

# ArAS News

NEWSLETTER OF THE  
ARMENIAN ASTRONOMICAL SOCIETY (A r A S)

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

## INTERNATIONAL YEAR of ASTRONOMY NEWS



Update from the **International Year of Astronomy (IYA-2009)** events (world and Armenia).

### Latest activities and events:

- July 1-8 Third Byurakan Summer School for the Yerevan State University (YSU) students in Byurakan
- July 6-8 ArAS VIII Annual Meeting in Byurakan, including the session “Astronomy and Society”
- July 22 Total Solar eclipse (India, Bangladesh, China), longest eclipse of the 21<sup>st</sup> century (6<sup>m</sup>39<sup>s</sup>)
- July 24 Start of science operations of Gran Telescopio Canarias (GTC), largest in the world
- Aug 3-14 IAU XXVII GA in Rio de Janeiro, Brazil
- Aug 19-24 UNESCO Congress in Kazan, Russia: “Astronomy and World Heritage”

### Next important events:

- Aug Meeting between astronomers and writers in Byurakan
- Aug Meeting between astronomers and actors in Byurakan
- Aug-Sep Meeting between astronomers and composers in Byurakan
- Aug-Sep Ringless Saturn
- Sep 2 Jupiter without its Moons (mutual occultations and eclipses between the Galilean satellites)
- Sep 18 Official day of Astronomy in Armenia (Ambartsumian’s birthday)
- Sep 18 Announcement of Ambartsumian’s first international prize (for 2010)
- Sep 22-24 French-Armenian workshop in Byurakan
- Sep IYA-2009 meeting at Armenian Pedagogical University

The IYA webpage is available at <http://www.astronomy2009.org/> and the IYA-2009 Armenian webpage, at [http://www.aras.am/IYA\\_2009.htm](http://www.aras.am/IYA_2009.htm).

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## TEN YEARS of ArAS

The Armenian Astronomical Society is now 10 years old. Though the idea to create an Armenian astronomical association goes to 1960s (Viktor Ambartsumian, Vahe Petrosian, Yervant Terzian, Ludwik Mirzoyan, et al.), it was in fact created on June 22, 1999, at the meeting of 16 BAO astronomers, its founding members. Bye-laws, membership form, and other necessary documents were prepared by the initiative group of 5 persons and in August the society already had 23 members. However, the society was not registered at the Ministry of Justice of Armenia and didn’t have an official status, though could start its activities. Another administrative “founding meeting” was held on July 10, 2001, and this time the Ministry of Justice registered ArAS as an NGO on August 29. The first international recognition came very soon; ArAS entered the European Astronomical Society (EAS) as an affiliated society on September 13, 2001 at the JENAM meeting in Munich. Later on it was accepted by all related international societies and organizations, so that ArAS really has an international recognition.

ArAS webpage (<http://www.aras.am>) was created in February 2002 and it is now such a detailed one that you can just visit it to have most complete information on the Armenian astronomy, including the Byurakan Observatory. Since the same year (2002) ArAS Electronic Newsletters (ArASNews) started. Typically they appear 4 times a year to deliver various kind of information about the Society, Armenian astronomy, Byurakan Observatory, international astronomical events, etc. to all Armenian astronomers in the world.

ArAS annual meetings and Byurakan summer schools are another type of activity that ArAS organizes together with the Byurakan Observatory. Since 2002, 8 ArAS meetings (including the Joint European and National Astronomical Meeting in 2007, JENAM-2007) and 4 summer schools (including 2 international ones) have been organized. At most of the ArAS meetings foreign participants have been present.

In 2004, another initiative was put forward by Areg Mickaelian and was supported by Yervant Terzian: ArAS Annual Prize for Young Astronomers (since 2009, Yervant Terzian Prize). Eight young astronomers have been the winners and co-winners during these 5 years. As announced in previous Newsletters, this year in connection with the IYA-2009, ArAS and BAO have established 5 other awards (Markarian, Arakelian, Sahakian, Mirzoyan, and Pishmish awards).

ArAS is very active in organizing the IYA-2009 in Armenia. Various events have already been and will be organized: meetings, popular lectures, exhibitions, etc. High importance is being given to mass media, educational (especially school), archaeoastronomical, amateur astronomy, and publication programs.

There are several other ambitious plans that ArAS has, like creation of its scientific and other divisions (like at IAU) and coordination of astronomy among the Armenian institutes and individual astronomers, coordination and development of archaeoastronomy (in frame of Astronomical Heritage project), astrobiology, astronomical education, and amateur astronomy in Armenia, publication of the Encyclopedic DVD on the Armenian astronomy (planned since a few years ago), and foundation of an Armenian International Academy of Astronomy. We believe that ArAS is really necessary for the Armenian astronomy and it will successfully serve to the development and promotion of astronomy in Armenia and among all Armenian astronomers in the world.

*Areg Mickaelian*

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## ARMENIAN ASTRONOMERS at IAU XXVII GA in RIO



The International Astronomical Union (IAU) XXVII General Assembly, the largest astronomical event in each three years, was held on **August 3-14, 2009** in **Rio de Janeiro, Brazil**. The General Assembly consisted of 4 Invited Discourses, 6 IAU Symposia (Nos. 262-267), 16 Joint Discussions (JD), 10 Special Sessions (SpS), several other administrative and special meetings, as well as the IAU General Assembly itself (in two sessions) took place during this period.

As at several previous IAU GAs, Rio's GA had some 2000 participants. This time the participants were from 76 countries, which was due to the International Year of Astronomy that supported participation of representatives from many developing countries. Eight Armenian participants representing different countries were present: **Evelyne Alecian** (Obs. Paris-Meudon, France), **Georges Alecian** (Obs. Paris-Meudon, France), **Igor Chilingarian** (LERMA, Obs. Paris, France), **Alexander Lazarian** (University of Wisconsin, Madison, USA), **Cristophe Martayan** (ESO, Chile), **Areg Mickaelian** (BAO, Armenia), **Elsa Recillas-Pishmish** (INAOE, Puebla, Mexico), **Alain Sarkissian** (LATMOS, France). They participated in 11 sessions:

S262: *Stellar Populations – Planning for the Next Decade*  
 S266: *Star Clusters – Basic Galactic Building Blocks throughout Time and Space*  
 S267: *Co-evolution of Central Black Holes and Galaxies*  
 JD04: *Progress in Understanding the Physics of Ap and Related Stars*  
 JD07: *Astrophysical Outflows and Associated Accretion Phenomena*  
 JD15: *Magnetic Fields in Diffuse Media*  
 SpS02: *The International Year of Astronomy 2009*  
 SpS05: *Accelerating the Rate of Astronomical Discovery*  
 SpS07: *Young Stars, Brown Dwarfs, and Protoplanetary Disks*  
 SpS08: *The Galactic Plane - in Depth and Across the Spectrum*  
 SpS10: *Next Generation Large Astronomical Facilities*

The Armenian astronomers presented 27 contributions: 2 invited, 2 oral ones, and 23 posters:

**Invited talks:**

- A. Lazarian: The role of Magnetic Reconnection at the jet launching basis (JD07)
- A. Lazarian: Fast Reconnection of Weakly Stochastic Magnetic Field: Theoretical Model and its Testing (JD15)

**Oral contributions:**

- E. Alecian: Magnetism and rotation of Herbig Ae/Be stars (JD04)
- G. Alecian: Strontium diffusion in atmospheres of CP stars (JD04)

**Posters:**

- I. Chilingarian: Kinematically and Evolutionary Decoupled Structures in Dwarf Elliptical Galaxies, (S262)
- I. Chilingarian: FUV-to-NIR K-corrections for Low-Redshift Galaxies (S262)
- I. Chilingarian: Analysis of optical spectra of ultra-compact dwarfs and globular clusters: effects of IMF vs dark matter (S266)
- A. Lazarian: Magnetic Reconnection and Particle Acceleration in Accretion Disk/Jet Systems (JD07)
- A. Lazarian: SN-driven outflows versus radio Jets in Galaxies and Clusters of Galaxies (JD07)
- A. Lazarian: The evolution of the magnetic field in the Intergalactic Medium: the effects of a collisionless plasma (JD15)
- A. Lazarian: Numerical Tests of Fast Reconnection in Weakly Stochastic Magnetic Fields (JD15)
- A. Lazarian: Flares of Magnetic Reconnection in MHD regime (JD15)
- A. Lazarian: Tsallis statistics in the ISM (JD15)
- A. Lazarian: Magnetic Field Diagnostics via Aligned Dust Grains: Recent Developments on Alignment of Dust by Radiative Torque (JD15)
- A. Lazarian: Magnetic reconnection in the presence of turbulence: 2D numerical studies (JD15)
- A. Lazarian: The role of turbulent magnetic reconnection in interstellar molecular clouds (JD15)
- C. Martayan: Evolution and appearance of Be stars in SNC clusters (S266)
- C. Martayan: Young open clusters in the Milky Way and Small Magellanic Cloud (S266)
- C. Martayan: Early-type pre- and main-sequence objects in the Eagle-Nebula and Carina star-forming regions (SpS07)
- C. Martayan: Emission Line Stars in the MW with the GAIA space mission (SpS08)
- C. Martayan: Massive stars in Centaurus A and Sculptor groups with the E-ELT EVE-OPTIMOS (SpS10)
- C. Martayan: Hot Stars survey with the GAIA space mission (SpS10)
- A. Mickaelian: Byurakan-IRAS Galaxy pairs as indicators of starburst and galaxy evolution (S267)
- A. Mickaelian: IYA-2009 activities in Armenia (SpS02)
- A. Mickaelian: Using large surveys, multiwavelength catalogs, and databases for new discoveries (SpS05)
- E. Recillas-Pishmish: Optical and NIR monitoring and identification of mm and gamma-ray bright blazars (JD07)
- A. Sarkissian: Planetary Atmospheres: Developments of Data Archiving, Tools, and Services in France (SpS05)

Several other Armenian astronomers were co-authors of contributions at the IAU GA but did not participate in the meeting: Felix Aharonian (Ireland/Germany), Tigran Arshakian (Germany), E. Arzoumanian (USA), T. Boyajian (USA), Vahram Chavushyan (Mexico), Ashot Chilingarian (Armenia), N. Fathalian (Iran), Garik Israelian (Spain), John Magorrian (UK), and Emmanuel Momjian (USA).

A. Mickaelian also represented Armenia at the IAU administrative meetings with the national members in the National Committee, Financial Committee, and Nominating Committee, where various questions were discussed and recommendations and decisions were accepted.

IAU GA was a good chance for meeting other scientists, discussions, exchange of experience, and enjoying the scientific and friendly atmosphere in wonderful Rio. For more info on the IAU GA please visit its web site at <http://www.astronomy2009.com.br/>

Gor Mikayelyan

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## THIRD BYURAKAN SUMMER SCHOOL for YSU STUDENTS



The Third Byurakan Summer School for the Yerevan State University (YSU) Students was held on **July 1-8, 2009 in Byurakan**. The two previous schools have been held in 1995 and in 2005.

Thirty-one 1<sup>st</sup>-3<sup>rd</sup> year YSU students of the Department of Physics stayed at the observatory hotel and learned astronomy, as well as had possibility to meet Byurakan researchers and see the work of the research groups. The Byurakan astronomers gave reviews on different important topics of modern astrophysics, as well as a lot of useful practical exercises, including observations. One of the important program items was the possibility to be present at the scientific sessions of the ArAS VIII Annual Meeting (*see next section*).

Competitions and various interesting social events were also organized, like a quiz on astronomy (where Levon Aramyan, Arus Harutyunyan, and Henrik Nersisyan were the winners), a concert by the famous composer Robert Amirkhanyan, an excursion to the medieval fortress Amberd, etc. At the closing ceremony, various prizes and gifts, including books, BAO souvenirs, etc., as well as certificates of participation were given to students.

**Organizers:** Armenian Astronomical Society (ArAS), Byurakan Astrophysical Observatory (BAO)  
**Organizing Committee (OC):** A.M. Mickaelian (Chair, [aregmick@aras.am](mailto:aregmick@aras.am)), L.A. Sargsyan (Secretary, [sarl11@yahoo.com](mailto:sarl11@yahoo.com)).

**Sponsors:** Armenian State Committee for Science (SCS), ArAS, BAO, YSU

## ArAS VIII ANNUAL MEETING



ArAS VIII annual meeting took place on **July 6-8, 2009 in the Byurakan Observatory**. Given that this year we all celebrate the International Year Astronomy, the meeting was devoted to more general topics, including relation of astronomy and astrophysics to other fields of science and society. Astronomers, biologists, historians, archaeologists, and students participated in the sessions, altogether some 100 people.

**The first day (July 6)** mainly was devoted to the astrophysical results. At the beginning, Areg Mickaelian, ArAS Co-President, gave a report on the ArAS 10-year activities (1999-2009). He mentioned that ArAS has achieved great successes and is in fact the most active scientific society in Armenia and one of the most active astronomical societies in Europe. Then 11 scientific talks were given. The last session of the first day was devoted to the astronomical education, where 3 talks were given.

**The second day (July 7)** was devoted to Astrobiology (5 talks) and Archaeoastronomy (10). Experts from biology, history, archaeology, geology, and other institutions were invited, as well as BAO fellows actively participated.

**The third day (July 8)** session was named "Astronomy and Society" and was devoted to other general topics related to astronomy, like the role of science and astronomy in the society, public outreach, amateur astronomy, scientific tourism, and scientific journalism. Prof. Radik Martirosyan, President of the Armenian Academy of Sciences, Prof. Robert Minasyan, Rector of the Armenian Institute of Tourism, Mr. Ralf Yirikyan, Director General of VivaCell Company (Sponsor of BAO), representatives from fields of culture, other sciences, journalists, teachers, amateurs, and other interested people were present.

The full meeting program is available at <http://www.aras.am/Meetings/arasVIIIprogram.pdf>. Upon submission, full papers (or at least abstracts of contributions) will be available too.

**Organizers:** Armenian Astronomical Society (ArAS), Byurakan Astrophysical Observatory (BAO)  
**Organizing Committee (OC):** H.A. Harutyunian (Co-Chair, [hhayk@bao.sci.am](mailto:hhayk@bao.sci.am)), T.Yu. Magakian, N.D. Melikian, A.M. Mickaelian (Co-Chair, [aregmick@aras.am](mailto:aregmick@aras.am)), T.H. Movsessian, E.H. Nikogossian (Secretary, [elena@bao.sci.am](mailto:elena@bao.sci.am)), E.S. Parsamian, L.A. Sargsyan.

**Sponsors:** Armenian State Committee for Science (SCS), ArAS, BAO

More information is available at <http://www.aras.am/Meetings/arasVIIIannualmeeting.html>.

## FRENCH-ARMENIAN WORKSHOP

**PICS**  
France·Arménie

A small workshop will be organized on **22-24 September 2009** in the **Byurakan Astrophysical Observatory**, "*Present and future of collaborations in astronomy between France and Armenia*". Collaborations in Astronomy between France and Armenia are presently partially supported by PICS (CNRS), which provides also an administrative and institutional framework to these collaborations.

All PICS have a limited duration of 3 years, and this one will end in December 2009. One of the aims of this workshop is to make an assessment of the activities financed by the PICS. Another aim is to discuss about the future of the collaborations and possibly about new orientations. The workshop will be divided in two sessions: a scientific one and a political one (including a discussion about teaching and training of young researchers). The scientific session will consist of oral presentations of results and activities in current collaborations. To enlarge the view, it is also planned to invite presentations concerning collaborations outside the PICS, and possibly from other scientific domains. The political session will consist in a round table with, if possible, representatives of potential funding institutions.

About 20 astronomers will participate, including PICS members and collaborators, invited speakers for collaborations from outside the PICS and possibly from other domains than astronomy. For registration, send an email to **Georges Alecian** ([georges.alecian@obsprm.fr](mailto:georges.alecian@obsprm.fr)) and **Haik Harutyunian** ([hhayk@bao.sci.am](mailto:hhayk@bao.sci.am)) before 3 September 2009 (it is advised not to wait so late if you need to book rooms in hotels of Yerevan). We will reply to confirm your registration and the scheduling of your presentation.

For **accommodation**, we suggest the YSU Guest house (we cannot guarantee available rooms), or the hotel of the Byurakan Observatory. There will be no special support from the workshop organization concerning travel and accommodation. But, we can provide practical information for those who need. Other practical information: there are no fees, no grant for travel.

There will be no proceedings, but a final report for the PICS, and a short document gathering the conclusions.

*Georges Alecian*

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