

**Second Announcement**  
of an  
**International Conference**

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

**Brno, Czech Republic**

**8 to 12 June 2009**

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

On the occasion of the 90th anniversary of Masaryk University foundation and International Year of Astronomy a conference will be held from 8 to 12 June, 2009 in the estates of Masaryk University in the Moravian city Brno, Czech Republic.

**MEETING ORGANIZERS**

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- [Dept. 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 rector of Masaryk University, Petr Fiala and governor of the South Moravian region, Michal Hašek.

## PROGRAM TOPICS

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- Binary Star Formation and Evolution
- Chemically Peculiar Binaries, Active Binaries, Colliding Winds
- Binaries with Intrinsically Variable Components
- Low-Mass Components (Brown Dwarfs, Giant Planets)
- X-Ray Binaries, Compact Objects in Binaries
- Binaries in Clusters, Extragalactic Binaries
- Astrometric Binaries, Resolved Binaries
- Modern Data Acquisition Methods (Surveys, RVs, Instrumentation)
- Calibrations, Distances, Astrophysical EB Laboratories
- Modeling Techniques and New Approaches to Solving the Inverse Problem

## INVITED SPEAKERS:

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- Bisikalo: CV hydrodynamics
- Bonanos: Extragalactic/high-mass binaries
- Burgasser: Low-mass binaries/brown dwarfs
- Eggleton: Binary/multiple star formation and evolution
- Guinan: Review of novel EB approaches/results
- Hubrig: CP binaries
- Mkrtichian: Intrinsically variable components
- Pavlovski/Hensberge: Spectroscopic analysis II (critical analysis, classification, applications)
- Piirola: Polarimetric analysis
- Rauw/Pols: Evolution and colliding winds in massive binaries
- Rucinski: Spectroscopic analysis I (DDO, broadening)
- Tokovinin: Instrumentation and missions in the 21st Century
- van den Berg/Cherepashchuk: X-ray binaries
- Wilson/Van Hamme: Modeling in the 21st Century
- Vanbeveren: The influence of binaries on galactic chemical evolution

## SCIENTIFIC ORGANIZING COMMITTEE (SOC):

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**Head:** Andrej Prša, *Villanova University, USA*, [andrej.prsa@villanova.edu](mailto:andrej.prsa@villanova.edu)

**Members:**

- Edward Devinney, *Villanova University, USA*
- Horst Drechsel, *Dr. Remeis-Sternwarte, Astronomical Institute of the University of Erlangen-Nuremberg, Germany*

- Peter Eggleton, *Lawrence Livermore National Laboratory, Livermore, USA*
- Ed Guinan, *Villanova University, USA*
- Petr Hadrava, *Astronomical Institute, Praha, Czech Republic*
- Svetlana Hubrig, *European Organization for Astronomical Research in the Southern Hemisphere (ESO), Santiago, Chile*
- Pavel Koubský, *Astronomical Institute, Ondřejov, Czech Republic*
- Carla Maceroni, *Italian National Institute for Astrophysics, Italy*
- Zdeněk Mikulášek, *Department of Theoretical Physics and Astrophysics, Masaryk University, Brno, Czech Republic*
- Ernst Paunzen, *Institute of Astronomy, University of Vienna, Austria*
- Kresimir Pavlovski, *Department of Physics, Faculty of Science, University of Zagreb, Croatia*
- Theodor Pribulla, *Astronomical Institute of Slovak Academy of Sciences, Tatranská Lomnica, Slovakia*
- Ignasi Ribas, *Institut de Ciències de l'Espai (CSIC-IEEC); Departament d'Astronomia i Meteorologia, Universitat de Barcelona, Spain*
- Slavek Rucinski, *David Dunlap Observatory, University of Toronto; Department of Astronomy & Astrophysics, University of Toronto, Canada*
- Nikolai Samus, *Sternberg Astronomical Institute, Moscow University, Russia*
- Augustín Skopal, *Astronomical Institute of Slovak Academy of Sciences, Tatranská Lomnica, Slovakia*
- John Southworth, *University of Warwick, United Kingdom*
- Keivan Stassun, *Vanderbilt University, Dept. of Physics & Astronomy, Nashville, USA*
- Robert Wilson, *Theoretical Astrophysics, University of Florida, USA*
- Marek Wolf, *Astronomical Institute, Charles University, Prague, Czech Republic*
- Tomaz Zwitter, *Department of Physics, University of Ljubljana, Slovenia*
- Miloslav Zejda, *Department of Theoretical Physics and Astrophysics, Masaryk University, Brno, Czech Republic*

## LOCAL ORGANIZING COMMITTEE (LOC):

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**Heads:** Jan Janík ([honza@physics.muni.cz](mailto:honza@physics.muni.cz)), Miloslav Zejda ([zejda@physics.muni.cz](mailto:zejda@physics.muni.cz))

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**Members:** Tomáš Gráf, Filip Hroch, Marek Chrastina, Tereza Krejčová, Jiří Krtička, Zdeněk Mikulášek, Vladimír Štefl, Viktor Votruba, Pavel Zvěřina

The organizers can look back to almost 50 years of continuing observational and publication activities in the field of variable star research, and an almost equally long tradition of holding national conferences (mainly in Brno), and a 25 year history of international contacts. While previous variable star meetings were held at Brno Planetarium, this conference will take place at the buildings of “always young lady”, Masaryk University, on the 90<sup>th</sup> anniversary of its foundation.

## CONTACT ADDRESS:

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## DEADLINES:

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**Early Registration: April 3, 2009**  
**Late Registration: May 28, 2009**  
**Abstract Submission: May 8, 2009**  
**Proceedings Paper Submission: August 31, 2009**

## CONFERENCE VENUE:

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### City of Brno

Brno is the largest city of Moravia and an important tourist centre for all who want to explore the natural and cultural beauties of the South-Moravian region. The city is surrounded by beautiful mixed forests, which 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 visit <http://www.brno.cz/index.php?lan=en>)

### Faculty of Science

The Faculty of Science at Masaryk University provides higher education in the scientific fields of Mathematics, Physics, Chemistry, Biology, and Earth Sciences. There are 127 accredited fields of study in Bachelor's, Master's, and Doctoral degree programs, designed to educate specialized researchers in the sciences, and future secondary school teachers. Intensive practical activity in the sciences is one of the faculty's main priorities. This is the foundation for the high standard of education that has made it the most productive faculty at the university over the years.

Academic activity is supported by technical facilities at the individual departments, which are of top international quality in many cases. Cooperation between Czech and foreign research centres is strongly

emphasized. The main goals of basic research are to acquire knowledge, and learn procedures and techniques that can be used in this country and elsewhere in applied research and development.

At present there are nearly 3000 students studying at the faculty, along with about 250 academic employees who also take part in research work.

(for more visit <http://www.sci.muni.cz/main.php?stranka=31&podtext=&jazyk=EN>)

## WEATHER CONDITIONS:

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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 climbing to 30-35°C/85-95°F (occasionally even higher) for short periods. Such heat waves can be expected in July and August. Sudden showers and thunderstorms are common, so bring an umbrella or be prepared to dash for cover.

## PAPERS:

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Working language is English.

The time allocated for an invited review paper is 40 min + 5 min for discussion, while the time allowed for oral presentation of a contributed paper is 15 min + 5 min for discussion. We recommend using the possibility of presenting your contributions on poster displays (expected oral presentation duration is 2 minutes). The selected oral contributions and posters will be published in the special conference proceedings. The Proceedings will be published as a special issue of the ASP Conf. Series.

If you are interested in presenting a paper please submit your abstract before May 8, 2009. Abstracts received after this deadline will not be included in the booklet of abstracts to be distributed at the beginning of the conference.

## ACCOMMODATION, MEALS:

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In Brno you can find various possibilities of accommodation, however, for participants of our conference a reduced price (1050,- CZK per person/night) is offered in the Hotel Continental, Kounicova street (<http://www.continentalbrno.cz/>), which is only 800 m away and practically on the same street as the conference. Please, write BINKEY in the column "special requirements" when booking the Hotel Continental via internet. If you need help with another place of accommodation do not hesitate to write to LOC.

Lunches and evening meals will be available in student canteens or restaurants in the surroundings of our faculty. The average price of a main meal will be about 100 CZK.

## REGISTRATION:

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Registration has been open since July 17, 2008. Conference fee payment will be accepted starting January 1, 2009. The normal registration fee is 6000 CZK, the late registration fee (after April 3, 2009) is 7500 CZK, and the reduced fee for accompanying persons is 2500 CZK. The full registration fee includes full service - coffee, admission to receptions, excursion, concert, abstract booklet, and a copy of the proceedings. The reduced registration fee will only cover admission to conference sessions, concert and coffee. The registration fee can be paid in EUR or USD as well, according to the current exchange rate. (for current CZK/EUR & CZK/USD exchange rates see <http://www.cnb.cz/en/index.html>)

Kindly use the webpage below for payment: <http://is.muni.cz/obchod/baleni/9341?lang=en>

or visit the conference webpage <http://astro.physics.muni.cz/binkey> - the part "Registration", fill in the online application form given there and follow the link for payment.

## FINANCIAL SUPPORT:

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The organizers will support each participants accommodated in the hotel Continental. Participants and conference guests have a price 1050 CZK per person/night instead of 1650 CZK given on the hotel webpage <http://www.continentalbrno.cz>.

## TRAVEL INFORMATION:

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

### Arriving by Plane

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

### Arriving by Car

Brno is located in the southwest part of the Czech Republic, on the D-1 backbone motorway Prague-Brno-Bratislava, and the rail-road line Prague-Brno-Vienna. The nearest international airports are Vienna and Prague. Brno is about a 120 minute drive from Vienna or a 150 minute drive 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 <http://www.mapy.cz> or <http://maps.google.com/>

### Arriving by Train

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

For railway or bus connections see actual information under

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

## VISA

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The list of countries with Visa Waiver Regime is available on the webpage of Ministry of Foreign Affairs of the Czech Republic [http://www.mzv.cz/jnp/en/travelling/countries\\_with visa waiver regime 1.html](http://www.mzv.cz/jnp/en/travelling/countries_with visa waiver regime 1.html).

Please take into account that to obtain visa takes some time.

## SOCIAL EVENTS

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Monday - 19:30 Welcome reception – Office building of South Moravian Region, Cejl 73, Brno

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:

A) Spilberk castle - <http://www.spilberk.cz/?lang=en>

B) Museum of J.G.Mendel (<http://www.mendelmuseum.muni.cz/en/>), Starobruno brewery,

18:00 – Public outreach - E. Guinan - N. Copernicus Observatory and Planetarium, Kravi hora, Brno

Thursday – 20:00 Closing reception – Botanical garden, Kotlarska 2, Brno

### Other events in Brno:

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

June 5 - 7 140 years of public transport in Brno

June 6 - 14 International fair AUTOSALON Brno 2009

June 7 Folksy castle party – entertainment at Spilberk castle

We look forward to meeting you in Brno in late spring 2009

Jan Janík, Miloslav Zejda  
chairpersons of LOC

Andrej Prša  
chairperson of SOC

## PRELIMINARY SCHEDULE:

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Monday	9:00 Opening the conference, invitations
8 June	9:15 Guinan: Review of novel EB approaches/results
	10:00 Contributed talk #1
	10:20 Coffee break
	10:50 Tokovinin: Instrumentation and missions in the 21st Century
	11:35 Contributed talk #2
	11:55 Contributed talk #3
	12:15 Lunch
	14:00 Wilson/Van Hamme: Modeling in the 21st Century
	14:45 Contributed talk #4
	15:05 Contributed talk #5
	15:25 Contributed talk #6
	15:45 Coffee break
	16:15 Piirola: Polarimetric analysis
	17:00 Contributed talk #7
	17:20 Contributed talk #8
	17:40 Poster review/short presentations
	19:30 Welcome party
Tuesday	9:00 Rucinski: Spectroscopic analysis I (DDO, broadening)
9 June	9:45 Contributed talk #9
	10:05 Contributed talk #10
	10:25 Contributed talk #11
	10:45 Coffee break
	11:15 Pavlovski/Hensberge: Spectroscopic analysis II (critical analysis, classification, applications)
	12:00 Contributed talk #12
	12:20 Contributed talk #13
	12:40 Lunch
	14:00 Eggleton: Binary/multiple star formation & evolution
	14:45 Contributed talk #14
	15:05 Contributed talk #15
	15:25 Contributed talk #16
	15:45 Coffee break
	16:15 Vanbeveren: The influence of binaries on galactic chemical evolution
	17:00 Contributed talk No. 17
	17:20 Contributed talk No. 18
	17:40 Poster review/short presentations
	20:00 Concert
Wednesday	09:00 Rauw/Pols: Evolution and colliding winds in massive binaries
10 June	09:45 Contributed talk No. 19
	10:05 Contributed talk No. 20
	10:25 Contributed talk No. 21
	10:45 Coffee break
	11:15 Bonanos: Extragalactic/high-mass binaries
	12:00 Contributed talk No. 22



12:20 Contributed talk No. 23  
12:40 Lunch  
14:00 Excursion

Thursday  
11 June

09:00 van den Berg/Cherepashchuk: X-ray binaries  
09:45 Contributed talk No. 24  
10:05 Contributed talk No. 25  
10:25 Contributed talk No. 26  
10:45 Coffee break  
11:15 Mkrtichian: Intrinsically variable components  
12:00 Contributed talk No. 27  
12:20 Contributed talk No. 28  
12:40 Lunch

14:00 Hubrig: CP binaries  
14:45 Contributed talk No. 29  
15:05 Contributed talk No. 30  
15:25 Contributed talk No. 31  
15:45 Coffee break  
16:15 Bisikalo: CV hydrodynamics  
17:00 Contributed talk No. 32  
17:20 Contributed talk No. 33  
17:40 Poster review/short presentations

20:00 Closing reception

Friday  
12 June

09:00 Burgasser: Low-mass binaries/brown dwarfs  
09:45 Contributed talk No. 34  
10:05 Contributed talk No. 35  
10:25 Contributed talk No. 36  
10:45 Coffee break  
11:15 Contributed talk No. 37  
11:35 Contributed talk No. 38  
11:55 Contributed talk No. 39  
12:15 Lunch

14:00 Contributed talk No. 40  
14:20 Contributed talk No. 41  
14:40 Contributed talk No. 42  
15:00 Summary  
15:20 Closing remarks

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Please feel free to copy this form and to distribute it among interested colleagues. Thank you.

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