



## 2020 HGF – OCPC – Programme for the involvement of postdocs in bilateral collaboration projects

**Title of the project:**

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Cosmic rays, Magnetic field, and/or turbulence

**Helmholtz Centre, division/group:**

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DESY, Zeuthen

**Project leader:**

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Huirong Yan

**Contact Information of Project Supervisor:**

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**Web-address:**

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**Department/Group:** (at the Helmholtz centre or Institute)

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DESY astroparticle Physics/ THAT

**Programme Coordinator** (Email, telephone and telefax)

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

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We are exploring the basic processes in the large scale plasma, which is closely linked to many astrophysical phenomena ranging from our solar system to the early universe. In particular, the research we do include cosmic rays, high-energy astrophysics, interstellar medium, plasma instabilities, magnetohydrodynamic turbulence and magnetic field detection as well as their influences on various astrophysical problems. Scholars interested in any of the following topics are welcome to join us: 1) Theoretical Astroparticle physics, in particular, bridging the basic plasma processes with the modelling of various observations; 2) Radio Astronomy and statistical study of astrophysical turbulence; 3) Plasma Astrophysics; 4) Magnetic field and polarimetry; 5) Interstellar medium.



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

Peking University, Yunnan University, Nanjing University, Beijing Normal University, University of Science & Technology, Sichuan University, National Astronomical Observatory of China (NAOC), Institute of High Energy Physics (IHEP)

**Required qualification of the post-doc:**

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- PhD in Physics or Astronomy
- Experience with modeling / analysis of polarizations and magnetized plasma, or numerical and analytical studies of plasma processes or particle transport process
- Language requirement: Good command of English