

Job Application: RF Engineer – Stellar Space Industries

Job Title: RF Engineer



Company Overview: Stellar Space Industries (SSI) is developing a novel helicon-based RF plasma thruster in collaboration with the European Space Agency (ESA). To support this, we seek an experienced RF Engineer to work on the continued development of the Power Processing Unit (PPU).

Job Summary: We seek an RF Engineer with theoretical knowledge (researching, designing, and analyzing) and hands-on experience (building and testing electrical systems). The ideal candidate will be responsible for the further development of PPU, working within a small team of researchers and engineers and collaborating closely with another RF engineer, ensuring the success of this critical phase of the project.

Key Responsibilities:

- Development of the Power Processing Unit (PPU) for the electric thruster.
- Guide and mentor at least one junior electrical engineer.
- Procure and fabricate electrical systems and subsystems.
- Test, analyze, and optimize electrical systems for performance and efficiency.
- Document and report relevant data, ensuring all milestones are met
- Support secondary tasks, such as assisting in developing hardware setups for breadboard models and designing voltage regulators for flow control systems.

Qualifications: The ideal candidate will have the following requirements:

- A Bachelor's or a Master's degree in Electrical Engineering or a related field.
- Proven experience in RF Engineering, with a solid understanding of:
 - Design and analyze various types of RF amplifiers.
 - RF Bandpass Filter design.
 - Design and analyze impedance matching networks.
 - Development of thermal management modules.
 - Improve the overall system efficiency of the PPU.
 - Design and analyze DC-to-DC converters.
 - Fabricate hardware components for the PPU, including procurement of COTS, printed circuit boards, breadboarding, and soldering.
 - Perform environmental compliance testing (temperature, vibration, shock, vacuum, outgassing, and EMC compatibility).

Desired Skills and Experience: In addition to the core qualifications, it is beneficial if the candidate can:

- Develop hardware setups (sensors, actuators, etc.) for testing breadboard, engineering, and validation models.
- Design voltage regulators for flow control systems.
- Contribute to developing control systems and electronic subcomponents of the EP thruster.

Key Competencies: As SSI is still in the early stages of development, we are seeking candidates who excel in:

- Flexibility and adaptability across a wide range of tasks and responsibilities.

- Strong problem-solving skills, especially in high-pressure situations.
- A curious mindset with a drive for continuous learning.
- Leadership and initiative, with the ability to mentor and guide others.
- A passion for optimization and innovation in engineering.

Work Environment: At SSI, you will find an open-minded and energetic working environment where everyone shares a passion for high-tech aviation and the space industry. Our employees bring various academic and practical skills and backgrounds, allowing us to tackle complex engineering challenges with creative and out-of-the-box solutions. Collaboration, flexibility, and handling multiple tasks are key to our success.

Location: SSI is based at the NL Space Campus in Noordwijk, Netherlands.

Work Arrangement: On-Site

Work Hours: 40 hours per week

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