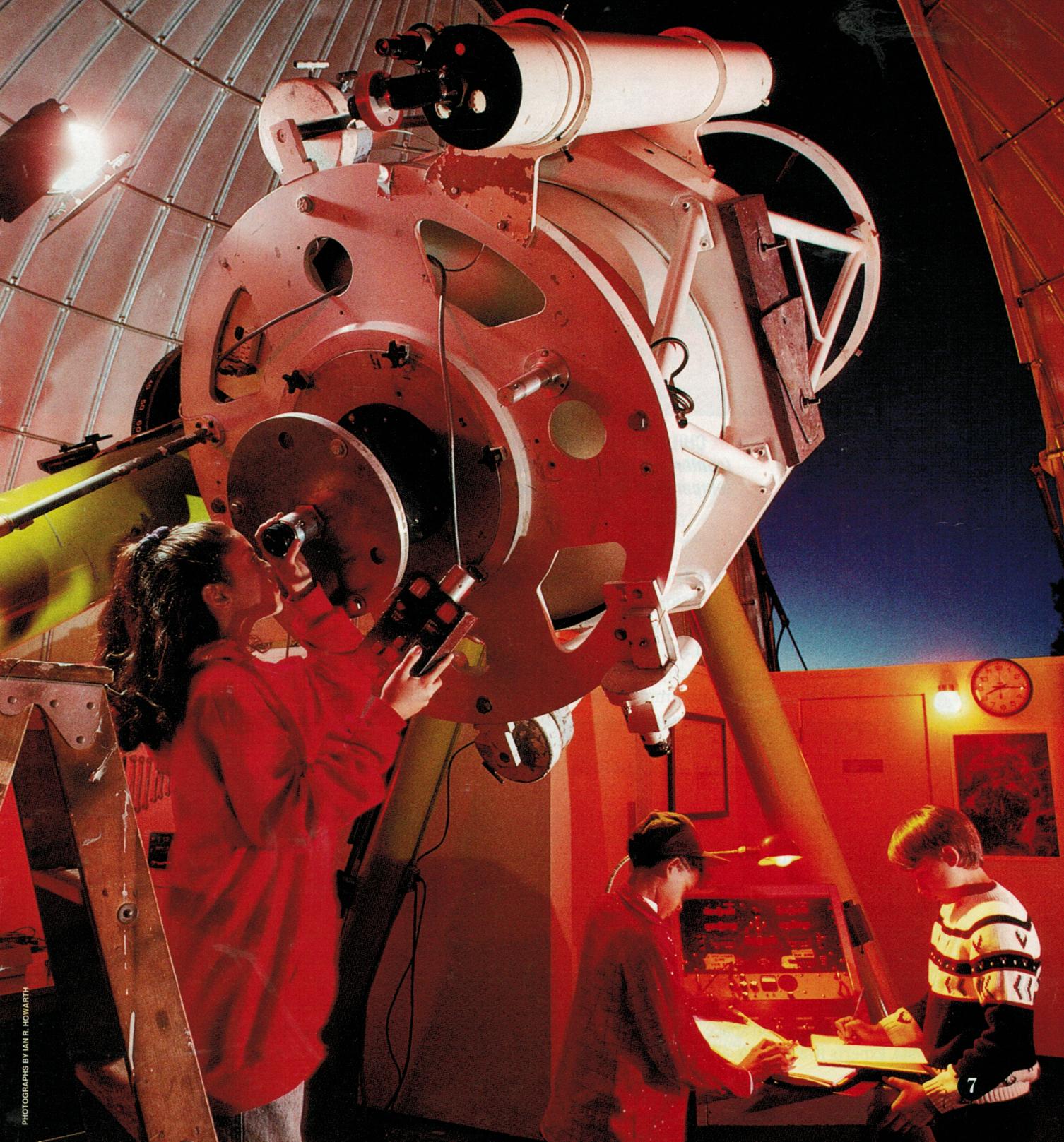


# SEEING STARS

Christina Vitale, 12, of Tucson, Arizona, gazes at galaxies and other heavenly bodies through a 40-inch telescope. Chris Cadle, 15, center, of Phoenix, and Tysen Gamble, 15, of Tucson, check star locations. Read on to find out what else goes on at an Arizona astronomy camp.





▲ CHILLING. Christina feels liquid nitrogen vapor, and she and Josh Hammond, 14, (center), of Tucson, learn that it measures 320° below zero Fahrenheit. "It is the temperature of Saturn," explains astronomer and camp director Don McCarthy.

t was so exciting to see the planets!" says Christina Vitale, 12, a Junior Member from Tucson, Arizona. "My favorite was Saturn. It's just beautiful. We could see its moons and rings. All the rings looked like a rainbow of orange and other colors." Last summer Christina viewed the planets, stars, and galaxies through powerful telescopes when she attended the University of Arizona Alumni Association's Astronomy Camp in Tucson.

The camp session lasted one week. The student astronomers spent the first three days at the university. They toured nearby Flandrau Planetarium and Kitt Peak Observatory. Going behind the scenes, they examined huge telescopes. At the university's mirror lab, they watched as scientists made some of the world's biggest telescope mirrors.

Each evening the campers learned about the night sky and constellations from professional astronomers. They listened to lectures on space, stars, and comets by scientists, experts from NASA, and space artists.

During the day the campers split up into research teams to do experiments. They investigated planet temperatures, tracked satellites, and built small telescopes and model rockets.

Campers came from many different places. One of them, Marian Toro, 17, came from Sells, Arizona. She is a Native American of the Tohono O'odham Nation, once called the Papago. She lives on the reservation, 60 miles west of Tucson.

"I'm really interested in astronomy," says Marian. "Kitt Peak is right on our reservation. It is part of a mountain range that is sacred to us. Our people have always believed that our creator stays in a cave there but dwells throughout the mountains. Long ago, our people looked at the moon and stars to tell if crops would be good. Now people study the stars with telescopes."

The highlight of the week was spending four days and nights using telescopes at the observatory on Mount Lemmon. The telescopes, used by research astronomers, are stationed on the mountaintop, 9,200 feet high.

Through the observatory's open domes, teams used the

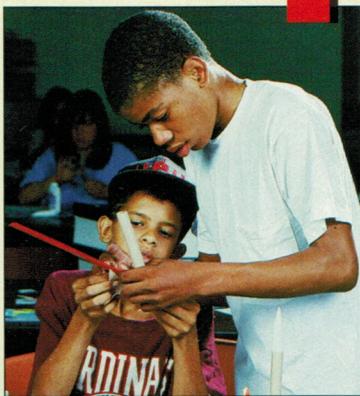
# over Easy

Building model rockets was a popular activity at camp. Each camper launched a rocket to see how high it could fly. Then each team launched a rocket with a raw egg as cargo. The goal? To see which rocket could fly and land the fastest without breaking the egg.

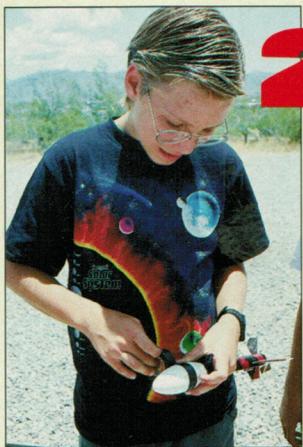
"This project teaches physics, engineering, and math skills," says camp director Don McCarthy.

Chris Cadle, 15, of Phoenix, Arizona, built the only three-stage rocket ever launched at camp. "It went more than a thousand feet high!" says Chris. "I got the prize for the highest flight."

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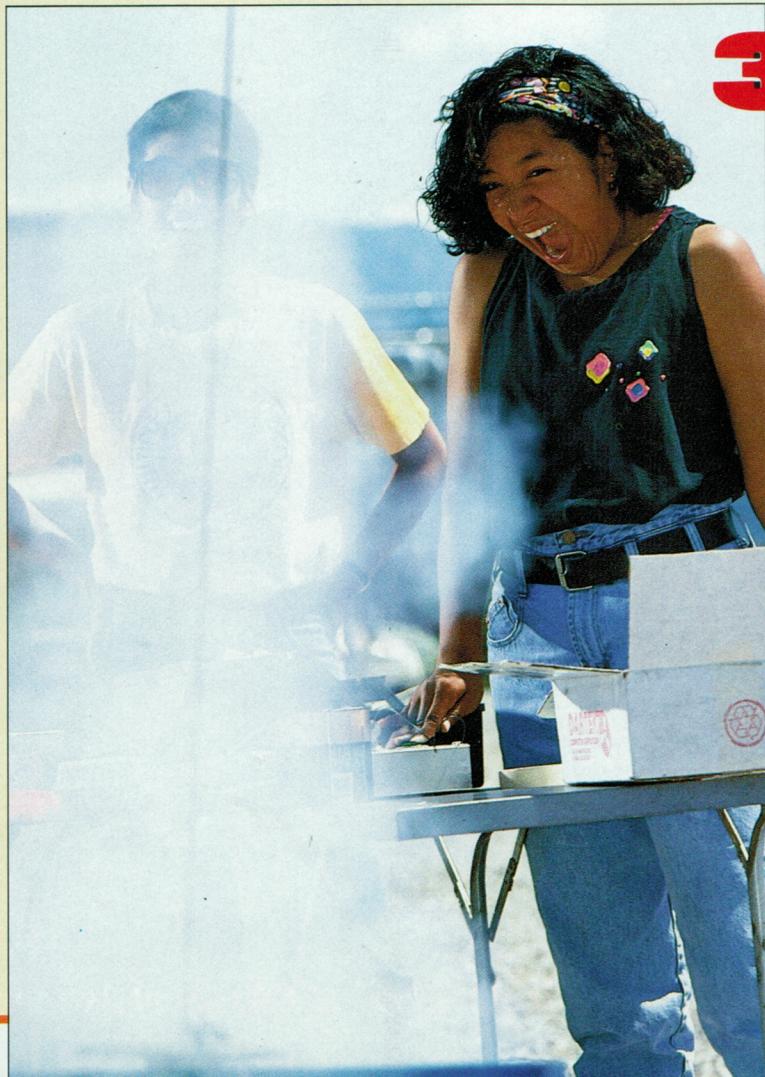


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BLAST OFF! Marian Toro, 17, of Sells, Arizona, launches her rocket. "We had a countdown, and the rocket shot up," she says. "Building it was tricky. I couldn't believe it flew so well."



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HAPPY LANDING. Josh and his team find their egg unbroken. Jason Peipleman, 15, of Tucson, opens the nose cone as Christina holds the parachute. "We were so excited to win the prize," says Christina.





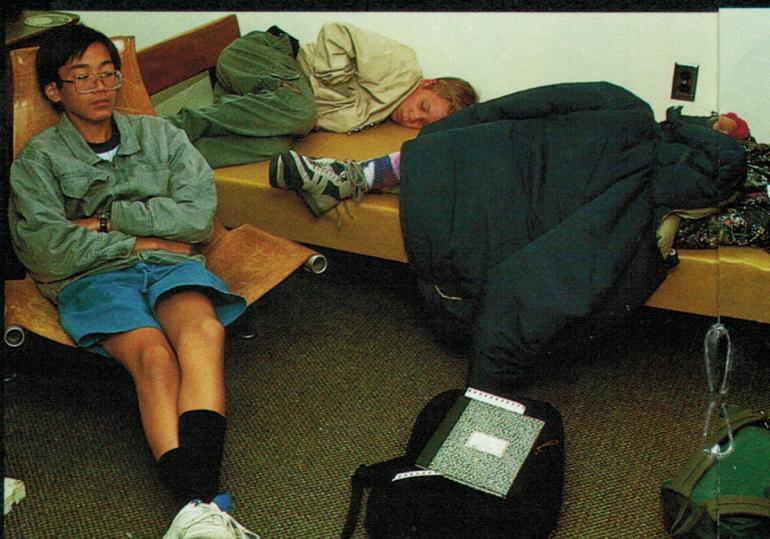
40-inch and 60-inch telescopes to observe objects in the night sky. The camp counselors, who were graduate students in astronomy, taught them how to position the huge telescopes to view each object.

"We stayed up until three every morning," says Marian. "I saw Jupiter and its Red Spot. The Ring Nebula, a ring of colored gases, was beautiful."

By the end of the week the campers had great souvenirs—photographs of the night sky they took through special cameras attached to the telescopes. Some of the campers began thinking of careers as astronomers.

"I really enjoyed camp," says Chris Cadle. "It's a neat experience to go to the top of a mountain to see what's out there."

BY JUDITH E. RINARD



**WOULD YOU LIKE TO REACH FOR THE STARS at Astronomy Camp?**



◀ STAR SEARCH. Studying a computer model of the night sky, Amanda Priestley, 15, of Scottsdale, Arizona, decides what she will view through a telescope.



◀ SLUMBER PARTY. Waiting for a turn at the telescope, Jason Lee, 14, of Winslow, Arizona; Josh; and Diana Johnson, a counselor, doze. "It was fun staying up late," says Josh. "We took naps and drank hot chocolate."

FAR OUT. Josh focuses a portable telescope on the night sky over Mount Lemmon. "The stars look so much bigger and brighter up here," he says.