

ArAS News

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ARMENIAN ASTRONOMICAL SOCIETY (A r A S)

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

VIKTOR AMBARTSUMIAN INTERNATIONAL PRIZE 2010

Award Ceremony and other events

On September 17, at 19:00, in the Conference Hall of the Armenian National Academy of Sciences (NAS RA), the Viktor Ambartsumian International Prize 2010 was awarded by the President of Armenia Serzh Sargsyan to *Prof. Michel Mayor* (Switzerland) and his team members, *Prof. Garik Israelian* (Spain) and *Prof. Nuno Santos* (Portugal).



The Award Ceremony was a big event in the scientific life of Armenia. It was in fact a NAS RA extraordinary general meeting with invitation of many other guests. The President of Armenia and the Prime Minister Tigran Sargsyan, ministers, Ambassadors of foreign countries to Armenia, representatives of international organizations in Armenia, the President of the Swiss Academy of Sciences *Prof. Denis Monard*, Viktor Ambartsumian International Prize Steering Committee members, the President of NAS RA *Prof. Radik Martirosyan*, the IAU President *Prof. Robert Williams*, *Prof. Yervant Terzian*, *Prof. Gennady Bisnovaty-Kogan*, *Prof. Norayr Arakelyan*, the Senior Editor of "Nature" *Dr. Leslie Sage*, the Director of the Geneva Observatory (Switzerland) *Prof. Stephane Udry*, the Director of Astrophysical Institute of Canary Islands (IAC, Spain) *Prof. Francisco Sanchez*, lecturers and students of the International School for Young Astronomers 2010 (ISYA-2010), directors and representatives of Armenian research institutes, rectors and representatives of universities and other educational establishments, students, school pupils and other guests were present. Altogether, some 430 people were present.

The Ceremony started with the Armenian national anthem followed by the speech of *Prof. Radik Martirosyan* who presented the principles of the Viktor Ambartsumian International Prize. Speeches were given by *Prof. Williams*, *Prof. Monard*, *Prof. Terzian*, and *Dr. Sage*. Then *Mr. Serzh Sargsyan* congratulated the winners and awarded the medals, certificates, and monetary award. At the end, *Prof. Mayor* presented a short talk on the investigations on extrasolar planets and results that were nominated for the Prize.



Several other events accompanied the Award Ceremony such as:

- Steering Committee meeting at NAS RA on Sep 16. *Prof. Martirosyan, Prof. Williams, Prof. Terzian, Prof. Arakelyan, and Dr. Mickaelian* were present. Some points of the by-laws, changes in the Steering Committee members and other future matters were discussed.
- *Prof. Williams'* interview to the Armenian 2nd TV channel (H2), "Fourth studio" program. A discussion on the astronomy internationally and the role of Armenia in world astronomy was held.
- A visit of Viktor Ambartsumian International Prize 2010 winners and Steering Committee members to the Byurakan Astrophysical Observatory (BAO) on Sep 17 morning. *Prof. Williams* was simultaneously a lecturer at ISYA-2010 and gave a lecture on the results obtained with HST. Then a meeting was held between *Prof. Mayor* and the school participants. The guests visited the 2.6m telescope and discussed a possible collaboration on exoplanets between *Prof. Mayor's* team and BAO.
- A press-conference by the Prize winners at NAS RA on Sep 17.
- A dinner given by the RA President for the Prize winners, Steering Committee members, foreign guests, academicians and other invited guests on Sep 17 evening. Altogether, 80 people were present.
- Interview by the Prize winners to the Armenian "Shant" TV company, "Herankar" program on Sep 18.
- A visit of the Prize winners to Viktor Ambartsumian's monument in Yerevan on Sep 18.
- An excursion for the Prize Committee members and other guests in Yerevan on Sep 18. Visits to the Yerevan "Ararat" Brandy Company, the museum of ancient manuscripts Matenadaran, etc.
- A visit of the Prize winners and other guests to Garni and Geghard on Sep 18.
- A dinner given by the NAS RA President for the Prize winners, Steering Committee members, and other foreign guests on Sep 18.
- A visit of the Prize winners, Steering Committee members, and other foreign guests to lake Sevan, Dilijan and Haghartzin monastery on Sep 19.

Areg Mickaelian,
Scientific Secretary,
Steering Committee, Viktor Ambartsumian International Prize

ISYA-2010 IN BYURAKAN



The **International School for Young Astronomers (ISYA-2010)** was held in Byurakan (Armenia) on Sep 12 – Oct 2. It was organized jointly by the International Astronomical Union (IAU), the Byurakan Astrophysical Observatory (BAO), and the Armenian Astronomical Society (ArAS). It was the IAU 32nd International School for Young Astronomers (ISYA-2010) and the 3rd Byurakan International Summer School (3BISS). The school was a great success and broke several records for the whole history of ISYAs. Altogether, 52 students from 19 countries took part, which was the largest number of representation by countries (Albania, Armenia, Czech Republic, Egypt, France, Georgia, Germany, Greece, Hungary, India, Iran, Lithuania, Poland, Romania, Russia, Serbia, Spain, Turkey, Ukraine). Taking into account the lecturers, two more countries were represented (USA and Belgium) thus bringing the total number to 21. 32 of the students were foreign ones selected out of 117 applications, also the largest number in the history. At last, female participation was 52%, another record.

A number of well-known scientists were invited to lecture during the school on various interesting topics. Altogether, there were 19 lecturers from 7 countries (Armenia, Belgium, France, Germany, Russia, Spain, and USA), including the IAU President *Prof. Robert Williams*, the Chair and Vice-Chair of the IAU ISYA Program Group *Prof. Jean-Pierre de Greve* and *Prof. Kam-Ching Leung*, organizer of the ESO NEON schools *Prof. Michel Dennefeld*, organizer of the Byurakan International Summer Schools *Dr. Areg Mickaelian*, other famous scientists, such as *Daniel Kunth*, *Dieter Engels*, *Gennady Bisnovatyi-Kogan*, *Lutz Wisotzki*, *Garik Israelian*, *Gary Mamon*, et al.

The **Official Opening** was held on Sep 13, and a number of guests were present, such as the Armenian Vice-Minister of Education and Science *Mr. Manuk Mkrtchyan*, the First Secretary of the Armenian National Committee for UNESCO *Mrs. Kristina Mehrabekyan*, Cultural Attache of the Germany Embassy in Yerevan *Mrs. Sophie Boehm*, Head of DAAD Information Centre Yerevan *Mrs. Tine Laufer*, President of “Antares” Holding *Mr. Armen Martirosyan*, and others. Welcome addresses were given by *Dr. Areg Mickaelian*, *Prof. Jean-Pierre de Greve*, Director of BAO *Dr. Haik Harutyunian*, *Mrs. Kristina Mehrabekyan*, *Mr. Manuk Mkrtchyan*, *Mrs. Sophie Boehm*, and *Mrs. Tine Laufer*. Then *Prof. de Greve* gave a short talk about the IAU ISYA program and previous ISYAs. *Dr. Mickaelian* presented the initiative of the Byurakan International Summer Schools and previous two schools in 2006 and 2008. At the end, a presentation of the book “Astronomy” by “Antares” Holding was made by *Mr. Armen Martirosyan*. A number of TV companies were present at the opening ceremony.

The school lasted 3 weeks; 36 lectures on various topics of modern astrophysics, 12 practical exercises on optical, IR, and radio reduction software and some others, observations with BAO 2.6m and 0.45m, as well as remote observations with 2.2m Faulkes North (Hawaii) and South (Australia) telescopes, students’ scientific presentations on their research topics and obtained during the school results, numerous discussions were carried out, as well as tours to Armenian sightseeing, participation in the Viktor Ambartsumian International Prize Award Ceremony in Yerevan, sports games, competitions, banquets, and other social events. All lectures were written on DVDs and distributed to students. The students presentations will be available on the ISYA official webpage.



The **Closing Ceremony** was held on Oct 1, including a summary and discussions, a photo report on ISYA-2010 events, award of the students certificates by lecturers, award of a number of prizes established for the most active students, award of ArAS membership cards to new ArAS members (ISYA-2010 participants *Dr. Dieter Engels* and *Arun Kumar Singh*), a presentation of Vahradyan's booklet on Karahunge, and a small violin and clarinet concert with compositions of Edward Manukyan dedicated to famous scientists.

The winners of students' prizes (some of them were just for fun):

- **Johannes Kleiner** (Germany), most active student
- **Fabian Kohlinger** and **Natalia Lewandowska** (both Germany), best scientific presentations
- **Evgeniya Shaldenkova** (Russia), winner of the students' competition, 37 correct answers out of 40! Next best ones were Thomas Gautier (France), Olga Nasonova (Russia) and Olga Zakhzhay (Ukraine)
- **Olga Nasonova** (Russia) and **Remigiusz Pospieszynski** (Poland), best stories and answers to students questionnaire
- **Sebastian Dietz** (Germany), best in sports games
- **Natalia Lewandowska** (Germany) and **Thomas Gautier** (France), best photos taken during the school
- **Olga Zakhzhay** (Russia) and **Levon Aramyan** (Armenia), best dancers
- **Thomas Gautier** (France) and **Marius Maskoliunas** (Lithuania), most humorous students

- Special prizes and thanks for help in organizational affairs: **Agnieszka Rys** (Spain, for organization of the ISYA-2010 Facebook group page and students' questionnaire), **Jana Polednikova** (Czech Republic, for the picture on the ISYA-2010 T-shirts), **Remigiusz Pospieszynski** (Poland, for the preparation of photo report on ISYA-2010), **Alexandera Novikova** (Russia, for the organization of collection of ISYA-2010 photos)



We would like to thank our **sponsors**: IAU, BAO, ArAS, Armenian National Academy of Sciences (NAS RA), Armenian State Committee for Science (SCS), United Nations Educational, Scientific and Cultural Organization (UNESCO), Armenian National Foundation of Science and Advanced Technologies (NFSAT), German Academic Exchange Service (Deutscher Akademischer Austausch Dienst, DAAD), UNICOMP CJSC, Yerevan "Ararat" Brandy Company, "Antares" Holding, and "Armenpress" News Agency.

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ISYA-2010 web page: http://www.aras.am/SS2010/ss_index.htm

ANANIA SHIRAKATSI 1400TH ANNIVERSARY MEETING



A meeting on Archaeoastronomy “Astronomical Heritage in the National Culture” dedicated to the 1400th anniversary of Anania Shirakatsi will take place on October 28-29, 2010 in the Byurakan Astrophysical Observatory (BAO), Armenia. The meeting is being organized jointly by BAO, Institute of History, Institute of Archaeology and Ethnography, and Matenadaran.

Talks on the Armenian rock art, ancient calendars, astronomical terminology, ancient observatories and astronomical instruments, records of astronomical events by ancient Armenians, Anania Shirakatsi’s heritage, etc. will be presented by astronomers, historians and archaeologists. Discussions on organizations of the archaeoastronomy matters in Armenia will be held.

Anania Shirakatsi (610-685) was the greatest Armenian scientist of the middle ages: philosopher, mathematician, astronomer, geographer, chronologist, the founder of the exact and natural sciences in Armenia. He in fact was the founder of the astronomy in Armenia. He supported the spherical hypothesis of the Earth, suggested a correct interpretation of the Milky Way, explained the Solar and Lunar eclipses. Shirakatsi had a number of chronological works; chronological calculations, tables, he has written several books. Most of the Armenian names of the constellations and stars used nowadays also come from Shirakatsi.

Scientific Organizing Committee (SOC): Elma Parsamian (BAO, Chair), Pavel Avetisyan (Institute of Archaeology and Ethnology), Vladimir Barkhudarian (NAS RA), Yuri Chilingarian (NAS RA), Haik Harutyunian (BAO), Ashot Melkonyan (Institute of History), Areg Mickaelian (BAO), Hrach Tamrazyan (Matenadaran).

Local Organizing Committee (LOC): Haik Harutyunian and Areg Mickaelian, Co-Chairs.

JENAM-2010 in LISBON



The European Week of Astronomy and Space Science JENAM-2010 was held on Sep 6-10 in Lisbon, Portugal. It was jointly organized by the European Astronomical Society (EAS) and Sociedade Portuguesa de Astronomia (SPA). There were 7 symposia and 11 special sessions (SPS).



Dr. Areg Mickaelian participated in JENAM-2010 from Armenia. He contributed in:

Symp. 2 *Environment and the Formation of Galaxies: 30 years later*: “Study of the Byurakan-IRAS Galaxy pairs and the galaxy evolution” (poster)

SPS1 *Astronomy Challenges for Engineers & Computer Scientists*: “ArVO web portal” (poster)

SPS6 *New Trends in Global Astronomy Education*: “Astronomy for Students DVD” (oral)

He also participated in the EAS General Assembly on Sep 8 and attended several other sessions. Important discussions were held about the future large facilities, such as 42m E-ELT, space telescopes, etc.

Next JENAMs will take place in St. Petersburg (Russia, 4-8 July 2011). More information can be accessed at the JENAM 2010 website at <http://www.jenam2010.org/>.

GTPP PROJECT TRAINING COURSES in BYURAKAN



Galileo Teacher Training Program (GTPP) course was organized in the Byurakan Astrophysical Observatory (BAO) on August 19, 2010. 24 teachers from 16 schools participated, including 17 from Yerevan and 7 from other regions of Armenia. Three lectures, an acquaintance to the Byurakan Observatory, excursions to the BAO biggest 2.6m telescope, V.A. Ambartsumian's home-museum, and lunch were organized. The lectures were given by:

H.A. Harutyunian, Director, BAO:

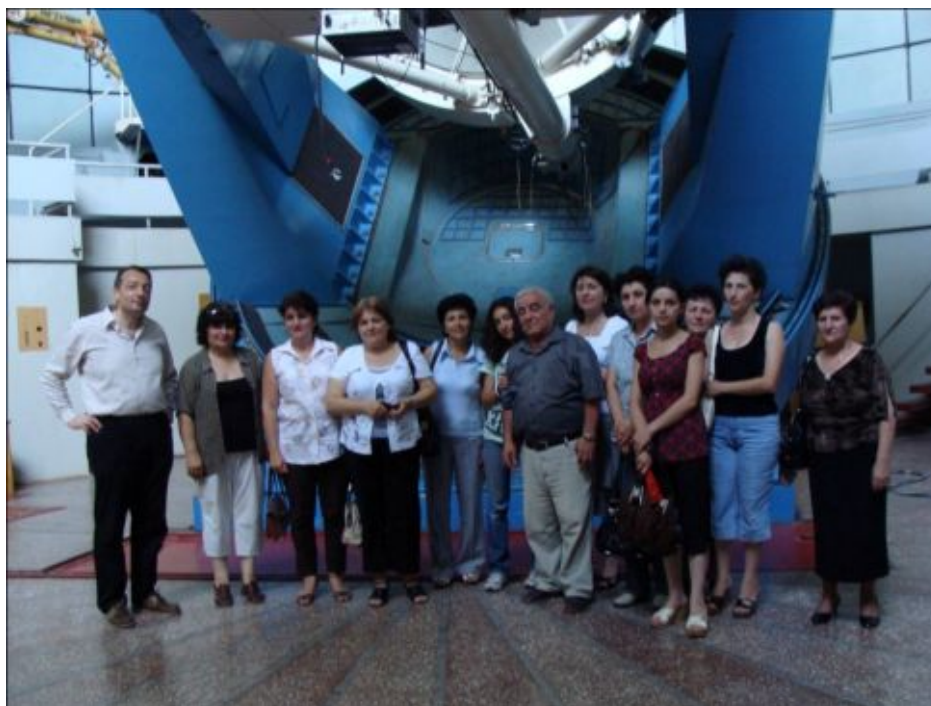
"Viktor Ambartsumian and the Byurakan Astrophysical Observatory".

A.M. Mickaelian, Co-President, Armenian Astronomical Society (ArAS), Leading scientist, BAO:

"The Problems and Methods of Modern Astrophysics".

M.V. Gyulzadyan, Researcher, BAO and teacher at Yerevan Phys.-Math. School:

"Hierarchical Structure of the Universe".



Dr. Areg Mickaelian, Marietta Gyulzadyan and school teachers at BAO 2.6m telescope.

An educational DVD (*"Astronomy for Students"*, compiled by A.M. Mickaelian) was distributed to all participants, as well as booklets and other information materials. Preparation of another DVD (*"Astronomy for pupils"*) was discussed. This event was funded by a GTPP grant, which covered the transportation, meals and educational material distributed to teachers.

ANNIVERSARIES



Dr. Tigran ARSHAKIAN – 50. *Dr. Arshakian is a researcher at Max-Planck-Institut für Radioastronomie (MPIfR) in Bonn, Germany. He was born on August 21, 1960 in Yerevan. He graduated from the YSU in 1983 and worked at BAO in 1984-1997. In 1988-1991 he was a post-graduate and in 1992 he defended his Ph.D. thesis “Investigation of active objects using the inverse problem approach” under the supervision of Dr. R.R. Andreassian. In 1996, he was awarded a Royal Society Fellowship and moved to Cambridge, Cavendish Laboratory and worked with Prof. Malcolm Longair. In 2001 he was awarded the*

Alexander von Humboldt Fellowship to work at the MPIfR with Dr. Anton Zensus and then continued working at MPIfR on other contracts. Arshakian’s main fields of investigations are theoretical astrophysics, pulsars, radiogalaxies, magnetic fields, and recently SKA (he is a member of German SKA team). He has worked on the application of inverse problems, mathematical statistics and theory of probabilities to astronomical tasks; Extragalactic Double Radio Sources: asymmetries, jets, active nuclei and evolution; radio pulsars: space velocities, distances and evolution; large-scale structure of the Universe. Among his main achievements one could mention: the development of a new asymmetric relativistic model for classical double radio sources; the presence of a large-scale space orientation of radio axes of classical double radio sources; the reconstruction of the distribution functions of both the space velocities and the true opening angles of emission beams of radio pulsars; the reconstruction of the electron density distribution in the Galaxy within 4-5 kpc; the discovery of a new effect of the blue-shifting of SNRs emission lines peaks. He has active collaborations with a number of astronomical institutes, particularly with INAOE/UNAM (Mexico). He has published 55 research papers in ApJ, A&A, MNRAS, Ap&SS, Astrophysics, Astronomy Reports, MemSAI, AN, Baltic Astronomy and other journals, as well as in proceedings of international scientific meetings. Arshakian is a member of IAU (1994), EAS, EAAS (1996), and ArAS (2002).

NEW ArAS MEMBERS

We are happy to inform that three new foreign astronomers entered ArAS in September 2010:

Prof. Michel Mayor (Geneva Observatory, Switzerland)

Dr. Engels, Dieter (Hamburger Sternwarte (HS), Germany)

Dr. Arun Kumar Singh (Pt. Ravishankar Shukla University, Raipur, India)

Prof. Mayor is the winner of Viktor Ambartsumian International Prize 2010. Among his relations to the Armenian astronomy is his participation in JENAM-2007 in Yerevan and organizations of one of the symposia, as well as his long collaboration with Prof. Garik Israelian. Dr. Engels collaborates with astronomers from BAO since 2002 (Dr. Areg Mickaelian and his team: Dr. Kamo Gigoyan, Dr. Lusine Sargsyan, and others); the main topics being X-ray and IR astronomy, AGN and late-types stars. He also has been teaching at the Byurakan International Summer Schools in 2006, 2008, and 2010. Dr. Singh participated in the ISYA-2010 in Byurakan.