

urement of one or more air pollutants such as sulfur dioxide on a systematic basis.

E. Wendell Hewson, the University of Michigan, Ann Arbor, Mich., "Mesoscale Wind Systems Around the Great Lakes." This research is concerned with atmospheric flow patterns around and over the Great Lakes, with attention focused on Lake Michigan in those areas where interurban and interstate transport of air pollution is a major problem. A physical model of a bounded mesoscale lake wind system is being developed. This model is expressed in terms of a set of nonlinear partial differential equations to be solved by numerical methods employing a high capacity hybrid analog-digital computer. The input data is obtained from winter and summer programs of field observations taken over land and water from a headquarters located near Holland, Mich, on the eastern shores of Lake Michigan. The field measurements include: pilot balloon, smoke rocket, and tower observations of winds aloft; tethered balloon and a few airplane observations of temperature and humidity; and tetraon tracking with an M-33 radar for air trajectories. Surface winds are measured and used in conjunction with the standard surface and upper winds taken around Lake Michigan.

Herbert Riehl, Colorado State University Research Foundation, Fort Collins, Colo., "A Study of Denver Air Pollution." The project has as its purpose: (a) Description of the life cycle of pollution episodes from onset to termination; (b) analysis of the air motions and the physical principles governing them, which bring about the pollution episodes; and, (c) analysis of sources contributing to the contamination. The Denver area is especially suited for these purposes, since the city complex is isolated and hence can be studied as such without references to neighboring pollution sources. Further, important topographically induced winds exist which bring out sharply the exchange of air between the city and its environment.

Wesley E. Yates, University of California, Davis, Calif., "Meso Wind Patterns in the Central California Valley." The purpose of this project is to study the meso wind patterns in the Central California Valley from Stockton to just north of Biggs. In addition to proving insight into a complex synoptic situation, this study applies to air pollution forecasting in the region.

Sidney R. Frank, Aerometric Research Foundation, Goleta, Calif., "Analysis of the Marine Layer—A Meso Meteorological Study." The project's specific aim is to define and model the marine layer of the atmosphere in terms of its diffusion and transport characteristics. In order to do this a systematic program has been developed in the Santa Barbara Channel area whereby several interested organizations and agencies have agreed to cooperate in obtaining geophysical data during specific times of the year. This program, called Operation COW (for Cooperative Observational Week), originated in 1961 and continues to operate 1-week periods during spring, summer, and fall. With the basic parameters that contribute to the definition and modification of the marine layer being orographic effects, ocean heat sources and sinks and meso-synoptic situations, all participants in Operation COW are equipped to obtain data pertinent to some facet of these parameters. The results of these studies are applicable to air pollution forecasting in this geographic area.