



## DEPARTMENT OF THE NAVY CAREER OPPORTUNITIES

### Solicitation of Applicants for an Opto-Mechanical Telescope Engineer, GS-0830 Flyer #24-008

**How to apply:** The United States Naval Observatory (USNO) is accepting resumes to fill a vacancy for an Opto-Mechanical Telescope Engineer under the direct hire authority for certain personnel of the Department of Defense. USNO will evaluate and consider resumes as they are received through September 30, 2024, or until the position is filled.

Resumes and transcripts should be submitted by email to [NAVOBSY\\_NOBS\\_N1-DL@navy.mil](mailto:NAVOBSY_NOBS_N1-DL@navy.mil) and reference the Flyer # above in the subject line of the email. Unofficial versions of transcripts are acceptable provided they list all coursework, credit hours completed, and the student's name. Cover letters are not required, but are encouraged. Highly qualified applicants will be contacted via email to schedule a job interview.

**Salary Range:** \$98,496 to \$128,043 Per Annum (for 2023)

**Job Location:** Flagstaff, AZ

**About the Job:** Successful candidates will be employed by USNO and assigned at Flagstaff, AZ. USNO provides to the Navy, the Department of Defense (DoD), other federal agencies, and the civil sector precise time, Earth orientation parameters, the positions and motions of celestial bodies, and related astronomical information.

**This position is in** the Instrumentation Research and Engineering Division at USNO Flagstaff Station to support existing astronomical instrumentation and related systems. Incumbent will work closely with the controls engineer, software engineer, and machine shop personnel to maintain existing infrastructure, create new designs, and implement upgrades. The ideal candidate will be an experienced telescope engineer with a thorough understanding of telescopes and mechanical and optical subsystems. This position is non-supervisory.

Highly qualified candidates will demonstrate the following knowledge, skills and abilities:

- Demonstrated history of working on telescopes & optical subsystems
- Background in structural design, drafting, modeling, FEM analysis using SOLIDWORKS
- Understanding of telescope drive components, encoder systems, as well as detector systems
- Understanding of optical systems, including the handling, coating, and alignment of the optical elements of large telescopes
- Strong skill set to solve complex mechanical engineering problems, ability to troubleshoot and

evaluate failed systems and to determine best course of action to improve telescope and instrument performance

- Experience with machine shop manufacturing, CNC, 3D printing, and working with external manufacturers
- Experience operating a mirror coating facility and its supporting infrastructure
- Experience with vacuum and cryogenic systems
- Familiarity with optics systems, relevant design and test methods; experience using optical design software (ZEMAX) is a plus
- Ability to work within a multidisciplinary engineering team
- Excellent verbal and written communication skills

**Basic Requirements:** Appointment to Federal position will be made at the GS-13 level, and is based on the applicant's education and/or experience. Opportunities are available for applicants in the following field:

- Opto-Mechanical Engineer (0830):
  - A. Degree: Engineering. To be acceptable, the program must: (1) lead to a bachelor's degree in a school of engineering with at least one program accredited by ABET; or (2) include differential and integral calculus and courses (more advanced than first-year physics and chemistry) in five of the following seven areas of engineering science or physics: (a) statics, dynamics; (b) strength of materials (stress-strain relationships); (c) fluid mechanics, hydraulics; (d) thermodynamics; (e) electrical fields and circuits; (f) nature and properties of materials (relating particle and aggregate structure to properties); and (g) any other comparable area of fundamental engineering science or physics, such as optics, heat transfer, soil mechanics, or electronics

OR

  - B. Combination of education and experience -- college-level education, training, and/or technical experience that furnished (1) a thorough knowledge of the physical and mathematical sciences underlying engineering, and (2) a good understanding, both theoretical and practical, of the engineering sciences and techniques and their applications to one of the branches of engineering. The adequacy of such background must be demonstrated by one of the following:
    1. Professional registration or licensure -- Current registration as an Engineer Intern (EI), Engineer in Training (EIT) 1, or licensure as a Professional Engineer (PE) by any State, the District of Columbia, Guam, or Puerto Rico. Absent other means of qualifying under this standard, those applicants who achieved such registration by means other than written test (e.g., State grandfather or eminence provisions) are eligible only for positions that are within or closely related to the specialty field of their registration. For example, an applicant who attains registration through a State Board's eminence provision as a manufacturing engineer typically would be rated eligible only for manufacturing engineering positions.
    2. Written Test -- Evidence of having successfully passed the Fundamentals of Engineering (FE) 2 examination or any other written test required for professional registration by an engineering licensure board in the various States, the District of Columbia, Guam, and Puerto Rico.

3. Specified academic courses -- Successful completion of at least 60 semester hours of courses in the physical, mathematical, and engineering sciences and that included the courses specified in the basic requirements under paragraph A. The courses must be fully acceptable toward meeting the requirements of an engineering program as described in paragraph A.
4. Related curriculum -- Successful completion of a curriculum leading to a bachelor's degree in an appropriate scientific field, e.g., engineering technology, physics, chemistry, architecture, computer science, mathematics, hydrology, or geology, may be accepted in lieu of a bachelor's degree in engineering, provided the applicant has had at least 1 year of professional engineering experience acquired under professional engineering supervision and guidance. Ordinarily there should be either an established plan of intensive training to develop professional engineering competence, or several years of prior professional engineering-type experience, e.g., in interdisciplinary positions. (The above examples of related curricula are not all-inclusive.)

***General and Career Information:*** Starting salaries are commensurate with education and experience, plus full benefits. Applicants must be U.S. citizens. Males born after December 31, 1959 are required to be registered with the Selective Service System. **All positions are subject to satisfactory completion of a security investigation, successful completion of a pre-employment physical, and/or drug test.**

Recruitment and relocation incentives **may** be authorized.

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