

By-Laws of the ASEC Collaboration

Article 1 (title)

The name of this collaboration is the Aragats Space-Environmental Center (ASEC). It has been formed by physicists and engineers employed by the Yerevan Physics Institute working in Cosmic Ray Division and by organizations and individuals participating in ASEC activities and/or promoting Cosmic Ray research in Armenia.

Article 2 (mission)

The mission of the ASEC is to:

1. Encourage and facilitate real-time monitoring of the secondary particles of Cosmic Rays at altitudes 2000 m and 3200 m. at Mount Aragats and in several newly established sites in Armenia in the framework of the Armenian geophysical network;
2. Prepare and install sensitive particle detectors, field meters, and other facilities for research in cosmic ray physics, atmospheric physics, and seismology;
3. Develop methods of prediction of Space Weather conditions, including particle fluxes and disturbances of the Interplanetary Magnetic Field (IMF) near Earth;
4. Investigate the influence of local atmospheric conditions (intracloud electric fields, lightning flashes, natural radiation, etc...) on the intensity of the measured particle fluxes;
5. Investigate the influence of the solar-terrestrial connection on the intensity of particle fluxes and on different aspects of life;
6. Provide online access to space-environment data products and services to collaborators and clients worldwide;
7. Provide information about the severe consequences of space storms and meteorological conditions to the public and to relevant organizations of the Republic of Armenia.

Article 3 (functions)

The basic functions of ASEC are to:

Organize the international collaboration of the Armenian geophysical network and the SEVAN European particle detector network, for optimal exploitation of the research facilities on Aragats and at Nor-Amberd;

Provide the development of new experimental and analysis techniques for solar and atmospheric physics research and for the forecasting of space weather events and earthquakes;

Establish an international advisory board for selecting new experiments in topics of mutual interest;

Organize data collection, ensure data quality standards, and develop modern methods of multivariate display and statistical analysis of big datasets on space weather events;

Prepare an ASEC web page with exhaustive information on space weather conditions as measured by the ASEC monitors.

Provide courses on High Energy Astrophysics, Atmospheric Physics, and Solar Physics for students of master courses and Ph.D. programs at the Yerevan Physics Institute.

Article 4 (management)

ASEC is managed by a spokesperson (scientific leader). A secretary of ASEC supports the spokesperson and the Collaboration Board (CB). The CB consists of members from the participating institutions and individuals and is chaired by one of the board members. The CB is the forum where ASEC scientific policy and new experiments are discussed and agreed upon. The spokesperson is nominated by the YerPhI director and confirmed by the CB. The CB meets at least once annually in person and by phone conference when necessary.

Article 5(members, rights and duties)

ASEC members are physicists and engineers who work at ASEC installations and on data analysis of ASEC data. All data from ASEC facilities will be stored in a common database and will be open to all ASEC members for scientific and technical use. ASEC members have access to all data and can use it for publications. Keeping data from an ASEC installation private is strongly discouraged.

Article 6(new members)

Applications from institutions and individuals to join ASEC should be submitted to the ASEC spokesperson. The spokesperson negotiates with individuals and organizations on the conditions of participation. The CB approves new collaboration members.

Article 7(financial issues)

The spokesperson reports regularly on the financial situation of ASEC and suggests an annual financial contribution from ASEC members, which located detectors on Aragats. The Spokesperson, the CB members, and the YerPhI director agree on the fee.

Article 8 (current management and funding)

The ASEC operation is provided by the Cosmic Ray division (CRD) and overseen by the head of CRD. The head of the CRD is appointed by the YerPhI director. CRD is funded by local and international grants independent of ASEC funding. ASEC funds contribute to the overall operation of the CRD, which is necessary for the operation of the ASEC detectors.

Article 9 (duties of the management)

The spokesperson coordinates and oversees all ASEC activities, most importantly operation, maintaining data quality, performing data analysis, provision of data products and publication of scientific results. The spokesperson calls regular meetings (online or in-person), pushes improvement of detectors and analysis methods, and serves as liaison to the outside world, specifically to relevant international organizations (e.g. NASA, ESA, JAXA, ROSCOSMOS, and NOAA). The spokesperson encourages the publication of ASEC results in journals and at conferences.

The secretary of the collaboration supports the spokesperson and the CB. The secretary takes care of the ASEC database and web pages.

The CB is kept informed on the state of the collaborative activities, discusses all scientific developments and issues, and advises the management on pending decisions. The CB strives to make decisions by consensus.

Article 10 (Duties of ASEC consultative board)

The Board is formed of leading scientists working in high-energy astroparticle physics and high-energy physics in the atmosphere. Each year the board comments on the annual report of the ASEC chairperson and make recommendations on the progress and the proposed further research directions. Members of the board periodically visit ASEC research stations to see the development of the ASEC experiments and discuss the results and progress with the staff onsite. Board meetings are organized by the chair, who since 2018 is Dr. Johannes Knapp, DESY.

Appendix

List of ASEC members:

1. Ashot Chilingarian
2. Yeghia Khanikyants
3. Gagik Hovsepyan

4. Balabek Sargsyan
5. Tigran Karapetyan
6. Davit Pokhsraryan
7. Mary Zazyan
8. Davit Aslanyan
9. Sergey Abovyan
10. Ekaterina Svechnikova
11. Nina Nikolova
12. Ondrej Ploc
13. Suren Chilingarian
14. Roni Langer
15. Dragan Rosha
16. Michael Walter
17. Diana Haas

List of ASEC equipment: See WIKI of ADEI crd.yerphi.am/adei. For the list of equipment with pictures and explanations