CYCLONE JONES

Discoverer of the Tornado Pulse Generator

A frightening encounter with a tornado in the early 1900s led Herbert L. Jones to a lifelong fascination with thunderstorms and to research that became the basis of modern tornado forecasting.

Born in Grants, N.M., in 1904, Jones grew up on a homestead in Alberta, Canada, where the memorable storm occurred. The experience remained etched in his memory even after his family relocated to Oregon, where he majored in electrical engineering at the University of Oregon.

After college, he taught at the University of New Mexico and worked as an engineer for the Pacific Telephone and Telegraph in Portland and Bell Telephone in New York. He also earned master's and doctoral degrees from Oregon State University and gained experience as a private consultant in radio, electronics and sound.

Herbert L. "Cyclone" Jones's research at OSU in the 1950s and '60s became the basis of modern tornado forecasting technology.

His arrival in Stillwater in 1946 coincided with thousands of veterans taking advantage of the GI Bill. Many entering the electrical engineering graduate programs already had training and experience in communication, radio and radar equipment operations.

Now, they were living in "Tornado Alley."

On April 9, 1947, an extremely destructive tornado roared through Woodward, Okla., killing a hundred people.

Jones met with the director of the Engineering Experiment Station, Charles Dunn, to explore possibilities for creating a tornado warning system.

Dunn and Jones reasoned that there were two potential methods that might produce positive results — radar and "sferics," a term representing atmospheric discharges of radio static or the electromagnetic properties of storm clouds.

Jones proposed examining lightning patterns and measuring directional changes as thunderstorms moved and intensified, and he led the School of

Engineering's study of sferics to track and identify tornadoes.

With his graduate students, Jones built unique electronic equipment to measure and record thunderstorm data, eventually adding radar technology.

Jones' collaborations outside of Stillwater included working with Tinker Air Force Base weather officers, helping create a tornado warning system for the state of Texas and leading a cooperative project with the U.S. Air Weather Service and Severe Weather Warning Center at Tinker to collect data from sites in Oklahoma, Kansas and Arkansas.

Even *Newsweek, Time* and other national publications printed articles about Jones, who quickly acquired the nickname "Cyclone" Jones.

On May 25, 1955, the "perfect storm" confronted Jones and his tornado team. As squall lines and tornadoes developed, the storm challenged the team's knowledge, experience and training as well as the capabilities of their updated and enhanced equipment.

Jones and his crew monitored the storm before, during and after its trek across Oklahoma and Kansas in which nearly 200 people died. The data gathered that day supported Jones' methodology, identified valuable storm characteristics and brought about the term "tornado pulse generator" to identify strange electrical phenomenon of tornadic thunderstorms.

The Air Force later applied Jones' research to classified Air Force studies during the Cold War in an effort to distinguish between thunderstorms and above-ground nuclear tests in other countries.

Jones and OSU led the state in severe weather forecasting and prediction until the mid-1960s. He retired in 1970 and died three years later in Yuma, Ariz., but his tornado lab's strategic and significant contributions in support of tornado watch and warning procedures remain in place today.

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(NANI PYBUS, '86, ENGLISH, CONTRIBUTED RESEARCH ARTICLES FOR THIS STORY. HER FATHER, EMMETT PYBUS, WHO RETIRED FROM THE ELECTRICAL ENGINEERING FACULTY, LED OSU'S SEVERE WEATHER RESEARCH PROJECTS FROM 1969 TO 1975.)

In 1959, two dilapidated plywood hutmets housing the tornado lab's specialized equipment valued at $25,000 were replaced with a more appropriate concrete bunker buried into the side of a small hill. During tornado season, project members took turns staffing the lab 24 hours a day. The remains of the lab can still be seen just north of campus, near Stillwater Airport.

"The Tornado Pulse Generator was first observed at approximately 10:10 p.m. Central Standard Time on 25 May, 1955, when the thunderstorm that developed into the Blackwell Tornado passed some 15 nautical miles west of Stillwater, Okla., on its way to the Blackwell, Okla., and Udall, Kan., areas of disaster."
— Herbert "Cylone" Jones

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