

Accelerator Operator

Accelerator Operator in the Beam Department (BE), Operations Group (OP), Proton Synchrotron Booster Section (PSB)

Role summary:

Programme	Staff
Staff Category	To be filled in by HR
Number of posts	1
Job Reference	To be filled in by HR

Associated Benchmark Job

Accelerator/Industrial Process Operations Technician

Grade

Grades 3 or 4

Closing date: 24/09/2017

Introduction

Are you qualified in Physics, Computing, Electronics, Electricity or Electromechanics? Do you have a first experience in a technical or scientific environment? Take your career to an exciting new level by joining the team of operators who run the Linac 2/4, the Proton Synchrotron Booster (PSB) and the associated Experimental Facility ISOLDE of CERN's accelerator complex, Take part!

The Operations group is responsible for the operation of the entire CERN accelerator complex, which currently consists of four linacs, six synchrotrons and seven experimental areas. In addition to the varied proton, antiproton and heavy ion experimental programs, the complex also supplies protons and heavy ions to the Large Hadron Collider (LHC). In the Proton Synchrotron Booster section you will be at the heart of the preparation of proton beams for the varied physics programs at CERN.

You will join:

- The Beams department (BE), responsible for the beam production, beam and accelerator physics, beam diagnostics, radiofrequency, controls and performance optimization for the entire CERN accelerator complex including the LHC;
- The Operations Group (OP), responsible for the operation of all CERN's present and future accelerators, their associated Experimental Areas and for monitoring the overall technical infrastructure at CERN. Further details on the operations group can be found at: <https://be-dep-op.web.cern.ch/>;
- The Proton Synchrotron Booster (PSB) section, comprising a dynamic team of 8 staff, which is providing proton beams for all downstream machines including the LHC and for all connected Experimental Areas. Further details on the PSB Section can be found at: <http://be-dep-op-psb.web.cern.ch/>.

Functions

As member of the PSB operations team, you will:

- Be part of the 24/7 shift team that runs CERN's accelerator complex;
- Oversee the operation of the Linac2/4 and PSB accelerators and the associated Experimental Facility ISOLDE on a shift basis, ensuring the application of safety rules;
- Work closely with accelerator physicists and setup and optimize the accelerator operation;
- Outside periods of shifts, and after a training period, you will participate in software or hardware related development and maintenance for one or more of the accelerators in the complex, either under the supervision of an engineer within the OP group or within the framework of a specialized equipment group in the department;

- Outside periods of accelerator operation, assist the technical infrastructure team with the operation of CERN's technical infrastructure, if required.

Your main activities will consist of:

- Monitoring the accelerator and beam production status and act promptly in case of issues arising;
- Adjusting machine parameters in order to ensure beam characteristics for the experiments are according to the specifications, using a large range of diagnostic tools;
- Troubleshooting beam physics and technical accelerator related problems, using a range of powerful diagnostic tools, perform data analysis and ensure a solution will be implemented with the expert support from the different equipment groups;
- Taking initiative in the optimisation of the Linac2/4 and PSB accelerator performance individually or in close collaboration with the team of accelerator physicists by preparing and performing machine tests, measurements and accelerator studies;

Qualifications Required

Higher technical diploma in the field of Physics, Computing, Electronics, Electricity or Electro-mechanics, or equivalent.

Experience and Competencies

The experience required for this post is:

- Initial work experience in a technical or scientific environment;
- Experience in the field of physics, computing, electronics, electricity or electro-mechanics;
- The following would be an advantage:
 - Experience in the field of software engineering in a modern development language environment (e.g. JAVA);
 - Experience in the field of or accelerator operation and/or accelerator related hardware (e.g. measurement devices, power converter techniques, vacuum equipment, PLCs, work in controlled radiation areas, etc.).

The technical competencies required or to be acquired for this post are:

- Accelerator operation;
- Accelerator performance analysis & optimization;
- Commissioning & maintenance of electro-mechanical equipment;
- Programming/software development: knowledge of JAVA would be an asset.

The behavioural competencies required for this post are:

- Solving problems: finding the information needed to solve problems; making objective judgements based on all the facts available;
- Managing self: working well autonomously, taking on activities and tasks without prompting;
- Communicating effectively: ensuring that information, procedures and decisions are appropriately documented;
- Working in teams: working well in groups and readily fitting into a team; participating fully and taking an active role in team activities.
- Demonstrating flexibility: adapting quickly and resourcefully to shifting priorities and requirements.

The language competencies required for this post are:

Spoken and written English or French: ability to understand and speak the other language in routine situations or the willingness to acquire it rapidly

- **Eligibility and closing dates**

Employing a diverse and international workforce is a CERN core value and central to our success.

We welcome applications from all Member States irrespective of gender, age, disability, sexual orientation, race, religion or personal situation.

This vacancy will be filled as soon as possible, and applications should normally reach us no later than **xx.xx.xx**. By applying here, you allow CERN to consider your application for any position it considers relevant with respect to your

profile. Please ensure you update your profile regularly with any relevant information and that you inform the Recruitment Service if you wish your file to be removed from the database.

Note on Employment Conditions

We offer a limited-duration contract for a period of 5 years. Limited-duration contracts shall terminate by default on their date of expiry. Subject to certain conditions, holders of limited-duration contracts may be granted an indefinite position.

x	These functions require shift work, including nights, Sundays and public holidays.
	These functions require participation in a regular stand-by duty, including nights, Sundays and public holidays.
x	These functions require work during nights, Sundays and public holidays.
x	These functions require work in radiation controlled areas.
x	These functions require interventions in underground installations.
	This post is also published in grades XXX with the corresponding functions and qualification requirements adjusted accordingly.
x	A valid driving licence is required.

SPECIAL CONDITIONS WHICH MAY BE REQUIRED DEPENDING ON THE NEED OF THE ORGANIZATION	
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	Shift work, when required by the needs of the Organization
	Stand-by duty, when required by the needs of the Organization
	Work during nights, Sundays and official holidays, when required by the needs of the Organization