

# ArAS News

NEWSLETTER

ARMENIAN ASTRONOMICAL SOCIETY (A r A S)



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## International Conference

### “Astronomical Heritage of the Middle East”

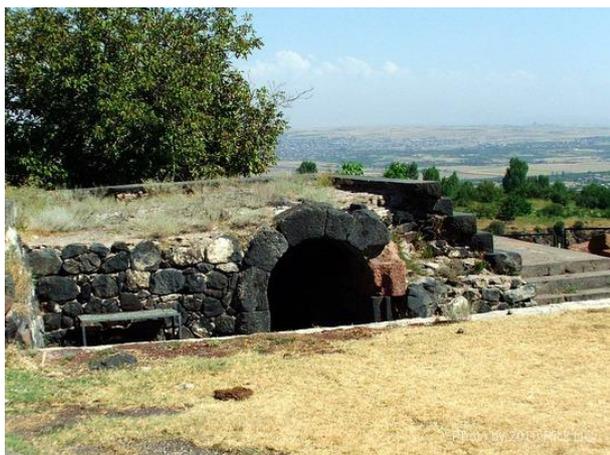


International Conference “Astronomical Heritage of the Middle East” approved by UNESCO Director General within UNESCO Participation Program for 2016-2017 cycles is devoted to the role of astronomy in culture and other fields of human activities was held on 13-17 November, 2017 in the Republic of Armenia. The conference brought together over 70 participants from 20 countries.

The President of the National Academy of Sciences Radik Martirosyan, Deputy Foreign Minister Ashot Hovakimyan, General Secretary of the International Astronomical Union (IAU) Piero Benvenuti and the Director of Byurakan Astrophysical Observatory Areg Mickaelian delivered welcoming speeches. Piero Benvenuti, General Secretary of the International Astronomical Union (IAU), highlighted: “I think it is a very interesting conference, because talking about the history of astronomy is fundamental for us.”

The **first day** of the conference involved “Introductory” and “Ancient Astronomy” sessions, which was held at National Academy of Sciences of the Republic Armenia (NAS RA). Besides contributed talks, we had very interesting invited talks given by Areg Mickaelian (Armenian Archaeoastronomy and Astronomy in Culture), Piero Benvenuti (IAU activities related to Archaeoastronomy and Astronomy in Culture), Sadollah Nasiri-Gheydari (Astronomical Heritage of Iran), Garik Israelian (Starmus Festival: Musical Astronomical Heritage), J. McKim Malville (Geographic and Societal Determinates of Ancient Astronomies), Xiaochun Sun (Astronomical Silk Road), Ariel Cohen (The Jewish Chronology and Astronomy), Moh'd Al-khasawneh Awni (Astronomical heritage of Jordan) and Irakli Simonia (Ancient Astronomical Knowledge – the Unity of Diversity). During the breaks the conference also hosted “Astro Painting” master class. And finally the day was summarized at welcome reception, where participants tasted the Armenian traditional dishes and learned more about the cuisine that reflects the history and geography where Armenians have lived.





The **second day** started with the visit to Aghdzk village which is home to the Arshakid Mausoleum, a large grave monument complex and basilica of the 4th to 5th centuries. Here Archaeologist Dr. Hakob Simonyan presented the results of unique excavations conducted, during which the remains of Armenian kings were discovered. After the visit to Aghdzk the participants visited to Byurakan Astrophysical Observatory, where “Astronomical Heritage for the Future” and “Astronomical Heritage for Science” sessions were held. During

the sessions the invited talks were given by Piero Benvenuti (Modern cosmology and the “creatio continua” concept by Thomas Aquinas), Habib Khosroshahi (Iranian National Observatory; building heritage for the future), Sinan Alis (Development of Astronomy in Turkey), Areg Mickaelian (Digitized First Byurakan Survey (DFBS) – as UNESCO “Memory of the World” documentary heritage), Coryn Bailer-Jones (Understanding Uncertainty: Lessons from Astronomy), Massimo Capaccioli (A pluralistic vein in the early Eighteen century in Europe), Vito Francesco Polcaro (The Astronomical Orientations of Sacred Buildings in the Levant during the Bronze and Iron Ages), Ahmed Abdel Hady (Observatories and astronomers in Egypt during the period 969-1850 AD). At the observatory the participants also visited to V. Ambartsumian Museum, 2.6m telescope.

The **third day** brought our conference participants to Syunik province for ancient observatory Zorats Karer. It is a megalithic assemblage, 200 km from Yerevan, and 3 km from town Sisian; at an altitude of 1,770 m. The northern latitude is 39.34', and eastern longitude is 46.01'. It is an assemblage of many stones put in a circle and a few arms starting from it. As many other such buildings, Karahunge was thought to be a religious assemblage. However, only in the middle of 1980th, Karahunge was first interpreted as an archaeoastronomical monument and was studied by Prof. E.S. Parsamian (1999) and Prof. P.M. Herouni (1998). Estimations give from 7700 to 4000 years for the age of Karahunge.



On the **fourth day** the conference continued its “Astronomical Heritage in Literature and Culture” and “Astronomical Heritage in Language” sessions at NAS RA. At these sessions a number of valuable talks were given, here we list invited talks: Grigor Broutian (Some astronomical-cosmic realities in the Armenian epic “Sasna Tzrer”), Hakob Simonyan (Sunrise as precondition for the



orientation of grave-tombs in ancient Armenia), Mohammad Bagheri (Kushyar ibn Labban), Ararat Yeghikyan (Does “Iron” in Armenian really means a “Sky Drop”?),

Karen Tokhatyan (Ancient Astronomical Knowledge and Rock Art in Armenia). At the evening the participants of the conference visited to Argatsotn province for Byurakan Art Academy.

At the Academy classical concert and conference dinner was held. It was an evening of the combination of the shine of stars, beautiful music and fusion of flavors.

The **fifth day** was the last day of the conference and its contributions were devoted to Astronomical Heritage for Outreach, Tourism and Development. This day we also had Panel Discussion on the goals and methodologies in Cultural Astronomy and Sundial Workshop by Somi Morteza, Press conference and interviews with scientists. The meeting was closed by the discussion of the problems of astronomy-related interdisciplinary sciences and further possible collaborations.

The Proceedings of the Meeting will be published by Astronomical Society of the Pacific (ASP) Conference Series, which is a world-wide known publication and our papers will appear in all libraries and electronic databases (including ADS). Sona Farmanyan, J. McKim Malville, Mohammad Bagheri, and Areg Mickaelian are the editors.



## TURKEY JOINED TO SOUTH WEST AND CENTRAL ASIAN ROAD



On November 17, Turkey officially joined to the South West and Central Asian ROAD office and expressed its desire to carry out its activities for the development of astronomy by adopting Armenia's coordinating role.

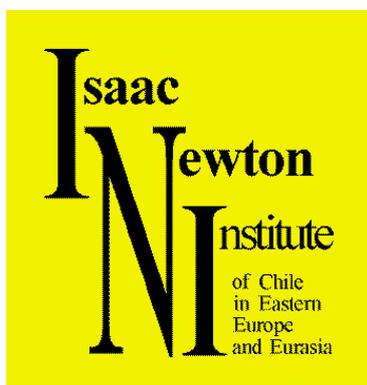
The head of Byurakan Observatory after V. Hambardzumian Areg Mickaelian mentioned: "It is important to state that we are also making a political big step. Armenia recognized as an astronomical center by Turkey. Although it was set up by the IAU, but now Turkey accepts it and joins. Now our cooperation will be closer, visits and exchange of scientific experience more active."



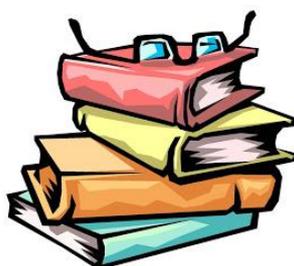
Sinan Alis, a representative of the Turkish Astronomical Society, expressed hope that membership would be effective. "With this cooperation we want to note that, despite certain problems, we are ready and willing to cooperate. We hope to work on various astronomical topics to develop astronomy, to organize conferences, to carry out all the activities that this cooperation assumes. We are glad to be a member of the Regional Astronomical Office. "

Let's remind that the International Astronomical Union's (IAU) Office of Astronomy for Development (OAD) has established South West and Central Asian (SWCA) OAD office in Armenia, 2015. The Armenian office is hosted by Byurakan Astrophysical Observatory and coordinates astronomy for development activities in Armenia and nearby countries, thus realizing the IAU Strategic Plan and Implementing the relevant functions. Georgia, Iran are the members of the office, also Central Asian countries Kazakhstan and Tajikistan.

## THE ISAAC NEWTON INSTITUTE OF CHILE IN EASTERN EUROPE AND EURASIA PAPER 900



Gonzalo Alcaino founder and President of the Isaac Newton Institute of Chile in Eastern Europe and Eurasia has announced the publication of its paper number 900. Since the expansion of the Institute with the opening of the first Branch in Moscow in 1992, a quarter of a century ago, all papers are only published in the four most prestigious journals in astronomy namely The Astrophysical Journal and The Astronomical Journal both in the United States, Astronomy and Astrophysics in Europe and Monthly Notices of the Royal Astronomical Society in England. According to the American Society of Physics the average cost of a paper is US\$ 40.000, which in the case of the total production of the Isaac Newton Institute of Chile together with all the other listed affiliations amounts to a total Endeavour of 36 million dollars, The most productive Branch has been in Petersburg with 176 papers, second is the Yugoslavia Branch in Serbia with 140 publications. The Armenian Branch has 74 published papers.



## RELEASE OF NRAO NEWSLETTER



### Upcoming Events

- NRAO Town Hall at the Jan 2018 AAS Meeting

*Jan 11, 2018 / National Harbor, MD*

- The Very Large Array Today and Tomorrow: First Molecules to Life on Exoplanets

*Jan 11, 2018 / National Harbor, MD*

- Magnetic Fields or Turbulence: Which is the critical factor for the formation of stars and planetary disks?

*Feb 6 - 9, 2018 / National Tsing Hua University, Hsinchu, Taiwan*

- Astrophysical Frontiers in the Next Decade and Beyond

*Jun 26 - 29, 2018 / Portland, OR*

### Recent Media Releases

ALMA Discovers Infant Stars Surprisingly Near Galaxy's Supermassive Black Hole

New Book Highlights Early Radio Astronomy Pioneers

NRAO Scientist/Engineer Noroozian Honored with NASA Roman Technology Fellowship in Astrophysics

Duo of Titanic Galaxies Captured in Extreme Starbursting Merger

SKA Organisation and NRAO team up to develop next-generation astronomy data reduction software

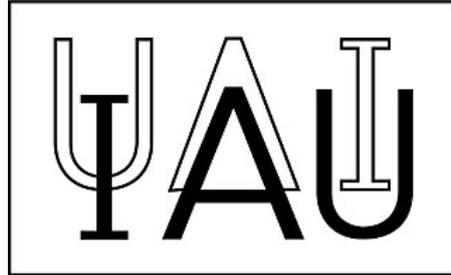
IMAGE RELEASE: Shocking Results of Galaxy-Cluster Collisions

Radio "Eyes" Unlocking Secrets of Neutron-Star Collision

Canadian Data Center Will Augment VLASS Science

VLBA Measurement Promises Complete Picture of Milky Way Galaxy

## RELEASE OF IAU ASTRONOMY OUTREACH NEWSLETTER 2017, November



0) From the Editors

- 1) IAU Commission C1 Education and Development of the Astronomy Newsletter #86
- 2) National Outreach Contact (NOC) Corner: News from Mexico
- 3) IAU C1 Exobiology WS - Astrobiology Introductory Course'18
- 4) Launch your design with CHEOPS
- 5) LIVE: Scientist in Your Classroom
- 6) Art Space at the European Week of Astronomy and Space Sciences (EWASS2018)
- 7) Write for Astrobites and join the team for Spanish!
- 8) Catch a Star
- 9) Meetings & Global Events
  - Recently added
  - Important Dates
  - Upcoming
- 10) IAU Astronomy Outreach Newsletter in other languages
- 11) Contributions to IAU Outreach Newsletter



## Vagharshak Sanamian – 100



Dr. Vagharshak Sanamian (1917-2010) is the founder of the Armenian radioastronomy. He was the teacher of almost all Armenian radioastronomers: Hrant Tovmassian, Vigen Malumian, Vazgen Panajian, Rafik Kandalian, Martik Hovhannisyan, Gabriel Ohanian, et al. He was born on 17 November 1917. Since October 1950 he worked at BAO and participated in the works of the construction and development of the observatory. Since the same year he headed the newly established BAO Radioastronomy Laboratory (reorganized in 1955 to Radioastronomy Department). In 1950s, he supervised the construction and installation of the first BAO radio telescopes, 2 synphase antennas working on 4.2m and 2 synphase antennas working on 1.5m wavelengths.

In 1950-1960s he led the radioastronomical investigations at BAO. In 1957, under the supervision of the outstanding Russian radioastronomer S.Ye. Khaykin, Sanamian defended his Ph.D. thesis. In 1960s he participated in the VLBI observations, in 1960-1970s – observations with a number of radiotelescopes (including the Russian RATAN-600). He worked at BAO until his retirement in 1989. Sanamian passed away on 30 June 2010. His fields of interest were: Galactic radio sources (masers, nebulae, Herbig-Haro objects, etc.), Markarian galaxies, QSOs, compact groups of compact galaxies, and radio instrumentation. Sanamian has published 74 research papers (the last one in 2007 at the age of 90!), including the book “Radioastronomy” (1967, in Armenian) and the chapter “Radio Astronomy at the Byurakan Astrophysical Observatory, the Institute of Radio Physics and Electronics of the Academy of Sciences of the Armenian SSR and Other Armenian Organisations” in the book “A Brief History of Radio Astronomy in the USSR” (2012). He was an ArAS member since 2004.

# CALENDAR OF LUNAR PHASES

## December 2017

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