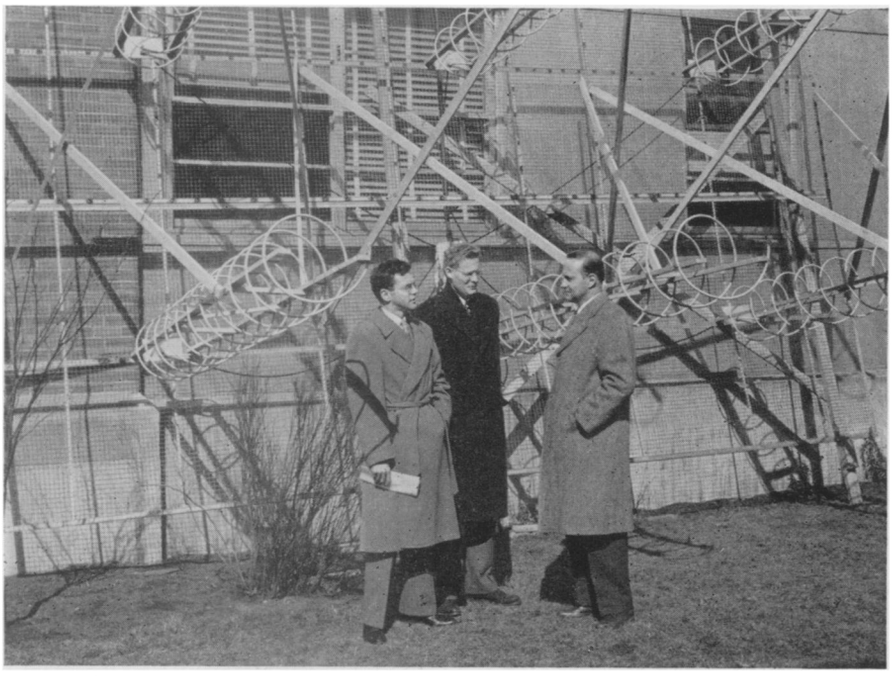

GIANT RADIO TELESCOPE—The antenna of the Ohio State University radio telescope in Columbus will consist of eight sections such as this one, mounted side by side. With it astronomers will seek out the noisy radio stars that hiss at the earth. (See SNL, March 1, p. 135.)

ELECTRONICS

Predict Fading for TV

Summertime will bring more interruptions to television viewing screens carrying transcontinental programs. Shifting air signals blamed for detouring video signals.

➤ TRANSCONTINENTAL TELEVISION network programs are likely to fade more often as the summer wears on, leaving blank television screens before video viewers' eyes.

Some fading already has been reported by television networks who blame changing temperatures and shifting air densities for detouring the television signal off its charted course. Sometimes the video signal has been lost as long as 15 seconds. But the sound, which is sent over different facilities, is not affected.

Opened last fall, the television relaying system is shared by all companies who broadcast to or from the West. It uses a microwave signal which is relayed across mountains and prairies by 107 repeater stations spaced from about 20 to 50 miles apart, depending upon the terrain.

The nearness of the stations to each other gives line-of-sight transmission of the television signal, necessary because of the extremely short wavelengths used in video broadcasting. Signals leaving one repeater station are beamed directly at another. Under ordinary conditions they are received without trouble.

However, changes in temperatures produce differences in air densities between relaying stations. The different densities offer different paths of resistance to the microwave carrier. By taking the path of least resistance, the video signal may stray off course and miss its destination completely.

NBC television engineer J. M. Weaver said fading probably would get worse during the summer. Hot days followed by cool nights are expected to produce much of the disturbance, he said.

Actually the microwave method of transmitting television pictures is superior in picture quality to the method used in coaxial cable transmission. One television engineer said sometimes the picture arrived in Washington by microwave from the West coast with more detail than from New York by coaxial cable. The difference in picture quality is due to a broader frequency spectrum which can be used in microwave transmission.

Science News Letter, March 8, 1952

WILDLIFE

Coyote Scalps In Deep Freeze

➤ HUNTERS IN the Tario, Mo., area are reported to have a new use for deep freezers: saving the scalps of coyotes until March 18, when the new, $30 bounty goes into effect.

Conservation agent Bill Noland, Atchison and Holt counties, Mo., also reports that more coyotes are being hunted from planes, possibly to increase the number of scalps in deep freeze lockers.

Science News Letter, March 8, 1952

DENDROLOGY

Discover Tropical Wood Half Aluminum Strength

➤ DISCOVERY OF a tropical wood five times stronger than white oak and nearly half as strong as aluminum was reported by Frederick F. Wangaard, associate professor of forest products at Yale School of Forestry in New Haven, Conn.

The tropical hardwood comes from a medium-sized tree known as Kaneelhart. It was uncovered during a search to find replacements for woods such as teak and oak now standard for various naval uses. Tests have shown it to be one of the strongest and heaviest woods in the world. Although having nearly half aluminum's strength, it weighs only a third as much as the metal.

The Kaneelhart tree, scientifically known as *Licaria cayennensis,* is a member of the Laurel family and a distant relative of the sassafras tree found in the eastern United States. The tropical hardwood is found in about 40 varieties in Central America and along the northern coast of South America.

Possible uses foreseen by Prof. Wangaard include hard-as-iron thresholds for doorways, for tool and utensil handles, in textile mill machinery and for turned-wood products of all kinds. The wood can be machined to a mirror-like finish.

Science News Letter, March 8, 1952

ELECTRONICS

Army Radio Equipment Shrunk to Tenth Size

➤ USE OF transistors, which are germanium crystal electronic devices that can replace conventional vacuum tubes, has allowed the Army Signal Corps to reduce one part of its radio-teletypewriter equipment from 100 to 10 pounds. The new equipment can also be operated on 1½ watts from dry batteries instead of 175 watts from a heavy mobile generator.

Instead of burning out after a relatively short period of use, like the familiar tubes such as in ordinary radio sets, the transistor has an estimated life of seven years of continuous use.

Science News Letter, March 8, 1952