

# BETTING ON A SURE THING

A 'RECORD' ENDING TO INDIANA ASTEROID PROGRAM



## THE YEAR WAS 1937.

It was a warm, summer day in Bloomington, Ind., and newly hired Indiana University astronomer Frank Edmondson was working in the Kirkwood Observatory with his colleague, department chairman Wilbur Cogshall. Edmondson's wife, Margaret, brought their two children for a visit bearing treats — chocolate ice-cream cones from the famous college hangout the Book Nook, better known as The Gables, where Buffa Louie's operates today. Maybe it was the tasty treat, or maybe it was the sun, but that was when inspiration struck Edmondson, BA'33, MA'34.

He turned to Cogshall and bet him a chocolate ice-cream cone that if Cogshall submitted a proposal to fund a postdoctoral position at the Goethe Link Observatory being constructed in nearby Brooklyn, Ind., it would be approved.

Cogshall did not believe they would get the funding, but it was a bet he couldn't pass by. But he didn't know Edmondson had an ace in the hole.

by **KEN KINGERY**

## "YOU MAY QUESTION MY MORALS,"

says Edmondson, now 95 and retired after decades of leading and building the IU Astronomy Department that, at one time, included only himself. "But I was betting on a sure thing."

Edmondson had already spoken to newly hired IU President Herman B Wells, BS'24, MA'27, LLD'62, and easily convinced him to fund the postdoctoral fellowship. But Wells insisted the proper channels be followed. This meant a formal proposal from Cogshall's desk.

"Without that bet, we may not have gotten the money," says Edmondson with a huge grin.

Although Edmondson didn't know it at the time, securing that postdoctoral position would eventually lead to the Indiana Asteroid Program, one of the most successful of its kind in the history of astronomy. Over a 28-year span, the project identified 119 asteroids, using more than 3,500 image plates, showing 12,000 asteroid images. And in January of this year, nearly 60 years after it began, the last chapter in its storied history was written when the final asteroid discovered by the program was named. The honor went to Brenda Records, who recently retired as office manager of the Astronomy Department after 20 years of service.

"I did not expect it at all," says Records, who now spends her time at home and visiting her grandchildren in Louisville, Ky. "I was very surprised and honored that Frank named the asteroid after me."

To understand where the Indiana Asteroid Program ended, it is important to know how it all began. In 1937 Edmondson and his mentor, Howard Shapley, director of the Harvard College Observatory, toured the Goethe Link Observatory's construction site. Soon after, Shapley suggested to Edmondson that he connect IU to the observatory by creating a postdoctoral fellowship for Shapley's doctoral student, James Cuffey.

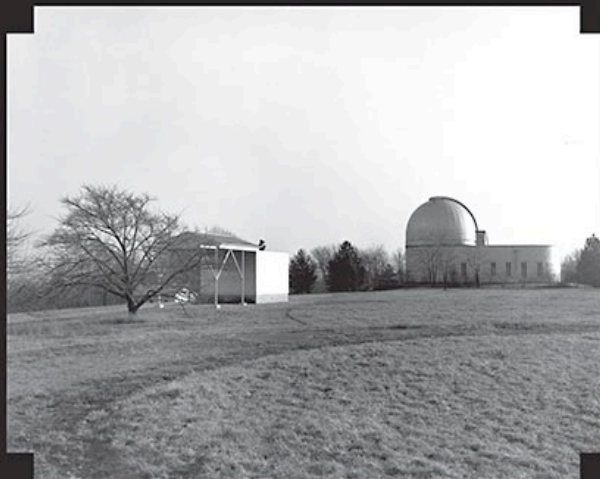
Nearly 10 years later, the International Astronomy Union put out a call for assistance, asking the astronomy world to help search for asteroids whose orbits had been lost during World War II. So, a decade after a chocolate ice-cream cone and a long interruption by the war, Edmondson and Cuffey decided to answer the plea.

"There were about 1,000 asteroids with identified orbits and 1,500 more with preliminary observations before World War II," says IU Astronomy Professor Emeritus R. Kent Honeycutt, who has served as chairman of the Astronomy Department twice and is currently director of the Goethe Link Observatory. "But the observatories were shut down during the war, and the asteroids were lost, meaning the information on them was no longer good enough to calculate their orbits."

Edmondson and Cuffey felt they had a moral obligation to answer the plea for help if it was in their power. But as it turned out, it wasn't. At least not at first.

After several attempts to search for asteroids, Cuffey found that the 36-inch lens of the Goethe Link Observatory telescope was simply the wrong size for the work required. The telescope provided a field of vision that was too small for finding asteroids.

However, soon after the failed attempts to help, a "lucky accident" occurred. While lecturing at the University of Cincinnati, Cuffey was informed that a 10-inch lens was "gathering dust" in the university's attic. He convinced Cincinnati to allow IU to



*The shed housing a 10-inch-lens telescope sits in front of the Goethe Link Observatory in Brooklyn, Ind.*



*Professor Frank Edmondson oversees an assistant taking precise measurements of an asteroid's location.*



*Guests enjoy a string quartet concert in the Goethe Link Observatory.*

borrow the lens indefinitely. The lens would eventually be directly responsible for discovering all of IU's 119 asteroids.

By 1949 the Goethe Link Observatory had been donated to IU, and the university decided to expand the facility to help the quest of finding lost asteroids with the newly acquired 10-inch lens. After the Office of Naval Research provided a grant to buy special photographic plates that capture images of the sky, IU agreed to fund the mounting of the 10-inch telescope, and Link built a small shed to house it.

The Indiana Asteroid Program was born. Edmondson and his colleagues quickly began recovering asteroids with orbits that had been lost during World War II, while discovering new ones.

According to Edmondson, it was his intent to name the first asteroid discovered at the observatory after Daniel Kirkwood, one of the most prominent scientists of the 19th century, who applied his skills in mathematics to celestial mechanics. However, a graduate student by the name of R.C. Cameron discovered the first one completely on his own.

Cameron did all of the "grunt" work, which involved taking photos with the plates, comparing them to find tiny objects mov-

Then, in 1967, the Indiana Asteroid Program met a sudden end. When plates were put in the telescope, they were too exposed to find the faint asteroids after only 15 minutes, when an hour is typically needed. So what was to blame for the program's sudden demise?

"The lights of Indianapolis got too bright," said Edmondson. "The city singlehandedly put an end to the asteroid program."

But it was not the end of the story. IU was still home to nearly 7,000 plates that encompassed a substantial portion of

the sky and contained a good deal of valuable data. Astronomers at IU and the Goethe Link Observatory continued to mine this data for two decades.

"If an astronomer needed an image for data on an asteroid or another heavenly body, Indiana

University probably had it," says Honeycutt.

Finally, after several decades of research, IU sent the plates to the Lowell Observatory, the only observatory in the country still taking plates. Over the years, the orbits of asteroids discovered by the program were slowly calculated and confirmed by other observatories. However, the naming rights still reside with the head of the program that discovered the asteroid. And so in January of this year, office manager Records joined the ranks of famous astronomers and IU personnel to have an asteroid named for them.

Edmondson named the final IU asteroid "Records" partly due to the employee's 20 years of excellent work as office manager and administrative assistant, and partly in recognition of her several years of hard work transcribing his book, *AURA and its U.S. National Observatories*. Records, one of the few people who could read Edmondson's handwriting, spent years typing his handwritten manuscript, getting it ready to submit to the publisher, Cambridge University Press.

"Brenda was a very important part of the Astronomy Department for a very long time and instrumental in getting my book published," says Edmondson. "We were very lucky to have her." ■

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■ THERE ARE SOME PRETTY MAJOR CHUNKS OF ROCKS FLOATING AROUND OUT THERE BEARING THE NAMES OF SOME VERY FAMOUS IU FACULTY, STAFF, AND ALUMNI ... ■

ing across the sky, making calculations based on the tiny speck's movements, and finding it again on its next orbit precisely where predicted. As head of the project, Edmondson could have named the asteroid, but he thought it only fair to allow Cameron the naming rights.

And Cameron had other ideas.

"The story he gave us is that he told his girlfriend — who was being coy with him about his marriage proposal — that if she said yes, he would name an asteroid after her," says Edmondson.

And so, the first asteroid named from Indiana University is named Winifred. The second is named Kirkwood.

Over the years, Edmondson and the Indiana Asteroid Program continued discovering asteroids and naming them for Indiana astronomers and faculty, both recent and retired, as well as famous classical composers and conductors. Some familiar names include IU presidents William Lowe Bryan, BA 1884, MA 1886, LLD'37, and Wells, IU astronomers K.P. Williams and Wilbur Cogshall, current IU faculty members James Glazier and Stuart Mufson, famous Indiana astronaut Gus Grissom, and classical conductor of the Boston symphony Sergei Koussevitzky.

"There are some pretty major chunks of rocks floating around out there bearing the names of some very famous IU faculty, staff, and alumni," says Honeycutt.

