

Quasi-final agenda for ISSI International Team on

"Superdiffusive transport in space plasmas and its influence on energetic particle acceleration and propagation"

ISSI, Bern, 10 - 14 February 2014

Note: the scheduled presentation times include the discussion time. Broadly speaking, we suggest 30' talks followed by 10'-15' questions/discussion.

Monday, February 10, 2014

09:00 - 09:30: Welcome addresses (Maurizio Falanga (+ Horst, Gaetano))

09:30 - 10:15: Gaetano Zimbardo: "Anomalous transport: numerical simulations and statistical descriptions"

10:15 - 11:00: Horst Fichtner: "Anomalous Transport of Cosmic Rays: Fractional Differential Equations in Astrophysics"

11:00 - 11:30: Coffee Break

11:30 - 12:15: Frederic Effenberger: "Lévy-stable Stochastic Differential Equation Methods for Superdiffusive Energetic Particle Transport and the Application to Termination Shock Particles"

12:15 - 13:00: General discussion

13:00 - 14:30: Lunch Break

14:30 - 15:15: Denise Perrone: "Study of kinetic effects in Vlasov turbulence: particle temperature anisotropy and beams"

15:15 - 16:00: Ambrogio Fasoli: "Burning plasmas for fusion energy"

16:00 - 16:45: Andreas Schalchi: "Analytical Theories for Perpendicular Diffusion" (remote talk via skype).

17:00: Welcome drinks offered by ISSI

Tuesday, February 11, 2014

09:00 - 09:45: Elena Amato: "Particle acceleration in Pulsar Wind Nebulae and Supernova Remnants: open questions"

09:45 - 10:30: Silvia Perri: "Superdiffusive transport and superdiffusive shock acceleration in the heliosphere: observations and theory"

10:30 - 11:00: Coffee Break

11:00 - 11:45: Ivo Furno: "TORPEX: a laboratory device for turbulence and fast ion transport studies in magnetized plasmas"

11:45 - 12:30: Alexandre Bovet: "Non-diffusive transport of fast ions in TORPEX"

12:30 - 13:00: General discussion

13:00 - 14:30: Lunch Break

14:30 - 15:15: Silvia Dalla: "Test particle simulations of Solar Energetic Particle propagation"

15:15 - 16:00: General discussion

16:00 - 16:45: Joe Giacalone: "The spatial distribution of energetic particles in the vicinity of collisionless shocks: spacecraft observations and results from test-particle simulations" (remote presentation via Skype)

16:45 - 17:30: General discussion and suggestions for joint session on Wednesday

Wednesday, February 12, 2014

Joint session with the Team of W. Dröge: "Exploration of the inner Heliosphere - what we have learned from Helios and what we want to study with Solar Orbiter"

----->>> SCHEDULE UNDER CONSTRUCTION !!! <<<-----

09:30 - 09:55: G. Zimbardo: "Introduction to anomalous diffusion of energetic particles in space plasmas"

09:55 - 10:15: I. Furno: "Highlights on fusion plasmas" (TBC)

10:15 - 11:00: W. Droge: "Transport modeling of multi-spacecraft particle events / identification of transport modes and parameters"

11:00 - 11:30: Coffee Break

Two more talks by 45 min from the "Inner heliosphere" team, plus ...

Frederic Effenberger: "The Diffusion Approximation vs. the Telegraph Equation for SEPs" (20 min)

Rami Vainio: "How to (simultaneously) understand flux dropouts and fast perpendicular transport?" (20 min)

Jakobus le Roux: "Non-diffusive Energetic Particle Transport in Intermittent Turbulence and at Shocks in the Heliosphere" (45 min)

Plus time for discussion and cross-fertilization

Thursday, February 13, 2014

09:00 - 17:00: General discussion, open questions, brainstorming, analysis of specific datasets and events.

Friday, February 14, 2014

09:00 - 12:30: Planning of next meeting; tasks to be carried out; plans for papers and conference presentations (abstracts to COSPAR?)

Adjourn
