Chance to use Mt. Lemmon telescopes unique aspect of camp

Someday, a teen-ager who attended The University of Arizona's astronomy camp may stand on the moon, look through space and mutter, "There's sure a beautiful Earth out tonight."

But for now, students seem content to spend a week during the summer on "terra firma," peering through UA telescopes to study the moon and space beyond.

That's hardly surprising. No other American university offers teen-agers the chance to take a close-up peek at outer space or to participate in other "hands-on" adventures in astronomy, says Joan L. Morrill, assistant director of the Arizona Alumni Association, which sponsors the camps.

"I've been on every one of the kids' camps," Morrill says, "and it's wonderful to see how enthusiastic and how excited these kids can get when they're given an opportunity to interact with the professors and the graduate assistants on a one-to-one basis.

"The professors are always amazed at the depth of understanding some of these students have. They are interested, they ask really good questions; and they're thrilled at the opportunity to actually use the equipment."

This is possible at the UA because of the many facilities that contribute to Tucson's renown as "astronomy capital of the world," Morrill says. This summer marks the camps' third year of operation.

Summer 1990 offerings included two one-week camps, each limited to 30 students who were 13 to 17 years old. One was for beginning students, the other for advanced.

The camps cost each student $485 for eight days' and seven nights' food, lodging and transportation, all study materials and admission fees for field trips. Scholarship assistance is available, Morrill says.

The camps focus on using astronomy as a tool, "to introduce kids to science and engineering in a hands-on way that they can enjoy," says Donald W. McCarthy Jr., a Steward Observatory astronomer who directs the camps. "We want to relate astronomy to different science and engineering fields and show them it can be fun."

Students in the beginners' camp spend the first three nights in UA residence halls, which become their base for visits to Kitt Peak National Observatory and the Arizona-Sonora Desert Museum. They also attend activities in the Flandrau Science Center & Planetarium and compete in rocket-launching contests, McCarthy says.

Students head for dormitories on nearby Mount Lemmon for the last four nights of the beginners' camp. There, they team up to use the 16-inch Schmidt and the 40- and 60-inch telescopes to photograph such phenomena as star clusters and double stars.

"The kids have to point and operate the telescope and the camera," McCarthy says, "and they have to agree among themselves on what it is they are going to look at. They have to calculate the right kind of exposures and do what's called guiding the telescope so that it's maintained on the object they're looking at."

Since some of the exposures can take 30 minutes to an hour, McCarthy says, "they learn a little patience in the process, and they learn a lot about engineering through astronomy."

A lecture series woven through the week's activities exposes the campers to "people who are involved in projects like the Hubble Space Telescope, so the kids can get modern, up-to-date information and meet some of these people that they would otherwise be seeing on television," McCarthy adds.

The advanced camp was conducted entirely on Mount Lemmon and covered more advanced topics in mathematics and computer science, McCarthy says.

FOR MORE INFORMATION: Contact Joan L. Morrill, assistant director, Arizona Alumni Association, 1111 N. Cherry, Tucson, Ariz. 85721; telephone (602) 621-5233, or toll-free 1-800-232-8278.

Donald W. McCarthy Jr. photo

Astronomy Camp participants learn physics and have fun making rockets they will launch themselves.