NOTES

Meteorological Conference in Helsingfors, Finland, 18—22 May 1953

During the last four or five years Scandinavian meteorologists have met once or twice a year to discuss basic meteorological problems under investigation in the Scandinavien countries. In most cases also a few scientists from countries outside Scandinavia have been invited to present their work and to exchange ideas with their Scandinavian colleagues. The experiences gained during previous meetings in Bergen, Copenhagen, Oslo and Stockholm have been exceedingly valuable. Hence, between May 18 and 22 of 1953, a similar meeting was held in Helsingfors at the invitation of the Geophysical Society of Finland and of the Institute of Meteorology at the University of Helsingfors. The very successful meeting was led by professor E. Palmén and professor V. Väisälä. Professor Palmén acted as general chairman and was assisted by Dr. L. Vuorela as general secretary.

This time the lectures and discussions were mainly devoted to problems in the field of dynamic and synoptic aerology, including aerological techniques, and to the use of aerology in forecasting. However, several other topics were brought up for discussion such as problems of the general circulation of the atmosphere, numerical forecastning and turbulence in the lowest part of the atmosphere. A more complete account of the meeting will be published in *Geophysica* (Geophysical Society of Finland), to which the reader is referred for detailed information. Abstracts of all lectures will be found there; some of the papers presented at the meeting will be published in extenso in Geophysica. Here merely the titles of the lectures will be listed. A few of the papers presented in Helsingfors are published in this issue of Tellus.

LECTURES

May 19

Prof. E. Palmén (Academy of Finland): Opening of the meeting.

Prof. C.-G. Rossby (University of Stockholm): Some problems of the jet stream.

Lt. W. E. Hubert (USN, ONR): A case study of variations in structure and circulation about westerly jet streams over Europe.

Mr K. Mori (Japanese Weather Bureau): The distribution of wind and temperature over Japan and adjacent ocean areas during the winter of 1950—1951.

Prof. P. Raethjen (Universität Hamburg): Zonalzirkulation und Tropopausenzirkulation.

Mag. scient. E. Eliasen (University of Copenhagen): Correlation functions for observed winds in the upper atmosphere.

Prof. E. Palmén (Academy of Finland): Subtropical and polar-front jet streams.

May 20

Prof. R. Fjörtoft (University of Copenhagen): Outlines of a project for a scale analysis of atmospheric motions.

Dr. A. Eliassen (Institute for Research of Weather and Climate, Oslo): Some notes concerning the demands upon the aerological network from the viewpoint of numerical forecasting.

Fil. lic. B. Bolin (University of Stockholm): The adjustment of a nonbalanced velocity field towards geostrophic equilibrium in a stratified fluid.

Cand. mag. K. Pedersen (Institute for Research of Weather and Climate, Oslo): Attempts with Fjörtofts graphical method.

Dr. C. W. Newton (University of Chicago): Streakiness of the wind field and vorticity transformations in the free atmosphere.
Prof. V. Väisälä (University of Helsinki): Lag of the hair hygrometer.
Prof. V. Väisälä (University of Helsinki): Demonstration of the Väisälä-radio-theodolite.

May 21

Prof. R. Scherhag (Universität Berlin): Untersuchungen der troposphärischen Kältepole der höheren Breiten.
Dr. V. Rossi (Finnish Met. Institute): Über die Temperaturschwankungen in der Stratosphäre.
Dr. L. Vuorela (University of Helsinki): On the upper wind distribution connected with invasion of upper tropical air.
Fil. lic. L. Raab (Swedish Met. Institute): A case of strong convection in the stratosphere.
Mr. M. Jensen and Mr. W. Nielsen (Danish Met. Institute): The motion of surface pressure centers in relation to upper mean maps.
Mr. A. H. Belmont (UCLA): A preliminary study of apparent diurnal and seasonal variations of upper-air temperature at Narsarssuak, Greenland.
Fil. lic. G. Arnason (University of Stockholm): Time-lapse photographs of clouds.

May 22

Prof. J. Keränen (Finnish Met. Institute): On frost formation in soil.
Dr. A. Nyberg (Swedish Met. Institute): A note on the eddy conductivity in statically unstable conditions.
Fil. lic. Aili Nurminen (Finnish Met. Institute): Fog in relation to discontinuities in the pressure field.

It is becoming increasingly evident that informal meetings of a small number of scientists interested in the same problems represent an extremely effective method of scientific cooperation, the more so since the large international meetings of WMO UGGI more and more tend to concentrate their efforts on organizational, administrative or technical problems. Through the concentration on a few problems of common interest and through restrictions on the size of the group participating in the meeting it is possible to stimulate effective discussions of each paper presented. It is to be hoped that this series of Scandinavian meetings will be continued and that similar group meetings will be arranged in other parts of Europe. For European science it is of course essential to maintain close contact with our colleagues in North America. Economic factors and U.S. immigration restrictions alike indicate that this contact for the time being must be based predominantly on assignments of or visits by American scientists to European institutions and meetings.

B. Bolin

Note on "A further study on the relation between the jet stream and cyclone formation"

Dear Sir,

In a very interesting article by Riehl and Teweles in Tellus no. 1 1953 some problems of vertical motion in relation to jetstreams have been discussed. The authors among other things state, that in a centre of a cold dome the cold air has ascended and that therfore Margules' theory of the conversion of potential energy into kinetic energy does not hold. They also have the opinion that there is an ascending motion on the left hand side and descending motion on the right hand side of the decelerating jet stream. I should like to make a few comments as regards these statements.

It does not appear from the charts that the cold "dome" is cut off, on the contrary there are strong indications of cold air advection in the Northwestern part of the cold "dome". The rising of isentropes is thus due to advection and not to upward motion. The cold "dome" progresses with only about half the speed of the wind in the center of the "dome" according to the authors' charts, which fact must be a result of descending motion. Anyway no physical reason for an upward motion in this part of the jet system can be seen.

Margules in 1903 did probably not know of cold domes and could not state that the whole cold dome was sinking. He just computed the release of potential energy when cold air sank and warmer air was lifted and these computations are all right. In principle this process must be the normal in the atmosphere. That this is so when jetstreams form has been