



Grote Reber explains radio astronomy at OSU's Caldwell Lab

Dispatch photo by Eric Albrecht

Space listener likes to go it alone

By David Lore
Dispatch Science Reporter

A half-century ago, nobody was interested in Grote Reber and radio signals from space: not the astronomers at University of Chicago, nor at Harvard University, nor at the California Institute of Technology.

"The astronomers were like God himself in those days; and since they didn't know anything about radio, radio didn't exist," Reber recalled.

So Reber, a "solder slinger" who tested radios for a living, decided to tackle the unseen, crackling universe all by himself.

Following up on the breakthrough of Bell Labs engineer Karl Jansky — the first man to identify radio signals from space — Reber built the first radio telescope in his backyard garden in Wheaton, Ill., 25 miles from downtown Chicago.

The homemade receiver successfully picked up signals from across the Milky Way, confirming Jansky's find-

ing and assuring for all time that astronomy would be practiced with the ears as well as the eyes.

He will be honored today at a Columbus luncheon being held by John D. Kraus, a longtime colleague and professor emeritus of electrical engineering at Ohio State University.

AT AGE 76, Reber said, he still prefers "to cook up my own schemes."

"My philosophy is to do something different, just as it was in the 1930s," he said. "You don't need to put in a jillion-dollar nuclear accelerator; all you need is brain power."

When Jansky stumbled on extraterrestrial static while studying long-distance radio transmissions, it marked the birth of a new science.

But the leading astronomers of the day "were dead sure this thing of Jansky's was at best a mistake and at worst a hoax; they couldn't dream up any way that Mother Nature could produce radio waves," Reber said.

Reber had received his first "ham" radio license at age 15.

He had graduated into the Depression from the Illinois Institute of Technology in Chicago to find his electric engineering degree in little demand. Reber was finally hired by a Chicago appliance company to test radio sets.

Because Bell Labs was not following up on Jansky's discovery, Reber built his own 31-foot-diameter parabolic reflector antenna to tap the VHF range at 160 to 200 megahertz.

Eventually, he was rewarded by signals not only from the galactic center but from points across the entire plane of the Milky Way.

His early mapping of galactic radio sources was largely ignored in scientific circles until after World War II. Then Reber finally was able to give up his job and pursue radio astronomy.

Today, he operates a low-frequency receiver station in the Australian

state of Tasmania, where atmospheric conditions are optimal for long-wave radio astronomy.

Low-frequency signals require a relatively simple, low-cost lattice of pole-and-wire antennae strung across several hundred acres. Reber — typically one of the few scientists interested in such signals — said he is hoping to build a second such station near Georgian Bay, Canada.

HE SAID he wants no part of government projects to put radio telescopes in earth orbit or on the moon.

"These guys always want to think big; my way is to think small.

Reber prides himself on being a liberated amateur.

He said he became interested in radio back in the 1920s because it was something he could control by himself.

"It represented a challenge; it gave you something constructive you could do with your hands, just like a sculptor," Reber said.