

# **PROGRAMME OF TEPA-2015**

## ***PROGRAMME***

### ***3-5 October***

Meeting of participants at the Zvartnots airport, transportation to the Nor Amberd, Registration at Nor Amberd International Conference Center

### ***Monday, 5 October***

9:00 – 11:00      **Registration**

11:00 - 11:15      **Opening Ceremony**

### **Session 1: Research of the Thunderstorm ground enhancements (TGEs)**

Chairperson – ***Michael Briggs***

11:15 – 12:00

**Ashot Chilingarian, Yerevan Physics Institute, Armenia, Aragats – Stable Electron Accelerator for the Atmospheric High-Energy Physics Research**

12:00-12:45

**Nicole Kelley, University of California, Berkeley, RREA emission as thunderstorm discharge competing with lightning**

12:45 – 13:30      **Coffee break and poster session**

14:00 – 15:00      **Lunch**

16:00 – 16:45

**Evgeny Mareev, Institute of Applied Physics of the Russian Academy of Sciences, Nizhny Novgorod, Thundercloud electrodynamics and its influence on high-energy radiation enhancements and lightning initiation**

17:00 – 17:45

**Alexander Lidvansky, Institute for Nuclear Research, Russia, The Baksan Experiment on Thunderstorm CR Variations: History, Results, and Prospects**

18:00 – 18:30      **Coffee break and poster session**

20:00                  **Special Event**

Icebreaker, Restaurant of Nor Amberd Conference Center

*Tuesday, 6 October*

09:00                    **Breakfast**

**Session 2: Research of the Terrestrial gamma-ray flashes (TGF)**

Chairperson – **Alexander Lidvansky**

10:00 - 10:45

**Michael Briggs**, *University of Alabama in Huntsville, USA*, **The Fermi Gamma-ray Burst Monitor (GBM) Terrestrial Gamma-ray Flash (TGF) Catalog**

10:45-11:30

**Sergey Svertilov**, *D.V.Skobeltsyn Institute of Nuclear Physics, M.V. Lomonosov Moscow State University*

**Observation of TGFs and Relativistic Electron Precipitations in RELEC Experiment on-board Vernov Mission**

11:30 – 12:00

**Alexei Pozanenko**, *Space Research Institute, Russia*, **Estimating dead time influence for non-stationary flux of TGFs registered by RHESSI experiment**

12:30 – 13:00        **Lunch**

13:00 – 17:30        **Excursion to Aragats Cosmic Ray Station; Introduction to Aragats Space Environmental Center particle monitors**

18:00 – 19:00

**Meftah Mustapha**, *Laboratoire Atmosphères, Milieux, Observations Spatiales*, **PICARD, a mission dedicated to study the Sun**

20:00                    **Supper**

*Wednesday, 7 October*

09:00      **Breakfast**

**Session 3: Lightning initiation: multivariate observations from the earth's surface**

Chairperson – **Nicole Kelley**

10:00 – 10:30

**Suren Soghomonyan, Yerevan Physics Institute, Armenia**

**Fast electric field waveforms of lightning discharges detected at the Aragats Mountain in Armenia**

10:30-11:00

**Leonid Sorokin, Peoples' Friendship University of Russia, Intracloud lightning with the high pulse repetition rate can be associated with emission of the high-energy photons and neutrons**

11:00-11:30

**Leonid Sorokin, Peoples' Friendship University of Russia, Electromagnetic pulses related to seismic waves can trigger lightning and TLEs**

11:30 – 12:00      **Coffee break and poster session**

12:00-12:30

**Suren Hovakimyan, Ministry of Emergency Situations and Territorial Administration of Armenia, Determination of the physical characteristics of the thunderstorm cloud**

12:30-13:00 **Hripsime Mkrtychyan, Yerevan Physics Institute, Armenia, Magnetic field variation during Lightning**

14:00 – 15:00      **Lunch**

**Session 1(2): Research of the Thunderstorm ground enhancements (TGEs)**

Chairperson – *Alexander Lidvansky*

15:00 – 15:45

**Yo KATO, The University of Tokyo , Results of observations of UV and IR emissions from lightning discharges at Aragats Cosmic Station.**

15:45 – 16:30

**Gali Garipov**, *D.V. Skobeltsyn Institute of Nuclear Physics, M.V. Lomonosov Moscow State University*, **Thundercloud-related radiation bursts observed at a coastal area and a mountaintop using segmented organic scintillators**

16:30 – 17:00      **Coffee break and poster session**

17:00 – 17:45

**Vitaly Bogomolov**, *D.V. Skobeltsyn Institute of Nuclear Physics, M.V. Lomonosov Moscow State University*,  
**Study of TGEs and Gamma-Flashes from Thunderstorms in 20-3000 keV Energy Range with SINP MSU Gamma-Ray Spectrometers**

19:00

**Discussion**

**Lightnings and TGEs: relation and competitiveness**

20:00 *Supper*

*Thursday, 8 October*

09:00                    **Breakfast**

**Session 4: Instrumentation**

Chairperson – S.Sogomonyan

10:00 – 10:30

**Gali Garipov**, *D.V.Skobeltsyn Institute of Nuclear Physics, M.V. Lomonosov Moscow State University*, **Vernov satellite mission; first results: Study of flashes of light in the ultraviolet and infrared ranges of the optical spectrum.**

10:30 – 11:00

**Hovik Baghdasaryan**, *Fiber Optics Communication Laboratory, State Engineering University of Armenia*, **Design of fiber optical sensor for atmospheric electric field measurements**

11:00 – 11:30

**Arsen Ghalumyan**, Yerevan Physics Institute, Armenia

**Development of Atmospheric Polarization LIDAR System**

11:30 – 12:00            **Coffee break and poster session**

12:00 – 12:30

**David Pokhsraryan**, Yerevan Physics Institute, Armenia

**Very fast Data Acquisition system based on NI-myRIO with GPS time stamping capabilities**

12:30 – 13:00            **Lunch**

13:00 – 18:30            **Excursion to Agarak, Oshakan, Echmiadzin, Yerevan (Matenadaran)**

20:00 **Conference dinner, Restaurant at Nor Amberd Conference Center**

***Friday, October 9***

4:00 – 24:00 Transportation of participants to the Zvartnots airport

09:00 **Breakfast**

10:00 – 11:00

**Tigran Karapetyan, Hripsime Mkrtychyan, Presentation how to access the data bases of Cosmic ray Division**

11:00-12:00 **Closing ceremony**

12:30 – 13:00 **Lunch**

13:00 – 17:30 **Excursion to Garni and Gegard**

18:00

**Invited Lecture**

**Gregory E. Areshian**

University of California, Los Angeles and American University of Armenia,  
**Archaeology and interdisciplinarity: current trends in studies of the Armenian past**

20:00 **Supper**

## POSTER SESSION

Marek Kollarik, Karel Kudela, **Ronald Langer**, Igor Strharsky, *IEP SAS Kosice*, **First results from the measuring equipment SEVAN on Lomnický štít and possible connections with atmospheric phenomena**

Ashot Chilingarian, **Gagik Hovsepyan**, *Yerevan Physics Institute*, **Observation of the “Long TGEs” at Aragats**

**Eduard Mnatsakanyan**, Karen Avakyan, *Yerevan Physics Institute*, **Thin Polystyrene Plastic Scintillation Detector for Registration Low-Energy Electrons ( $>0.350$  meV) Connected To Atmospheric Phenomena**

**Debanjana Das**, *University of Calcutta*, **Predictability of thunderstorms using cloud parameters.**

**Mikhail Khaerdinov**, Nail Khaerdinov, Alexander Lidvansky, *INR RAS*, **Angular Dependence of Anomalous Disturbances of Muon Intensity during Thunderstorms**

**Solomon Otoo Lomotey**, R. A. Buriti, I. Paulino, A. F. Medeiros, *Federal University of Campina Grande*,  
J. J. Makela, *University of Illinois*, J. W. Meriwhether, *Clemson University*, D. Barros, *INPE*, **Study On Planetary Wave Propagation In The Lower Thermosphere Using Wind Measurements From A Fabry- Perot Interferometer**

**Ajeet Maurya**, Rajesh Singh,  
*Dr. K. S. Krishnan Geomagnetic Research Laboratory, IIG, India*, **On the characteristics of sprite-producing thunderstorm over Indian sub-continent**

**Harutun Dermenjyan**, *H.Mkrtchyan, Yerevan Physics Institute, Armenia*, **Optical Monitoring of Atmospheric Discharges on slopes of Mt. Aragats: Storage and On- Line Display of video information**