



PROTom
proton therapy technologies

JOIN OUR TEAM, CREATE A FUTURE FOR EVERYONE

Our team is the core of our mission to transform cancer treatment by expanding worldwide access to proton therapy – an advanced form of radiation therapy. We are always interested in hearing from anyone who shares our vision and believes that they can advance our mission.

Senior Service Engineer

Regular, Full-Time
Boston, MA

Summary

ProTom's flagship product is the Radiance 330[®] Proton Therapy System ("Radiance 330"). This cutting-edge radiation therapy system requires monitoring, steering, and controlling a high-energy proton beam that treats at sub-mm accuracy using high-speed pulses. Under the direction of the Site Supervisor, the Senior Service Engineer will operate, maintain troubleshoot and repair the Radiance 330 at a client hospital site. Subsystems to be maintained include a synchrotron and optical beam line, multiple software control systems, X-ray imaging systems, safety PLC and HMI, robotic positioner, gantry, and beam monitoring systems. The Senior Service Engineer will also be involved in engineering R&D, installation, testing and monitoring of new system features and improvements.

Job Functions and Responsibilities

1. Perform daily start up and shut down procedures, based on timing of treatment schedules, and routine scheduled inspections and preventive maintenance procedures.
2. Utilize Linux terminal commands to parse out relevant data needed to identify and fix system faults in a dynamic fast paced environment to keep machine time up and treating.
3. Perform troubleshooting and error code analysis to identify faulty system components.
4. Have a strong background troubleshooting computer networks, including thin client to server architecture, supporting both Ethernet and Modbus protocols.
5. Ability to use and interpret diagnostic information provided by electronic test equipment, such as oscilloscopes, spectrum analyzers, voltage and current meters, and computerized error diagnostic systems.
6. Ability to understand computer based control logic systems and software.
7. Excellent interpersonal and strong written and oral communication skills to support safe and effective performance a client hospital site.



PROTom
proton therapy technologies

8. Responsible for working with ProTom design engineers to conduct system and software level test plans as well as providing feedback to improve efficiency in testing and overall system performance.
9. Assists clinical users in understanding error messages and performing time-sensitive troubleshooting and repair of system issues during treatment sessions.
10. Ability to read and interpret both electrical and mechanical drawings as well as electrical schematics and to troubleshoot and repair faulty electronic systems and components.

Education and Experience

1. B.S. degree in Computer or Electrical Engineering, Physics, or equivalent (e.g., appropriate military training and experience).
2. Minimum of 5 years hands-on experience working in related industry.
3. Proficient with setup and operation of Linux OS (RHEL, SUSE), Virtual Machines (VMware, VirtualBox, etc.), Windows 10.
4. Experience with Python scripting.
5. Experience in trouble shooting industrial controls systems (PLC, Motion controllers, HMI, Industrial computers).
6. Preferred service and operational knowledge in working with some of: high voltage systems, power supplies, accelerators, vacuum systems, electromagnets, lasers, data acquisition metrology, hydraulic and/or large mechanical systems.

Working Conditions

1. Primary work site is a radiation therapy center in a basement with no natural light, with service activity taking place in a proton accelerator vault, with classification as a radiation worker.
2. System configuration requires periodic working at heights and occasionally ascends/descends a ladder to obtain access to equipment during testing. Operates computers or test equipment at a desk or in a standing-height assembly area.
3. Ability to periodically lift and/or move heavy objects up to 40 lbs. May require positioning of self to access low to the floor equipment or control cabinets.
4. Regularly communicates verbally with co-workers, monitors for audible alarms and must be able to detect alarm notifications displayed on a control system screen.
5. Ability to travel domestically and internationally as needed; must be able to acquire all necessary travel documents.