

Programme

WISER Alfvén 2007 Workshop, September 17-21, 2007

Monday, 17 September 2007

9:00 **Opening**

Turbulence: Observations (Chairman: Kristof Stasiewicz)

- 9:30** The Low Frequency Plasma Waves in the Polar Cusp Associated with Strong Fluxes of the Energetic Particles
Jan Błęcki (Poland)
- 10:00** Intermittent Turbulence at the Dayside Magnetosphere as Observed by Polar and Cluster
Emiliya Yordanova (Bulgaria)
- 10:30** **Coffee break**
- 11:30** Turbulence and Fossil Structure in the Solar Wind
Joe Borovsky (USA)
- 12:00** Alfvénic Collapse and Plasma Jets: Impacts on the Sun-Earth Connections
Sergey Savin (Russia)
- 12:30** **Lunch break**

Turbulence: Modelling (Chairman: Abraham C.-L. Chian)

- 14:00** Quantifying the Scaling Properties of the Solar Wind Intermittency, Anisotropy and Evolving Turbulence versus Coronal Driving
Sandra C. Chapman (UK)
- 14:30** Firehose Instability as a Source for MHD Turbulence
Lin-Ni Hau (Taiwan)
- 15:00** Acceleration by Strong Double-Layers: Turbulence and Radiation Generation
Raymond Pottelette (France)
- 15:30** **Coffee break**
- 16:00** Unstable Periodic Orbits of a Shell Model Turbulence
Yoshitaka Saiki (Japan)
- 16:30** Wave Kinetic Description of Alfvén Wave Turbulence
José T. Mendonça (Portugal)
- 17:00** Turning the Resistive MHD into a Stochastic Field Theory
Massimo Materassi (Italy)
- 17:30** **End of the Session**
- 18:30** **Welcome Reception**

Tuesday, 18 September 2007

Complexity, Stochasticity and Fractals (Chairman: Sandra C. Chapman)

- 9:00** Intermittent Turbulence and Chaos in the Space Environment: Observation and Theory
Abraham C.-L. Chian (Brasil)
- 9:30** Turbulence and/or Stochasticity in the Earth's Magnetotail Plasma Sheet
Giuseppe Consolini (Italy)
- 10:00** Origin of Transient and Intermittent Dynamics in Space Plasmas
Erico L. Rempel (Brazil)
- 10:30** **Coffee break**
- 11:00** Complexity and Multistability in Nonlinear Alfvén Waves
Rodrigo A. Miranda (Brasil)
- 11:30** Markovian Modeling of Intermittent Solar Wind Turbulence
Marek Strumik (Poland)
- 12:00** Multifractal Models for Solar Wind Turbulence
Wiesław M. Macek (Poland)
- 12:30** **Lunch break**

Simulations and Modelling (Chairman: Wiesław M. Macek)

- 14:00** Dimensionality Effects on the Nonstationarity of a Perpendicular Collisionless Shock: Hybrid versus PIC Simulations
Bertrand Lembege (France)
- 14:30** Fluid versus Simulation Model of SW Solitons: Application to Ulysses Observations
Klaus Baumgärtel (Germany)
- 15:00** The Formation of Relativistic Ion Structures and their Potential Role in the Generation of Cosmic Ray Electrons
Mark E. Dieckmann (Sweden)
- 15:30** **Coffee break**
- 16:00** Alfvén Wave Filamentation in the Presence of Density Inhomogeneities
Pierre L. Sulem (France)
- 16:30** Mirror Structures in Planetary Magnetosheaths: Simulations and Asymptotic Modeling near Threshold
Thierry Passot (France)
- 17:00** **Special lecture:** Cosmic Vision and Space Research in Poland
Marek Banaszkiewicz (Poland)
- 17:45** **End of the Session**
- 18:00** **Dinner**

Wednesday, 19 September 2007

8:30-17:30 Excursion (lunch in town included)
18:00-19:00 **Dinner (UKSW)**
20:00 Concert (Nowe Miasto)

Thursday, 20 September 2007

Particle Energization by Waves and Turbulence

(Chairman: Hans L. Pécseli)

- 9:00 Kinetic Alfvén Waves in a Mixed Kinetic-Inertial Regime
Yuriy Voitenko (Belgium)
- 9:30 Transport of Energetic Particles by Large Amplitude Alfvén Turbulence
Tohru Hada (Japan)
- 10:00 Impulsive Solar Electrons and Energization of Coronal Rare Elements
Ilan Roth (USA)
- 10:30 **Coffee break**

Nonlinear Waves, Solitary Structures and their Role in Turbulence

(Chairman: Einar Mjølhus)

- 11:00 Nonlinear Electrostatic Solitary Waves Observed in Connection with Extreme Space Weather Conditions
Jolene S. Pickett (USA)
- 11:30 Low-Frequency Electrostatic Waves in the Ionospheric E region: a Comparison of Rocket Observations and Numerical Simulations
Hans L. Pécseli (Norway)
- 12:00 Structure of Wave Packets of Whistler-Mode Chorus
Ondrej Santolik (Czech Republic)
- 12:30 **Lunch break**

Solitons and Coherent Waves (Chairman: Tohru Hada)

- 14:00 Stationary Alfvén Waves
Sean M. Finnegan (USA)
- 14:30 FLR Modelling of Dispersive Stationary MHD Structures
Einar Mjølhus (Norway)
- 15:00 How Elusive Are Large Amplitude Solitary Waves in Space Plasmas?
Frank Verheest (Belgium)
- 15:30 Studies of Plasma Turbulence with Methods Based on Electromagnetic Angular Momentum
Bo Thidé (Sweden)
- 16:00 **Coffee break**
- 16:30 Electric Field Structures Produced by Nonlinear Waves in Space
Kristof Stasiewicz (Sweden)
- 17:00 Ion-Acoustic Solitary Waves and Enhanced Ionospheric Radar Spectra
Jonas Ekeberg (Sweden)
- 17:15 Comments on the Dispersion Relation of Two-Fluid Waves
Erik Nordblad (Sweden)
- 17:30 **End of the Session**
- 18:30 **Banquet**

Friday, 21 September 2007

9:00-10:30 Panel Discussion and Future Meetings
11:30 Visiting the Space Research Centre of the Polish Academy of Sciences
13:00 **Lunch at SRC**
Afternoon Possibility of Visiting Warsaw