Advanced Oncotherapy is an innovative technology business focused on delivering a proton-based radiotherapy system using technology originally developed and tested at the world-renowned CERN facility in Switzerland.

Proton beam therapy is likely to play a crucial role in the affordable treatment of cancer in the future. Advanced Oncotherapy’s system is based on a linear accelerator (‘LIGHT’) technology that is superior to traditional cyclotron/synchrotron accelerators and significantly less expensive to implement than its competitors. The company acquired the technology through the acquisition of A.D.A.M. SA, a CERN spin-off company, in 2013.

The first LIGHT systems is being installed and commissioned at our test site at STFC Daresbury, in the north of England, prior to shipping to our customer sites.

The post holder will be in charge of the installation and commissioning of the radiofrequency equipment, radiofrequency power sources, power supplies, power converters foreseen in the LIGHT proton therapy accelerator at Daresbury STFC (UK). As a beam RF and power expert, he/she will have to coordinate or participate in all the needed tests to operationalise the equipment. The post holder will have an active role during the beam commissioning in the control room, by performing measurements, developing analysis tools and debugging the accelerator. Once commissioning is over, he/she will be involved in the continuous operation and maintenance of the machine in the control room. The role might involve travel in Europe and work on shifts.

Key Responsibilities

Area 1: Support the radiofrequency (RF) and electrical power areas at Daresbury:

- Be part of the team who performs the low and RF power acceptance tests of the accelerating structures.
- Support the RF conditioning of the accelerating structures.
- RF characterization and acceptance of RF network components, readout and pre-amplification stages calibrations from low level RF to high power RF source output and RF measurements from the low-level RF generation to the high-power RF source output.
- Support the RF interventions on the RF systems (accelerator cavities, pickups, readout chain, pre-amplification chain, low level RF).
- Support the activities on the installation and setting up of the high RF power systems.
- Support in characterizing and carry out measurements campaigns for currents in electromagnets and voltages in power systems.
- Troubleshoot technical problems of the accelerator related to RF and high-power systems.

Area 2: Support during beam commissioning phases.

Area 3: Writing reports, documentation and first support contact of LIGHT operators for High Power and RF related issues.

Requirements

- BSc in Physics, Power Systems or Electronic Engineering;
- University studies with emphasis on EM theory and propagation;
- Knowledge of standard instrumentation for RF measurements such as Vector Network Analyzer, Spectrum Analyzer, Oscilloscope, Signal Generators and/or able to learn it quickly;
- Measurements of high currents and high voltages;
- Knowledge of power converter systems and high-power amplifiers (IOTs and klystrons);
High-Power and RF Physicist / Engineer

- Ability to understand links between an assembly of complex systems working as a single entity;
- Hands-on mindset;
- Possess excellent interpersonal and communication skills (oral and written) with the ability to communicate effectively with both internal and external stakeholders;
- Highly motivated, proactive and enthusiastic, with the ability to work on own initiative.
- Languages: fluent English, other European languages advantageous.

What we offer

- A friendly, multi-cultural environment working in a multi-disciplinary team.
- A wide range of tasks and opportunities for learning new skills and techniques.
- An initial placement at our new site on the STFC Daresbury campus with the opportunity to travel to other installation sites in the UK and Europe after c18 months.
- A competitive salary, 28 days holiday, private healthcare, 8% contribution to pension.

Applications to

The HR Director, Bridget Biggar bridget.biggar@avo-adam.com by 4 April 2020.

Please submit a CV and cover letter together with the names of 2 referees, and copies of qualifications/relevant training.