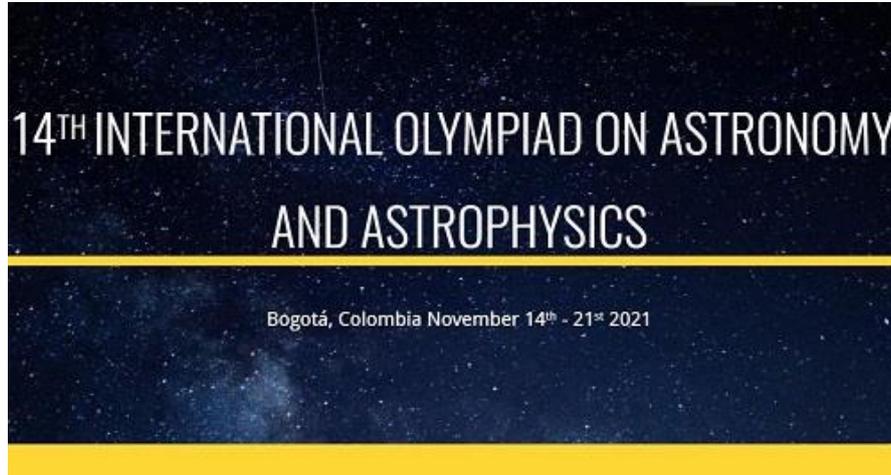
Bagrat Ioannisian's 110 th Anniversary	5
Norayr Yengibaryan's 80 th Anniversary	6
Srbuhi Iskudarian's 85 th Anniversary	7

International News

IAUS366: "The Origin of Outflows in Evolved Stars"	8
--	---

LOCAL NEWS

Another Gold and Silver in the International Olympiad on Astronomy and Astrophysics



Armenian Olympiad team again shows brilliant results in the International Olympiad on Astronomy and Astrophysics.

At the 14th International Olympiad on Astronomy and Astrophysics, Artashes Gyoletsyan, a student of the Special Physic-mathematical School, was awarded a gold medal as well as a special diploma for showing the best result in the Data Analysis Examination. He was one of the gold medal winners last year as well. Davit Gyulamiryan from Quantum College was awarded a silver medal, and students of the Special Physic-mathematical School Maria Arakelyan and Vyacheslav Petrosyan received diplomas.

The Olympiad was held in Colombia on November 14-21 online. It involved 298 participants from 49 countries.

According to tradition, Armenian team of the year is hosted at the Byurakan Astrophysical Observatory (BAO) prior to the Olympiads. This year was no exception.

The team mainly worked with Vardges Mambreyan, a member of the Republican Commission of the Astronomy Olympiad, and Marietta Gyulzadyan, a former researcher at BAO. The team was supported by Haykaz Navasardyan, Director of the Special Physic-mathematical School, Areg Mickaelian, Director of BAO, and Ashot Hakobyan, Chairman of the Republican Commission of the Astronomy Olympiad in Armenia.

It is interesting that the Armenian participants always lead in Astronomy Olympiads, though “Astronomy” is not a separate subject of the school curriculum.

IAU Astronomy Development Center

Former employee of the Byurakan Astrophysical Observatory Armine Patatanyan has joined the Astronomy Development Center of the International Astronomical Union (IAU). The fellows were selected through a call for applications announced in July 2021.

Due to restrictions posed by the pandemic, Armine and the other 3 new members from Uganda, Spain and Romania will be working remotely for most or all of their fellowship.

As part of her work, Armine will study the growing potential of Astronomy in preventing mental health problems and discovering human potential. who will be contributing to its mission of “Astronomy for a better world”.

It should be noted that Armine has been interested in Astronomy for a long time. She is an active supporter for the advancement of Astronomy, and has organized as well as supported several outreach and education projects.

Armine currently serves as NAEC Armenia. She has participated in a number

of IAU conferences, and in 2017 was awarded the Galileo Teacher Training Program (GTTP) International Certificate for Applying New Methods and Approaches to Astronomy Education.



Bottom left: Armine Patatanyan

HISTORY PAGES

70 YEARS AGO

The 1st International Conference at the Byurakan Astrophysical Observatory



BAO Main Building. © Meline Asryan

70 years ago, on November 12-16, 1951, the Byurakan Astrophysical Observatory (BAO) hosted the first international conference called “Stellar Associations and the Distribution of Hot Giants”.

This was the conference of the Astronomical Council of the USSR Academy of Sciences, which was devoted to the newly discovered stellar associations in Byurakan (1947) and the distribution of hot giants that make up the population of OB-associations.

It is interesting that the conference was held in the main administrative building of the BAO (see the photo above) while it was under construction.

Later the BAO became and it still remains the hub of astronomical conferences. Suffice to say, that it has organized 6 conferences of the International Astronomical Union (IAU), becoming among top ten places where IAU conferences are held most often. Moreover, many international conferences, like the [First International Symposium on the Problem of Extraterrestrial Civilizations and Communication with Them](#) (1971) was organized here.

ANNIVERSARIES

Bagrat Ioannisian's 110th Anniversary

On November 5, famous constructor of Armenian origin, constructor-in-chief of the major Soviet astronomical telescopes, Hero of the USSR Socialist Labour, Lenin Prize Winner Bagrat Ioannisian (1911-1985) would turn 110.

On this occasion, a seminar was held at the Byurakan Astrophysical Observatory (BAO) where Director of BAO Areg Mickaelian presented Ioannisian's life and activities.

The Great Designer

Bagrat K. IOANNISIAN (1911-1985)

Awards:
1957, 1961, 1977

Brief Biography:
B. K. Ioannisian was born in Erevan in 1911 and in 1932 was graduated from a secondary school in Yerevan. He worked in the optical industry and then in the design bureau of the Leningrad Optico-Mechanical Association. In 1938 he became the chief designer of the optical systems of astronomical instruments which were produced in Soviet Optical-Mechanical Plants. He set the pace which resulted in the great majority of our domestic astronomical designs.
He first success saw the necessity of an AZ-1 mirror telescope for the Byurakan Astrophysical Observatory in 1949. This instrument is thus the largest of its kind. A series of original but similar instruments followed later on:
AZ-2 — meridian telescope (2100 mm, Arta-Ara Observatory, 1950);
AZ-3 — reflecting telescope;
AZ-4 — reflecting telescope with a double quartz spectrograph;
AZ-5 — meridian telescope with a double quartz spectrograph;
AZ-6 — meridian telescope with a double quartz spectrograph.
He had also received the assignment of the meridian spectrograph project by the order of the Council of Ministers of the USSR in 1950. B. K. Ioannisian took the chief design of G.A. Shajn's 2.6 m reflector mounted at the BAO in 1950. At the moment received the telescope was the largest telescope in Europe and the first in the world. The largest observational instrument of Byurakan Astrophysical Observatory ZTA-2.6 telescope which actually is the G.A. Shajn reflector was constructed at the COMEC (Central Optico-Mechanical Association) in a workshop since 1976.
In the 1970s the Soviet Academy of Sciences decided to build a new telescope that would allow to make long term observations. Design work started at Byurakan in 1970 under the leadership of Bagrat K. Ioannisian. In the goal of building the largest telescope in the world, he have worked on a new design of an AZ-6 telescope instrument. This is what the telescope size is 2.6m primary and 1.6m secondary mirrors from made stainless steel. In 1985 the Byurakan Astrophysical Observatory was invited to build the ZTA-6 and each telescope (AZ-6). The ZTA-6 received the sign from 1975. At that time ZTA-6 was the largest telescope in the world.

The stages of the construction of ZTA-2.6 of the Leningrad Optico-Mechanical Association

ZTA-2.6 telescope installed at the BAO

ZTA-2.6 in reflection presented at the IAU

ZTA-2.6 telescope installed at the IAU

Both the largest 6m telescope in the Soviet Union (which was installed in the North Caucasus) and two telescopes with a 2,6m diameter mirror telescopes installed in the observatories of Crimea and Byurakan were constructed under his supervision.

It should be noted that in 2021 the Scientific Council of BAO named the

largest (2,6m) telescope of BAO after Bagrat Ioannisian.

Norayr Yengibaryan's 80th Anniversary

On November 12, the Byurakan Astrophysical Observatory's former researcher Norayr Yengibaryan celebrated his 80th anniversary.

Norayr Yengibaryan was born on November 12, 1941 in Yerevan. In 1963 he graduated from Yerevan State University (YSU). He did in postgraduate studies and under the supervision of Victor Ambartsumian, he successfully defended his PhD thesis in 1968. In 1980 he received the degree of Doctor of Sciences, and in 1982 the degree of Professor.

N. Yengibaryan has lectured at YSU for many years. In 1980-1989 he worked at the Institute of Applied Problems of Physics of the National Academy of Sciences of the Republic of Armenia as the head of the laboratory of mathematical physics. 1989-2005 . He worked at the Byurakan Observatory as a group leader. In 2001-2003 he held the position of Deputy Director of the Byurakan Observatory. He is currently working at the Institute of Mathematics of the National Academy of Sciences of the Republic of Armenia as the head of the Methods Department of Mathematical Physics.

N. Yengibaryan's scientific works refer to the fields of mathematical physics, theoretical astrophysics, the theory of functions, integral equations, the theory of radiation transfer. He developed the theory of nonlinear factoring equations for integral operators, including Wiener-Hopf type operators, and constructed the normal concordance domains of Laurent's multiple series. Developed new methods for solving linear and nonlinear radiation problems.

He is a member of the International Mathematical and Astronomical Unions.

We cordially congratulate Norayr Yengibaryan on his birthday and wish him good health.

Srbuhi Iskudarian's 85th Anniversary



Srbuhi Iskudarian

On November 21, the Byurakan Astrophysical Observatory's former researcher Srbuhi (Sofik) Iskudarian (1936-2019) would celebrate her 85th anniversary.

Dr. Srbuhi (Sofik) Iskudarian (Iskandarian) was born on 21 November 1936 in Yerevan. She graduated from the Department of Astrophysics of the Yerevan State University (YSU) in 1958 and since then worked BAO. She was a post-graduate in 1965-1973 and defended her Ph.D. thesis in 1973 under the supervision of V.A. Ambartsumian.

Srbuhi worked as a research associate. Her research fields are observational cosmology and irregular galaxies, particularly study of the central regions of irregular galaxies and observations of nuclei of binary interacting galaxies. She also worked on morphological characteristic of late-type spiral galaxies, color – absolute magnitude relation for the nuclei of normal spirals, extragalactic supernovae, etc.

Srbuhi was a member of the European Astronomical Society (EAS). She published more than 40 papers in *Astrophysics and Communications of BAO*, as well as papers in proceedings of international meetings.

INTERNATIONAL NEWS

IAUS366

“The Origin of Outflows in Evolved Stars”



The IAUS366 conference “The Origin of Outflows in Evolved Stars” was held on November 1-6.

Due to restrictions caused by the pandemic the conference moved to a fully online event via Zoom, with posters and coffee breaks on Gather.town, and Slack for further discussions. Besides talks and poster contributions, there were also the possibility for contributed 3-min pre-recorded pitch talks

Key topics of the conference included:

- Theory of stellar outflows: low mass & massive stars
- Observing stellar outflows: low mass & massive stars
- Numerical models for stellar outflows: low mass & massive stars
- Binarity
- Enrichment of the interstellar medium by stellar winds
- Astrochemistry
- Current and new observing facilities
- Hot topics
- Education
- Outreach, Arts and STEAM

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.

ArAS Newsletter issues are available online: <https://www.aras.am/ArasNews/arasnews.html>