

# ArAS News

NEWSLETTER

ARMENIAN ASTRONOMICAL SOCIETY (A r A S)



March 31, 2020

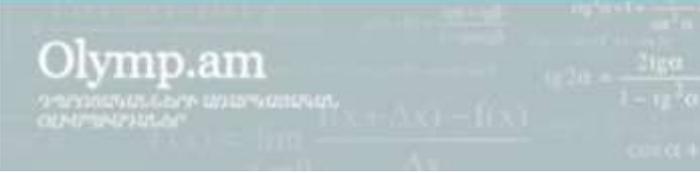
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ArAS Newsletter online at: <http://www.aras.am/ArasNews/arasnews.html>

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# CONTENTS

	1	<b>Editorial Astronomy@Home</b>	3
	2	<b>Byurakan-Artsakh Cooperation</b>	4
	3	<b>Collaboration with Anton Pannekoek Institute for Astronomy</b>	5
	4	<b>Astronomical National Olympiad</b>	6
	5	<b>Paris-Saclay Newsletter Covered BAO Partnership</b>	7
	6	<b>IAU Office of Astronomy for Education</b>	8
	7	<b>Calendar of Astronomical Events April</b>	9

**Dear Colleagues,**

We hope you are staying healthy and safe in this challenging time. We advise ArAS Members and public in general to stay at home and leave the houses only in strict necessity.

This is to inform that the IAU Office for Astronomy Outreach has announced the Online Astronomy@Home Awards to award people running innovative online astronomy events to engage with communities during this time. IAU asks outreach professionals, educators, amateur and professional astronomers, and astronomy enthusiasts to develop and participate in astronomy activities online. People from all backgrounds and level of experience are encouraged to organise online events using astronomy as an engagement tool to connect online with their communities. From one person streaming their night sky through a telescope at their window; astronomers holding virtual meetups; educators sharing fun activities to DIY at home; to planetariums broadcasting live remote shows; online astronomy challenges, we're already seeing creative and engaging activities all around!

We hope to keep this momentum going, by recognising the various event organisers worldwide through the Online Astronomy@Home Awards. The five categories for the awards are:

- 1) Most Innovative Event: Where organisers have come up with an imaginative or unusual approach to enthusing the public about astronomy with an online event or campaign.
- 2) Best Family Event: For those at home with their families, what astronomy activity they come up with (together with their family members, remotely or that are in the same house) and inspiring others along the way.
- 3) Outstanding Online Event: Engaging with the public isn't necessarily the number of attendees or the scale of the event, but the quality of the experience. This award recognises the excellence of an engaging and fully online outreach experience.
- 4) Largest Number of Registered Online Events Held by a Single Group: Where an organising group has made an effort to take astronomy above and beyond from their own homes to the community-at-large.
- 5) Community Engagement: For the most interesting event that garnered participation with communities that aren't focused on astronomy, or made efforts to connect to non-astronomy-enthusiasts.

**Prizes**

First Prize: 600 euros (one first prize per category award)

Second Prize: 300 euros (one second prize per category award)

Top ten: A four-year subscription to the printed version of the CAPjournal.

All organisers will receive a Certificate of Participation.

For more details please visit: [https://www.iau.org/public/oao/oao\\_global\\_events/](https://www.iau.org/public/oao/oao_global_events/)

*Areg Mickaelian, ArAS Acting President*

*Sona Farmanyan, ArASNews Editor*



## Byurakan-Artsakh Cooperation

On March 12-15 the director of NAS RA V. Ambartsumian Byurakan Astrophysical Observatory (BAO), Areg Mickaelian, visited Artsakh at the invitation of the Ministry of Education, Science and Sport of the Republic of Artsakh.



Since 2006 BAO has cooperated with Artsakh. 30 cm Newton system telescope has been installed by BAO at the Artsakh State University (Stepanakert), BAO scientists have given lectures and various issues of cooperation have been discussed so far. Taking into account all the things mentioned, on March 13 the cooperation agreement was signed between BAO and the Ministry of Education, Science and Sport of the Republic of Artsakh by the director of BAO Areg Mickaelian and Minister Narine Aghabalyan. According to this agreement, educational, scientific and social joint programs are to be held in the fields of Astronomy and Astrophysics; the students' academic and professional progress are to be promoted; joint conferences, seminars, youth schools and other events are to be organized; the work of the telescope installed by BAO is to be ensured and professional advice provided; lectures on Astronomy are to be organized in schools and universities of Artsakh by professional astronomers, and students' annual three-day visit to BAO is to be organized having the purpose to introduce them to the achievements of Viktor Ambartsumian and BAO. Moreover, astronomy clubs are to be established, if possible.

Because of the renovations at the University building, the telescope, which is the only one in Artsakh, was moved to High School N190 named after H. Tumanyan, where an appropriate platform and dome had been built in the attic. It will put to work soon. Mr Mickaelian visited that school and got acquainted with the installation conditions. Later, he had a meeting with high school students giving a popular lecture on V. Ambartsumian and BAO. At the end, professional literature was presented to the students and a small portable telescope to the school.

Areg Mickaelian and Narine Aghabalyan gave an interview to Artsakh Public TV about their cooperation and further programs.

*Meline Asryan*

## Collaboration with Anton Pannekoek

### Institute for Astronomy

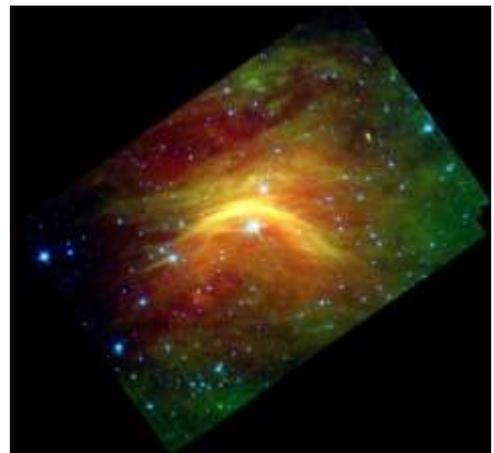


Viktor Ambartsumian International Prize (VA prize) also provides great opportunities for young researchers based on Armenia. Thanks to the VA prize, young researchers are able to meet famous astronomers. With the support of VA Prize 2018 Winner Prof.

Edward van den Heuvel, from 2 to 28 March 2020 Junior Researcher of Byurakan Astrophysical Observatory (BAO) Ms. Naira Azatyan was invited to Anton Pannekoek Institute for Astronomy, University of Amsterdam, the Netherlands. During the visit, it was planned to carry out collaborative research in the field of star formation, particularly the formation of massive stars in the “Stars and stellar populations” research group of Professors Lex Kaper and Alex de Koter. The main goal of the “Stars and stellar populations” research group is to understand the influence of massive stars on their environments. Massive stars are very important object in the galaxies and understanding these stars, and populations of them, from birth to death elucidates many key processes of our origins, such as the cycle of star birth and galaxy evolution, and the origin of the elements (especially those needed for life).

In the process of the evolution of massive stars, the surrounding stars, including other massive stars that are nearby, can acquire extremely high velocity, leaving their birthplace. These stars are called runaway stars. If the star running away with supersonic velocity, it hits the environment, creating a bow shock that radiates in the visible range of the electromagnetic waves, allowing such objects to be detected. One of these runaway stars is the Vela X-1 high-mass X-ray binary (Figure 1), which Naira studied during her visit.

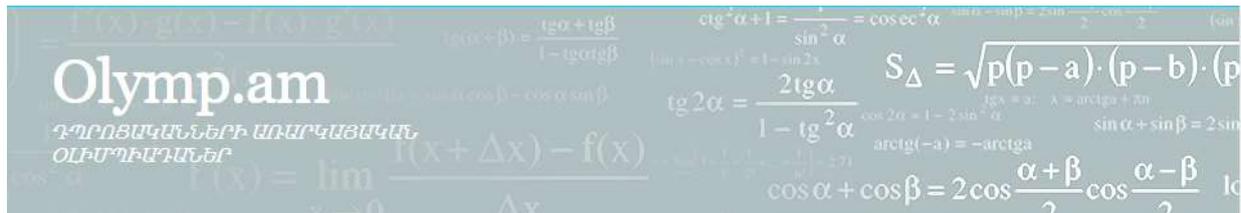
Within the framework of the collaboration, one of her main goals was to find the birthplace of the Vela X-1 runaway star using proper motions provided by GAIA space observatory. One of the results with proper motions is that Vela X-1 runaway left the Vel OB1 association 2Myr ago. Work is currently in preparation.



*Figure 1: Vela X-1 high-mass X-ray binary, Composite image on Spitzer Space Telescope*

## Astronomical National Olympiad

The final (Republican) phase of the Astronomical School Olympiad was held at Yerevan, Phys.-Math. School (PMS) after A. Shahinyan on February 27. In total 12 pupils participated. Dr. Ashot Hakopian, BAO senior researcher, was the Chair of the Jury and the other members were Dr. Marietta Gyulzadian, Vardges Mambreyan, Edgar Vardanya, Davit Aslanyan and Tigran Gaksyan.



Five problems were offered from the fields of celestial mechanics, astrometry, astrodynamics and radiation theory. Most of the participants showed deep knowledge and displayed high results. Pupils from PMS and National Polytechnic University of Armenia (NPUA) college showed the best results. As a result, First-rank diploma was awarded to PMS students Eve Hunanyan and Karen Baghdasaryan. Second-rank diploma to Artashes Gyoletsyan (PMS), David Kirakosyan (PMS), David Gyulamiryan (Quantum Collage), Third-rank diploma to Norayr Gevorgyan (PMS), Vahe Vahanyan, Romanos Mkrtchyan and Hayk Minasyan from NPUA.



For more information please follow the link: <http://olymp.am/>

Armenian Astronomical Society congrats the winners and wishes all the best.

# Paris-Saclay Newsletter

## Covered BAO Partnership

In the March issue of the University of Paris-Saclay Newsletter you may read about partnership of Paris-Saclay University and Byurakan Astrophysical Observatory.

Rubrique: **VUE D'AILLEURS**

Regard

Areg Mickaelian,  
Observatoire  
d'astrophysique de Byurakan  
(BAO), Arménie



© Areg Mickaelian

Journal: **THE PIE NEWS**

Titre: **EUROPEAN UNIVERSITY ALLIANCE ON GLOBAL HEALTH LAUNCHED**



The European University Alliance for Global Health has been launched with a press conference in Paris. Part of the European Universities alliances receiving funding by the EU Commission to collaborate across borders, the network is composed of five international partners.

[www.thepienews.com/news/european-alliance-on-global-health-launched](http://www.thepienews.com/news/european-alliance-on-global-health-launched)

*Toute collaboration est positive car les gens unissent leurs efforts sur un sujet et obtiennent finalement plus que s'ils avaient travaillé séparément. i + i ne donne pas 2 mais plus que cela. Avec le LATMOS, nous travaillons sur de nombreux sujets soutenus par des projets européens. De notre côté, cela a également un grand*

*avantage: nous avons récemment participé au projet Europlanet 2020 et décroché des bourses Erasmus +. Aujourd'hui nous collaborons autour de projets en sciences et technologies spatiales. Nous avons récemment organisé à Byurakan une école d'été internationale où Alain Sarkissian et Mustapha Meftah, du LATMOS, sont*

*venus donner des conférences aux étudiants. Nous menons ensemble un grand projet de construction d'un satellite portant sur de la recherche atmosphérique et astronomique. Notre expérience passée nous a prouvé notre volonté de continuer à travailler ensemble et nous en sommes très heureux.*

Areg Mickaelian dirige le département des études astronomiques de l'Observatoire d'astrophysique de Byurakan (BAO) en Arménie. Il est directeur du Bureau régional d'astronomie pour le développement du Sud-Ouest et de l'Asie centrale (SWCA ROAD) de l'Union astronomique internationale (UAI), et président par intérim de la Société astronomique arménienne (ArAS), qu'il a fondée en 1999. Il est également directeur de projet de l'Observatoire virtuel arménien (ArVO) et directeur des écoles d'été internationales de Byurakan (BISS).

Ses recherches portent sur les études astronomiques, les galaxies actives, les rayons X, les IR et les sources radio. Il se concentre principalement sur les noyaux galactiques actifs, qui sont l'un des principaux sujets d'astrophysique liés à l'évolution des galaxies. Ce thème a été établi dans les années 1950 par le fondateur du BAO, Victor Ambartsumian, qui a été le premier astronome à prouver que le centre des galaxies actives est le siège de phénomènes particuliers (débits sortants, émissions radio et d'autres longueurs d'onde...) permettant de les différencier des autres galaxies. Au cours des dernières années, Areg Mickaelian a travaillé sur les quasars et les galaxies de Seyfert, tous deux appartenant aux

noyaux galactiques actifs. Grâce aux relevés astronomiques, son groupe a découvert des milliers de nouveaux objets dans l'Univers (objets stellaires bleus, naines blanches, étoiles IR, galaxies actives, sources de rayons X...).

Le groupe d'Areg Mickaelian et le laboratoire d'Alain Sarkissian - Laboratoire Atmosphères, Milieux, Observations spatiales (LATMOS - Université Paris-Saclay, UVSQ, CNRS) - collaborent depuis plusieurs années. Les premiers contacts remontent à 2005, alors qu'Alain Sarkissian s'intéresse aux observations virtuelles. À cette époque, de nombreux pays, dont la France et l'Arménie, développent leur propre projet d'observatoire virtuel. Areg Mickaelian et Alain Sarkissian commencent à collaborer sur la science des données, puis passent à la planétologie et à la recherche de nouveaux astéroïdes grâce à leur spectre. Leur collaboration comprend visites réciproques, publications communes, participation à des projets européens, etc.

[www.aras.am//aregmick.htm](http://www.aras.am//aregmick.htm)

Journal: **El Blog Salmón**

Titre: **ABRE LA UNIVERSIDAD PARÍS-SACLAY, EL ÚLTIMO INTENTO DE FRANCIA PARA ENTRAR EN LA ÉLITE UNIVERSITARIA MUNDIAL**



Este verano ha comenzado oficialmente la Universidad Paris-Saclay, al sur de París. Esta universidad se autodefine como una Mega-Universidad y proviene de la asociación de múltiples centros de prestigio situados al sudeste parisino, no muy lejos de La Defense y es parte del cluster Paris-Saclay, en el que lleva habiendo empresas tecnológicas desde 1950, y que desde los años en los que estuvo Sarkozy en la presidencia, se intenta que se convierta en el Silicon Valley francés.

[www.elblogsalmon.com/entorno/abre-universidad-paris-saclay-ultimo-intento-francia-para-entrar-elite-universitaria-mundial](http://www.elblogsalmon.com/entorno/abre-universidad-paris-saclay-ultimo-intento-francia-para-entrar-elite-universitaria-mundial)

23

## IAU

## Office of Astronomy for Education

The International Astronomical Union (IAU) is in the process of creating the Office of Astronomy for Education (OAE) to achieve the goals set out in the IAU Strategic Plan 2020–2030.



The OAE will be established through an international Call for Proposals and will have the following main objectives:

- ❖ identify the OAE host which will work in partnership with the IAU;
- ❖ establish a network of National Astronomy Education Coordinators (NAECs) that will represent the interface between the OAE and the community of teachers, in each Coordinator's country, who would be interested in astronomy and in using astronomy as a tool for teaching science in primary and secondary school;
- ❖ through the NAECs, liaise with curriculum experts and hopefully with education ministries to further the inclusion of astronomy in the national curricula, and perhaps to propose modifications of the national curricula and the schools' syllabi, to develop educational material tailored to the needs of specific countries or groups and school level;
- ❖ analyse, with the support of the NAECs, how astronomy is used in teaching in all the IAU countries, identifying existing relevant actions and liaise with them, e.g., organising professional development for teachers and high-quality teaching material that is readily accessible and that can be translated into the local language;
- ❖ develop and encourage the use of standards to be followed in the organisation of teacher training activities;
- ❖ organise Regional or International Schools for Astronomy Education (SAE) for teachers, adhering to these standards;
- ❖ recruit and organise volunteer IAU members who are willing to contribute to the teacher training programme.

Dr. Marietta Gyulzadyan, Sona Farmanyan, and Armine Patatanyan are appointed as IAU OAE Armenian NAEC team.

Read more about this initiative in the announcement at :  
<https://www.iau.org/news/announcements/detail/ann18054/>

# ASTRONOMICAL CALENDAR

## April, 2020

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
						1 Lunar crescent (first quarter)
2	3 Conjunction of Mercury and Neptune	4	5	6	7	8 Full Moon
9	10	11	12	13	14 Lunar crescent (last quarter)	15
16	17	18	19	20	21 Lyrids Meteor Shower	22
23 New Moon	24	25	26	27	28	29
30	31					