

Team “Cross-scale energy transfer in space plasmas” meeting, Oct 21 - 25, 2024, ISSI Bern

Time: 09:00 – 17:00 from Monday to Friday
ISSI, Hallerstrasse 6, 3012 Bern

Monday 21st Oct

09:00 Welcome and introduction, review of work done, setting goals for this meeting

10:00 Trans-Heliospheric Survey - **Bennett Maruca**

11:00 Modeling of electric measurements in space plasmas using neural networks - **Om Kieokaew**

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14:00 **Discussion:** What are the new frontiers (new science) in the heliospheric plasmas?

15:00 **Discussion:** What are opportunities with machine learning tools & multi-s/c data?

16:00 Wrap up, write up, and summary

Tuesday 22nd Oct

09:00 Optimal selection of subsets of polyhedra to reduce aliasing - **Kris Klein**

10:00 Quadratic Magnetic Gradients from 7-spacecraft and 9-spacecraft Constellations - **Chao Shen**

11:00 Taylor microscale - **Owen Roberts**

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14:00 Multi-point analysis of turbulence kurtosis - **Francesco Pucci**

15:00 Electron Dissipation and Electromagnetic Work - **Yan Yang (online)**

16:00 Analysis tools for HelioSwarm and Plasma Observatory - **Yasuhito Narita**

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19:00 Team dinner 1: Aarbergerhof (see <https://www.aarbergerhof.ch/>)

Wednesday 23rd Oct

09:00 The anisotropy of the energy cascade rate - **Francesco Pecora**

10:00 How energy conversion is organised with respect to temperature anisotropy-beta instabilities in MMS magnetosheath data - **Lewis Harry**

11:00 **Discussion:** Why should turbulence and kinetic researchers care about multi-point tools?

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14:00 Analysis of energy transfer with single-point measurements during PSP-SO alignment? - **Om Kieokaew**

15:00 Electron-only reconnection and ion heating in 3D hybrid-kinetic turbulence - **Sergio Cerri**

16:00 Wrap up, write up, and summary

Thursday 24th Oct

09:00 Error in multi-spacecraft reconstruction method - **Kris Klein**

10:00 Turbulent reconnection & associated energy transfer - **Julia Stawarz**

11:00 **Discussion:** What development do we actually need to advance our science?

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14:00 Paper drafting session

15:00 Some simulation results on shocks and Kelvin-Helmholtz instability - **Guo Fan**

16:00 Nonuniversality and Dissipative Anomaly in Compressible MHD Turbulence - **Yan Yang (online)**

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19:00 Team dinner 2: Altes Tramdepot Brauerei Restaurant

Friday 25th Oct

09:00 – 12:00 Planning for review papers and distributing workload

14:00 – 17:00 Writing and collaborative work

Talk format: Please prepare for 30 – 45 minutes talk to allow time for discussion.

Discussion format: Please prepare materials, thoughts, ideas for the discussion.