

Second Circular



Objectives of the workshop

The workshop aims at providing a more comprehensive understanding of the nature and origin of magnetic switchbacks as observed in the inner heliosphere, and their role in structuring the solar corona. Our main objective is to make progress by bringing together two communities of physicists: those with expertise in the solar atmosphere and those studying the solar wind in situ, both from an experimental/observational and theoretical/numerical perspective. A large fraction of the workshop will be devoted to moderator-led discussions.

Organization of the workshop

The workshop will start on Monday, September 18 at 13:30 and end on Friday, September 22 at 12:30. There will be four sessions :

- 1) Switchback properties: what are their main characteristics ?
- 2) Switchback origins: what causes them ?
- 3) Switchback evolution: how do they evolve dynamically in the solar corona and how do they interact with it ?
- 4) Switchback propagation: how do they propagate outside of the solar corona and throughout the heliosphere ?

Each session will be divided into three parts of comparable length :

- A few overview talks (solicited)
- A series of focused talks that are directly related to the topic of the session. Each participant is invited to contribute to these short talks
- A moderator-led discussion

All sessions will be plenary but some time has been allocated as well for splinter sessions.

All participants (with no exceptions!) are invited to give a focused talk, one per session (with the possibility of giving a talk in more than one session). We really want everyone to actively participate in this workshop by sharing their results on switchbacks. These may include observations, simulations, modeling, or just ideas. The length of these short talks will depend on the number of submissions we receive and should be about 5 to 10 minutes, including time for questions. The exact length will be specified in September.

Please submit your contribution no later than September 1st by using this form <https://forms.gle/5ERR3zkfUGDrVMXA6> Up to one abstract per session can be submitted. Re-use the same form if you wish to submit abstracts to multiple sessions.

Outcome of the Workshop

An important aim of the workshop is the production of a high-level book published in the Space Sciences Series of ISSI by Springer Verlag (volume #97 in www.issibern.ch/publications). This volume is NOT intended to be the proceedings of the workshop, but a collection of in-depth papers informed by the contributions and discussions at the workshop. It should provide a coherent picture of the current state of the subject. All papers will be peer reviewed. The papers will be published both in the hardcover book in this series and also individually in Space Science Reviews as they are received. We expect the papers to be submitted within 3 months of the workshop so they can reflect the discussions during it and be made available to the community in a timely manner. The journal issue and the SSSI volume are expected to appear about 12 months after the workshop. Electronic versions will be online as soon as accepted.

The book will have four main chapters corresponding to the four sessions of the workshop. Each participant will be expected to contribute to at least one chapter. Chapters will be coordinated by a small team of 3-4 early career and senior scientists. This list of contributions will be discussed during the workshop.

Venue and travelling to Bern

The Workshop will be held at the International Space Science Institute (ISSI), Hallerstrasse 6, 3012 Bern, Switzerland. Check out our website www.issibern.ch for a few more travel tips such as links to city maps of Bern, weather forecasts, tourist information and so on.

Bern is ideally connected to many European cities by fast intercity trains (e.g. TGV Paris-Bern in 4.5 hours, or Frankfurt-Bern 5 hours). Timetable information of trains within and around Switzerland can be found at www.rail.ch

Bern can be reached easily from three international airports: Zurich (ZRH), Basel-Mulhouse (BSL) and Geneva (GVA). Zurich is the busiest one. Direct intercity trains to Bern depart every half hour from inside the airport buildings; see www.rail.ch. The travel time is approximately 1.5 hours from Zurich airport and 2 hours from Geneva airport.

Funding

ISSI will provide the subsistence costs to all participants (i.e. hotel costs plus a per diem), but not the travel costs. There is no registration fee for the Workshop.

Hotel reservations

A block booking has been made in city centre hotels for the Workshop. **All participants are requested to contact before September 1st the workshop secretaries**, Jennifer Fankhauser or Dominique Fuchs (email: secretary@issibern.ch or Tel. +41 31 684 4896), to indicate their arrival and departure dates, as well as any special requests they may have (e.g. double room). Please note that all hotel reservations are made by the ISSI Secretariat only.

Invitation letters (e.g. for visas) can be requested by the ISSI Secretariat and will be sent within a few days. Check [here](#) for visa requirements for Switzerland.

Workshop web page

You will find an updated schedule, a list of participants and the workshop poster (painted by one of the conveners) at <https://workshops.issibern.ch/magnetic-switchbacks/>

Conveners

Marco Velli (UCLA, Los Angeles)
Maria S. Madjarska (MPI, Göttingen, and SRTI, BAS, Sofia)
Stuart D. Bale (University of California, Berkeley)
Olga Panasenco (Advanced Heliophysics, Los Angeles)
Etienne Pariat (LPP/CNRS, Paris)
Anna Tenerani (University of Texas, Austin)
Tim Horbury (Imperial College, London)
Thierry Dudok de Wit (ISSI, Bern, and University of Orléans)

Local organization : Jennifer Fankhauser and Dominique Fuchs, secretary@issibern.ch,
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