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POSITION ANNOUNCEMENT

EXtreme PREcision Spectrometer (EXPRES) Observer and Lowell Discovery Telescope (LDT) Operator

Lowell Observatory's EXtreme PREcision Spectrometer (EXPRES) Observer and Lowell Discovery Telescope (LDT) Operator will focus their efforts on tasks related to nighttime operations and observing with the EXPRES instrument at the 4.3-m LDT, located near Happy Jack, Arizona. The EXPRES Observer and Telescope Operator (EO+TO) is responsible for observing with EXPRES and operating LDT on a regular basis, and will train LDT staff to observe with EXPRES as well. The EO+TO will work closely with the LDT Night Operations Manager, LDT Operators, Engineering, Instrumentation, and Science staff, and other observatory teams.

RESPONSIBILITIES

The EO+TO is expected to serve as the primary observing expert of EXPRES at the 4.3-meter LDT, and be the main observer for the "100 Earths" program. The EO+TO will also operate LDT and its subsystems safely and efficiently. The EO+TO will work closely with LDT observers to facilitate their science goals. Duties include troubleshooting observing problems, editing and maintaining EXPRES user manuals, and assisting with EXPRES and EXPRES solar Telescope data reduction, analysis, and access. The EO+TO will assist with training of telescope operators to observe with EXPRES as well as on-call night-time support.

As part of the night operations team, the EO+TO is also responsible for the safe, efficient, and effective nightly operation of the 4.3-meter LDT. The EO+TO works closely with the technology department in supporting the proper functioning of the telescope and with the scientists at Lowell and partner institutions in maximizing the productivity of time on the telescope. Responsibilities include:

- Preparing the telescope and dome for nightly observations
- Performing functional checks on telescope subsystems (mount, active optics, wavefront optimization, guiding)
- Operating the telescope and related subsystems
- Monitoring telescope systems, maintaining logs, and reporting problems throughout the night
- Working with technical staff to diagnose and remedy problems during nightly observing
- Developing a familiarity with the existing instrumentation, to be able to execute remote observer instructions in case of internet outage
- Collecting data during engineering time and cloudy nights to better characterize and improve performance of the facility instruments

- Monitoring environmental conditions, and following current policy in deciding when to close the facility to protect personnel, the facility, and the instruments
- Assessing, monitoring, and reporting on telescope-level image quality
- Following safety procedures, working with the safety team
- Attending periodic meetings with the night operations team, the Night Operations Manager, and others
- Communicating clearly with the team and supervisor, including responding to email queries occasionally between shifts
- Other duties and responsibilities as assigned

The EO+TO will also work with the instrument and engineering teams during the annual monsoon shutdown season on required maintenance tasks.

QUALIFICATIONS

- The EO+TO should have strong technical and communications skills and should be able to work with a multi-disciplinary group of people in time-critical and potentially high-pressure situations.
- They should have significant observing experience with EXPRES, and with astronomical instrumentation and data analysis in general.
- The EO+TO should have programming experience, and broad experience with a variety of computer systems including Windows, Linux, and Mac OSX.
- Willingness and ability to learn new systems
- Strong attention to detail
- Ability to reliably work remotely and independently, and in a safe and efficient manner
- Strong professional/technical oral and written communication skills
- History or experience with troubleshooting technically complex systems will be considered a plus
- Helpful and enthusiastic team member
- Professional behavior

EDUCATION/EXPERIENCE

Candidates should hold a Bachelor's degree in Astronomy, Physics, Engineering, or a closely related field.

Candidates should have four years of observing and/or telescope operations experience (this may include experience gained during completion of a relevant degree). Specialized training in the operation of LDT and subsystems will be provided.

Experience with Photometric and/or spectroscopic data analysis, as well as familiarity with astronomical instrumentation in general (and active optics telescope systems in particular), is highly desirable.

Preparation must include a demonstrated understanding of astronomical coordinate systems and time keeping.

Due to the remote nature of the facility the candidate must have a valid driver's license or be able to acquire an AZ state driver's license upon acceptance of this position.

WORKING CONDITIONS

The EO+TO works largely at the LDT, located roughly 45 miles southeast of Flagstaff, AZ at an altitude of approximately 7800 feet elevation. Environmental conditions can be unpredictable with temperature ranges varying between -20 and +90 °F. Inclement winter weather conditions can also be expected which will require travel to/from the telescope in occasionally snowy, icy, and/or rainy conditions; willingness and ability to drive safely in inclement conditions are required.

This position requires a moderate degree of standing, walking, bending, handling, reaching, grasping, driving, and repetitive motions. Additionally, night operations typically require long periods of sitting at a computer station during observing periods. Requires the ability to lift and manipulate heavy objects (20lbs or more).

This position will predominantly work at night, although the schedule will vary depending on current requirements and the state of the telescope and instruments. Weekend work is frequently required and shifts of 10 hours or more can be expected due to the nearly 360 days a year operation of the facility.

Hours:	40 hrs. per week
Compensation:	\$56,525 - \$60,225 annually, depends on Experience
Status:	Full Time, Regular
Location:	Lowell Discovery Telescope in Happy Jack, AZ
Benefit Eligible:	Yes*
FLSA Classification:	Salary/Exempt

To Apply:

Please send the following documents to jobs@lowell.edu

- Lowell Application (<https://lowell.edu/about/career-opportunities/>)
- Letter of interest addressing your qualifications
- Resume
- Phone numbers and e-mail addresses of three professional references

Applications received by March 13th at midnight will receive full consideration. Position Open Until Filled

*Benefits Overview: 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. Up to a 5% match on retirement contributions after 6 months of employment.

This position may require working on company-designated holidays without additional compensation. To provide balance, employees in this role typically receive extended paid time off during the annual maintenance shutdown in the summer.

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 one of the mountains sacred to Indigenous 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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