

**Postdoctoral positions  
at the Astronomical Institute  
of the Academy of Sciences of the Czech Republic, v.v.i.**

Astronomical Institute of the Academy of Sciences of the Czech Republic, v.v.i. intends to open the following temporary postdoctoral positions. The applicants are expected to have experience in one of the fields studied at the Astronomical Institute and to be holding PhD at the time of job commencement. Independent and collaborative research is expected. Publication activity in the scientific astronomical literature is required.

One position in **solar and stellar astrophysics** at Ondřejov observatory. The applicant can work on problems of solar/stellar atmospheres.

**Velocity fields in active galaxies**

The primary goal of the project is the spectroscopic study and interpretation of velocity fields of ionised gas in nearby Seyfert galaxies. This research should help to reveal the distribution and kinematics of gas in the central kiloparsec, such as the properties of the narrow-line region, the presence of nuclear discs and tori, rotational motions, manifestation of inflows and outflows, etc. The work is aimed to provide a detailed analysis of the gravitational potential in central regions of active galaxies.

**Relativistic astrophysics**

The successful candidate will investigate processes in nuclear regions of accretion discs, in the immediate vicinity of the central compact object. Effects of strong gravity will be studied. Familiarity with relevant mathematical methods is required, as well as with the astrophysics of compact objects. Some experience with numerical methods and scientific programming is also necessary. Part of the activity will include the analysis and interpretation of the observational data.

**Orbits of asteroidal satellites**

Properties of asteroidal binary systems bring important information on processes working among asteroids. A knowledge of orbit parameters of asteroid satellites (secondaries) is necessary to advance in our understanding of the population. Within the proposed postdoc topic "Orbits of asteroidal satellites", a successful applicant will model orbits of asteroid satellites from data obtained within the Ondřejov Asteroid Photometry Programme as well as from collaborating stations, estimate their orbital parameters and constrain other properties, such as relative sizes of binary components. In a collaboration with the group of radar observers (Nolan et al.), he will combine models obtained from photometric and radar observations, which provide complementary information.

The positions can start in summer 2008 (latest on January 1, 2009), initially for duration of one year. An extension will be subject to successful scientific results, publication output and funding availability. The scholarship will be based on the standard domestic scale. The positions are open to scientists of all nations (the age limit is 40 years).

The candidates should send their applications (including the curriculum vitae, list of publications, and the summary of research work and plans) and they should arrange for two letters of recommendation to be sent to the director of the Institute at the following address:

Astronomical Institute of the ASCR, v.v.i.  
Ass. Prof. Petr Heinzel, director  
Fricova 298  
CZ-25165 Ondřejov  
Czech Republic

In the cover letter, the applicants should indicate the research subject and the working group they wish to work with (see also [www.asu.cas.cz](http://www.asu.cas.cz)). **The applications and reference letters must be received by June 10, 2008.** The applicants are invited to attend the meeting of the selection committee to be held on June 11, 2008 at the Astronomical Institute ASCR, Prague section (Praha 4-Spořilov, Boční II-1401).