

Eleven Reasons Why Fremont Peak is a Unique Location for Astronomy Outreach:

1. Being at 3100' elevation, there is 10% less absorption of light by the atmosphere than at sea level. Since astronomical objects are very faint, this is important. Astronomers often pay large amounts of money to coat their optics to reduce light loss by several percent.
2. Being outside of large cities, the amount of light pollution (brightening of the sky by reflected city lights) is lower, allowing much fainter objects to be seen, photographed, or measured.
3. The tops of the coastal stratus clouds (fog) often are lower than the Peak, which significantly reduces light pollution from surrounding cities.
4. The prevailing winds are from the west and, having blown over thousands of miles of flat ocean before arriving at the Peak, the air flow is very laminar, or smooth. This reduces the amount of atmospheric turbulence, thereby making astronomical images much more crisp and clear.
5. The coastal air contains fewer particulates and aerosols, reducing haziness.
6. The cold water upwelling along the Pacific coast cools the lower layers of air, making the air mass more stable and further reducing turbulence.
7. The park is served by a well-maintained county road and contains a parking area, making public access feasible.
8. Access to the observatory area is controlled, allowing illumination by headlights and streetlights to be controlled. Light sources such as these can instantly ruin people's dark adaptation, which can take half an hour to recover. They can also ruin sensitive astronomical measurements and images.
9. Astronomy is done late at night, so people are sleepy after observing. Rather than driving home tired and in the dark, the campgrounds allow a good night's sleep, so people can drive home rested in daylight.
10. The campgrounds allow community organizations to combine camping outing with an astronomical experience, increasing visitorship.
11. For all the preceding reasons, astronomers have been observing at Fremont Peak for years. Since they are already attracted to the location, it is easier to engage them in public outreach.