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POSITION ANNOUNCEMENT

HEAD OF INSTRUMENTATION

Lowell Observatory invites applications for the position of Head of Instrumentation (HOI), a leadership position in Lowell's Technology Group. The HOI reports to Lowell's Deputy Director for Technology (DDT) and will, in collaboration with the DDT and the Technical Facilities Manager, both supervise and work alongside the instrumentation staff that builds and supports the instruments at the Lowell Discovery Telescope (LDT), the smaller-aperture facilities at Anderson Mesa, and the Mars Hill Flagstaff campus. The Head of Instrumentation will be responsible for expanding the Lowell Instrumentation Group into a cohesive world class group of motivated, forward thinking, professional instrument scientists and engineers. The Observatory is currently exploring designs for both the next generation of LDT instrumentation and a new Technology Services Center; this position is ideal for someone who is passionate about shepherding new instrumentation and/or technical facilities projects from start (i.e., scientific requirements definition) to finish (i.e. commissioning, operations, and ongoing maintenance).

Lowell Observatory operates telescopes at three sites: its expanding Mars Hill campus (both research and public viewing telescopes); Anderson Mesa, with 1.1-meter and 1.0-meter (in development) telescopes, as well as the Navy Precision Optical Interferometer (NPOI); and Happy Jack with the 4.3-meter LDT. Lowell operates a well-equipped instrument shop to support projects from design and development of modern instrumentation, to restoration and preservation of historic observing facilities such as Percival Lowell's 24" Alvan Clark refractor and the Pluto discovery telescope.

RESPONSIBILITIES

- Leads instrument-related projects and various telescope activities for the LDT, Anderson Mesa facilities, and the Public Program/Mars Hill
- Provides elements of instrument design (e.g., optical, mechanical, detector, cooling, vacuum, software) and the systems engineering and management role for large projects, including defining instrument requirements that address the science goals of astronomical instrument proposals
- Plays a central role in the development (and eventual operation) of the Technology Services Center
- Works with the telescope user community and the technology group to assess instrumentation needs, including performance optimization and troubleshooting
- Provides technical leadership and operational management for the instrument group, who are collectively responsible for the optomechanical, electrical, and software elements of current and future Lowell Observatory instrumentation (as well as occasional externally-contracted instruments for NASA or similar organizations)

- Supports the Deputy Director for Technology (DDT) in working with the Lowell faculty and Public Program groups, and in defining project priorities for the Observatory. Also assists the Deputy Director for Development (DDD) to obtain funds for projects
- Ensures that instrumentation and software are ready for observing every night at the various telescope facilities (shared with the Operations Manager)
- Identifies, assigns, and tracks all projects required to correct or prevent system faults. Develops and executes preventative maintenance plans and procedures for instruments, and participates in instrument maintenance activities when needed

A qualified candidate will not necessarily have prior experience with every element of this position, but should be willing to grow and challenge themselves in areas beyond their current expertise.

QUALIFICATIONS

Qualifications for this position include a BS degree (advanced degree preferred) in astronomy, physics, engineering, or a closely related field, plus significant experience in designing, building, maintaining, and operating research-grade astronomical telescopes, instrumentation, electronics, and software. Experience in management of technical personnel is also required. Extensive knowledge of and experience with modern software architecture, practices, and programming is desirable. Experience in building, maintaining, and/or operating instrumentation specifically for 4m-class (or greater) telescopes is a plus.

The HOI leads the instrument group in instrument development and operations, and also facilitates communication of priorities and goals between the instrument group and other Lowell Observatory groups. The position therefore requires someone skilled in communication, project management, personal interactions, and an ability to define, balance, and advance multiple tasks based on institutional and group priorities.

WORKING CONDITIONS

The HOI works largely at Lowell Observatory's Mars Hill Campus in Flagstaff, AZ with occasional travel to the Anderson Mesa and Lowell Discovery Telescope sites.

Flagstaff sits at an altitude of approximately 7200 feet elevation. Environmental conditions can be unpredictable with temperature ranges varying between -20°F and $+80^{\circ}\text{F}$. Inclement winter weather conditions can also be expected which will require some degree of comfort and proficiency with driving in snowy/icy conditions.

Often working at a computer and sitting for extended periods. Moving throughout the campus, on sometimes uneven terrain. Physical installation, repair, and maintenance of instruments may require standing, crouching, lifting, and reaching.

Status:	Full-time, Regular
Compensation:	\$95K-\$115K (commensurate with experience)
FLSA Classification:	Salary, Exempt
Benefit Eligible:	Yes*
Location:	Flagstaff, Lowell Observatory's Mars Hill Campus

*Benefits Overview: In addition to 11 scheduled paid holidays, Lowell Observatory offers a Flexible Paid Time Off policy for all full-time, benefit eligible employees which allows you to determine how much time you need to rest and enjoy yourself outside of work. The cost of premiums for medical, life & long term disability insurances for benefit eligible employees is 100% paid by the company, and includes a contribution to either an H.S.A or HRA account for first dollar medical expenses. Up to a 5% match on retirement contributions after 6 months of employment and funds in lifestyle spending account provided by the observatory.

To Apply:

Please send the following documents to humanresources@lowell.edu

- Lowell Standard Application (www.lowell.edu/careers)
- Letter of interest addressing your qualifications
- Resume
- Phone numbers and e-mail addresses of three professional references

Applications received by September 15th, 2021 will receive full consideration.

Inquiries may be sent to Kyler Kuehn, Deputy Director for Technology (kkuehn@lowell.edu).

Employment is subject to passing a background check

Lowell Observatory is proud to be an equal opportunity workplace and is an affirmative action employer. We are committed to equal employment opportunity regardless of race, color, ancestry, religion, sex, national origin, sexual orientation, age, citizenship, marital status, disability, gender identity or Veteran status. Lowell Observatory has always been, and always will be, committed to diversity and inclusion. We seek individuals from all backgrounds to join our teams, and we encourage our employees to bring their authentic, original, and best selves to work.

Lowell Observatory sits at the base of mountains sacred to tribes throughout the region. We honor their past, present, and future generations, who have lived here for millennia and will forever call this place home.

Lowell Observatory is committed to providing access, and reasonable accommodation in its services, programs, activities, education and employment for individuals with disabilities. Our non-smoking campus is at an elevation of 7,200ft/2200m, and the LDT is 40 miles south of Flagstaff at an elevation of 7,800 ft/2370m. If you need a reasonable accommodation for any part of the application and hiring process, please notify the Human Resources office for assistance.

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