

## Position Profile for Chinese Applicants running for 2019 Helmholtz – OCPC – Program

### **PART A (Info about the Position)**

**Helmholtz Centre and institute:** DESY

**Title of the project:** Fast digital Silicon Photomultiplier

**Project leader:** Karsten Hansen

**Web-address:**

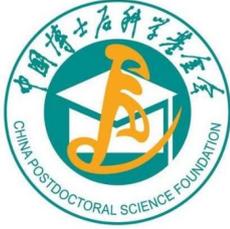
### **Description of the project:**

The FLC group is leading the development of detectors with read out by novel Silicon photomultipliers (SiPM). Together with the electronics development group FE, an advanced digital SiPM detector system with MHz frame rate capability was successfully developed. The system consists of a 2-D sensor matrix with readout integrated circuit and a microTCA based data acquisition system.

Future tasks comprise the implementation of a new laser-based test approach and a new sensor technology as well as the setup and qualification of a new prototype. Further activities range from the optimization of firmware and data analysis tools and possibly the redesign of electronic components. The activities also include test beam campaigns.

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

- PhD in Electronics or Physics
- Experience with FPGA firmware programming and PCB design, software design
- Skills in laboratory electronics, data analysis and presentation of scientific results
- A background in pixel detectors at accelerators would be desirable

**PART B****(Materials and Procedures)**

The applicants shall submit the following documents to a Chinese postdoc station affiliated to a research institution or a university, after passing through the internal selection, the qualified application shall be forwarded to OCPC, and then to Helmholtz for evaluation:

- Detailed description of the interest in joining the project (motivation letter)
- Curriculum vitae, copies of degrees
- List of publications
- 2 letters of recommendation
- Proof of command of English language

**PART C (General Conditions)****Additional requirements on the postdoctoral fellows:**

- Chinese citizenship from Mainland China (allows application while staying abroad)
- Max. age of 35 years, PhD degree not more than 5 years by submission of application
- Very good command of English language
- Strong ability to work independently and in a team