

# WISAP 2011, Eilat, 19-24 June, 2011

## Scientific Program

### SUNDAY, June 19th

19.00-20.30 : Ice breaking and registration

### MONDAY, June 20th

8.45-9.00 : Late Registration

9.00-9.05 : Welcome

9.05-9.15 : Opening by Prof. Miri Amit, Dean of the Eilat campus of Ben-Gurion University

Morning session : 9 :15 – 12 :40

**Session I** : Chair : D. Eichler

09.15-10.05 : [Tony Bell](#), University of Oxford, UK

Particle acceleration and magnetic field generation at shocks

10.05-10.35 : [Martin Lemoine](#), Institut d'Astrophysique de Paris, France

Electromagnetic instabilities at relativistic shock waves and relativistic Fermi acceleration

10.35-11.00 : coffee-break

**Session II : Chair : M. Lemoine**

11.00-11.50 : [Bertrand Lembège](#), LATMOS-IPSL-CNRS-UVSQ, 78280 Guyancourt, France

Macro- and micro-scales mechanisms responsible for the nonstationarity of collisionless shocks front

11.50-12.40 : [Christian Mazelle](#), IRAP (UPS/CNRS), Toulouse, France

Non stationary character of quasi-perpendicular shocks and associated micro-turbulence.

12.40-14.00 : lunch break

**Afternoon session : 14 :00 – 18 :00**

**Session I : Chair : V. Krasnoselskikh**

14.00-14.50 : [Ehud Behar](#), Department of Physics, Technion, Haifa, Israel

Instabilities in Photo-ionized Outflows of Active Galactic Nuclei

14.50-15.20 : [Lev Pustil'nik](#), Department of Geophysics and Planetary Sciences, Tel Aviv Univ., Israel

Energy release in Solar flares – critical analysis of the current approach

15.20-15.50 : [David Eichler](#), Ben Gurion University of the Negev, Beer Sheva, Israel

Magnetic field amplification in shock precursors, and the maximum attainable shock potential

15.50-16.10 : coffee break

**Session II : Chair : Y. Lyubarsky**

16.10-16.40 : [Mario Riquelme](#), Astronomy Department, University of California, Berkeley, USA

Electron Injection by Whistler Waves in Non-relativistic Shocks

16.40-17.30 : [Igor Rogachevski](#) : Ben Gurion University of the Negev, Beer Sheva, Israel

Astrophysical turbulent dynamos : open issues and perspectives

17.30-18.00 : [Martin Pohl](#), Institut für Physik und Astronomie, Universität Potsdam, Germany

Magnetic-field amplification in astrophysical sources

TUESDAY, June 21st

Morning session : 9 :00 – 12 :50

**Session I** : Chair : P. Hellinger

9.00-9.50 : [Laurence Rezeau](#), LPP, CNRS/UPMC/Ecole Polytechnique, France

Solar wind turbulence: analysis at different scales

9.50-10.40 : [Olga Alexandrova](#), LESIA, Observatoire de Paris-Meudon, France

Solar wind turbulent spectrum from MHD to electron scales

10.40-11.10 : coffee break

**Session II** : Chair : L. Rezeau

11.10-12.00 : [Reinhart Schlickeiser](#), Institut für Theoretische Physik, Ruhr, Universität Bochum, Germany

General properties of small-amplitude fluctuations in space plasmas

12.00-12.50 : [Lorenzo Matteini](#), Dipartimento di Fisica e Astronomia, University of Florence, Italy

Ion kinetics in the solar wind: observations and simulations

12.50-14.00 : lunch break

Afternoon session : 14 :00 – 17 :30

**Session I** : Chair : R. Schlickeiser

14.00-14.50 : [André Mangeney](#), LESIA, Observatoire de Paris-Meudon, France

Intermittency and dissipation in solar wind MHD turbulence

14.50-15.40 : [Petr Hellinger](#), Astronomical Institute, Academy of Sciences of the Czech Republic, Prague.

Proton electromagnetic instabilities in the expanding solar wind

15.40-16.10 : coffee break

**Session II : Chair : A. Arlt**

16.10-16.40 : [Pierre-Louis Sulem](#), UNS, CNRS, Observatoire de la Côte d'Azur, Nice, France

Fluid modeling of waves and turbulence in plasmas with temperature anisotropy.

16.40-17.30 : [Thierry Passot](#), UNS, CNRS, Observatoire de la Côte d'Azur, Nice, France

Fluid modeling of anisotropic heating and micro-instabilities in space plasmas.

**Workshop dinner : 19 :30**

WEDNESDAY, June 22nd

Morning session : 9 :00 – 12 :50

**Session I** : Chair : T. Bell

9.00-9.50 : [Vladimir Krasnoselskikh](#), LPC2E/CNRS-University of Orleans, France

Generation of electric currents in the solar chromosphere by means of neutral-ion drag

9.50-10.20: [Michael Gedalin](#), Physics Dept. Ben Gurion University of the Negev, Beer Sheva, Israel

Heliospheric and astrophysical shocks : Common features and differences

10.20-10.50 : [Itzhak Goldman](#), Tel-Aviv University, Tel-Aviv, Israel

Shock generated turbulence in clouds near the Galaxy center

10.50-11.20 : coffee break

**Session II** : Chair : T. Passot

11.20-11.50 : [Günter Rüdiger](#), Astrophysikalisches Institut, Potsdam, Germany

Helicity formation by Tayler instability

11.20-11.50 : [Rainer Arlt](#), Astrophysikalisches Institut, Potsdam, Germany

The Tayler instability in spherical domains

11.50 : 12.20: [Todor Kondić](#), Astrophysikalisches Institut, Potsdam, Germany

Shear-Hall instability in spherical geometry

12.20 : 12.50: [Ludovic Petitdemange](#), Max-Planck Institut für Astronomie, Heidelberg, Germany

MagnetoRotational instability and dynamo action

Free afternoon :

An excursion to the Timna Valley (Copper mines of Timna and the King Solomon pillars) is scheduled.

THURSDAY, June 23rd

Morning session : 9 :00 – 12:40

**Session I** : Chair : O. Umurhan

9.00-9.30 : [Evgeny Griv](#), Ben Gurion University of the Negev, Beer Sheva, Israel

Plasma-like instabilities in astrophysical discs

9.30-10.00 : [Michael Mond](#), Ben Gurion University of the Negev, Beer Sheva, Israel

Non-exponential hydrodynamical growth in stratified thin Keplerian discs

10.00-10.50 : [Edward Liverts](#), Ben Gurion University of the Negev, Beer Sheva, Israel

Magnetorotational instability in thin Keplerian discs

10.50-11.20 : coffee break

**Session II** : Chair : M. Pohl

11.20-12.10 : [Orkan Umurhan](#), School of Mathematical Sciences, University of

California Merced, USA, and Astronomy Department, City College of San Francisco, USA

Baroclinic instabilities of accretion disks

12.10-12.40 : [Yuri Lyubarsky](#), Ben Gurion University of the Negev, Beer Sheva, Israel

Magnetic dissipation in Poynting dominated outflows

12.40-14.00 : lunch break

Afternoon session : 14 :00 – 18 :15

**Session I : Chair : M. Gedalin**

14.00-14.50 : [Fabrice Mottez](#), LUTH, Observatoire de Paris-Meudon, France

The role Alfvén waves in the generation of Earth polar auroras

14.50-15.20 : [Semion Sukoriansky](#), Ben Gurion University of the Negev, Beer Sheva, Israel

Nonlinear waves in zonostrophic turbulence

15.20-15.50: [Michal Michno](#), Institut für Theoretische Physik, Ruhr Universität Bochum, Germany

The dissipation of the kinetic energy of cosmic outflows

15.50-16.15 : coffee break

**Session II : Chair : B. Lembège**

16.15-16.45 : [Yosuke Mizuno](#), CSPAR/UA Huntsville, Huntsville, AL 35805, USA

The Current-Driven Kink Instability in Magnetically Dominated Relativistic Jet

16.45-17.15 : [Yu. V. Khotyaintsev](#), Swedish Institute of Space Physics, Uppsala, Sweden

Observations of Wave-Particle Interactions Related to Magnetic Reconnection in the Earth's Magnetotail

17 :15 – 17 :45 : [N. Ikhsanov](#), Pulkovo Observatory, Saint-Petersburg, Russia

Stability of the Magnetospheric Boundary of Accreting X-ray Pulsars

17.45-18.15 : [V. Ghorela](#), Govt. P.G. College, Neemuch, India

A Study of Dust-induced Gravitational Instability of Self-gravitating Magneto- Rotating Space Plasma

18.15 : Closing remarks