



Astronomy Camp director Donald McCarthy, guest lecturer/observer David H. Levy, and camper Saleela Salahuddin pose at the Astronomy Camp hosted annually by the University of Arizona. Photograph by Teresa Longazo.

STAR TRAILS

Sharing the Thrill of Discovery

By David H. Levy

"EUREKA!" I called out to the group of children. All 30 of them were huddled on the observing platform of the 61-inch telescope high in the Catalina Mountains north of Tucson, Arizona. These youngsters were with Donald McCarthy's Astronomy Camp, hosted annually by the University of Arizona. Each June I visit the camp and talk with the children, mostly 12-year-olds and young teenagers.

This year I was telling the children about an asteroid I found in 1990 while observing at Palomar Observatory with Henry Holt. It turned out to be the first Martian "Trojan" ever found. Locked 60° behind Mars in the L₅ region of the red planet's orbit, Eureka is named somewhat differently from most asteroids. Instead of being named for a person, a town, or a cat, Eureka is named for a feeling, as immortalized by the Greek philosopher Archimedes. Allegedly, Archimedes discovered his principle of objects of different mass displacing different amounts of water while in his bath. So excited was Archimedes that he ran out of the house, presumably still unclad, and yelled "Eureka! (I have found it!)"

I told the children how we wanted to name our new asteroid after the thrill that astronomers feel when they have

made an important discovery. I wanted to give the children an idea of how exciting science can be, especially since nobody knows when nature will open a door and share one of her secrets.

The asteroid story usually works with children. This time, however, the tale boomeranged. Maria Clark, a 12-year-old attending the camp from Houston, Texas, looked quizzically at me and then raised her hand. "I think you should have called the asteroid Eris," she opined.

"And why do you suggest that?" I asked.

"Eris," Maria explained, "is the goddess of hate and oblivion and suffering. She always follows Ares, the Greek god of war. Mars is just the Roman name for Ares. And, since Eureka follows Mars in its orbit, the asteroid should have been named Eris."

The dome was silent for a moment; I didn't know what to say. I looked toward an equally surprised McCarthy. Maria had beaten me hands down. We had spent months coming up with what we thought was an original name for our asteroid, yet in the blink of her eye Maria had come up with something much better. I looked at the rest of the group. "You're absolutely right," I said. "Eris is a much more appropriate name." (I love

being upstaged by a 12-year-old!)

Although I always enjoy talking with youngsters, this astronomy camp is really something special. McCarthy is a well-known astronomer with a knack for explaining difficult concepts to young minds. Most important, the camp has the enthusiastic support of the astronomical community in Tucson. Clearly the highlight of the camp is the night the kids use the Catalina 61-inch reflector. Built in 1965 to study the Moon in preparation for the Apollo flights, the 61-inch is one of the highest-quality telescopes I have ever used. Observing time on it is in great demand. Like any other astronomer, McCarthy has to apply for observing time through a review committee. To its credit, the committee consistently awards these children a night to have this valuable instrument to themselves.

We arrived at the telescope late in the day, just as the Sun began to disappear. The children gathered on the small platform, which I raised to a level just below the big scope. Then I started to tell them about the feelings, emotions, and sheer effort that go into a career under the stars. "It is not important," I insisted, "whether you want to be a professional astronomer or just an informed stargazer. In fact, we would be very surprised if all of you decided to become astronomers. That is not the purpose of this camp. What is important is that you get a feel for what it is like to spend an evening under the stars."

Then I opened my favorite battered copy of Leslie Peltier's *Starlight Nights* and read from the description of his two telescopes. "All day long they sit there," I quoted, "without a sign of life about them. It is only when the stars come out that they begin to stir."

At this point I quietly turned a lever, and the dome's huge shutters surged to life and began to open. Silently the children looked upward as a darkening sky was revealed. I continued reading: "Then like some snowy owl and owlet waking for a night of dark marauding, they spread apart their tight-closed wings, open up their big round eyes and peer about in all directions. The prey they seek is hidden somewhere in the skies, for these are my observatories."

The children sat quietly as the shutters finally opened and mighty Jupiter shone from the south. The kids seemed to understand why they were there. These bright boys and girls were in their element, spending time with people who share their curiosity. They were anxious to look at the gas giant after I had talked with them about the upcoming crash of

Comet Shoemaker-Levy 9.

Jupiter did not disappoint us tonight. With steady seeing, the big planet was exquisite. Festoons and bridges stretched between its dark belts, and the Jovian clouds showed rich colors. It would have been enough to see this sight alone, but these children were seeing Jupiter for the first time. "This look will jump-start your interest in the sky," I suggested. "When you look again at Jupiter with your small telescopes, you won't see anything near the detail or color you have tonight. Let this be your wonderful memory, and may you see Jupiter a thousand more times."

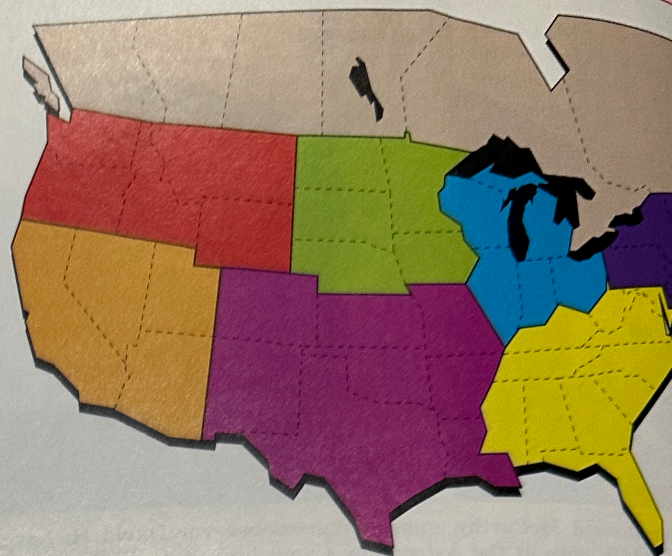
I wanted these children to have the feeling that this is a great time to be alive, and an even greater time to be looking through a telescope — any telescope — at Jupiter. They knew that a comet was hurtling through space to meet its death upon the planet they were gazing at. "Look carefully at the details at the top," I said, trying to explain why south should appear at the top in this telescope. "Imagine that you're right there, watching the comet train chugging closer and closer." Whether or not Jupiter would show major changes is not the issue, I maintained. Jupiter is always a beautiful planet to look at, and now is a thrilling and inspiring time to look at it.

Even through this telescope, the comet would have been too faint for a direct view. But I wanted to show them what a comet looked like, so the telescope then surged its way north for a look at Comet Takamizawa-Levy. Just past perihelion and on its way out of the solar system, this comet surprised me by displaying a beautiful antitail — one that projects toward the Sun.

As the night grew older, McCarthy set up the camp's CCD. Yes, this camp even uses a CCD! For this part of the night I was more interested in the children's reactions to the CCD than I was to the images the device could obtain.

The reason for this night's program was not to acquire data but to give those kids a close look at how professional astronomy is done today. No matter how technical astronomy might be for some of these children, what will remain is that stunning moment when the shutters give way to a brand new night and the first slit of starlight comes in. These kids may never become astronomers; I don't mind. But I do hope that they will never forget about that magic moment.

Though author and lecturer David H. Levy has often howled "Eureka!" upon discovering comets, he has yet to be found roaming the streets of Tucson unclad.



■ **October 4-9** (Oklahoma). The 11th annual Okie-Tex Star Party will be held at Lake Murray State Park. Richard Teske (University of Michigan) will be the featured speaker. Campsites and bunkhouses are available. Contact Beryl Cadle, 6616 NW 20th St., Bethany, OK 73008.

■ **October 7-8** (Tennessee). The 11th annual Bays Mountain StarFest is being readied in Kingsport. The event will feature talks, observing, food, and fun. Write or call for an application: StarFest '94, Bays Mountain Park and Planetarium, 853 Bays Mountain Rd., Kingsport, TN 37660; phone 615-229-9447.

■ **October 7-9** (Pennsylvania). The eighth annual Stella-Della-Valley astronomy convention will be held at Camp Onas in Ottsville. Activities will include speakers, door prizes, a flea market, demonstrations, and observing. Indoor accommodations are limited; tent and camper space will be available. For details, contact Ed Melnick, 1443 Devon Rd., Warminster, PA 18974, or call 215-443-7929.

■ **October 14-16** (California). The Pacific Planetarium Association and the Rocky Mountain Planetarium Association will hold their 1994 Joint Conference at the U. S. Grant Hotel in San Diego's historic Gaslamp District. Contact John Young, Reuben H. Fleet Space Theater and Science Center, P. O. Box 33303, San Diego, CA 92163, or call 619-238-1233 ext. 831.

■ **October 21-24** (California). The Antique Telescope Society's third annual convention and antique telescope show

will take place at Clara in Santa Clara. The event will include an exhibit of antique telescopes, keynote address by B. G. J. Bok, tours of Lick, Mount Wilson, and Palomar observatories. If you are interested in tag telescopes, contact B. G. J. Bok, Green Valley, CA 95030, or call 214-235-1908.

■ **October 26-28** (California). The 30th annual California Lakes Planetarium Society meeting will be held at the Bays Mountain Theater in Kingsport, TN. The event includes a portable planetarium, planetarium material or materials, and a presentation by Steve Mitchell. For more information, call 304-243-4000.

■ **November 1-3** (Alabama). The 12th annual Stargaze, the Southeastern State Park near Wetumpka, AL, will include night sky viewing, a speaking program, and a test for home telescopes. Contact Barry Simon, 700 Leans, LA 70000.

■ **November 4-5** (California). The 5th annual California State Park night sky viewing workshop for home telescopes and instruments will include a display area and a presentation. Contact Horton Rd.,