2025 Helmholtz – OCPC – Programme

for the involvement of postdocs in bilateral collaboration projects

PART A

Title of the project:

Turbulence, magnetic fields and/or Cosmic rays,

DESY Division & Group:

Z-PLAS

Project leader/supervisor:

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Description of the project (max. 1 page)**:**

We are exploring the basic processes in the large scale plasma, which is intricately linked to many physical processes ranging from our solar system to the early universe. In particular, we want to investigate physical processes involved in MHD and kinetic turbulence, particle transport and acceleration in turbulence, instabilities and damping processes in collisionless plasma related to cosmic rays and turbulence, space plasma, high-energy astrophysics, as well as their influences on various astrophysical problems. Scholars interested in any of the following topics are welcome to join us: 1) turbulence and instabilities bridging the basic plasma processes with the modelling of various processes in space/astro plasma; 2) Particle transport and acceleration in turbulence; 3) Polarimetry and radiative transfer in magnetized medium.

Description of existing or sought Chinese collaboration partner institute (max. half page)**:**

Peking University, Yunnan University, Nanjing University, University of Science & Technology, Sichuan University, National Astronomical Observatory of China (NAOC)

Required qualification of the postdoc:

<Sample text below>

- PhD in … Physics or Astronomy …….
- Experience with … modeling / analysis of polarizations and magnetized plasma, or numerical and analytical studies of plasma processes ……
- Additional skills in ……
- Language requirement… Good command of English……