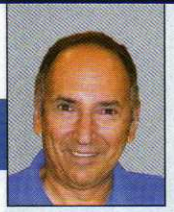


Evening**Stars**

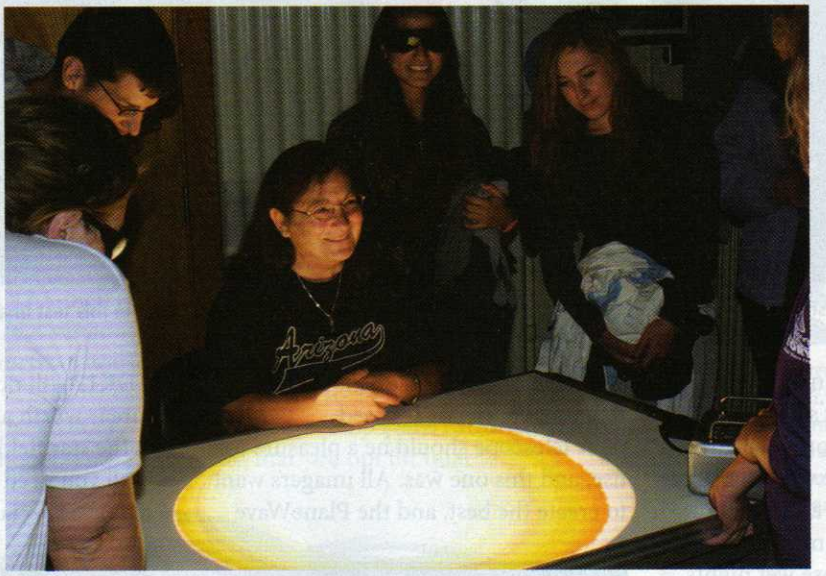
by David H. Levy

Camp to the stars

As a crowd of youngsters gets excited about astronomy, it's impossible not to feel the same enthusiasm.

The idea of an astronomy camp is hardly new. Over many years, a number of opportunities have cropped up for youths to get out of town and enjoy a dark sky, but none can approach the magic of the University of Arizona's Astronomy Camp, which this June completed its 23rd season. I only wish I'd had the opportunity to use a mighty telescope atop Kitt Peak in my youth some 45 years ago!

But that was a different time; in those days, I was limited to a portable 3½-inch reflector and a pier-mounted 6-inch refractor at our local observatory. At least now I have the privilege of helping to guide this generation's brightest youngsters, who have the opportunity of using some of the world's best telescopes located under what may be the darkest conditions in North America.



Wendee Levy, the author's wife, enjoys the setting Sun with a group of campers using the McMath-Pierce Solar Telescope at prime focus. David H. Levy

Take the Bart Bok Telescope, for instance, a magnificent 40-year-old instrument. (Campers enjoyed reading an article describing its colorful history in the July issue of *Astronomy*.) One of the larger telescopes on Kitt Peak, its optical quality is superb. It's hard to imagine how a group of teenagers could gain control of such a telescope for several nights.

They would have to go through the traditional process of applying to Steward Observatory's Telescope Allocation Committee at the University of Arizona. It assigns telescope time for all observers and divides that time among the university-owned telescopes. The fact that these campers' proposals were sucessful attests to their scientific merit, but it also supports the innovative idea of allowing young people to use a big telescope, inspiring them to learn about the process of astronomy. Such an achievement is invaluable in helping youngsters understand how scientists really work.

Astronomy Camp is far more than just getting to use Bart Bok's 90-inch (2.3 meters) scope. The campers also enjoyed time on one of Kitt Peak's oldest and most venerable scopes, the McMath-Pierce Solar Telescope, which opened in 1962.

It was while the students used that facility that my wife, Wendee, and I showed up. With the Sun low in the west, we encountered a solar image almost a yard wide; it was bereft of all but two small sunspots, at least in this white light. But as the Sun sank lower, the preceding edge became a reddish hue as its light traveled through more of Earth's atmosphere, while the following side developed a greenish tinge.

Now I understood what I had heard long ago, when observers claimed to see a long-lasting green tinge in the McMath prime focus image. With the unaided eye, the effect lasts just a split second as the last solar rays set, and thus it's called the "green flash." But through the great Kitt Peak solar telescope, the green tinge is a relaxed phenomenon that lasts at least 15 minutes!

With the onset of twilight, Wendee, Camp Director Don McCarthy, and I headed to the 90-inch. The spectrograph was the instrument of choice that night, with an eyepiece available for direct viewing. In my brief presentation to the campers and staff, I compared witnessing the exquisite view through this telescope to the feeling that observers enjoy the world over at the start of each new observing session.

We began with a good look at Saturn — its edge-on rings across the distant world — before slewing the telescope to the position of my latest discovery, 19th-magnitude Comet Jarnac (P/2010 E2). Through the eyepiece, a bright star shone near the center of the field of view. Just off from that star, at the field center, we occasionally glimpsed a faint structure that might have been the comet.

If these experiences sound like something you, or someone you know, would like to be a part of or just learn more about, visit www.astronomycamp.org. Working with these committed, interested young people is always such a thrill. Some of them want careers in astronomy; others are just curious about observing under a dark sky. What unites them all is the thought that after the Sun sets each evening, the boundless eternity of the night sky awaits them.

Browse the "Evening Stars" archive at www.Astronomy.com/Levy.