

# High Energy Physics Instrumentalist

## 2022 prematuration program from Institut Polytechnique de Paris

### Project SPLIF

The "[Medical Instrumentation](#)" group of the Leprince-Ringuet Laboratory (UMR7638, CNRS-Ecole Polytechnique, Palaiseau) is offering a one-year contract for an instrumentation and beam diagnostic specialist.

The SPLIF project (SimPLe monitor of for Intensities Flash) aims at realizing an intensity monitor for charged particle beams used during so-called "Flash" therapies. The measurement principle is based on the emission of secondary electrons, which do not saturate at the targeted beam intensities (O(microA)). The project consists in realizing and testing a functional laboratory prototype able to measure the intensity of electron and proton beams.

Within the LLR "Medical Instrumentation" team, the candidate will lead the development of the prototype, from its design to the beam tests. He/she will participate in the development of the data acquisition system (electronics and computer) and will be in charge of their analysis.

The project, developed within the framework of the 2022 [pre-maturation program of the Institut Polytechnique de Paris](#), may lead to a technology transfer in which the candidate may have an involvement.

The person applying for this position must have:

- an advanced degree in physics or an engineering degree
- good knowledge of instrumentation, medical and/or beam
- knowledge of dosimetry and its issues is desirable
- experience: thesis or post-doc in instrumentation or 3 years in an engineering position

Know-How:

- analysis and modeling of scientific data
- mastery of C/C++/Python programming languages
- teamwork while maintaining excellent autonomy
- good organizational skills
- good command of English

In brief:

- contract: fixed-term contract
- duration: one year
- start of contract: as soon as possible
- remuneration: according to diploma and seniority (Ecole polytechnique scale)
- place of work: Leprince-Ringuet laboratory, Ecole polytechnique, Palaiseau
- face-to-face/telework: yes/yes

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