

NCAR



Information Release

1970 - 3

February 5, 1970

For Release Friday, February 6, 1970

NCAR Scientist Presents Prize Lecture

Boulder, Colo. -- An audience of NCAR staff members and others from the Boulder scientific community heard Edward J. Zipser, staff scientist at the National Center for Atmospheric Research (NCAR), present the second annual NCAR Prize Lecture today at the NCAR Mesa Laboratory here.

The lecture, entitled "The Role of Downdrafts and Squall Lines in Tropical Weather Systems," was based on a paper that received the NCAR Outstanding Publication Award for 1969. Zipser's paper, "The Role of Organized Unsaturated Convective Downdrafts in the Structure and Rapid Decay of an Equatorial Disturbance," was selected by John W. Firor, Director of NCAR, and a group of consultants, as the best scientific paper published by an NCAR staff member during 1969. Honorable mention was awarded to a paper by Dietrich Hochrainer and Paul M. Brown, and two related papers by Akira Kasahara and Warren Washington.

The Outstanding Publication Award, which includes a bronze medallion and a cash prize of five hundred dollars, was established in 1967 by Walter Orr Roberts, president of the University Corporation for Atmospheric Research, the nonprofit consortium of 27 universities that operates NCAR under the sponsorship of the National Science Foundation.

- more -

Zipser, a staff scientist in the NCAR synoptic meteorology program, served as scientific director of the Line Islands Experiment which was a program of intensive meteorological observations conducted in the equatorial Pacific Ocean in 1967. His prize-winning paper, which appeared in the Journal of Applied Meteorology, presented a detailed analysis of the rapid growth and decay of a tropical weather disturbance that passed through the Line Islands data network during the period of observation. The processes of growth and decay which he observed seem to have been influenced largely by a system of downdrafts that grew, on increasingly larger scale, throughout the entire weather system. The organized downdraft system, similar in many respects to mid-latitude squall lines, had been observed on some tropical continents but had never been fully documented over the tropical oceans.

The process of downdraft production in tropical rain squalls may explain why many tropical disturbances decay rapidly and may also be an important constraint on hurricane development, since the relatively cool, dry downdraft replaces some of the very warm, moist low-level air that a potential tropical cyclone requires for its source of energy.

Commenting on Zipser's paper, Firor said: "This study is an important contribution to our understanding of one of the central problems of tropical meteorology--the interaction between weather systems on different scales in the equatorial trough zone. Studies of this sort, in which observational data obtained in critical regions of the atmosphere are subjected to intense and precise analysis, are central to our efforts to understand the large-scale behavior of the atmosphere as a system."

- end -

Henry H. Lansford
Public Information Officer
National Center for Atmospheric Research
Box 1470
Boulder, Colorado 80302
Phone: 303 444-5151, extension 261