

The Max-Planck Institute for Astrophysics (MPA) and the Excellence Cluster "Origin and Structure of the Universe" invite applications for a

PhD studentship for the Study of the Cosmological evolution of Supermassive Black Holes with the LOFAR telescope

The Cluster of Excellence, installed at the end of 2006 on the Garching/Munich campus as part of the Excellence Initiative of the Federal Government of Germany, is a joint investigation by astrophysicists, particle physicists and nuclear physicists aimed at exploring fundamental questions in cosmology and astrophysics.

MPA, a world-leading institute of theoretical astrophysics, itself part of the Cluster of Excellence, is also a partner in the LOFAR telescope, a novel low-frequency radio interferometer currently under construction in the Netherlands and throughout Europe that will revolutionize our understanding of the radio sky at these low frequencies.

The PhD work will involve both theoretical and observational studies of radio emission from Active Galactic Nuclei (AGN) and will be carried out under the joint supervision of Dr. Andrea Merloni at the Excellence Cluster and Prof. Guinevere Kauffmann at MPA. The successful candidate will participate in the analysis of the very first LOFAR extragalactic survey (Million Sources Survey), which will produce the global sky model necessary for future LOFAR operation. This will further help the planning and execution of deeper AGN surveys, with the aim of putting firm constraints on the cosmological evolution of radio-emitting black holes. Together with models of galaxy formation and AGN feedback, currently under investigation at MPA and in the Excellence Cluster, such a study will ultimately lead to a better understanding of the role of supermassive black holes in structure formation.

Besides these research activities the candidate is expected to actively participate in the Cluster's academic life (lectures, seminars, workshops, discussions with invited guests). Applicants should have a university degree in physics or astronomy (diploma or equivalent) and a strong interest in extragalactic astrophysics.

Applications are invited within the frame of the International Max-Planck Research School (IMPRS) on Astrophysics. For application and information on the IMPRS please consult <http://www.imprs-astro.mpg.de/admission.html>. Once you have applied through the IMPRS webpage, please also contact Dr. Andrea Merloni, by quoting 'LOFAR PhD', as an earlier selection of outstanding candidates will also be possible.

We offer a contract for three years, with salary and benefits commensurate with German public service organizations. The Max-Planck Society is an equal opportunity employer. The goal is to enhance the percentage of women where they are underrepresented. Women, therefore, are especially encouraged to apply. The Federal Government of Germany is committed to employing more handicapped people, and applications from handicapped people are particularly welcome.

The closing date for receipt of applications is December 1st, 2008.

Further information can be obtained from Dr. Andrea Merloni (email: am@mpe.mpg.de)

http://www.universe-cluster.de/en/jobs_view_en.php?code=200809124ts83