

## **Job Title 4**

### **Electronics Engineer or Applied Physicist for the development of a precise Beam Position Monitor for CLIC Project.**

#### **Introduction**

Joining the Beams Department, which hosts the Groups responsible for beam generation, acceleration, diagnostics, controls and performance optimisation, you will work in the Beam instrumentation Group who develop and build the instruments used by the accelerator operators to visualise the particle beams being produced and accelerated at CERN. This unit is responsible for the conception, design and test of new diagnostics for accelerators at the high energy and high intensity frontier.

#### **Functions**

As an APPLIED PHYSICIST or ELECTRONICS ENGINEER in the Position and Intensity Section, your main task will be to take part in the development of a precise Beam Position Monitor (BPM) capable of achieving the CLIC drive beam requirements of two micrometre resolution and twenty micrometre absolute accuracy.

In collaboration with other institutes and CERN experts, you will:

- Perform electromagnetic simulations of a new BPM design
- Take care of manufacturing a prototype BPM.
- Construct a laboratory test stand for complete characterization of the BPM
- Design and produce a working prototype of the read-out electronics for such a system
- Evaluate the performance with beam

#### **Qualification required**

Electronics Engineer or Applied Physicist

#### **Experience and competencies**

Knowledge of radio frequency engineering, test and measurement techniques and digital acquisition systems.

Basic knowledge of electromagnetic modeling and accelerator beam instrumentation would be an advantage.

#### **Language competencies**

Good knowledge of English or French; working knowledge of the other language.

#### **Job location**

The selected candidate will be working at CERN during the entire period of his (her) contract, attached to the Beams Department (BE), in the Beam Instrumentation (BI) Group.