

## JOINT COLLOQUIA

31 March 1960

## The Warburton Wave

by U. Radok

Dr. U. Radok, of the Meteorology Department, University of Melbourne, described the Warburton Wave project, a joint investigation with the R.A.A.F, the Bureau of Meteorology, the Division of Meteorological Physics, C.S.I.R.O, the Department of Civil Aviation, and two gliding clubs. After preliminary trials in December 1957 persistent unsuitable weather forced the postponement of the main trials until June, when cloud conditions seriously restricted both ground visibility and pilot balloon observations upwind of the mountains. The analysis of the eight pairs of traverses across Mount Donna Buang flown at height between 22,000 ft and 6,000 ft by a Mustang (pilot Flt. Lt. Coty) and a Wirraway (Flt. Lt. Blake) was hampered by the partial breakdown of the cameras which the aircraft carried for recording their exact positions. Nevertheless a consistent streamline picture emerged, with a marked lee wave approximately in phase at all but the highest levels and downdraft velocities exceeding 20 ft/sec in stationary cumulus clouds at 6,000 ft. The latter clearly form a serious hazard for aviation in mountainous regions. A comparison of observed lee wave features was made with those predicted by the Scorer and Long theories; similar calculations are to be made for the Palm model. It is hoped that the results may aid with the prediction of lee wave conditions.

In the discussion Mr. E.K. Webb stressed the need for the study of secondary waves further downstream which are an essential feature in the perturbation theory model. Mr. F.K. Ball commented on the possibility of allowing for compressibility effects in the Long model; while the speaker thought that this was rendered unnecessary by the use of potential density.

28 April 1960

1. The Effects of Dissolved Salts in the Water used for  
Wet and Dry Bulb Psychrometers

by S. Bloomberg

Mr. Bloomberg, of the Bureau of Meteorology, discussed the errors introduced into humidity measurements by the use of wet bulb