

**Second Circular
Workshop of the International Space Science Institute (ISSI)**

Cosmic Rays in the Heliosphere II: Temporal and Spatial Variations

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1. General Information

The International Space Science Institute (ISSI) is hosting a workshop on the subject of *Cosmic Rays in the Heliosphere II: Temporal and Spatial Variations*. The attendance at this workshop is by invitation only. All participants listed below have been contacted earlier and have given a positive reply.

The aim of this information circular is to provide the participants with some more detailed information on the workshop program, organization and logistics, and to inquire about hotel reservation information. Please consult the letter of invitation and our WWW homepage at www.issibern.ch for general information about ISSI.

2. Objective

The goal of the Workshop is to assess the current state of our understanding of the spatial and temporal variations of galactic and anomalous cosmic rays in the heliosphere, and their relation to effects of the Sun. Since the last workshop on cosmic rays in the heliosphere, one solar cycle ago, observations and theory have led to much-improved understanding. Observations in the heliosheath and in a broad range of heliographic latitudes in the inner heliosphere have provided important new information on the global structure of the heliosphere, its time variations and the resulting effects on cosmic rays. The workshop aims at improving our understanding of the key physical mechanisms through which the Sun controls the spatial and temporal variations of cosmic rays. The recent, unusually long-lasting solar minimum also offers a unique opportunity to study into the physics how cosmic-ray modulation operates. This has the potential of significantly improving our understanding of the long-term variation of cosmic rays and therefore to unravel the past behavior of our Sun, and possibly, climate.

The main objective is to understand the spatial and temporal variation of galactic and anomalous cosmic rays in the light of recent observations, theory and modeling:

- Identify the key mechanism(s) of cosmic ray modulation and how changes on the Sun relate to changes in the observed characteristics of cosmic rays in the heliosphere.
- Examine the current long-lasting solar minimum and understand its implications for solar-cycle variations and long-term variations.
- Interpretation of long term variations of cosmogenic radionuclides in terms of solar variability and climate change on Earth.

3. Workshop Structure and Program

This one-week workshop will be structured into three sessions. Each session consists of a series 30-min or 45-min talks (incl. discussion). Speakers are requested to submit their presentation material to ISSI at the time of the Workshop where it will be made available to all participants on a server. Each session will be concluded by a long (90 min) plenary discussion, which will be prepared and moderated by two discussion leaders and summarized in a discussion paper in the Workshop volume.

The draft program is attached to this circular. Please note that individual talks may still need to be shifted somewhat.

4. Publication

A workshop volume is planned to be published by [Springer](#) both as a hardcover book in the [Space Sciences Series of ISSI](#) (SSSI) and as an issue of the journal [Space Science Reviews](#) (SSRv). Papers may be prepared in LaTeX or Word using the style of Space Science Reviews, and must be submitted to the Journal using the [Editorial Manager](#) system. The editors of the volume will be announced at the Workshop. Further details about the publication (including deadlines, style files and such) will be given at the workshop.

5. Funding of the workshop

ISSI will fund the participants by providing the daily subsistence cost during the time of the meeting up to a maximum of 7 days (time of arrival in Bern through departure from Bern). This includes the cost for the hotel and for meals. However, ISSI is not in a position to cover travel costs, taxis, phone calls etc.

There will be no registration fee charged for this workshop.

ISSI will also cover the publication costs of the book volume, of which each participant will receive a complimentary copy.

6. Equipment available at ISSI

ISSI is equipped with a pool of different kinds of workstations such as PCs, Macs, and Sun Stations, as well as with Postscript printers for both b/w and color. All machines have Ethernet connections and run web browsers, ssh, telnet, ftp, etc., so connecting home, accessing email, printing, etc. while at ISSI will be no problem.

Participants who bring their own notebook computers will be able to connect to the Ethernet through the standard RJ45 plug. Cables are available at ISSI and addresses will be dealt out by our DHCP server. We also provide wireless access; participants wishing to use that service will receive a username/password combination from our computer engineer and system administrator, Saliba F. Saliba (saliba@issibern.ch), who will also help with any other computer-related questions. The meeting room is equipped with a computer and beamer for electronic presentations, a video player, an overhead projector, a slide projector, and a whiteboard.

7. Social Program

An informal welcome drink will be offered at the end of the first day at ISSI, on Monday, 12 April 2010 at 5:30 p.m.

A free afternoon is foreseen on Wednesday, 14 April 2010, for sightseeing in or around Bern. Suggestions will be made at the Workshop.

A workshop dinner will be offered to all participants in the evening of Wednesday, 14 April 2010, at 7:30 p.m., in a restaurant located in the old part of the city.

8. Travelling to Bern

Bern can be reached easily from two international airports: [Zurich \(ZRH\)](#) and [Geneva \(GVA\)](#). Direct intercity trains to Bern depart every half hour from inside the airport buildings; see www.rail.ch for detailed departure times. The travel time is ~1.5 hours from Zurich airport and ~2 hours from Geneva airport.

There is also a local airport (Bern, BRN), located a 20-minute shuttle ride from the city centre, with connections to several European cities (Paris, Munich, etc.). Bern is 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. Also check out <http://www.issibern.ch/localguide/location.html> for a few more travel tips and links to city maps of Bern, weather forecasts, currency calculators, etc...

9. Hotel Reservations

All participants of the workshop are kindly requested to contact the workshop secretary, Brigitte Schutte (Tel. +41-31-631-4896, Fax: +41-31-631-4897, email: brigitte.schutte@issibern.ch), to indicate their arrival and departure dates and times, as well as any special requests they may have (e.g. double room). A confirmation will be returned within a few days. Block bookings have been made in nearby hotels; please see www.issibern.ch/localguide/hotels.html for a map indicating the location of the hotels and of ISSI. Deadline for sending the hotel reservation information, which should include your complete contact information, is **15 March 2010**.