

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

21 September 2012

The Physics of Accretion onto Black Holes

Date: 8 - 12 October 2012

Conveners

Tomaso Belloni (INAF - Osservatorio Astronomico di Brera, Italy)
Piergiorgio Casella (INAF - Osservatorio Astronomico di Roma, Italy)
Maurizio Falanga (International Space Science Institute, Bern, Switzerland)
Marat Gilfanov (Max Planck Institut für Astrophysik, Garching, Germany)
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Objectives of the Workshop:

The Workshop is designed to review in depth what has been achieved in the research on accretion on all scales, from galactic binaries to intermediate mass black holes to super-massive AGN, and discuss possible future directions. The main goal of the proposed ISSI Workshop is to discuss the state of the art of the research on black hole accretion.

Following discussions by the Conveners, it is proposed that the Workshop will cover the following main themes:

1. Introduction (Historical perspective)
2. Physical models for the accretion flow around black holes of all masses
3. Accretion on black holes from stellar mass to supermassive
4. Black hole fundamental parameters
5. Accretion jets outflows
6. Overview and outlook

Short presentations by those attending will be structured around the above headings. This list could, subject to discussion and assessment at the Workshop, become the set of chapter headings for the ISSI book. All of those attending will be expected to contribute to one or more of the chapters or for the discussions during the talks.

Product

Following the Workshop, its output will be published as a volume in the Space Science Series of ISSI by Springer, in parallel with the publication of the papers in Space Science Reviews. It is expected that a total of about 6 sections and between 15 and 20 review style and quality papers, submitted to the usual refereeing process will be published in the book. Papers will be based on talks presented at the Workshop and will reflect the discussions that will be held among the participants during the Workshop. A realistic schedule for the publication of the contributions will be agreed and confirmed at the end of the Workshop but the deadline is expected to be end of February 2013.

Advice to Speakers

The conveners would like to remind the speakers that ISSI workshops differ in many ways from other, larger gatherings called "workshop". The guiding spirit of the ISSI workshops is interaction between the attendees who are representing, in this case, all aspects of the physics of accretion onto Black Holes. The resulting multi-author chapters should provide a broad view of the current status of this important discipline but, the Workshop should focus on the future directions of the subject – what we are seeking to achieve in the future and what we need to do to get there. This latter aspect includes new missions, new instrumentation and observing methodologies, new analysis techniques and the development of theory. With this in mind, presenters are encouraged to spend a fraction of their talks in addressing future directions and challenges and the barriers that need to be overcome. We anticipate that the extended discussion sessions will seek to emphasise also these aspects.

Location

The Workshop will be held at the International Space Science Institute, Hallerstrasse 6, 3012 Bern, Switzerland.

Attendance

This will be by invitation only. The draft version of the Workshop programme is attached to this 2nd circular.

Young scientists

Under its special programme for supporting young scientists, ISSI will invite five early career scientists, within two years of their PhD, to take a full part in the Workshop. ISSI will cover the subsistence costs (hotel and meals) to the invited young scientists (see participants list).

Funding

ISSI will provide the subsistence costs (hotel and a per diem to cover meals) to all participants but not the travel costs. There will be no registration fee for the Workshop.

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 <http://www.flughafenbern.ch/>), located a 20 minute shuttle ride from the city centre, with direct connections to Munich, Berlin Schönefeld, Hamburg, Amsterdam, London City, Vienna and Paris Orly.

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 our website www.issibern.ch/ for a few more travel tips such as links to city maps of Bern, weather forecasts, tourist information etc...

Hotel reservations

A block booking has been made in city centre hotels for the Workshop. All participants at the workshop have already been requested to contact the workshop secretary, Jennifer Zaugg (Tel. +41-31-631-4896, Fax: +41-31-631-4897, email: Jennifer.Zaugg@issibern.ch), to indicate their arrival and departure dates and times, as well as any special requests they may have (e.g. double room). Please note that all hotel reservations have to be made by the ISSI Secretariat.

A confirmation will be returned within a few days. Block bookings have been made in nearby hotels; please see <http://www.issibern.ch/localguide/location.html> for maps that indicate the location of ISSI and of the hotels (go to “hotels”, and near the bottom of the page “map of hotels”).

Schedule

Invitations and First Circular:	11 May 2012
Registration deadline:	11 June 2012
Second Circular and final program:	21 September 2012
Workshop:	8–12 October 2012