Aerospace Optical Systems Engineer (0346U), Space Sciences Laboratory - 81935
University of California, Berkeley

Job Title	Aerospace Optical Systems Engineer (0346U), Space Sciences Laboratory - 81935
Department	Space Sciences Laboratory
Institution	University of California, Berkeley Berkeley, California
Date Posted	Oct. 20, 2025
Application Deadline	Open until filled
Position Start Date	Available immediately
Job Categories	Professional Staff
Academic Field(s)	Aerospace/Aeronautical/Astronautics
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Job Description

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About Berkeley

At the University of California, Berkeley, we are dedicated to fostering a community where everyone feels welcome and can thrive. Our culture of openness, freedom and belonging make it a special place for students, faculty and staff.

As a world-leading institution, Berkeley is known for its academic and research excellence, public mission, diverse student body, and commitment to equity and social justice. Since our founding in 1868, we have driven innovation, creating global intellectual, economic and social value.

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We are looking for applicants who reflect California's diversity and want to be part of an inclusive, equity-focused community that views education as a matter of social justice. Please consider whether your values align with our Guiding Values and Principles, Principles of Community, and Strategic Plan.

At UC Berkeley, we believe that learning is a fundamental part of working, and provide space for supportive colleague communities via numerous employee resource groups (staff organizations). Our goal is for everyone on the Berkeley campus to feel supported and equipped to realize their full potential. We actively support this by providing all of our full-time staff employees with at least 80 hours (10 days) of paid time per year to engage in professional development activities. Find out more about how you can grow your career at UC Berkeley.

Departmental Overview

The Space Sciences Laboratory (SSL) is an Organized Research Unit (ORU) of the Berkeley campus reporting to the Vice Chancellor for Research. SSL's primary goal is to foster research in space-related sciences and to provide education for the next generation of space scientists. Research at SSL, led by Berkeley faculty and SSL Senior Fellows, focuses on experiments and observations carried out in space as well as theoretical and basic research.

Position Summary

This position requires an opto-mechanical engineer with experience in both designing opto-mechanical systems (spectrographs, cameras, and spaceflight mechanisms such as filter wheels) as well as the execution of assembling and bonding spaceflight optics into mounts. Opto-mechanical systems may include both ground based and spaceflight instrumentation. Experience developing and assembling mounts for optical elements up to 1 meter in diameter is preferred. Engineering activities include development of CAD based opto-mechanical systems, characterizing mounts through finite element modelling (FEM), and laboratory assembly/alignment of opto-mechanical systems. Collaborative activities include frequent interaction with team engineers and management, working to meet science requirements while maintaining engineering integrity.

Application Review Date

The First Review Date for this job is: October 30, 2025. This position will remain open until filled and applications will be reviewed on a rolling basis.

Responsibilities

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- Leads development of CAD based opto-mechanical studies for proposals and implementation for UV Imagers.
- Responsible for leading the overall opto-mechanical effort, including mirror mount design/analysis, primary structure design, and oversight of opto-mechanical mechanisms.
- Collaborates with optical engineers to ensure the opto-mechanical design follows fabrication guidelines and can be assembled and aligned within project schedule constraints.
- Plans, organizes and supervises lower-level engineers and technical staff engaged in design, construction and testing of space flight instruments.
- Responsible for developing plans and procedures required to assemble precision opto-mechanical systems.
- Systems engineering responsibility to ensure the effective design and integration of all components and engineering fields such as optomechanical.
- Ensures that opto-mechanical design supports overall optical requirements and can achieve desired performance specifications.
- Develops detailed drawings and specifications for optics, optical assemblies, metering structures, and opto-mechanical mechanisms.
- Works with optical engineers and vendors to obtain optimal solutions.
- Integrates the activities of multiple sub-specialties of one of the Aerospace Engineering disciplines or covering several engineering specialties.
- Leads the overall mechanical assembly and integration of a spaceflight instrument or large ground-based instrument (>$20M).
- Carries major responsibility for accomplishment of research objectives in relationships with investigators, contractors, and Campus staff.
- Works with project management in meeting technical requirements within schedule and budget; revises the design and verification as needed; provides all design and verification data to project leadership for integration to the spacecraft.
- May lead a team of lower-level professional engineers and technicians.

Required Qualifications

- Advanced skills in the planning, development, and construction of space systems, including one successful complex space instrument from concept development through launch.
- Experience leading an opto-mechanical design effort from concept definition to component delivery is expected.
- Advanced knowledge and experience using mechanical CAD (SolidWorks), as well as finite element analysis (FEA).
- Experience designing and analyzing optical mounts for relevant environments (vibration, shock, and thermal) in addition to optical performance (induced wavefront error, STOP, etc.).

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- Experience with Optical design software such as Zemax OpticStudio or Code V.
- Advanced systems knowledge to effectively integrate multiple engineering fields.
- Experience in being responsible for mechanical integration of a space flight instrument or facility class ground-based instrument.
- Skills in project management to include organization, planning, quality assurance, contamination control and scheduling.
- Skills in supervising staff and establishing work objectives.
- Advanced degree in related area and/or equivalent experience/training.

Preferred Qualifications

- Advanced skills in the planning, development, and construction of space systems, including one successful complex space instrument from concept development through launch in the UV region.
- Experience supporting either a NASA explorers class mission, or a facility class instrument for a large ground-based observatory.
- Post-graduate level course work in related area.

Salary & Benefits

For information on the comprehensive benefits package offered by the University, please visit the University of California's Compensation & Benefitswebsite.

Under California law, the University of California, Berkeley is required to provide a reasonable estimate of the compensation range for this role and should not offer a salary outside of the range posted in this job announcement. This range takes into account the wide range of factors that are considered in making compensation decisions including but not limited to experience, skills, knowledge, abilities, education, licensure and certifications, analysis of internal equity, and other business and organizational needs. It is not typical for an individual to be offered a salary at or near the top of the range for a position. Salary offers are determined based on final candidate qualifications and experience.

The budgeted annual salary range that the University reasonably expects to pay for this position is $180,000.00 - $230,000.00. The full range for this classification is $138,200.00 - $271,200.00.

- This is an exempt, monthly-paid position.

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How to Apply

- To apply, please submit your resume and cover letter.

Other Information

- This is not a visa opportunity.

Conviction History Background

This is a designated position requiring fingerprinting and a background check due to the nature of the job responsibilities. Berkeley does hire people with conviction histories and reviews information received in the context of the job responsibilities. The University reserves the right to make employment contingent upon successful completion of the background check.

SB 791 and AB 810 Misconduct Disclosure Requirement: As a condition of employment, the final candidate who accepts a conditional offer of employment will be required to disclose if they have been subject to any final administrative or judicial decisions within the last seven years determining that they committed any misconduct; received notice of any allegations or are currently the subject of any administrative or disciplinary proceedings involving misconduct; have left a position after receiving notice of allegations or while under investigation in an administrative or disciplinary proceeding involving misconduct; or have filed an appeal of a finding of misconduct with a previous employer.

"Misconduct" means any violation of the policies or laws governing conduct at the applicant's previous place of employment, including, but not limited to, violations of policies or laws prohibiting sexual harassment, sexual assault, or other forms of harassment, discrimination, dishonesty, or unethical conduct, as defined by the employer. For reference, below are UC's policies addressing some forms of misconduct:

UC Sexual Violence and Sexual Harassment Policy

UC Anti-Discrimination Policy

Abusive Conduct in the Workplace

Equal Employment Opportunity

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The University of California is an Equal Opportunity Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, age, protected veteran status, or other protected status under state or federal law.

To apply, visit
https://careerspub.universityofcalifornia.edu/psc/ucb/EMPLOYEE/HRMS/c/HRS_HRAM_FL.HRS_CG_S

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact

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University of California, Berkeley
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