

## Friends of Lick Observatory

### Response to News on Lick Observatory

As President of the Lick Observatory Council, I would like to personally thank you for joining Friends of Lick Observatory. Your financial support is critical to our future success. As you may know from recent articles in the San Jose Mercury News and elsewhere, the UC Office of the President plans to ramp down UC funding for Lick Observatory, and we are now working on securing other forms of financial support. I feel passionate about Lick for a number of reasons:

1. Outstanding research has been done at Lick during the past few decades. This includes the detection of most of the first 100 exoplanets, and the discovery and study of nearby supernovae (exploding stars). The latter culminated with the discovery and verification of the accelerating expansion of the Universe, which was recognized with the 2011 Nobel Prize in Physics to two teams leaders.
2. The research potential of Lick remains very high. In particular, the Shane 3-m telescope can be used for major spectroscopic projects requiring many years of observations or large numbers of nights each year, such as for monitoring the evolution of supernovae and studying supermassive black holes in the centers of galaxies. Recently, the Automated Planet Finder was commissioned, and it has started to search for Earth-like exoplanets. It is difficult or impossible to obtain sufficiently large blocks of time for such projects at other observatories.
3. Lick Observatory is used for instrument development, and also as a testbed for new instruments. For example, laser guide-star adaptive optics (AO) was largely developed at the Shane 3-m telescope, and this became the basis for the Keck Observatory AO system. Even graduate students and postdocs have designed and tested innovative new instruments at Lick.
4. Lick provides substantial, direct, hands-on access to telescopes for undergraduate and graduate students, so they can best learn observational and technical skills. For example, more than 150 undergraduates in my group have used Lick facilities, sometimes coauthoring research papers. Over the past decade, dozens of UC Ph.D. theses have utilized Lick data.
5. Graduate students and postdoctoral scholars can be Principal Investigators of Lick proposals. They conceive, propose for, execute, and complete their own projects, thereby adding immensely to their development as strong, skilled, independent research scientists.
6. Lick Observatory is a unique Bay Area treasure, with great historical significance both as a California landmark and as an educational institution with a lasting scientific legacy. Lick functions as the primary base for UC astronomy education and outreach efforts. About 35,000 visitors come to Lick each year to learn about the cosmos. Amateur astronomers volunteer for our public summer visitors program, providing extra telescopes and expertise.
7. To help Lick continue to function as a vibrant research observatory, student training facility, and center for public outreach, I hope you will consider making a special year-end donation to the Friends of Lick Observatory.

Thank you for your consideration — and best wishes for the holiday season and the new year!

Best regards,

Alexei V. Filippenko  
Friends of Lick Observatory, Board Chair  
Professor, UC Berkeley