



UNM-TAOS OBSERVATORY AND ASTRONOMY CENTER FACT SHEET

CAPITAL OUTLAY REQUEST LEGISLATIVE ID# 2705

A new observatory at UNM-Taos which will house the largest operable public telescope in New Mexico to allow college and K-12 students, community members and visitors to the region to observe thousands of celestial objects across the northern New Mexico sky. The Center will include a planetarium, observation deck, auditorium, classroom, and weather station.

WHAT: UNM-Taos has received the donation of a 36" Dobsonian telescope.

Once installed, this telescope will be the largest public telescope (vs. those devoted strictly to research purposes) in New Mexico and among the largest public telescopes in the country. Less than 1% of the population of the US and Europe are able to experience dark skies, so vast dark skies visible from campus, where you can see the Andromeda Galaxy, 2.5 million light years away, is a precious resource. The telescope will not only be used to show students and visitors some of the wonders of the universe, but will also be used to educate them on the consequences of light pollution, such as wasted energy, the enforced disconnection of people from their cultural heritage, and the disruption to wildlife and the ecosystem.

ASK: Funding to support the Observatory and Astronomy Center project at UNM-Taos Klauer Campus

UNM-Taos conducted a feasibility study for an observatory, which can be built in two phases:

Phase 1: Observatory Facilities (\$1.3 million) – observatory, storage shed, observation/overlook deck, outdoor planetarium/auditorium and trails. UNM-Taos submitted a capital outlay request to the 2023 NM State Legislature to fund Phase 1 of the project.

Phase 2: Classroom Building (\$1.8 million) - multi-use classroom, support spaces, outdoor classroom deck. UNM-Taos will be requesting funding from federal sources to support Phase 2 of the project.

WHY: UNM-Taos proposes to offer regional K-12 students and residents, as well as visitors to this rural area, an opportunity to experience and connect to Astronomy and other scientific fields relevant to the region.

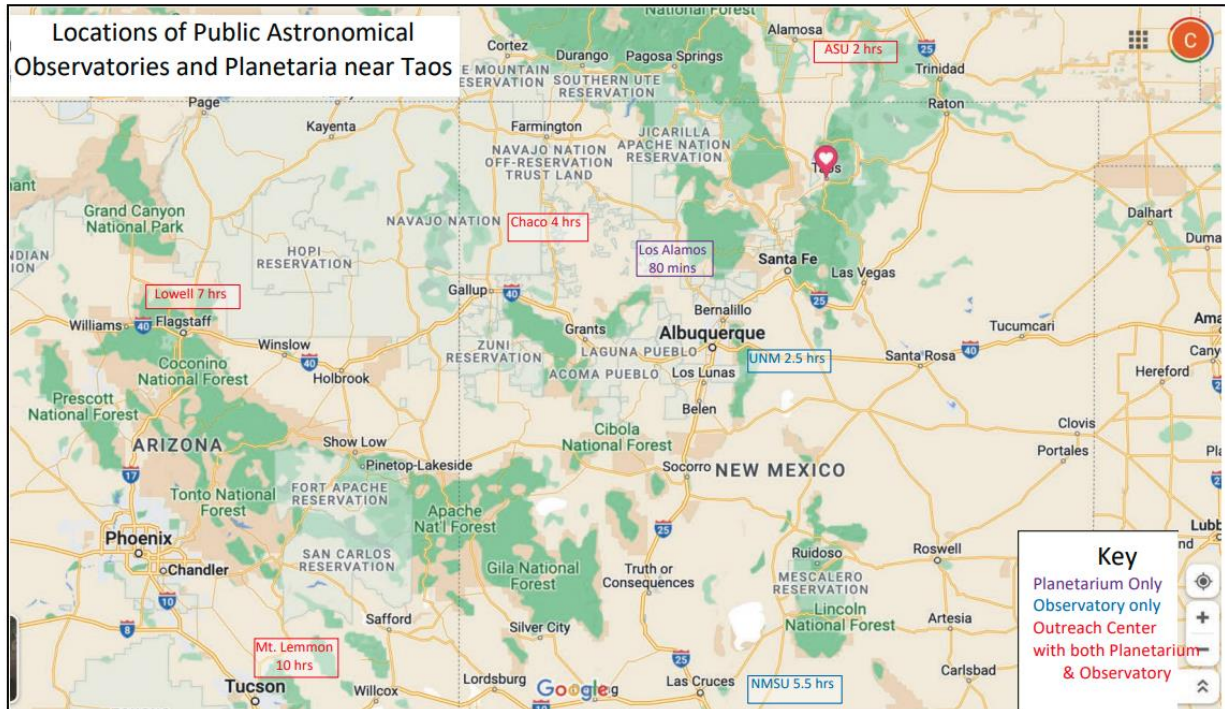
While the center will primarily focus on Astronomy, it will host activities and exhibitions in Natural Resource Management (e.g. Forestry, Wildlife Biology, Ecology, Water Resources) and Geology. Since the UNM-Taos campus has a 500 KW Solar panel array and houses the *Senator Carlos Cisneros and Healy Foundation Land Grant and Acequia Archives*, activities and exhibitions in cultural water resources and renewable energy sources could also be displayed.

The heart of the center will be the astronomical observatory, which will be used to take advantage of the area's dark skies to show planets, nebulae, star clusters and distant galaxies to students in STEM classes as well as to local pre-K-12 students and visitors in regularly scheduled public viewing events. At the outdoor planetarium, visitors will be shown images and details of celestial objects, which will then be pointed out to them in the night sky. The last major component of the center will be a multi-use classroom/exhibition hall/learning space that will be used for classes, public meetings, lectures & other activities.

The observatory will be the center of the college's outdoor education resources planned in collaboration with regional preK-12. A science center consisting of a STEM trail system provides outdoor educational resources on a variety of science topics including the solar system, anatomy and physiology (fitness trail), bees (hive and pollinator trail), and solar energy (solar panel trail). Additional trails are planned for development.

The observatory will house a registered weather station to build understanding of climate concepts. It will monitor Max/Min temperatures, sunlight, rain fall, wind speed and direction, and would log it on a data network. The station could monitor levels of smoke, pollen, UV, and other pollutants to help students learn more about stewardship of the environment.

The center will be unique in New Mexico in that it is in a dark sky location, has the largest public telescope in the state, offers an observatory and a planetarium, which allows students and visitors to enjoy hands-on learning experiences and operate some of the college's telescopes. There are no comparable telescopes available to the public in NM, AZ, or CO, as shown on the map and chart on the next page.



NOTES

Facility	Location	Drive Time from Taos	Largest 'Scope	Notes
New Mexico				
Pajarito Center	Los Alamos	80mins	None	General STEM Outreach - Weekly
UNM	Albuquerque	2.5 Hrs	14" SCT	Approx 30 nights/yr.
Chaco Canyon	Nageezi	4 Hrs	25" Dobsonian	Currently dormant – unstaffed
NMSU	Las Cruces	5.5 Hrs	16" Dobsonian	Approx 8 events/yr.
Colorado & Arizona				
ASU	Alamosa CO	2 Hrs	14"	1-2 events/yr. on 2 sites
Lowell GODO	Flagstaff AZ	7 Hrs	32" Dobsonian	Daily
Mt Lemmon	Tucson AZ	10 Hrs	32" Cassegrain	By appointment - \$85 per person.

UNM-Taos Observatory Feasibility Study
 Downloaded at goto.unm.edu/observatory or scan the QR code.



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