



MASARYKOVA UNIVERZIT

Press Release

Scientists will come to Brno to discuss lives of stars in binary systems

Brno, June 4, 2009 – Almost 150 scientists from 30 countries will participate a conference in Brno to discuss lives of stars in binary systems. The conference named “Binaries – key to comprehension of the Universe”, organised on the occasion of the International Year of Astronomy and the 90th Anniversary of Masaryk University, will be held in the large auditorium of the Faculty of Science at MU on June 8-12, 2009.

Stars are considered as the cornerstones of the universe. Deep understanding of their birth, evolution and death is crucial for our knowledge about the galaxies and the universe as whole. Most of the stars do not live alone, like our Sun. They live in binary or multiple stellar systems. Prof. Zdeněk Mikulášek from the Department of Theoretical Physics and Astrophysics at Masaryk University says: “Married lives of the stars that are bound in binary systems are much more varied and dramatic than lives of single stars. Both components can mutually exchange their matter, they can explode like novae or supernovae. They can even become an X-ray source. Furthermore, the stars living in couples can reveal about themselves much more than single stars. We are able to reliably determine physical dimensions, masses, luminosities and ages of both components just by analysis of the light of a binary star. These data can be used to support our knowledge of stellar evolution, to unveil processes in the stellar interiors or even to measure distances to the other galaxies.” Methods used in the binary star research are often successfully applied in the research of extrasolar planets. Therefore, they remarkably extend our knowledge of the exotic planetary worlds outside our Solar System. They may also help us to discover the secrets of the life in the universe.

We have invited the experts in this field: Jiří Grygar (Astronomical Institute AS CR, Czech Republic), R. E. Wilson (AD University of Florida, USA), E. Guinan, A. Prša (Villanova University, USA), S. Rucinsky (DAA, University of Toronto, Canada), A. Tokovinin (CTIO, National Optical Astronomy Observatory Chile) and others. More information on conference programme is available on: <http://astro.physics.muni.cz/binkey/>

Main organiser of the conference is the Department of Theoretical Physics and Astrophysics of the Faculty of Science at Masaryk University. Co-organisers are: Astronomical Institute of the Academy of Sciences of the Czech Republic in Ondřejov, Astronomical Institute of the Charles University in Prague and Astronomical Institute of the Slovak Academy of Sciences in Tatranská Lomnica.

Contact Persons:

doc. RNDr. Zdeněk Mikulášek, CSc. (Phone: 549 495 880) mikulas@physics.muni.cz

RNDr. Miloslav Zejda, Ph.D., (Phone: 549 498 600) zejda@physics.muni.cz

RNDr. Jan Janík, Ph.D. (Phone: 549 494 083) honza@physics.muni.cz

RNDr. Jiří Grygar, CSc.

International Year of Astronomy 2009
Czech Organising Committee Chair

Astronomical Institute, AS CR
oční II / 1401, 141 31 Prague 4

Phone: +420 267 103 040

E-mail: info@astronomie2009.cz
www.astronomie2009.cz



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