

**Third Announcement
of the
International Conference**

**Binaries – Key to Comprehension
of the Universe**

Brno, Czech Republic

June 8—12, 2009

(<http://astro.physics.muni.cz/binkey>)

In celebration of the 90th anniversary of the Masaryk University foundation and International Year of Astronomy, we are organizing a conference from June 8 to 12, 2009, in the estates of Masaryk University in the city of Brno, Czech Republic.

MEETING ORGANIZERS

- [Department of Theoretical Physics and Astrophysics, Faculty of Science, Masaryk University, Brno, Czech Republic](#)
- [Astronomical Institute, Charles University, Prague, Czech Republic](#)
- [Astronomical Institute, Academy of Sciences of the Czech Republic, Ondřejov, Czech Republic](#)
- [Astronomical Institute of Slovak Academy of Sciences, Tatranská Lomnica, Slovakia](#)

Co-operating institutions:

- Nicholas Copernicus Observatory and Planetarium Brno, Czech Republic
- Observatory and Planetarium of Johann Palisa, VŠB - Technical University of Ostrava
- Czech Astronomical Society (represented by Variable Stars and Exoplanets Section)

The conference is sponsored under the auspices of the rector of Masaryk University, Petr Fiala and the governor of South Moravian region, Michal Hašek.

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CONFERENCE CITY - BRNO:

Brno is the largest city of Moravia and an important tourist centre for all who want to explore natural and cultural beauties of the South-Moravian region. The city is surrounded by beautiful mixed forests that offer many opportunities for tourism and cycling. Today, Brno is a seat of universities and important judiciary institutions. It offers many possibilities for cultural enjoyment in its numerous theatres, museums, cinemas and clubs. (for more information visit <http://www.brno.cz/index.php?lan=en>).

Places worth seeing: <http://www.brno.cz/index.php?nav01=2222&nav02=6&lan=en>

TRAVEL INFORMATION:

How to reach Brno

Brno can be reached easily by direct trains from Prague, Vienna, Bratislava, and Budapest. You can travel by plane to Vienna and then by coach or train (130 km). Another possibility is to travel by plane to Prague and then travel about 200 km by plane, coach or train.

Arriving by Plane

There are direct flights to the Brno airport from Prague, London and Moscow. The nearest large international airports are Vienna (130 km) and Prague (200 km). They provide good train/bus connections to Brno; some airlines even offer direct bus transport to Brno from the airport. Ask your travel agent for this option when buying your plane ticket.

How to get from the Vienna Airport to Brno:

1. There are [direct bus lines](#) from Vienna to Brno (Wien-Brünn); however, you need to book the seat in advance. It is possible to acquire reservation via [internet](#) and sometimes they have free seats; it is also possible to buy the ticket on the bus.
2. If you want to travel by train, you can purchase a ticket at the railway station. You need to go from airport to the *Südbahnhof* railway station. There are [Vienna Airport Lines](#) (airport service runs

every 20 minutes) or any [other ways of transport](#). Note that there are multiple railway stations in Vienna.

Vienna-Brno Timetables for June 7th, 2009:

- a) [Bus Timetable](#).
- b) [Train Timetable](#).

How to get from the Prague Airport to Brno:

1. Czech airlines offer short 50 min flights from Prague to Brno.
2. Another option is traveling by bus. There are direct bus lines from the Prague airport to Brno. [Student Agency](#) buses (recognizable by the yellow color) depart from the Prague airport every hour from 7:35 to 21:35. It is possible to book a seat in advance via [internet](#), but also to buy the ticket on the bus. The price is 250 CZK.
3. The last possibility is to travel by a regular bus or by train. However, you need to take care of the transit from the airport to the railway/bus station by [public transport](#).

Prague-Brno Timetables for June 7th, 2009:

- a) [Bus Timetable](#).
- b) [Train Timetable](#).

Arriving by Car

Brno is located in the southwest part of the Czech Republic, on the D-1 backbone motorway Prague-Brno-Bratislava, and on the rail-road line Prague-Brno-Vienna. The nearest international airports are Vienna and Prague. It takes about 120 minutes to get to Brno from Vienna, and 150 minutes from Prague. Use exit 190 when leaving the motorway from Prague.

Notes:

- 1) If you want to use a Czech highway, you must buy a stamp (CZK 220 for 7 days, CZK 330,- for 1 month).
- 2) For a map of the Czech Republic see [Maps CZ](#) or [Maps Google](#).

Arriving by Train

Brno can be reached easily by direct EC/SC trains from Prague, Vienna, Bratislava and Budapest. You may find train connections which suit you best by using the on-line timetable service.

For railway or bus connections the actual information may be found at:

- a) [Bus and Train Timetables](#)
- b) [Train Timetable](#).

In general: consult the following links for railway or bus connections.

<http://jizdnirady.idnes.cz/vlakyautobusy/spojeni/> or <http://www.vlak.cz>
<http://www.jizdnirady.cz> or <http://www.vlak.cz> .

In Brno: How to Reach the Hotel and Conference Venue

Hotel Continental: You can take tram No. 4,5,12,13 from the main railway station to the "Česká" stop (the third stop) and then walk about 300 m to the hotel Continental. You will need to purchase one ticket for 14 CZK. It might be easier to take a taxi, however please take into account that the distance is about 2 km from the bus station (from Vienna) or railway station to the hotel Continental. The cab fare should be about 100-150 CZK (40 CZK to start the meter and then about 30 CZK per kilometer). Unfortunately, Czech taxi drivers have a bad reputation (especially in Prague), that's why we warn you about the price.

UNI Hostel Garni: You can take tram No. 1 from the main railway station to the stop Lipová. You need one ticket 18 CZK. See [map](#).

CONFERENCE VENUE:

Faculty of Science

[The Faculty of Science at Masaryk University](#) is situated at Kotlarska street 2. It is about 800 m from the hotel Continental. Veer right from the hotel and turn left at the light after about 800 m; after several metres you will reach the main entrance of the Faculty of Science.

From the student hostel you can use trolley lines No. 25, 26 from Lipová to the Konečného náměstí stop. From the stop continue in the same direction along the brown fence (paling) and you will reach the main entrance to the Faculty of Science in around 100m.

WEATHER CONDITIONS:

Summer weather in the Czech Republic typically covers the period from June through mid-September. Czech summers are usually mild (20-27°C/70-80°F) and somewhat humid, with the highest temperatures rising to 30-35°C/85-95°F (occasionally even higher) for short periods. Such heat waves can be expected mostly in July and August. Sudden showers and thunderstorms are common, so bring an umbrella or be prepared to dash for cover.

ACCOMMODATION, MEALS:

We hope that all participants have already arranged for their accommodation in Brno. If not, please contact hotel Continental immediately (for instructions please consult the conference webpage) or contact the organizers.

Lunches will be provided in the student canteen of the Faculty of Science for the first day only. For the following days participants can order one of the three possibilities for 90 CZK. Of course, you can use restaurants in the surrounding areas as well. The average price of the main course will be about 100 CZK.

REGISTRATION:

Registration will be open on Monday from 7:30 am at the auditorium of Faculty of Science. Please do not come just before 9 am....

PAPERS:

Working language is English.

The time allocated for the invited review paper is 40 min + 5 min for discussion, while the time allowed for the contributed paper is 15 min + 5 min for discussion. The speaker can use local computer (Windows) or

his/her laptop, and the overhead projector. We ask all speakers to make certain that their talks actually work (copy and check your presentation in advance). Our technicians will help you.

We invite presenting your contributions on poster displays (the oral presentation duration is 2 minutes max). The recommended poster size is A1 or A0.

Oral contributions and posters will be published as a special issue of the ASP Conference Series. The necessary style together with instructions for authors is available at our conference webpage <http://astro.physics.muni.cz/binkey/conference/language-papers/>. Please take into account that ASP will want the American letter format instead of A4 format. The limits for conference contributions are: 10 pages for invited papers, 4 pages for contributed papers, and 2 pages for posters.

The deadline is August 31, 2009.

SOCIAL EVENTS

Monday - 19:30 The Welcome reception – Office building of the South Moravian Region, Cejl 73, Brno - refreshments, jazz music

Tuesday - 20:00 Concert – N. Copernicus Observatory and Planetarium, Kravi hora, Brno – large planetarium hall. Concert of Chamber Wind Harmony Brno (double wind quintet with a conductor): "Small pieces of great composers". Popular compositions of A. Dvorak, L. Janacek, P. I. Tchaikowskij, C. Orff, J. Suk and others. Conductor - Petr Lichnovsky, dramaturgy and music arrangements Z. Mikulasek, J. Strmiska, planetarium show P. Karas.

Wednesday – 14:00 Excursion: Museum of J.G.Mendel (<http://www.mendelmuseum.muni.cz/en/>), Starobruno brewery – due to limited capacity participants must be split into smaller groups for tours that start every 30 minutes. Please choose a group and sign in the form at the registration desk.

18:00 – Public outreach - E. Guinan - N. Copernicus Observatory and Planetarium, Kravi hora, Brno, 15 min walk from Faculty of Science

Thursday – 19:30 Closing reception – Botanical garden, Kotlarska 2, Brno – refreshments, folk music, wine tasting

Other events in Brno:

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|-------------------|---|
| April – June 15 | Exhibition „Universe-adventure of discoveries“ – large size astrophoto in the street (Malinovskeho namesti) |
| May 22 - June 5 | International Fireworks Festival with musical accompaniment |
| May 31 - Sept. 28 | Sculptures in streets – Brno Art Open 2009 |
| June 5 - 7 | Amusements under ramparts – festival for everybody |
| June 5 - 7 | Traffic nostalgia – exhibition of history of public transport ; 140 years of public transport in Brno |
| June 6 - 14 | International fair AUTOSALON Brno 2009 - car exhibition |
| June 7 | Folksy castle party – entertainment at Spilberk castle |
| June 10 19:30 | Claus-Erhard Heinrich: organ concert – St. Augustin church, Náměstí míru, Brno (end station of tram line 4; just under the hill with planetarium) |

We look forward to meeting you in Brno next week

Jan Janík, Miloslav Zejda
chairpersons of LOC

Andrej Prša
chairperson of SOC

PRELIMINARY (BUT ALMOST FINAL!) SCHEDULE:

Monday, June 8

- 08:45 Opening Remarks
09:00 Guinan: Review of novel EB approaches/results
09:45 Maceroni: The CoRoT light curves : a goldmine for binary research
10:05 Matijević: Binary Detection and Parameter Estimation in the Automated Spectroscopic Surveys
10:25 Pietrzynski: Precise distances to the Magellanic Clouds from the unique late-type long-period eclipsing binaries
10:45 *coffee break*
- 11:15 Tokovinin: Instrumentation and Missions in the 21st Century
12:00 Tsantilas: Introduction to VSAA - the method of Variable Sine Algorithmic Analysis and its applications to active binaries
12:20 Mennekens: The delay time distribution of type Ia supernovae: comparison between theory and observation
12:40 *lunch*
- 14:00 Wilson & Van Hamme: Eclipsing Binary Modeling in the 21st Century
14:45 Devinney: Artificial Intelligence in Astronomy
15:05 Budaj: Shellspec - a code for modelling the spectra and lightcurves of interacting binaries
15:25 Longhitano & Binggeli: The widest binary stars: A statistical approach
15:45 *coffee break*
- 16:15 Rucinski: David Dunlap Observatory program of short-period binary spectroscopic orbits
17:00 Borkovits: Interferometric observations of the hierarchical triple system Algol
17:20 Kawka: Common proper motion white dwarf companions to bright Hipparcos stars
17:40 poster review
- 19:30 **conference reception**

Tuesday, June 9

- 09:00 Eggleton: Formation and Evolution of Binaries and especially Triples
09:45 Suda: Pan Binary Scenario for the Origin of Extremely Metal-Poor Stars in the Galactic Halo
10:05 Kouwenhoven: The formation of very wide binaries
10:25 Kisseleva-Eggleton: Further Evidence for Evolution by Kozai Cycles and Tidal Friction
10:45 *coffee break*
- 11:15 Vanbeveren: Binaries and Stellar Population Synthesis
12:00 Mennickent: Double Periodic Variables
12:20 Nanouris: Probing evolutionary trends in close binaries from observed period changes
12:40 *lunch*
- 14:00 Pavlovski & Hensberge: Spectroscopic analysis of binary stars
14:45 Škoda & Hadrava: Fourier Disentangling Using Technology of Virtual Observatory
15:05 Torres: The Hyades binary Theta 2 Tauri: a new spectroscopic orbit and orbital parallax
15:25 Richards: Applications of Doppler Tomography in 2D and 3D
15:45 *coffee break*

- 16:15 Piirola: Polarimetric analysis of binary stars
- 17:00 Katajainen: Polarization in Soft X-ray Intermediate Polars
- 17:20 de Mink: A new evolutionary scenario for the formation of close massive black hole binaries such as M33 X-7
- 17:40 poster review

- 20:00 **concert in planetarium**

Wednesday, June 10

- 09:00 van den Berg & Cherepashchuk: X-Ray Binaries
- 09:45 Gális: Hard X-ray Emission of Intermediate polars
- 10:05 Bonneau: Spectro-interferometric observation of interacting massive stars with VEGA/CHARA
- 10:25 Samus Eclipsing stars among variables discovered using scans of the Moscow plate stacks
- 10:45 *coffee break*

- 11:15 Bonanos: Extragalactic and High Mass Binaries
- 12:00 Vilardell: Properties and distances of eclipsing binaries in the Andromeda Galaxy
- 12:20 Drechsel & Nesslinger: Accurate fundamental parameters of five OB-type binaries in the SMC
- 12:40 *lunch*

- 14:00 Rauw & Pols: Evolution and Colliding Winds in Massive Binaries
- 14:45 Kraus: Catching the binaries amongst B stars
- 15:05 poster review

- 15:30 **conference excursion**
- 18:00 **Guinan: Our Sun - Effects on Climate and Life (public talk, planetarium)**

Thursday, June 11

- 09:00 Hubrig: Chemically Peculiar Binaries
- 09:45 Soydugan: New discovered pulsational components in Algol type binaries and their positions on the plane of Porb - Ppuls
- 10:05 Skopal: Symbiotic stars from high to low energies
- 10:25 Friedjung: Shifts of ultraviolet lines of symbiotic binaries
- 10:45 *coffee break*

- 11:15 Mkrtichian: Intrinsically Variable Components in Binaries
- 12:00 Pazhouhesh: A CCD Photometric Search for Pulsations in RZ Dra and EG Cep
- 12:20 Mars: The intrinsic variations of bright stars in NGC 7160
- 12:40 *lunch*

- 14:00 Bisikalo: Hydrodynamics of Cataclysmic Variable Stars
- 14:45 Swierczynski: Nova V2467 Cyg as possible intermediate polar
- 15:05 Djurasević Accretion disks in massive binary systems
- 15:25 Vennes: Properties and evolution of post-common envelope binaries
- 15:45 *coffee break*

- 16:20 Jurkić: Modelling of Circumstellar Dust around Symbiotic Miras in Infrared
- 16:40 Çiçek: Cool active binaries recently studied in the CAAM stellar programme
- 17:00 Selam: Precise Radial Velocity Measurements - Key to Discover Low-mass Companions and

Exoplanets Around Stars

17:20 Röhl: Search for sub-stellar companions in low-mass binaries via high precision relative astrometry

17:40 poster review

20:00 **closing reception**

Friday, June 12

09:00 Gałan: Multi-ring structure of the eclipsing disc in EE Cep - possible planets

09:20 Petr-Gotzens: Protoplanetary disks of TTauri binaries in Orion: Prospects for planet formation

09:40 Ramm & Hearnshaw: nu Octantis: a close binary with a possible planet

10:00 Pritchett: The Nature of Type Ia Supernovae and Implications for the Properties of Binaries

10:20 *coffee break*

11:10 Shugarov: The outburst activity of classical novae V2467 Cygni and V2468 Cygni

11:30 Chadima: The mysterious eclipsing binary epsilon Aurigae

11:50 Mikulášek: HD 143 418 - an interacting binary with a subsynchronously rotating primary

12:10 Volkov & Volkova: The Unique Triple System V577 Oph, 20 Years of Observations

12:30 *lunch*

13:30 Quinn: Probing Dark Matter with Very Wide Halo Binary Stars

13:50 Sirotkin: About the distribution of WD masses in superhump systems

14:10 poster review

14:30 Closing remarks