



# ACCELERATOR PHYSICS.

## DESY, Hamburg location, is seeking: Scientist (f/m) PETRA IV

### DESY

DESY is one of the world's leading research centres for photon science, particle and astroparticle physics as well as accelerator physics.

DESY operates the world's brightest storage-ring-based hard X-ray radiation source: PETRA III offers scientists outstanding opportunities for experiments with X-rays of exceptionally high brilliance since 2009. In the scope of the PETRA III extension project two new experimental halls were built in 2014 to open further research opportunities at finally ten additional beam lines. Research activities have been started towards a future up-grade scenario of PETRA III which envisions the conversion of the PETRA ring into a diffraction-limited hard X-ray radiation source: PETRA IV. The appropriate preparatory work has to be done over the next few years which will include a very challenging design of the magnet lattice and several beam dynamics issues related to collective effects. We are seeking several highly motivated scientists to join our PETRA IV accelerator physics study team.

### The position

- Participate in accelerator research and development for a future up-grade of the synchrotron light source PETRA III
- Study collective effects of the electron beam with a very high beam quality including intra beam scattering, Touschek lifetime and wakefield effects
- Determine magnet lattice tolerances with respect to errors
- Study up-grade scenarios for the injector complex
- Collaborate with other institutes and laboratories involved in similar design studies
- Participate in studies at PETRA III

### Requirements

- Ph.D. in physics or engineering science
- Several years of experience in accelerator physics is an advantage
- Experience in the application of particle accelerator codes, such as MAD-X and Elegant, and numerical simulation methods
- Ability to communicate research results effectively, both orally and in writing, within the team and at international conferences

For further information please contact Rainer Wanzenberg, +49 40 8998-2496, [rainer.wanzenberg@desy.de](mailto:rainer.wanzenberg@desy.de)

The position is limited to 2 years with the opportunity of prolongation. Salary and benefits are commensurate with those of public service organisations in Germany. Classification is based upon qualifications and assigned duties. Handicapped persons will be given preference to other equally qualified applicants. DESY operates flexible work schemes. DESY is an equal opportunity, affirmative action employer and encourages applications from women. Vacant positions at DESY are in general open to part-time-work. During each application procedure DESY will assess whether the post can be filled with part-time employees. There is a bilingual kindergarten on the DESY site.

We are looking forward to your application quoting the reference code preferably via our electronic application System: Online-Application

### Deutsches Elektronen-Synchrotron DESY

Human Resources Department | Code: MMA007/2017

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Email: [recruitment@desy.de](mailto:recruitment@desy.de)

**Deadline for applications: until position is filled**

**[www.desy.de](http://www.desy.de)**