A SUBARCTIC MICROCLIMATOLOGY STATION

Concept and Installation

INTRODUCTION

Microclimatology is the study of local climate near the surface of the earth. It may be distinguished on the basis of scale from mesoclimatology (the science of regional climates) and macroclimatology (the study of continental circumpolar climates), commonly referred to simply as "climatology". Local climate is of interest to a variety of disciplines from agriculture to architecture. Most plants and animals, including man, live and function at or near the air-earth interface, and are vitally affected by local climate as expressed in such familiar parameters as temperature, day length, wind movement, humidity, precipitation, and radiation and convective energy exchange. Probably the best introduction to this realm remains Geiger's (1965), "The Climate Near the Ground". The past two decades have seen increasing interest in study of many aspects of microclimatology, as evidenced by a large number of publications in the field (well attested by the recent review of Riefsnyder (1973), and emergence of journals largely devoted to local climate, such as "Agricultural Meteorology" (Elsevier Publishing Company, Amsterdam).

This paper describes establishment of a research microclimatology station in central Alaska. Included are discussion of the site, the installation, and the projected uses of data to be acquired. The purpose of this descriptive note is to provide information on the effort for interested parties, and simultaneously to invite participation in this project by interested research or operation entities, be they university, state, Federal, or private.