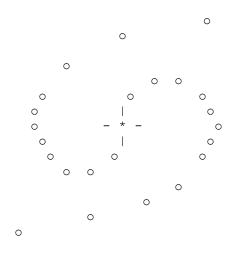
# ArAS News

### NEWSLETTER OF THE ARMENIAN ASTRONOMICAL SOCIETY (ArAS)

No. 23 (Nov 1, 2007)

Editor: Lilit Hovhannisyan

The ArAS Newsletter in the INTERNET: <u>http://www.aras.am/arasnews.html</u>



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### **JENAM-2007 IN ARMENIA**

The Joint European and National Astronomy Meeting (JENAM) in 2007 took place on August 20-25 in Yerevan, Armenia. It was the 15th annual meeting of the European Astronomical Society (EAS) and the 6th annual meeting of the Armenian Astronomical Society (ArAS). JENAM-2007 consisted of 6 Plenary sessions, 8 EAS symposia and 5 special sessions. In addition, the EAS General Meeting was held on August 22, and the EAS Council Meeting was held on August 21. JENAM-2007 was organized by EAS, ArAS, the Yerevan State University (YSU, the venue of JENAM), and the Byurakan Astrophysical Observatory (BAO). The international Scientific Organizing Committee (SOC) had 16 members from 10 countries, including the EAS and ArAS leaders and most of the chairmen of the EAS symposia and JENAM special sessions:

Harvey Butcher (Netherlands) Anatol Cherepashchuk (Russia) Thierry Courvoisier (Switzerland) Michel Dennefeld (France) Anne Dutrey (France) Hayk Harutyunyan (Armenia) Joachim Krautter (Germany), Co-chair Tigran Magakian (Armenia) Michel Mayor (Switzerland) Areg Mickaelian (Armenia), Co-chair Antonella Natta (Italy) Artashes Petrosian (Armenia) Ian Robson (UK) David Sedrakian (Armenia) Yervant Terzian (USA) Yaroslav Yatskiv (Ukraine)

The Local Organizing Committee (LOC) consisted of 11 members from YSU and BAO, most of them being ArAS members: A.M. Mickaelian (Chair), A.K. Avetissian (YSU), S.A. Ghazaryan (YSU), H.A. Harutyunyan (BAO), S.G. Harutyunyan (YSU), E.R. Hovhannisyan (BAO), L.R. Hovhannisyan (BAO), N.D. Melikian (BAO), A. Melkonian (BAO), A.A. Sadoyan (YSU), L.A. Sargsyan (BAO). There was also a LOC supporting team consisting of nearly 40 students from YSU, Brusov Linguistic University, and other institutes.

The EAS symposia lasted 2 days each, and the JENAM special sessions, 1-2 days each. In addition, some 116 posters were displayed in the exhibition/poster/coffee break area during the whole week. 79 invited and 157 contributed talks were given on various topics of astrophysics, involved in the following EAS symposia and special sessions.

### PLENARY SESSIONS

P1: Michel Mayor (Geneva Observatory, Switzerland): Searching for earth type planets

P2: Guy Monnet (ESO, Germany): Status of the European Extremely Large Telescope Programme

P3: Massimo Turatto (Padua Astronomical Observatory, INAF, Italy): Supernovae

P4: Michael Smith (Univ. of Kent, UK): Astrophysical jets and beams

P5: Felix Aharonian (DIAS, Dublin / MPIK, Germany): The Very High Energy Gamma Ray Sky

P6: Vahe Petrosian (Stanford University, USA, TBC): Particle Acceleration

### EAS SYMPOSIA

EAS S1: Extrasolar Planets (Chair: Michel Mayor, Switzerland)

EAS S2: Stellar Evolution and Asteroseismology (Chair: Georges Alecian, France)

EAS S3: Violent Phenomena in Young Stars (Chair: Tigran Magakian, Armenia)

EAS S4: High-Energy Astrophysics: the keV-TeV connection (Chair: Thierry Courvoisier, Switzerland)

EAS S5: Activity in Galaxies (Chair: Ian Robson, UK)

EAS S6: Dynamics of Galaxies and Galactic Nuclei (Chair: Rainer Spurzem, Germany)

EAS S7: Cosmology: New Facts and New Problems (Chair: Haik Harutyunian, Armenia) EAS S8: Science with Virtual Observatories (Chairs: Andrew Lawrence, UK and Areg Mickaelian, Armenia)

### JENAM-2007 SPECIAL SESSIONS (SPS)

SPS1: European Large Facilities for Astronomy (Chair: Michel Dennefeld, France)
SPS2: Numerical Astrophysics (Chair: Avetis Sadoyan, Armenia)
SPS3: Gravitational Wave Astrophysics (Chair: David Sedrakian, Armenia)
SPS4: Astronomy from the Antarctic plateau (canceled)
SPS5: Astronomy Education in Europe (Chair: Magda Stavinschi, Romania)
SPS6: Archaeoastronomy (Chair: Magda Stavinschi, Romania)

YSU central and physics department buildings were used for all meetings and events: 2 meeting halls at the central building and 3 meeting halls at the Department of Mathematics, as well as the exhibition/poster and coffee breaks areas at the central building, secretariat, computer room, and press centre at the departments of Physics and Mathematics.

The official opening of JENAM-2007 took place in the YSU central meeting hall. Welcome speech of the YSU rector was presented. Yuri Chilingarian (NAS RA), Joachim Krautter (EAS President), Nerses Yeritsyan (Minister of Trade and Economic Development), Anthony Cantor (UK Ambassador), Massimo Lavezzo Cassinelli (Italian Ambassador), Haik Harutyunian (BAO Director), David Sedrakian (Editor-in-Chief of Astrofizika journal) welcomed the participants.

248 participants from 31 countries took part in JENAM-2007, including 79 from Armenia, 25 Germany, 24 France, 21 Russia, 17 Italy, 15 Spain, 10 UK, 6 Ukraine, 5 Greece, Switzerland, and USA, 4 Iran and Netherlands, 3 Czech Republic, etc.

The European Southern Observatory (ESO), Euro-VO project, Springer Verlag publishing house, UK Embassy in Armenia, HSBC bank, and other companies held exhibitions during JENAM-2007, as well as some companies inserted their info booklets in the participants satchels (EDP Sciences, Taylor and Francis, etc.). The social program was rather rich: the participants visited Yerevan Brandy Company and BAO (with an open-air joint dinner) on Wednesday, August 22, had a unforgettable banquet in the Ashtarak Dzor restaurant on Friday, August 24, had joint excursions to Armenian sightseeing on Saturday, August 25, as well as many participants took social tours during the working week when they were free from JENAM sessions. The tours included visits to Echmiatzin, Garni/Geghard, Lake Sevan. Khor Virap/Noravank/Karahunge, and Mt. Aragatz. Some participants who stayed in Armenia longer (before and after JENAM) had longer duration tours to Southern and Northern Armenia, a tour around Lake Sevan and Kharabakh (Artsakh).

JENAM-2007 was supported by 13 sponsors, as well as by an information sponsor and partner:

Apaven Co. Ltd., principal sponsor Ani Plaza Hotel C.J.S.C. Antares Holding ARAY Co. Ltd. Edit Print Ltd. Embassy of the UK in Armenia European Space Agency (ESA) HSBC Bank Armenia C.J.S.C. National Foundation for Science and Advanced Technologies (NFSAT) UNICOMP C.J.S.C. Union of Manufacturers and Businessmen (Employers) of Armenia (UMB(E)A) WEB Co. Ltd. Yerevan Brandy Company C.J.S.C. "Armenpress" news agency, information sponsor ArMedia, information partner

### **Contributions from the Armenian participants**

Abrahamyan Hayk Galaxy	Armenia, YSU		S5	poster Multi-Investigation of Distant Radio
Abrahamyan Martin Adibekyan Vardan	Armenia, YSU, Astrophysics	S5	poster S5	On the Astrophysical Jets poster The spectral investigation of several HII
Aharonian Felix Alaverdyan Grigor	regions in Kazarian galaxies Germany, MPIK Armenia, YSU, Radiophysics	S4		/ invited The Very High Energy Gamma Ray Sky Neutron stars with a quark core in the relativistic
Alecian Georges	mean-field theory including the isov France, Paris-Meudon stars	vector-sca S2		neson field The COROT satellite and its first glances to the
Amirkhanian Artur	Armenia, BAO of energetic Transient events (NOM	S4 IOT)	poster	Nor-Amberd Optical mini-observatory for detection
Andreassian-Thomas Nor Andreasyan Ruben	a USA, Univ. Virgin Islands Armenia, BAO Field	S6	oral	3-Dimensional Distribution of Galactic Magnetic
Arshakian Tigran	Germany, MPIfR LOFAR and the SKA		SPS	1 oral Exploring cosmic magnetism with
Asatrian Norayr	Armenia, BAO emission lines of Seyfert galaxy l		oral 1 6 and 1	Rapid profile variations in the broad hydrogen radio galaxy 3C390.3: Possible evidences for an
Avetissian Ara	accretion disk with macroturbulence Armenia, YSU, Astrophysics Superdense Degenerate Plasma	sin AGN S4	poster	High Energy Radiative Transfer Processes in the
Avetissian Ara	Armenia, YSU, Astrophysics Constants	S4	poste	r On Cosmological Variability of Fundamental
Avetissian Ara	Armenia, YSU, Astrophysics a Consequence of Global Symmetry	S7 / Breakdo	oral	A New Theoretical Model of Big-Bang Evidence as
Avetissian Ara	Armenia, YSU, Astrophysics Specialization Courses for Matricula	SPS	5 oral	New Master Program of Astrophysics and
Broutian Grigor	Armenia, BAO stellar associations in the works of V	SPS6	oral	The beginning and evolution of the concept of
Chilingarian Ashot	Armenia, YerPhl "knee" till "cutoff" (10^16-10^19) eV	S4	poster	Research of the Galactic Cosmic Rays from
Chilingarian Ashot	Armenia, YerPhI radiation by the networks of particle	S4	poster	Studies of the Energy Spectra of incident cosmic
Chilingarian Igor	France, Paris Galaxies: 3D Spectroscopic View	S6	oral	Embedded Structures and Young Nuclei in dE
Chilingarian Igor	France, Paris the Virtual Observatory	S8	oral	Discovery of Compact Elliptical (cE) Galaxies with
Chilingarian Igor	France, Paris Centre - I	S8	poster	Some VO Implementations in VO Paris Data
Chilingarian Igor	France, Paris Centre - II	S8	poster	Some VO Implementations in VO Paris Data
Chilingarian Igor	France, Paris Centre - III	S8	poster	Some VO Implementations in VO Paris Data
Egikian Anahit	Armenia, BAO groups of galaxies (SHCGs)	S6	poster	A comprehensive study of Shahbazian compact
Erastova Lida Erastova Lida	Armenia, BAO Armenia, BAO	S4 S5	poster poster	Study of Long-Term Variability of ON 231 Active Dwarf Galaxies as Circumnuclear Regions
Gigoyan Kamo	of LSB-galaxies Armenia, BAO		S2	oral Cool Carbon Stars in the Galactic Halo
Gigoyan Kamo	Armenia, BAO the DFBS Database	S8	oral	Search and Study of Extremely Red Objects in
Gyulzadyan Marieta	Armenia, BAO clusters	S5	poster	с ,
Hajyan Gevorg Hakobyan Artur	Armenia, YSU, Radiophysics S Armenia, BAO Supernovae and their host galaxies	S5	poster A pos	About Stability of Strange White Dwarfs ter Statistical investigation of Core-Collapse
Hakobyan Ashot activity	Armenia, BAO		S3	poster Long-time variation of flare stars
Hakobyan Ashot	Armenia, BAO	S3	poster	SNe explosions frequency distribution function
Hakobyan Ashot Hakopian Susanna	Armenia, BAO Armenia, BAO	S5	S5 oral	poster On the X-ray radiation of M87 2D-spectroscopy of two SBS galaxies with
Hambaryan Valeri	starformation regions Germany, AIP Newton observations	S3	oral	"Unusual" X-ray flares discovered in XMM-
Harutyunian Haik	Armenia, BAO their Role in the Cluster Formation F	S7 Process	invited	On the Nature of cD Galaxies: Some Musings on
Harutyunian Haik	Armenia, BAO	SPS5	oral	Astronomy Education in Armenia
Harutyunian Haik Harutyunyan Avet	Armenia, BAO Italy, Padova	SPS6 S5	oral oral	Armenian Names of the Planets Classification and analysis of 30 Supernova
Hayrapetyan Mekhak	spectra Armenia, YSU, General Physics Oscillating Neutron Stars	SPS3	poster	Glitch-Induced Gravitational radiation from Isolated

Hayrapetyan Tamar	Armenia, Institute of History S7 poster	Calendar and astronomical ideas in Armenian
Herouni Paris	magic fairy tales Armenia, Radio Measurements S7 poster	Experiments are showing: It was never a Big Bang
Herouni Paris	in the Universe Armenia, Radio Measurements SPS6 oral Armenia	The oldest in the World Stone Observatory in
Hovhannissian Elena Hovhannisyan Lilit	Armenia, BAO S3 poster Armenia, BAO S2 oral	2D spectroscopy of HH588 large-scale outflow Optical Identification and Study of Infrared Sources
Hovhannisyan Lilit	in Bootes Armenia, BAO S8 oral	Search and Study of Variable Objects in the DFBS
Iskudarian Sofik	Database Armenia, BAO S7 poster	New Approaches in Astrophysics Gave the Birth
Israelian Garik	of Astroparticle Physics Spain, IAC S1 invited	Abundances of chemical elements in stars with
Kandalian Rafik	exoplanets Jordan, Al Al-Bayt University	
Khalatyan Arman	Germany, AIP S6 invited	AGN influence on galaxy type and morphology
Khangulyan Dmitry	Germany, MPIK S4 oral	On the physics of the VHE emission in LS 5039
Krikorian Ralph	France, IAP	
Magakian Tigran	Armenia, BAO S3	invited 60 years of YSO studies in Byurakan
Martirosyan Zhaklin	Armenia, YSU, Astrophysics S5 poster excess	Infra-red and radio features of galaxies with UV-
Melkonyan Anahit	Armenia, YerPhI SPS2 poster method	On the analysis of output information of S-tree
Mickaelian Areg databases	Armenia, BAO S8	invited Science based on spectroscopic
Mickaelian Areg	Armenia, BAO S8 oral Observatory	Science projects with the Armenian Virtual
Mirzoyan Razmick	Germany, MPP S4 oral the 17m Diameter MAGIC Telescope	Highlights of VHE Gamma Ray Observations with
Movsessian Tigran	Armenia, BAO S3 oral	2D spectroscopy of jets from YSOs
Nikogossian Elena	Armenia, BAO S3 oral	Two neighbor FUor-like objects in Cygnus
Ohanesyan Juleta	Armenia, BAO S2 poster A-Stars	The Behavior of Resonance Doublet 2800 MgII in
Ohanian Gabriel	Armenia, BAO S5 poster	Radio Source Evolution and Intrinsic Redshifts
Paronyan Gurgen	Armenia, YSU, Astrophysics S5 poster	Multi-Frequency Investigation of Distant QSO
Parsamian Elma	Armenia, BAO SPS6 oral	Ancient Astronomy in Armenia
Petrosian Artashes	Armenia, BAO S5 oral study of the galaxies with different nuclear activity	The NGP +30deg zone galaxies. I. Comparative
Petrosian Vahe	USA, Stanford University Plen Plasma Turbulence	ary invited Stochastic Particle Acceleration by
Petrosian Vahe Cosmology	USA, Stanford University	S7 invited Gamma-Ray Bursts and
Sadoyan Avetis	Armenia, YSU, General Physics SPS3 invited	Gravitational Waves from Isolated White Dwarfs
Sahakyan Karen	Armenia, Russian-Arm. State Univ.	SPS2 poster A numerical method for
integrating orbits		
Sahakyan Karen	Armenia, Russian-Arm. State Univ. SPS2 post velocities and accelerations of celestial bodies	ter Simultaneous approximation of coordinates,
Sargsyan Lusine	Armenia, BAO S5 oral Observed by Spitzer	Study of Extremely High IR/opt Flux Ratio Objects
Sarkissian Alain	France, Service d'Aeronomie S8	poster Asteroid Search with the DFBS
Sarkissian Alain	France, Service d'Aeronomie S8 poster Digitized First Burakan Survey	Simple Spectral Access VO application on the
Sedrakian David	Armenia, YSU, General Physics SPS3	invited Gravitational Waves from Millisecond
Pulsars Sedrakian David	Armenia, YSU, General Physics SPS3	oral Toroidal Magnetic Field in Pulsars
Shahabasyan Karen	Armenia, YSU, General Physics SPS3 Armenia, YSU, General Physics SPS3 invited and Oscillating White Dwarfs	Gravitational Radiation from Differentially Rotating
Shahverdian Ashot		Splitting the quasiperiodic orbits and some basic
Shahverdian Ashot	Armenia, Inf. & Autom. Problems SPS2 poster constants in guantum and celestial mechanics	
Sinamyan Parandzem	Armenia, BAO S2 oral	The Nature of the FBS Blue Stellar Objects
Sinamyan Parandzem	Armenia, BAO S8 oral DFBS Database	Search and Study of UV-Excess Objects in the
Tokhatyan Karen	Armenia, Institute of History SPS6 oral Armenia	Ancient Astronomical Knowledge and Rock Art in
Tovmassian Gagik	Mexico, UNAM	
Vardumyan Gohar	Armenia, Archaeo. & Ethnography SPS6 oral	Celestial Bodies in Ancient Armenian Mythology
Yeghiazaryan Anahit	Armenia, BAO S5 poster 6384	HII Region Population of the Spiral Galaxy NGC
Zamkotsian Frederic	France, Marseille SPS1 oral instrumentation on ground and in space	MOEMS devices for future astronomical

# ANNIVERSARIES

### **Grigor GURZADYAN – 85**

Grigor Gurzadyan was born on October 15, 1922 in Baghdad. Upon graduating the Yerevan Polytechnic Institute in 1944, he became the postgraduate of Victor Ambartsumian, who had just moved to Armenia. He defended his Ph.D. in 1948 and became doctor of Science in 1955. Being in Ambartsumian's founding team of Byurakan observatory, he later headed a Laboratory, in 1960s became deputy director of the observatory for space research. He headed the branch of Byurakan observatory on space research, Garni space astronomy laboratory (later Institute, 1992-2004). He is among the pioneers of space astronomy. In 1960s he directed the UV and X-ray observations of sun and stars using ballistic rockets R-5, the first launch being on February 15, 1961 from Kapustin-Yar base. Spectra of thousands of stars to as faint as 13th magnitude were obtained. In April, 1971, the first space station Salyut 1 carried into orbit Orion 1, the first space telescope with an objective prism.

Gurzadian authored theoretical papers on planetary nebulae, interstellar matter, and flare stars. In 1990s he developed the theory of common chromospheres (roundchromes) of close binary stars and of evolution of binary globular clusters.

For decades he lectured in Yerevan State University (theoretical astrophysics) and in Polytechnic Institute (precise mechanics). He has published over 200 papers and a number of monographs, including "Radioastrophysics", "Planetary Nebulae", "Flare Stars", "Stellar Chromospheres", "Physics and Dynamics of Planetary Nebulae", "Theory of Interplanetary Flights", "Space Dynamics".

Gurzadian is a member of the Armenian Academy of Sciences (1986, corresponding member from 1965).

### Agop TERZAN - 80

Famous Armenian astronomer Agop Terzan was born on October 31 1927 in Istanbul. He got his Bachelor degree on Mathematical and Astronomical Science in 1945 and Masters on Astronomy in 1949. He defended his PhD degree in 1965 at Lyon University. During 60s he discovered 710 variable stars in the immediate vicinity of 14 globular clusters. Later he discovered 11 new globular clusters, 158 diffuse nebulae, 124 galaxies, from which 25% appeared to be active galaxies of Sy2 type. In direction to the Galactic center Terzan discovered 4430 new variable stars, including 458 ones identified later with the IRAS sources. Another large work was the discovery of 1428 high proper motion stars ( $\mu > 0$ ".1 per year).

Terzan is a member of French National Astronomy Committee, International Astronomical Union (IAU) and a number of other international organizations. Among his numerous awards and honors are Henry Rey price of the French Astronomical Society and a number of medals. Agop Terzan has visited Armenia many times including his official missions to Byurakan in 1971, 1973, 1977, 1984, and 1989. He has published more than 100 papers on the above mentioned subjects.

### Vagharshak SANAMIAN - 90

Vagharshak Sanamian was born in 1917 in Karabagh. After finishing the local school he moved to Yerevan, where he applied for the Yerevan State University, Department of Engineering-Mathematics. Soon, after the application, the First World War began and he was called to serve in the Soviet army. During his service he managed to get theoretical courses at radio-locational department at the Military Electrical-Technical Academy after S.M. Budyony in Leningrad. In 1946 he returned from the army and graduated from the Yerevan State University Department of Engineering-Mathematics. He had worked from 1949 to 1950 at the Yerevan State University at the Mathematical Department. Starting from 1950 he was at Byurakan Observatory as a senior researcher. In 1957 he defended PhD thesis on radio astronomy and his supervisor was famous Russian radio astronomer S.E.Khaikin. For number of years he supervised radio astronomical studies in Byurakan Astrophysical Observatory. He participated in a number of international collaborations including collaboration between BAO and Indian Astronomical Centers. He worked on flare stars, Sun and Markarian galaxies, Herbig-Haro Objects and other important radio sources. He also worked for a number of years Institute of Radiophysics and Electronics in Ashtarak. He is an ArAS member from 2005.

### **Arthur AMIRKHANIAN - 60**

Artur Amirkhanian was born on July 20 1947 in Port-Artur. He started working at Byurakan Astrophysical Observatory from 1975. He was the head of the laboratory of 2.6 m telescope. He defended his PhD degree 1989, under E.Ye.Khachikian supervision. His main research area includes groups and clusters of galaxies in particular Shahbazian compact groups of compact galaxies. He published about 26 scientific papers.

### Ashot HAKOPIAN - 50

Ashot Hakopian was born on 11 August 1957 in Yerevan. In 1979 he has graduated from the Yerevan State University department of physics and the same year he started working at Byurakan Astrophysical Observatory. Since 2000 he lectures at the Yerevan State University different courses. He has published a number of scientific papers. His main research area includes statistical studies of variable stars.

## CALL FOR ARAS ANNUAL PRIZE FOR YOUNG ASTRONOMERS

ArAS fourth Annual Prize for Young Scientists will be awarded at the end of this year. As in previous years, the prize will be awarded to a young scientist under 35 working in astronomy or related field and showing significant results in research and/or other scientific activities connected anyhow with the Armenian astronomy. Nominations may be made by members or any research organization from Armenia or elsewhere and should be sent to one of the ArAS Co-Presidents. They should include personal data for the nominee and a brief description of his/her achievements during the year, including important scientific results, all published papers, participation in meetings, given talks, etc., whatever is considered to be important. The deadline for applications is December 1. The selection will be made by a special committee and the results will be announced in the last issue of ArAS Newsletter at the end of each year. A diploma and sum of \$100 will be awarded to the winner. As in the previous years, the ArAS Co-President Prof. Yervant Terzian is sponsoring the annual Prize for Young Scientists in 2007, too.