PhD position in Plasma Astrophysics at IPP Garching

The Max Planck Institute for Plasma Physics (IPP) at Garching offers a PhD position in the Theory Division’s Plasma Astrophysics Group. We invite applications from outstanding candidates with a background in plasma physics, astrophysics, space physics, or related disciplines, with a strong motivation for doing research in plasma astrophysics using kinetic simulations. Despite the omnipresence and importance of Cosmic Rays in our Universe, their origin remains one of top-rated unsolved problems in modern astrophysics. Telescope observations may help to pinpoint the sites of Cosmic Ray origin (e.g., supernova remnants, pulsars, active galactic nuclei, or galaxy clusters), but the physical processes of Cosmic Ray acceleration are still poorly understood. The selected candidate will perform numerical simulations of astrophysical plasmas with state-of-the-art computational tools on modern supercomputers. The project will encompass (but is not limited to) shock simulations, particle acceleration microphysics, and two-stream instabilities. These studies will be complemented with analytical calculations and comparison with in-situ measurements whenever possible.

Requirements:
- A master’s degree in physics, astrophysics, space physics, or a related field, ideally with some background in plasma physics
- Experience with numerical simulations and modern programming languages
- Excellent written and verbal communication skills in English
- Ability to work both independently and in a team

We offer:
- an interesting job at one of the largest research institutes for fusion research
- flexible working hours
- training and further education opportunities within the HEPP graduate school

Applications will be reviewed on a rolling basis until the position is filled. For more information, please contact Prof. Dr. Frank Jenko (frank.jenko@ipp.mpg.de).