



M2FINDERS-3 - TWO POSTDOCTORAL POSITIONS (m/f/x) IN RADIO ASTRONOMY

The Max Planck Institute for Radio Astronomy (MPIfR) is the leading radio astronomical institute in Germany. It operates the [100-m radio telescope in Effelsberg](#) (as a single telescope and as an element of the European VLBI Network - [EVN](#) and the Global Millimetre VLBI Array - [GMVA](#)), the LOFAR DE1 station, which is part of the [International LOFAR Telescope](#), the [APEX](#) telescope in Chile (also an element of the Event Horizon Telescope - [EHT](#)), and a state-of-the-art VLBI (Very Long Baseline Interferometry) correlator. The department of Radio Astronomy/VLBI, led by Prof. Dr. J. A. Zensus, has a broad research portfolio, with a focus on compact extragalactic objects (AGN) and their broad-band emission, through very-high-resolution studies with mm- and space-VLBI imaging and blazar monitoring.

The MPIfR is recruiting up to two **postdoctoral researchers in Radio Astronomy** to join the project M2FINDERS (*Mapping Magnetic Fields with INterferometry Down to Event hoRizon Scales*). [M2FINDERS](#) is led by Prof. Zensus as the principal investigator, with funding from the European Research Council (grant agreement No 101018682). The project will measure and model the three-dimensional morphology of the magnetic field in the immediate vicinity of supermassive black holes. The primary goal is to use VLBI observations to measure the strength and distribution of the magnetic field within 10000 gravitational radii of the black hole and to use these measurements as a probe of physical conditions on the event horizon scale. **The postdoctoral researchers will work on Magnetic field measurements in the vicinity of supermassive black holes.** For this purpose, multifrequency polarimetric VLBI observations of a sample of radio-loud AGN with the available cm- and mm-wavelength VLBI arrays will be carried out, in order to obtain linear polarisation and Faraday rotation information. These observations will be used to map the structure of the magnetic field: Faraday rotation measure, core shift, and turnover frequency/flux density distribution.

There will also be opportunities to supervise and collaborate with PhD students and gain teaching experience in the [International Max Planck Research School for Astronomy and Astrophysics \(IMPRS\)](#).

We are looking for researchers with related scientific interests, qualifications and skills. Experience in polarimetric and/or astrometric radio interferometry techniques and VLBI is desirable.

Interested and qualified individuals are encouraged to apply by submitting their curriculum vitae, list of publications, and a research motivation letter. Applicants should also arrange for three letters of recommendation to be sent to the MPIfR application portal at the address given below by **December 31, 2021**.

The initial appointments are for two years with the possibility of extension after review. The anticipated starting date is February 2022, or later. The recruitment process will

remain open until the positions are filled. Remuneration is within the framework of the German wage agreement for the public service (TVöD-Bund) in level 13.

The Max Planck Society is committed to increasing the number of individuals with disabilities in its workforce and therefore encourages applications from such qualified individuals. Furthermore, the Max Planck Society seeks to increase the number of women in areas where they are underrepresented and therefore explicitly encourages women to apply.

Please submit your application at

https://s-lotus.gwdg.de/mpg/mbra/perso/mpifr_bonn_sci_012.nsf/application

Contact information for inquiries:

Prof. Dr. Eduardo Ros

Tel. +49 228 525 125

ros@mpifr.de

