

Dome on the Range

Texas Hill Country Called to Couple Who Dreamed of an Observatory



Kenric and
Laurie Kattner

Christine Forrest

High on Putman Mountain, on the edge of dark-sky country in Llano County, a gleaming cylinder rises next to a Hill Country cottage. The 24-foot Galvalume tower looks a little like a grain silo, but the shutter on the rotating Ash-Dome roof is the giveaway. It's actually a computer-controlled, robotic observatory that can produce striking photographs of spiral galaxies and cloudlike nebulas millions of light-years away.

Stargazing is more than just a hobby for the observatory's owners, Kenric and

Laurie Kattner. You could even say the stars brought them together. Within a couple of hours of meeting on a blind date more than 20 years ago, they were pointing at the sky, naming constellations.

Now they take deep-sky photographs with a 16-inch RC Optical Systems Ritchey-Chrétien telescope and digital imaging system that uses the same technology as NASA's Hubble Space Telescope. A handful of universities in Texas have something similar, but theirs has all the comforts of home in a two-bedroom cottage next door.

Even though the Kattners can operate the observatory over the Internet from anywhere in the world, they would rather be there in person to gaze up at the night sky.

"There's not much better than to watch the Milky Way sprawl overhead while the coyotes howl from the far horizon," says Ken. "When it's really dark, it's just spellbinding."

A Wish Upon a Star

The Kattners acquired their love of astronomy early on. Laurie spent countless hours on the roof of her Houston home

The Kattners' custom-designed telescope uses the same technology as NASA's Hubble Space Telescope to photograph deep-sky objects such as the Whirlpool Galaxy, a spiral galaxy about 30 million light-years away that is interacting with a companion galaxy, seen to its lower right.



Kenric Kattner



Kenric Kattner

learning the stars with her dad, Austin Anthiss, a chemist at Brown & Root. And when Ken was in junior high in Dallas, his father, Lionel Kattner — a nuclear physicist involved in the creation of the first integrated circuits — taught him to use a Celestron 8-inch Cassegrain telescope. Some of the integrated circuits from the company Lionel cofounded, Signetics, even went to the moon in the TV cameras for the Apollo missions, and are still there today. Seeing the moon and planets in such detail fascinated Ken, who soon learned how to rig the family telescope with a

camera. His curiosity was encouraged by an inspiring teacher at his high school, St. Mark's School of Texas, which had an even larger telescope Ken could use to photograph galaxies and nebulas. He was given run of the school's domed observatory, and dreamed of having his own.

"We live in the Milky Way, and with a telescope, you can see beyond it to billions of other galaxies that each harbor billions of stars," he says. "They give you a sense of how big the universe really is."

After they met and married, the Kattners would go out of their way to peer into the dark sky. They had to, after settling in Houston, where city lights wash out all but the brightest stars. Busy careers pushed the idea of an observatory aside for Laurie, an interior designer, and Ken, a lawyer who restructures distressed airlines and other large companies.

About eight years ago, Ken picked up Astronomy magazine in an airport and was astonished at the advances in technology. New equipment was controlled by computers that track the rotation of the earth. Telescopes could

slowly follow deep-space objects across the sky, while digital cameras took photos with exposures that last for hours.

Before long, Ken was pursuing astrophotography again. He tried several portable telescopes that he could carry far from the city lights, but was frustrated by their limitations.

"What I wanted to do was make those pretty pictures, and with that consumer class of equipment, you couldn't do it," he says. The experience rekindled the desire for an observatory somewhere under the dark skies of rural Texas.

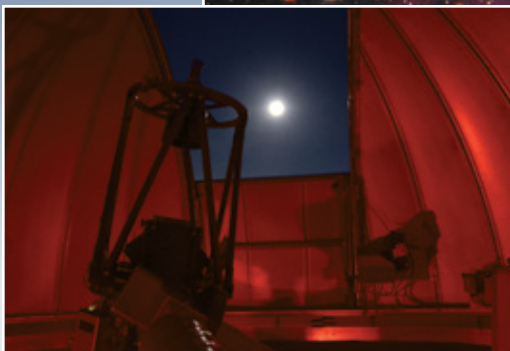
"Once it hit me, I couldn't let go."

Deep in the Heart of Texas

It was Laurie's idea to look for land on their way home from the Texas Star Party, an annual event near the University of Texas McDonald Observatory in Fort Davis. They started their search in Fredericksburg, but still saw some sky glow from the lights of San Antonio. They spent months driving around at night, looking for the perfect piece of property.

They found it in Llano County, and bought 170 acres in 2007.

"The Big Bend area near McDonald Observatory is one of the darkest areas in the nation, and it's not that different out at our place," Ken says of their Hill Country land.



A fierce stellar wind and intense radiation from a massive star created this glowing cloud known as the Bubble Nebula, a mere 11,000 light-years away. Inset: In the Kattners' observatory, the moon shines through the dome to shed light on their telescope, which stands ready to capture the night sky.

They wanted to be a part of the rural community and get financing through a local lender, he says, and learned about Capital Farm Credit from a billboard advertising rural land loans. They sealed the deal at the Mason branch office.

But buying the land was just the start. The real work was in creating an observatory, something that requires extreme precision and doesn't come in a kit. Even the telescope had to be made to order.

They searched for a designer who was up for the challenge, and found Eric Mustard, a Fredericksburg architect who helped them arrive at their farmhouse style with a high-tech twist. The Kattners knew a little about the technology required, and honed their ideas after looking at telescopes at Texas A&M University and at an astronomy bed-and-breakfast in New Mexico.

After about a year of designing and refining with Mustard, they returned to Capital Farm Credit to finance the construction in 2009. Ken says Jeri Langehennig, vice president of lending in Mason, was very interested in the observatory, something that doesn't come along every day at the lending cooperative.

"I was eager to go see it," Langehennig says. "I'm glad we were able to finance it. Conventional lenders might not be able to lend for such a unique feature."

In 2010, the Kattners had their cottage and observatory, and the property had a new name: Iron Oak Ranch.

An Eye on the Sky

As the sun sets on Putman Mountain, the observatory comes to life, rotating its dome into position and opening its shutter. A cooling system equalizes the temperature of the telescope with the air around it, and motors aim it toward the sky, adjusting its focus to within 1/40,000 inch. What the telescope sees is captured by a camera with a CCD image sensor, a light-sensitive integrated circuit that is a descendant of those pioneered by Lionel Kattner.

To keep vibrations in the cottage from blurring photos, the telescope sits on a tall concrete pier isolated from the foundation and anchored 7 feet into the ground.

The dome, telescope and equipment communicate through software that has required some fine-tuning, Ken says. Once he's completely satisfied with how the observatory runs unattended, he plans to collaborate with professional astronomers and set up observing programs with local schools. Many supernovas are discovered by high school students, he says.

"I'm really pro-education," says Ken, who still stays in touch with the teacher who made such a difference in his life. "I feel it's incumbent on us to give back, and get kids interested in science. There's a ton of math going on in the computer."

The observatory already has a following among Hill Country astronomy clubs, which consult dark-sky and climate information collected there and posted online. Its website, www.putmanmountainobservatory.com, has had more than 23,000 visits from people on six of the world's seven continents.

There's just something special about the heavens and the earth at this location on the Llano Uplift, a stone's throw from Enchanted Rock.

That's why the Kattners plan to build another home amid the granite boulders higher on the mountain when they retire. When they look up, they'll see the Milky Way, and when they look down, they'll see the observatory that fulfilled a wish from so long ago.

"It's a sanctuary," Ken says. "We just love it."