# The Internationsl Workshop on the Shocks, Turbulence and Nonlinear Systems joint with The International Advanced Workshop on the Seismo-Electromagnetic Studies

## 2011

PROGRAMME

11 - 15 September, 2011

Eilat, Israel

Organised by

The University of Sheffield, UK
Schmidt Institute of Physics of the Earth (IPE), Russia
Ben-Gurion University, Beer-Sheva, Israel
The Tel-Aviv University, Israel

| | | Theatre |
|---|---|---|
| Friday | 17:30 – 24:00 | Arrivals and Welcome |
| Saturday | 19:00 – 21:00 | Round table: heliospheric and astrophysical shocks |
| Sunday | 09:30 – 11:00 | Shocks and turbulence |
| | 11:00 – 11:30 | Coffee break and Poster session |
| | 11:30 – 13:30 | Seismo session |
| | 13:30 – 19:00 | Lunch/Roundtable discussions: Seismo-ionopheric effects: Pro and Contra. |
| Monday | 09:30 – 11:00 | Shocks and turbulence |
| | 11:00 – 11:30 | Coffee break |
| | 11:30 – 13:30 | Seismo session |
| | 13:30 – 19:00 | Lunch/Roundtable discussions: Physics of Collisionless shocks. |
| Tuesday | 09:30 – 11:00 | Shocks and turbulence |
| | 11:00 – 11:30 | Coffee break |
| | 11:30 – 13:30 | Seismo session |
| | 13:30 – 19:00 | Lunch/Roundtable discussions: Nonlinear processes in the Ionospheric turbulence. |
| Wednesday | 09:30 – 11:00 | Shocks and turbulence |
| | 11:00 – 11:30 | Coffee break |
| | 11:30 – 12:30 | Seismo session |
| | 12:30 – 13:00 | Concluding disscussion |
| | 13:30 – 19:00 | Lunch/Roundtable discussions: Earthquake's predictabilitiy. |
| Thursday | 09:00 – 24:00 | Departure |

**17:30–24:00 Arrivals and Welcome**

**19:00–21:00 Round table: heliospheric and astrophysical shocks**

**09:30–11:00 Shocks and turbulence** (Theatre) *Chair: O. Pokhotelov*

09:30–10:00 **M Gedalin** Heliospheric and astrophysical shocks: Common features and differences
10:00–10:30 **V Krasnoselskikh**, M Balikhin, S Schwartz, D Sundkvist, M Gedalin, J Soucek and V Lobzin The scales and energy fluxes in quasiperpendicular High Mach number shocks: recent Cluster and THEMIS discoveries
10:30–11:00 **M Medvedev**, J Frederiksen, T Haugboelle and A Nordlund Theory and numerical modeling of radiation from sub-larmor-scale magnetic turbulence

**11:00–11:30 Coffee break and Poster session**

**A Kotsarenko**, V Grimalsky, G Urquiza Beltran and S Koshevaya Nonlinear Surface Dust Sound Waves in the System Dusty Plasma-Dielectric
**M Solovieva**, A Rozhnoi, M Parrot, M Hayakava and P Biagi Ionospheric turbulence from ground-based and satellite VLF/LF transmitter signal observations for Simushir earthquake (November 16, 2006).

**11:30–13:30 Seismo session** (Theatre) *Chair: O. Pokhotelov*

11:30–12:00 **N Erokhin** The Analysis of Features of Internal Gravity Waves Propagation from Earthquake Zones up to the Ionosphere
12:00–12:30 **T Kaladze** and L Tsamalashvili Nonlinear solitary structures driven by seismo-electromagnetic emissions in the Earths ionosphere
12:30–13:00 **V Chauhan**, O Singh and B Singh A morphological study of GIM-TEC data and its association with seismic activities at a low latitude station
13:00–13:30 **V Korepanov** and G Lizunov Seismo-ionospheric coupling-evidence and possible mechanism

**13:30–14:30 Lunch**

**14:30– Roundtable discussions** Seismo-ionopheric effects: Pro and Contra. *Chair: O. Onishenko*

**09:30–11:00** **Shocks and turbulence** (Theatre) *Chair: V. Korepanov*

09:30–10:00 **M Balikhin**, R Boynton and S Billings Modeling the evolution of energetic electrons fluxes at geostationary orbit
10:00–10:30 **S Klimov**, Liudmila Belyakova, Jean-Louis Pincon and Jean-Andre Sauvaud New physical phenomena in the atmospheric lightning discharges: observations from micro-satellites and ground.
10:30–11:00 **O Pokhotelov** Mirror and Weibel Instabilities: Similarities and Nonlinear Dynamics

**11:00–11:30** **Coffee break**

**11:30–13:30** **Seismo session** (Theatre) *Chair: E. Rogozhin*

11:30–12:00 **V Fedun** and R Erdélyi 2D numerical simulations of MHD waves in solar flux tube
12:00–12:30 **A Kotsarenko**, V Yutsis, V Grimalsky, S Koshevaya, M Pérez, M Fazio and P Perego Experimental study of anomalous Radon activity in the Tlamacas mountain, volcano Popocatepetl area, Mexico as a tool to study Litosphere-Atmosphere coupling for forecasting volcanic and seismic events
12:30–13:00 **V Novikov** and V Zeigarnik Electromagnetic Triggering Phenomena and Their Implication for Earthquake Hazard Mitigation
13:00–13:30 **O Onishchenko** and O Pokhotelov Convective cells of inertio-gravity waves in ionospheric D-layer

**13:30–14:30** **Lunch**

**14:30–** **Roundtable discussions** Physics of Collisionless shocks. *Chailr: M. Balikhin*

**09:30–11:00** **Shocks and turbulence** (Theatre) *Chair: T Kaladze*

09:30–10:00 **T Gombosi** Space Weather Simulations

**11:00–11:30** **Coffee break**

**11:30–13:30** **Seismo session** (Theatre) *Chair: T Kaladze*

11:30–12:00 **O Pokhotelov** Ionospheric response to the natural and man-made activity
12:00–12:30 **E Rogozhin** The major earthquakes and tsunami hazard in the Far East Region of the Russian Federation
12:30–13:00 **A Rozhnoi**, M Solovieva, O Pokhotelov, B Levin and M Hayakava VLF signal anomalies before Sendai earthquake on March 11, 2011
13:00–13:30 **A Sobisevich**, L Sobisevich and K Kanonidi The new geophysical observatory in Northern Caucasus: results of studies of ULF magnetic variations preceding tsunamigenic seismic events

**13:30–14:30** **Lunch**

**14:30–** **Roundtable discussions** Nonlinear processes in the Ionospheric turbulence. *Chair: O. Pokhotelov*

**09:30–11:00** **Shocks and turbulence** (Theatre) *Chair: O. Pokhotelov*

09:30–10:00 **M Ruderman**, Marcel Goossens and J Andries Nonlinear propagating kink waves in thin magnetic tubes
10:00–10:30 **V Krasnoselskikh**, M Balikhin, S Schwartz, D Sundkvist, M Gedalin, J Soucek and V Lobzin Determining the wavelength of Langmuir wave packets at the Earth's bow shock
10:30–10:50 **M Gedalin** Instabilities in the foot
10:50–11:00 **M Balikhin** Concluding remarks

**11:00–11:30** **Coffee break**

**11:30–12:30** **Seismo session** (Theatre) *Chair: M. Medvedev*

11:30–12:00 **F Vallianatos** and F Vallianatos Moving Charged Dislocations and Pressure Stimulated Currents. From fracture processes to earthquake physics in a non-extensive thermodynamic view.
12:00–12:30 **I Zakharenkova**, I Cherniak, I Shagimuratov and O Suslova Seismo-ionospheric anomalies before strong earthquakes of Japan region on the base of GPS/GLONASS data

**12:30–13:00** **Concluding disscussion**

**13:30–14:30** **Lunch**

**14:30–** **Roundtable discussions** Earthquake's predictabilitiy. *Chair: A. Rozhnoi*

**09:00–24:00** **Departure** (Theatre)