

A. Jankowiak, Leiter FG-IA

Employment Posting G2014/14

The Helmholtz Zentrum Berlin für Materialien und Energie GmbH (HZB) operates one of the world's most advanced Synchrotron Light Sources (BESSY II) in the VUV to soft x-ray range, as well as the low energy storage ring Metrology Light Source (MLS) of the Physikalisch Technische Bundesanstalt. With its accelerator staff of about 100, HZB strives to continuously improve its existing accelerators, and to develop novel concepts for future applications. To strengthen our accelerator physics group, HZB's Institute for Accelerator Physics (head: Prof. Dr. Andreas Jankowiak) seeks a candidate to fill in the following open position for an accelerator physicist contributing to the bERLinPro Project. bERLinPro, a 50 MeV electron "Energy Recovery Linac", is currently being constructed as a test facility, to investigate technologies crucial to the realization of future large scale projects.

Ref. No. G2014/14:

The major task for the candidate will be the continuation of planning and preparatory work for the commissioning of bERLinPro, i.e. the definition of steps required to take this new kind of electron accelerator with extremely high beam power in the MW class successfully and safely into operation.

This comprises the detailed commissioning planning of the two general bERLinPro project stages, including the definition of beam modes, operational energies and currents, etc.

For commissioning and operation a thoroughly equipped diagnostics system is essential. Thus, the verification and completion of the bERLinPro's set of diagnostics equipment, to enable the machine commission but also finally prove the achievement of the project goals (with respect to beam current, energy and size), will be one major field of activities.

An important aspect of the commissioning and diagnostics work is the continuation of planning for the "Machine Protection System", ensuring an immediate "beam switch off" in case of beam loss causing errors. Here beam loss scenarios have to be classified and their destructive potential analysed in order to define MPS requirements with respect to detection-, processing- and beam inhibit times.

For **informal inquiries** contact: Prof. Dr. Andreas Jankowiak (phone: +49 30 8062 13508) or Dr. Michael Abo-Bakr (phone: +49 30 8062 12119).

The candidates should have experience in the operation of particle accelerators and accelerator physics and engineering in general. Detailed knowledge in the field of beam diagnostics application and simulations will be favourable. Since the successful realisation of bERLinPro bases on the teamwork of many colleagues from several HZB subgroups, the candidate needs to have excellent team and communication skills.

Beside this skills in programming (C, C++, Fortran,...) or computational mathematics (MATLAB, Mathematica, Mathcad,...) and accelerator physics tools (MAD, Elegant, ASTRA,...) will be advantageous.

This intricate work requires not only commitment but also a high aptitude for learning. A Ph.D. degree in Physics or Engineering is mandatory.

The salary is based on the German Tarifvertrag für den öffentlichen Dienst (TVöD)

Application Deadline: see official job advertisement

(http://www.helmholtz-berlin.de/projects/berlinpro/bpro-jobs_en.html)

We strive to increase the proportion of women in academic staff and are therefore particularly interested in the application of female scientists.

Disabled persons will be preferred in case of equal qualification.

Please send your written application (quoting the **Ref. No.** of the position you apply for) to the Helmholtz Zentrum Berlin für Materialien und Energie GmbH, Abteilung Personal und Soziales, Hahn-Meitner-Platz 1, 14109 Berlin (email: personalabteilung@helmholtz-berlin.de)