



THUNDERSTORMS & ELEMENTARY PARTICLE ACCELERATION



Programme



September 9-13, 2013

Nor Amberd International Conference Centre
of the Yerevan Physics Institute,
Byurakan, Aragatsotn Province, Armenia

<http://crd.yerphi.am/Conferences/tepa2013>



PROGRAMME OF TEPA-2013

7-9 September

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

Monday, 9 September

9:00 - 10:30 ***Registration***

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

Session 1: Chairperson – R. Mirzoyan

11:30 – 12:00

A. Chilingarian, Yerevan Physics Institute, Armenia,

Thunderstorm ground enhancements - model and relation to atmospheric flashes

12:00-12:30

M. Briggs; NASA, Huntsville, USA,

New results from the Fermi GBM extended TGF sample

12:30 – 13:00 ***Coffee break***

13:00 - 13:30

M. Panasyuk, SINP, Moscow State University, Moscow, Russia,

Overview of MSU orbital observation of TLE's and future prospects

13:30 – 14:00

V. Gotlib; Space Research Institute of Russian Academy of Sciences, Moscow, Russia,

Microsatellite “Chibis-M”: observation of terrestrial lightening radiation from space

14:00 – 15:00 ***Lunch***

Session 2: Chairperson – M.Panasyuk

15:00 - 15:30

M. Cherry, Louisiana State University, Louisiana, United States,

Observation of Gamma Rays at Ground Level Associated with Nearby Thunderstorms

15:30 – 16:00

T. Gjesteland; Birkeland Centre for Space Science, University of Bergen, Bergen, Norway,

Terrestrial Gamma ray Flashes observed over low cloud tops

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

18:00 – 19:00 ***Discussion***

TGEs and TGFs - what we can learn by comparisons of both?

20:00 ***Special Event: Icebreaker, Restaurant of Nor Amberd Conference Center***

Tuesday, 10 September

09:00 ***Breakfast***

Session 3: Research of the Thunderstorm ground enhancements (TGEs)

Chairperson – Michael Briggs

10:00 - 10:20

B. Mailyan, Yerevan Physics Institute, Armenia

Observation of Thunderstorm Ground Enhancements with intense fluxes of high-energy electrons

10:20-10:40

L. Vanyan , Yerevan Physics Institute, Yerevan, Armenia

Production of the gamma rays in the thunderstorm electric fields with strength below the run-away threshold due to MOS effect (Modification of secondary cosmic ray Spectra)

10:40-11:00

T. Karapetyan, Yerevan Physics Institute, Armenia

Statistical analysis of the Thunderstorm ground enhancements (TGEs) detected on Mt. Aragats

11:00 – 11:30 *Coffee break*

11:30 – 11:50

H. Mkrtchyan, Yerevan Physics Institute, Armenia

Role of the Lower Positive Charge Region (LPCR) in initiation of the Thunderstorm Ground Enhancements (TGEs)

11:50 – 12:10

L. Vanyan, Yerevan Physics Institute, Armenia

Neutron production during TGEs

12:10 – 12:40

Ch. Fasano; Monmouth College, Monmouth, United States

A Distributed Detector Array Correlating X-Ray Emissions from Lightning flashes with Meteorological Data in the American Midwest

Session 4: Research of the Terrestrial gamma-ray flashes (TGFs)

Chairperson – M. Cherry

12:40 – 13:10

P. Minaev, Space Research Institute of Russian Academy of Sciences, Moscow, Russia

Search and candidates of TGF in SPI experiment of INTEGRAL observatory

13:10 – 13:40

A. Vostrukhin; Space Research Institute of Russian Academy of Sciences, Moscow, Russia

New experiments for TGF study onboard ISS and Chibis-2 satellite

14:00 – 15:00 *Lunch*

Session 5: Atmospheric High-energy phenomena observations by space-born facilities

Chairperson – T. Gjesteland

15:00 - 15:20

G. Garipov; Skobeltsyn Institute of Nuclear Physics, Moscow State University, Moscow, Russia

Additional analysis of MSU microsatellite Tatiana-2 TLE data with data of IKI RAS microsatellite Chibis M

15:20-15:40

G. Garipov; Skobeltsyn Institute of Nuclear Physics, Moscow State University, Moscow, Russia

Some phenomena in studies of transient luminous events measured by “Universitetsky-Tatiana-2”

15:40 - 16:10

V. Morozenko; Skobeltsyn Institute of Nuclear Physics, Moscow State University, Moscow, Russia

Analysis of satellite Tatiana-2 data correlation with cloud cover and regions of thunderstorm and lightning activity

16:10 -16:40

M. Dolgonosov; Space Research Institute of Russian Academy of Sciences, Moscow, Russia

“Chibis-M” observations of lightening radio-emission: capabilities and basic results

Type: ORAL

16:40 – 17:40 *Coffee break and poster session*

18:00 – 19:00 *Discussions*

Particle fluxes and atmospheric discharges - any causal relation?

20:00 *Supper*

21:00 *Evening lecture*

R. Mirzoyan.

Recent highlights of MAGIC experiment

Wednesday, 11 September

09:00 *Breakfast*

Session 6: Instrumentation

Chairperson – Ch.Fasano

10:00 -10:30

P. Klimov; Skobeltsyn Institute of Nuclear Physics, Moscow State University, Moscow, Russia

New opportunities of TUS detector on-board Lomonosov satellite for TLE measurements

10:30 – 11:00

V. Gharibyan; DESY, Hamburg, Germany

Pre-lightning radio signals generated by cosmic ray air showers

11:00 – 11:30

Artur Reymers, Yerevan Physics Institute, Yerevan, Armenia

Geophysical Research Network Operating in the Aragats Space Environmental Center

11:30:12:00

A. Pozanenko; Space Research Institute of Russian Academy of Sciences, Moscow, Russia

Fast optical monitor for lightning detection onboard Chibis-2 mission

12:30 – 13:00 *Lunch*

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

18:00 – 19:00 *Discussion*

High energy physics in atmosphere - perspectives for coming years.

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

Thursday, September 12

09:00 *Breakfast*

10:00 – 12:00 *Discussion*

Databases of TGEs and TGFs are they available for community?

Presentation how to access the data bases of Cosmic ray Division

12:00 – 12:45 *Lunch*

13:00 -18:30 *Excursion to Yerevan and Echmiadzin*

20:00 *Supper*

21:00 *Evening lecture to be announced*

Friday, September 13

09:00 *Breakfast*

10:00 – 12:00 *Discussion*

Transient energetic events in in the Earth' s atmosphere (TGF, TGE, TLE, particle precipitation...) can they all be explained in one theoretical framework?

13:00-13:30 *Closing ceremony*

13:30 – 14:00 *Lunch*

14:00 -18:30 *Excursion to be announced*

20:00 *Supper*

