

Electromechanical Technologist -Atmospheric Sciences

Location: Albuquerque, NM

Full Time, Regular

What Your Job Will Be Like

In this role, the technologist will work on a growing, dynamic team to help design and test scientific instrumentation and flight equipment related to large tethered aerostat/balloon flights for atmospheric and climate science research missions. The selected candidate will be a key member on a hardworking team of scientists, engineers, technologists, and support personnel that conducts scientific field studies. As an electromechanical technologist, you will perform all phases of equipment design, testing, integration and operation of instrumentation and balloon flight system components. You will conduct balloon deployments at varied locations so travel up to 16 weeks per year is required.

On any given day, the selected applicant may be called on to:

- Develop electrical components related to airborne operations of miniaturized instrumentation such as pumps, microcontroller boards and heaters
- Operate tethered balloon systems and instrumentation in the field.
- Design and test components of the winch system such as electronic brakes, variable speed controllers and DC electric motors
- Size and specify lithium batteries to operate airborne equipment
- Build cabling for 110 or 220 VAC system or solder components for 12 – 48 VDC systems
- Evaluate the performance of airborne lighting, communications or science equipment operating from DC powered tether

Qualifications We Require

- Bachelor's degree in electrical or Aeronautical or Mechanical Engineering or other relevant field; OR equivalent combination of education and experience
- Willingness to travel up to 16 weeks per year to conduct science flights of the tethered balloon system
- Ability to obtain and maintain a DOE Q-level security clearance

Selected applicants will be required to pass a Job Placement Assessment before beginning the job to ensure that they perform the essential physical requirements, with or without accommodations.

Qualifications We Desire

- Experience with balloon systems or un-manned aerial vehicles (UAV)
- Proven experience with MATLAB, LabView or SolidWorks
- Strong understanding and proficiency designing AC and DC circuits
- Experience with component programming such as Arduino, Teensy or Raspberry Pi
- An ability to work independently in multi-disciplinary team environments
- Experience with surface imaging from airborne platforms
- Experience with 3D printing
- Experience with scientific or atmospheric instrumentation
- Experience with conducting scientific field deployments
- Ability to read and/or create electrical circuit diagrams
- Ability to diagnose and troubleshoot electrical components
- Knowledgeable about circuit design and component selection
- Applied understanding of battery systems
- Training or certification in CNC machining
- Training or certification in welding
- Training or certification in soldering

Apply online at:

sandia.gov/careers

Job #: 683228

About Our Team:

The staff in the Atmospheric Sciences Department (8913) at Sandia National Labs have expertise in atmospheric measurements and modeling. Technical activities cover the spectrum from theory to application, including algorithm development, computer modeling, data inversion, instrumentation and measurement systems development, field demonstration, field campaign execution, and field site management. Particular expertise exists in the measurement and modeling of atmospheric processes in the Arctic including the use of un-manned aerial vehicles such as small fixed wing and rotary aircraft and tethered balloons, as well as the use and cold hardening of measurement systems such as radar and lidar. The department serves as a Laboratories resource for atmospheric sensing expertise.

About Sandia:

Sandia National Laboratories is the nation's premier science and engineering lab for national security and technology innovation, with teams of specialists focused on cutting-edge work in a broad array of areas. Some of the main reasons we love our jobs:

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- Extraordinary co-workers
- Some of the best tools, equipment, and research facilities in the world
- Career advancement and enrichment opportunities
- Flexible work arrangements for many positions include 9/80 (work 80 hours every two weeks, with every other Friday off) and 4/10 (work 4 ten-hour days each week) compressed workweeks, part-time work, and telecommuting (a mix of onsite work and working from home)
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*These benefits vary by job classification.