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# ArAS Newsletter



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## LOCAL NEWS

### List of 2023 International Scientific Events

2023 is full of international scientific events at the Byurakan Astrophysical Observatory (BAO).

The kickoff event will be on May 1 with the [Armenian-Georgian colloquium](#). This is a traditional meeting that has been held since 1974. This is already the 15<sup>th</sup> colloquium and will be held on May 1-5.

On August 21-25, the BAO will organize the International Astronomical Union [Symposium 365](#): Dynamics of Solar and Stellar Convection Zones and Atmospheres.

The next is the 3rd Byurakan Regional and 1st Interregional Summer School (3RASS/1IRASS). The School, which will be held on September 11-15, is intended for students of the field. It will give students the opportunity to make observations with BAO 1m and 2.6m telescopes and to participate in practical trainings conducted by experienced astronomers.

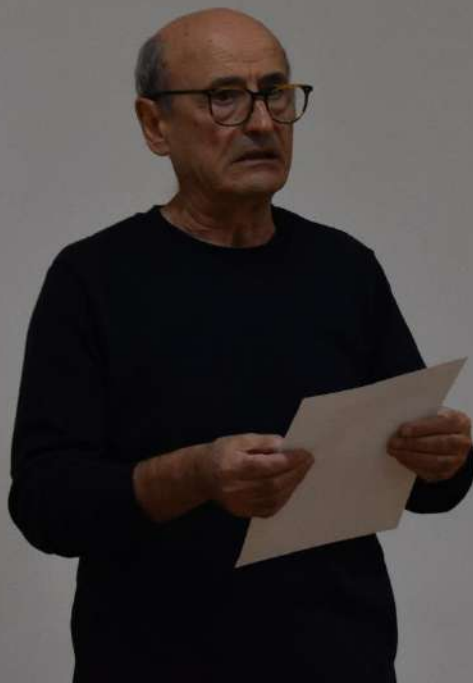
On September 18-22, the international conference dedicated to BAO founder V. Ambartsumian's 115<sup>th</sup> anniversary, entitled “Non-stable Phenomena in the Universe” will take place.

More detailed information about these events will be provided in the days leading up to them.



## The Winner of “ComBAO-2022 Best Paper” Competition is Known

On March 13, the winner of the “ComBAO-2022 best paper” competition was announced. According to the Byurakan Astrophysical Observatory (BAO) Scientific Council awarded the honor to Gagik Ter-Kazarian, BAO principal research associate and the Head of the Research Department “High Energy Astrophysics”. The article was devoted to “Relative velocity in pseudo-Riemannian spacetime” (Volume 69, Issue 2, pp. 151-171, Dec 2022), one of the most important issues in cosmology. In particular, the article gives a coordinate-independent definition of the relative velocity of a particle in pseudo-Riemannian spacetime.



Gagik Ter-Kazarian. BAO. 2023

We would like to extend our warmest congratulations to Gagik Ter-Kazarian for being selected as the winner of “ComBAO-2022 best paper” competition.

## The Byurakan Astrophysical Observatory at DigiTech Expo 2023



BAO at DigiTech 2023

It should be noted that this was the first time the scientific institutions of Armenia were represented during the expo.

The Byurakan Astrophysical Observatory presented its activities at the DigiTech science-technologies expo. This year, the expo, which usually features technology companies, also welcomed scientific institutions.

Visitors to the expo had the chance to engage with astronomers, get acquainted with the current scientific and public activities of the BAO, learn about Markarian's surveys, the Armenian Virtual Observatory, robotic telescopes and more.



BAO at DigiTech 2023

## ANNIVERSARIES

### Rafik Kandalian's 75<sup>th</sup> Anniversary



Rafik Kandalian

Rafik A. Kandalian was born on March 12, 1948, in Yerevan. In 1973, R. Kandalian graduated from the Leningrad (St. Petersburg) State University, Department of Physics (Chair of Radiophysics), and began working at the Byurakan Astrophysical Observatory (BAO).

He took his post-graduate studies in 1977-1980 and defended his Ph.D. thesis in Astrophysics in 1984 under Prof. V.A. Sanamian's supervision. He served as the Scientific Secretary of the BAO for international affairs for a few years. He also participated in several important radio-astronomical projects in Byurakan.

Kandalian's main scientific fields are radiogalaxies, IR galaxies, and megamasers. He conducted a number of collaborations with foreign astrophysical centres, including ones in Australia, Russia, and France, and carried out observations with a number of important radio and millimeter telescopes, both in Armenia and abroad.

Kandalian has authored more than 100 scientific papers. Recently, he has been working at the Al-Albait University of Jordan, where he teaches a number of astronomy and physics courses. R. Kandalian is a member of IAU (since 1994), EAS, and ArAS (February 2002).

## INTERNATIONAL NEWS

### New Name Approved for Towering Lunar Mountain

The Working Group for Planetary System Nomenclature of the International Astronomical Union (IAU) has approved an official name for a mesa-like lunar mountain that towers above the landscape carved by craters near the Moon's south pole. This unique feature will be named in honor of Mons Mouton, after NASA mathematician and computer programmer Melba Roy Mouton (MOO-tawn). The name Mons Mouton was proposed to the Working Group for Planetary System Nomenclature (WGPSN) of the IAU by members of NASA's Volatiles Investigating Polar Exploration Rover (VIPER) team. The flat-topped mountain is adjacent to the western rim of the Nobile crater, on which VIPER will land and explore during its approximately 100-day mission as part of [NASA's Artemis](#) program.



Melba Roy Mouton

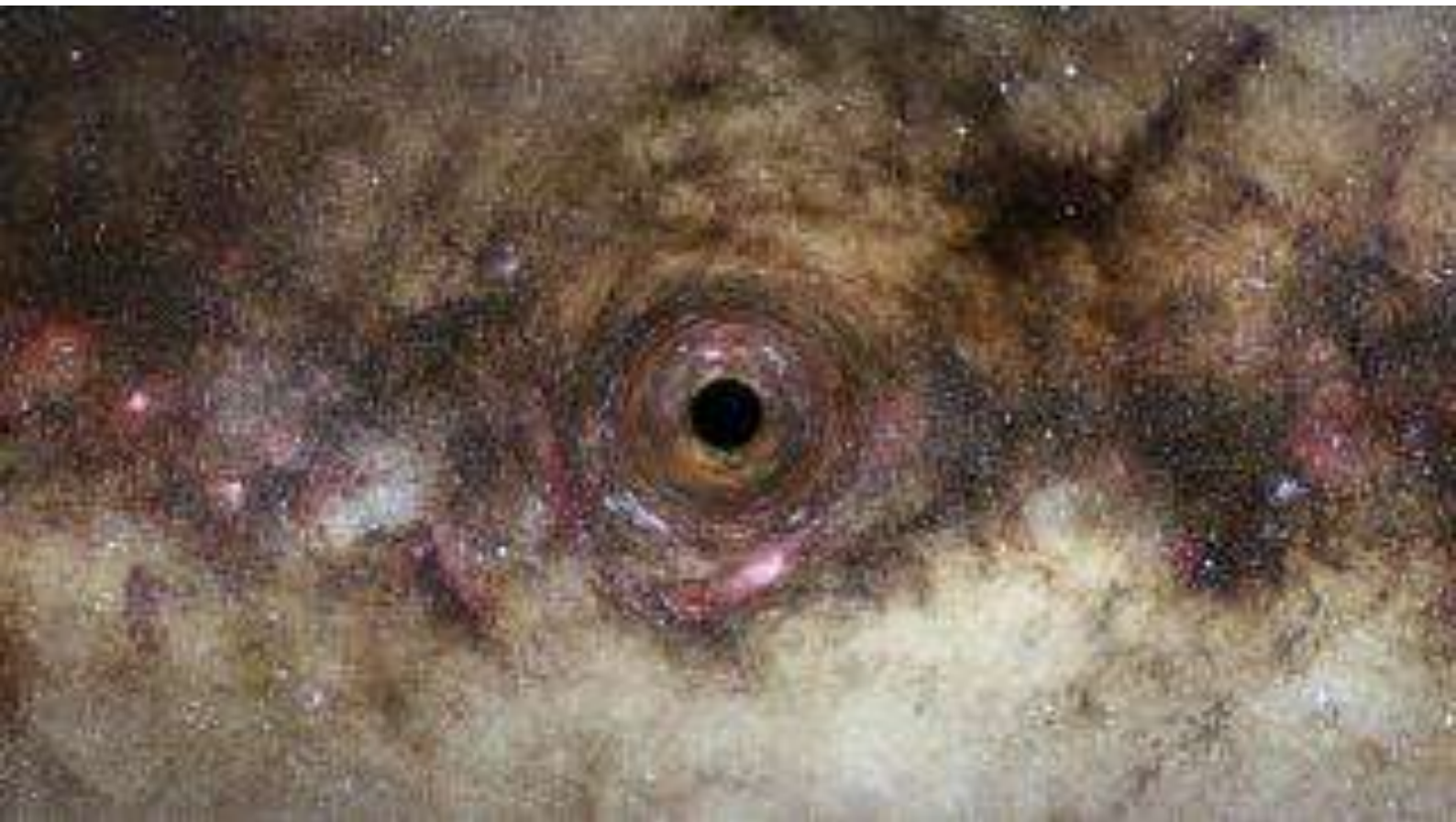
*Note: The mountain is also one of 13 candidate landing regions for NASA's Artemis III mission, which is intended to send astronauts to the lunar surface, including the first woman to set foot on the Moon.*

## OTHER NEWS

### The Largest Black Hole Ever Discovered Can Fit 30 Billion Suns

A recent discovery by astronomers has revealed what could be the largest black hole ever detected. This colossal black hole is situated at the center of a galaxy hundreds of millions of light-years away and has a mass of 30 billion suns. Unlike the typical supermassive black holes found in galaxies, this cosmic behemoth is categorized as an ultramassive black hole due to its exceptional size.

Astronomers discovered the black hole during observations of a galaxy located farther away from Earth than the one centered around the monster black hole, while using the gravity of the foreground galaxy to magnify the background object. This effect, known as gravitational lensing, is a result of gravity bending the light around extremely massive objects. Serving as nature's own telescope, gravitational lensing frequently helps astronomers to increase the magnification of objects too distant to be properly visible to human-made telescopes.





*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.