



# Leibniz-Institut für Astrophysik Potsdam

The Leibniz Institute for Astrophysics Potsdam (AIP) works on a variety of astrophysical topics covering the full range from solar physics to cosmology. Key aspects are cosmic magnetic fields and extragalactic astrophysics, supported by a large technology branch on spectroscopy, robotics, and e-science. It is located in the beautiful Potsdam/Babelsberg area, at the South-western border of the Berlin metropolitan area. The AIP continues the tradition of the Astrophysical Observatory Potsdam and the Berlin Observatory (founded 1700) and has about 200 employees.

## **We invite applications for a PhD position in the area of close supermassive black hole binaries.**

All galaxies harbor a supermassive black hole ( $10^{6-9}$  solar masses) in their centers. When galaxies merge, the supermassive black holes of the individual galaxies are expected to approach each other down to milli-pc separations. Such objects are referred to as supermassive black hole binaries. The focus of the offered PhD project will be to analyze new proprietary XMM-Newton data on supermassive black hole binary candidates. The aim is to confirm the presence of a binary black hole system, in particular by searching for double peaked iron lines in the X-ray spectrum. The binary candidates are selected from the regular all-sky scans of the eROSITA X-ray telescope. This instrument is currently revolutionizing X-ray astronomy. In its first year of observations, eROSITA already discovered more X-ray sources than have been discovered in the previous 60 years of X-ray astronomy. The PhD student will be supervised by Dr. Mirko Krumpe and will be a member of the X-ray group at the AIP, as well as a member of the eROSITA consortium.

Applicants should hold a Master's degree or equivalent in astrophysics or a related discipline at the time of starting the position. Applicants are expected to have some experience in scientific coding (preferentially with python). The following skills would be advantageous for the position: experience in observational astronomy and its data analysis (e.g., X-ray, optical), knowledge of extragalactic astrophysics (e.g., AGN), and good English skills. We aim to fill this position by February 2022. The project is funded for 3 years. The salary will be based on the German public service scale (66% TV-L E13). Benefits include employer contributions to medical and dental insurance, maternity leave, and retirement benefits.

Applications for the position should be submitted as a single pdf to [bewerbung\\_2021-21@aip.de](mailto:bewerbung_2021-21@aip.de) containing a cover letter, a curriculum vitae, your Master degree certificate (or equivalent), a link to your Master thesis, and a statement of previous research experience, the latter not exceeding 2 pages. Applicants should also provide the contact information for two reference letter writers. All applications received by September 30, 2021 will be given full consideration.

Equal opportunities are an integral part of personnel and organisational development at the AIP, therefore applications from men and women are equally welcome. People with disabilities will be given preferential consideration if they are equally qualified and skilled.

Your application documents will be kept for at least three months after completion of the appointment process. As a rule, your documents will be made available to a selection committee and to the committees and officers to be involved.

Contact:

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