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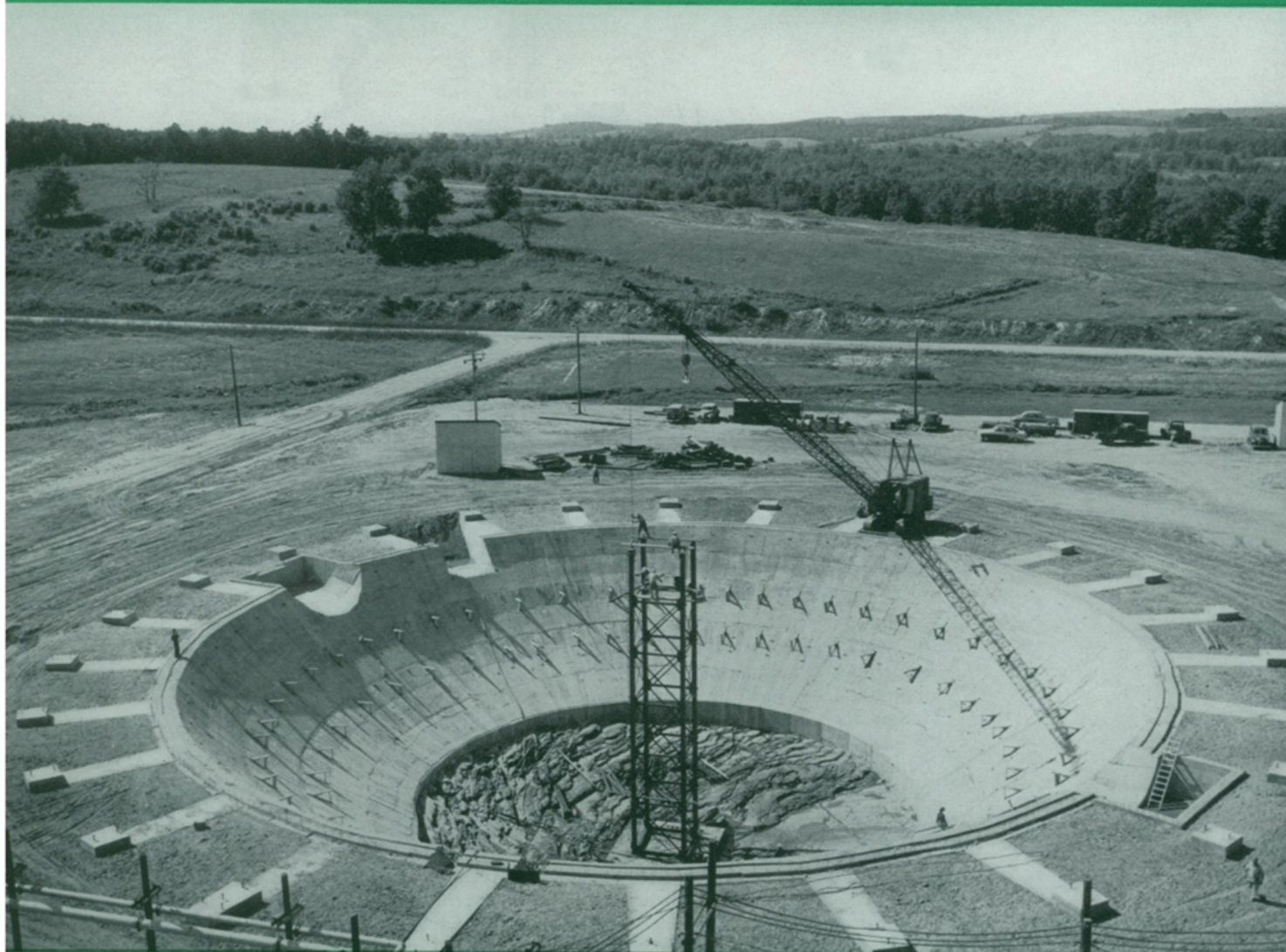
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SCIENCE NEWS LETTER

THE WEEKLY SUMMARY OF CURRENT SCIENCE



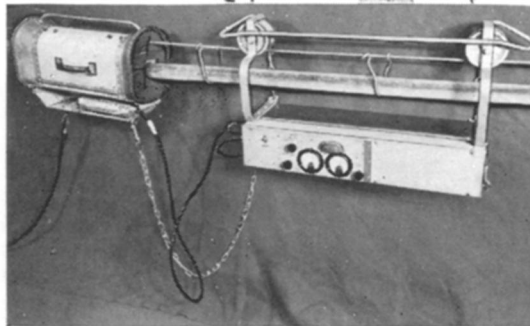
Atomic Saucer

See Page 286

A SCIENCE SERVICE PUBLICATION

**This
electronic
nose
sniffs
out
leaks**

Starting electronic nose on its way. It is pulled from pole to pole by line extending toward the ground. Previously workmen had to paint the cable with soap solution, so bubbles would disclose leaks.



For test, the cable is cleared of protective nitrogen or air, and filled with Freon gas. Case at left collects escaping gas which operates Freon-sensitive detector underneath. At points where Freon escapes through sheath cracks, the box at right—a combined control unit and power supply—rings a bell. Workmen mark the point of leak for later repair.

AFTER years of buffeting by the wind, even tough telephone cable sometimes shows its age. Here and there the lead sheath may crack from fatigue or wear through at support points. Before moisture can enter to damage vital insulation, leaks must be located and sealed.

To speed detection, scientists at Bell Laboratories constructed an electronic nose which *sniffs* out the leaks. Using an electrically operated element developed by the General Electric Com-

pany, the device detects leaks of as little as 1/100 cubic foot per day. Sheath inspection can be stepped up to 120 feet per minute.

Thus Bell scientists add findings in other fields to their own original research in ways to make your telephone system serve you better. On the other hand their discoveries are often used by other industries. Sharing of scientific information adds greatly to the over-all scientific and technological strength of America.



BELL TELEPHONE LABORATORIES

Improving telephone service for America provides careers for creative men in scientific and technical fields