

ASTRONOMY

CONTINUED FROM A1

Once aligned, the operator can direct an automated telescope to tens of thousands of stars, planets and nebulae. Many automated telescopes include a database of information describing each celestial object, and some newer telescopes can even do the alignment for you.

You'll get hooked

Tonight at Starizona, there are at least six automated Celestron telescopes, but several stargazers have more traditional-looking telescopes.

Darleen Sims and her husband, Woody, own a 10-inch Dobsonian telescope that they bought before Thanksgiving. With its simple design, ability to magnify objects in deep space and its affordability, the "Dob" is a popular telescope for visual observing, but not for astrophotography.

Scott Tucker, an employee of Starizona, says becoming an amateur astronomer costs less than you might think. According to Tucker, you can buy a good starter telescope for \$200 to \$300. Basic computerized telescopes are available for about \$500.

The more elaborate automated telescopes, including many of the Celestrons, can cost thousands of dollars.

Once hooked, the desire to upgrade to a larger, more versatile telescope can be irresistible. Sims says she and her husband were visiting Kitt Peak National Observatory southwest of Tucson recently, and decided to stop at Starizona on the way home. The next thing she knew, they'd bought another telescope, one they can use for astrophotography.

"We're here buying a big boy. An 11-inch Celestron," she said.

Aiding the uninitiated Sometimes spectators drop by Starizona, a popular Tucson fixture for almost 20 years, because they know an event is scheduled; others are drawn by the crowd in the tiny parking lot.

Dean Koenig, 58, is Starizona's owner and a fervent stargazing mentor who never seems to tire of sharing his knowledge.

Several years ago, in recognition of the International Year of Astronomy, Koenig was invited to Astronomy Night at the White House in Washington, D.C. On the South Lawn he set up two Celestron telescopes and shared the secrets of deep space with 150 middle school students.

During tonight's viewing at Starizona, Koenig and



PHOTOS BY SUSAN E. SWANBERG | WICK COMMUNICATIONS SCIENCE INTERN

CURT HUGHES sets up his telescope for an evening of astrophotography at Starizona in Tucson. Hughes will spend the evening photographing objects in deep space. Photograph by Susan E. Swanberg

his staff roam the parking lot offering advice to novices and tips to more experienced amateurs.

Annetta Glowacki, watching her husband, Mike, test astrophotography software, calls Koenig "a master at multitasking."

Starizona regular Gene Dickens says that as a child he saw Sputnik pass overhead.

"I'm glad I was able to make it until we became an interstellar-faring race, and I hope I live until we get photos back from Pluto," he says.

Dickens mentions the common names of some of the celestial objects he finds interesting: the Owl Cluster (also known as the ET Cluster) in the constellation Cassiopeia, Stick Man and the Dragonfly Nebula. These objects have official names, but stargazers often use the more descriptive names.

"Humans, especially astronomers, enjoy finding patterns in the sky," says Adam Block, astrophotographer and manager of public observing programs at the Mount Lemmon Sky-Center. "It somehow makes the unreachable something a bit more familiar."

Dicken's favorite celestial objects are of the planetary variety.

"Saturn takes the cake," Dickens says. "Jupiter is probably second." Jupiter and its four largest moons, lined up almost perfectly, are visible through Dickens' telescope.

Mike Glowacki is working on an image of the Andromeda Galaxy 2.5 million light-years from Earth.

By 7 p.m., there are six "R2-D2s" ranging from six to eleven inches, and one Orion refracting telescope assembled and ready to go.

Soon the lights in the nearby Sherwin-Williams

Paints store goes dark and the crowd of 16 amateur astronomers and curious onlookers cheer.

In your backyard

Several astronomers have specialized lenses and cameras attached to their telescopes to capture images of faint objects in deep space. The high-speed lenses, all versions of the HyperStar — designed and patented by Koenig — can be paired with a light-sensitive camera and specialized computer software to photograph images of deep-sky objects like the Pacman or Flame nebulae.

A HyperStar-equipped telescope is installed on the International Space Station.

"It's astounding. Every man has a 'Hubble' in his backyard now," says stargazer Neil Zaborowski, in a nod to NASA's powerful telescope launched nearly 24 years ago.

He watches as Curt Hughes begins an astrophotography session.

"This guy knocks off beautiful photos in a couple of minutes."

Hughes positions his telescope to take 10 exposures of a nebula, each



MIKE GLOWACKI ASSEMBLES his telescope and astrophotography equipment.

three minutes long.

At 7:45, the group buzzes with talk of Messier objects, nebulae and star clusters. In the background, motorized drives on automated telescopes hum as the astronomers triangulate their way to a guided view of the universe.

Finished with his astrophotography session, Hughes can't figure out where the computer stored his images.

"They're lost in space," Zaborowski says.

Other clubs

In addition to Starizona, Southern Arizona is home to other astronomy groups willing to help beginners. Glen Sanner says Huachuca Astronomy Club in Sierra Vista has members who are just getting started and seasoned observers with their own backyard observatories.

"We probably have the greatest assortment of telescopes of any club

around, from large to small to automated or non-automated," Sanner says.

Sonora Astronomical Society (SAS), in Green Valley, provides astronomy education and fellowship with other amateur astronomers. SAS sponsors frequent star parties where amateur astronomers provide telescopes for public viewing of the skies.

The Tucson Amateur Astronomy Association is

READY TO TRY IT?

- Green Valley
The Sonora Astronomical Society
<http://www.sonora-astronomical-society.org>
- Sierra Vista
The Huachuca Astronomy Club
<http://www.hacastronomy.com>
- Tucson
Tucson Amateur Astronomy Association
<http://tucsonastronomy.org>
- Starizona
<http://starizona.com/acb/>
- Kitt Peak National Observatory**
<http://www.noao.edu/kpno/>
- Amado
Fred Lawrence Whipple Observatory
www.cfa.harvard.edu/

another resource for amateur astronomers.

What's lost is found

By 8:45, there are 24 sharing astronomy and friendship under the stars. The lost computer files found, Hughes commands the computer to stack the 10 images. Soon a composite image emerges on his computer screen.

Within a field of stars is a hazy-looking orange ball with what looks like an open mouth. Several stars lie within the gaping grin.

"Pacman," Hughes says. Having found his files, and assembled a credible image, Hughes is ready to move on. "Now I'm going to try the Flame Nebula."

Thank you everyone for your kind words and support at the "Taste of the Valley". Thank you GV/Sahuarita Chamber of Commerce for an exceptional event. Hope to see you soon! - The Ladies

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Thurs. 2/6 • 10 - 12 pm • 316-B S. Paseo Pena
Betsy Mabrey • (520) 260-8747
\$48,900 - Villas West - East facing patio to take advantage of the shady patio. Home has tile & carpet flooring. Furnished, gas stove, water heater & furnace. Close to churches, shopping & restaurants. (52177)

Thurs. 2/6 • 12 - 3 pm • 1829 W. Via del Recodo
Jennifer Root • (520) 918-8168
\$224,900 - Beautiful home with mountain views. 2bd/2bath + den. Upgraded kitchen, large screened in back porch and your own fruit trees. New on market! JRoot.longrealty.com/53123

Thurs. 2/6 • 1 - 3 pm • 457-C Paseo Quinta
Betsy Mabrey • (520) 260-8747
\$46,900 - Villas West - Dishwasher, full bathroom vanity, tile flooring in LR & Kit. Bedroom is carpeted w/a king sized bed. No worries when you travel, well maintained & secure. Enjoy friendly neighbors. (52432)

Thurs. 2/6 • 4 - 6 pm • 1 Avenida Marquez
Karen West • (405) 642-4548
\$469,000 - Tubac custom home w/casita! 3 car garage, gourmet kitchen, 1 acre in Country Club Estates. (52414)

FRIDAY OPEN HOUSES

Fri. 2/7 • 9 - 12 pm • 981 W. Paseo del Cilantro
The DePalma Team • (520) 275-5754
\$235,000 - Portillo Hills opportunity at \$95 PSF. Spacious home w/2BRs & a den/home office/hobby room with amazing storage space. New SS dishwasher & Corian counters. (51232)

FRIDAY OPEN HOUSES

Fri. 2/7 • 9:30 - 12:30 pm • 175-A S. Paseo Tierra
Betsy Mabrey • (520) 260-8747
\$57,900 - Villas West - Have your own washer & dryer in the house. Remodeled kit. w/full size appliances. Bathroom remodeled as well. See what can be done w/a 2 bedroom Villa. Built in bookshelves. (52454)

Fri. 2/7 • 10 - 12 pm • 233 E. Paseo Chuparasos
Cindi & Paul • (520) 906-9805
\$166,900 - Beautiful 2BR, 2BA. Awesome Family Rm overlooking golf fairway. Great curb appeal. Beautifully landscaped. Nicely finished golf cart & Shop bldg. Lg. 2Car carport. (52667)

Fri. 2/7 • 10 - 1 pm • 470 W. San Ignacio
The Walsh Team • (520) 256-7078
Your affordable Green Valley getaway awaits! Large bedrooms with private baths and much more! Back borders common area. Come take a look! GVR available. (52720)

Fri. 2/7 • 11 - 2 pm • 708 Cedar Bend Ave
Jennifer Root • (520) 918-8168
\$143,000 - Sparkling home in gated community. 2bds/2baths + den. Large kitchen in great room. 2 car garage and nice mountain views. Retirement at its best! JRoot.longrealty.com/52677.

Fri. 2/7 • 11 - 2 pm • 873 N. Delacroix Drive
Linda Staneart • (520) 405-5775
\$167,000 - Do you want a little extra space? Check out this great 2 bedroom, 2 bath, 2 garage SF home on a nice corner lot in a gated community! Beautiful furnishings avail. **Hosted by Mark Walsh.** (52494)

Fri. 2/7 • 1 - 3 pm • 1850 Via Frondosa
Judy Johnston • (520) 419-2679
\$69,500 - Great opportunity in Pueblo Estates. Large living area with vaulted ceilings, spacious laundry rm with built-in desk. separate shed/workshop. Stop in Friday! (52373)

SATURDAY OPEN HOUSES

Sat. 2/8 • 9 - 12 pm • 444-B Quinta
Judy Johnston • (520) 419-2679
\$48,900 - New lower price on this fully updated Villa. Tile everywhere / full size appliances / washer & dryer in house / mtn views from front patio. Stop by Saturday for a tour! (51286)

SATURDAY OPEN HOUSES

Sat. 2/8 • 10:30 - 12:30 pm • 537 W. Chardin Drive
Joyce Redweik • (520) 603-5315
\$167,500 - Beautifully furnished 2BR, 2BA, Den in gated community. 2 car garage. Beautiful desert landscaping. GVR. (52275)

Sat. 2/8 • 10 - 1 pm • 212 W. Tuna Dr
Betsy Mabrey • (520) 260-8747
\$74,900 - Pueblo Estates - Carpeted LR & Bdrms. Large kit. w/lots of storage. Breakfast bar & dining table. LR is full width of home w/mtn views. Storage & workshop on covered side patio. Enjoy friends & pets. (51473)

NEW LISTINGS

Land Lots of Land • Calle Quarto
Cha Cha Donau • (520) 591-4982
\$159,000 - Montana Vistas - No age restriction, no GVR, no HOA! But... you can build your dream home on 9+ acres bring your horse & enjoy the panoramic views! Call me for more information! (52684)

Madera Reserve Family Home • 901 E. Mount Wrightston Loop
The DePalma Team • (520) 248-8304
\$379,000 - Split level 5BR home in Madera Reserve. It has a pool, spa & Koi pond on .81 acres. Remodeled Mstr bath, ext. paint & roof recoated in '13. Also newer A/C. (52996)

Remodeled & Amazing! • 751 W. Rio San Pedro
Cha Cha Donau • (520) 591-4982
\$137,000 - Villages - Truly amazing transformation. Better than new and looks like a model. All the cabinets are Ikea, ceramic tile & bamboo floors throughout. Designer colors & finishes! (53119)

Perfect! Legends Home! • 2219 S. Via Massari
Cha Cha Donau • (520) 591-4982
\$189,000 - Ventari floor plan! Just the best floor plan Dorn ever designed. That wonderful southwest feeling w/modern comforts. The bedrooms are split, the office is perfect & the great room is open & bright! (53098)

FEATURED PROPERTIES

Wow! New Price! • 1786 W. Placita Canoa Azul
Cha Cha Donau • (520) 591-4982
\$177,500 - Gated community in Canoa Ranch. This home has all the right stuff. Loads of windows, open, den, split bedrooms, fans, higher ceilings, well landscaped & extended garage. (51975)