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370 Science News / Vol. 90 / 5 November 1966

### GENERAL SCIENCE

# **DEWLine** Marks Tenth **Anniversary**

### See Front Cover

> AT POINT BARROW, the northernmost tip of Alaska, the first radar communications of the DEWLine was marshalled into service ten years ago. One of the stations is shown on the cover.

The DEWLine, (Distant Early Warning System), a 3600-mile network of communications stations and stretching from northwestern Alaska to eastern Greenland, guards the North American continent against at-tacks by high-flying manned bombers that might be launched over the polar region and serves as a vital communications link giving support to defense programs including those against intercontinental ballistic missiles.

The DEWLine consists of six main stations and 27 auxiliary stations situated roughly along the 69th parallel from Cape Lisburne, Alaska, and across Canada to the east coast of Greenland. These stations, operated 24 hours a day, are manned by more than 1,000 technicians from Interna-tional Telephone and Telegraph Corporation.

Before assignment to the DEW Line, trainees must not only demonstrate technical competence to operate and maintain specific DEW Line equipment but also pass a battery of physical and psychological tests that measure a person's ability to adapt to life in the Arctic as well as his fitness for working in an isolated, lonely world.

Most formidable foe in the Arctic is the unrelenting cold. At minus 30 degrees F., exposed flesh will freeze solid in three minutes. When a 30-knot wind is blowing at the same temperature, the freezing time plummets to 30 seconds. At the start of each work shift, and at frequent intervals throughout the day and night, all DEWLiners are informed of the temperature, the wind velocity, and the "chill factor" of this combination—the damaging potential of the temperature when intensified by the wind.

Artificial winds, too, add a potentially lethal chill factor to the existing temperature.

The DEWLine was conceived in 1952 by scientists at Massachusetts Institute of Technology's Lincoln Laboratory and construction began in December 1954

(Cover photograph by ITT.)