

beigebracht, ohne das Phänomen in Nyköping 1580 zu erwähnen. Auch DRUGULIN² führt es in seinem Verzeichnis der Einblattdrucke gleichfalls nicht auf, sondern gibt als ersten Einblattdruck über skandinavische Nebensonnen die wesentlich spätere Beobachtung vom 7. Januar 1681 in Stockholm an: »Entsetzlicher Sonnen-Stand in dem schwedischen Norder-Land».

Falls überhaupt ein Einblattdruck über Nyköping 1580 gefertigt worden ist, würde er wohl in der kgl. Bibliothek zu Stockholm aufbewahrt werden. Das ist aber nicht der Fall.

Wenn auch die erste Halo-Beobachtung in

² DRUGULIN, W.: Historischer Bilderatlas 2, Leipzig 1867.

Schweden vom 20. April 1535 datiert³ so darf doch die hier reproduzierte Zeichnung, die ja noch vor den Beobachtungen von Tycho Brahe auf Hven gefertigt wurde, als eine der ältesten Nebensonnen-darstellungen aus dem skandinavischen Raume angesehen werden.

Meinen herzlichen Dank sage ich der kgl. Bibliothek sowie dem Meteorol.-Hydrol. Institut zu Stockholm für die freundlichen Auskünfte, Stadtarchivdirektor Dr. W. van Kempen zu Göttingen für die Erlaubnis zur Reproduktion der Zeichnung.

³ Vergl. die Beschreibung eines Gemäldes in der Storkyrka zu Stockholm von Göran Axel-Nilsson: Urban Målare — St. Eriks Årsbok 1941, 75.

Heinz Dieterichs, Göttingen.

International Congress on Alpine Meteorology

Milano-Torino, September 20—22, 1950

The meteorology of the Alps is a matter of international relevance not only because the Alpine region politically is divided between several countries but also, and above all, because the general problems of Alpine meteorology are of great importance for our knowledge of the thermodynamics, kinematics and dynamics of the atmosphere. Thus, while it is natural that the study of these problems is concentrated on the whole to those countries which are most directly interested, it is important that methods and results of current investigations are communicated to and studied by practical and theoretical meteorologist all over the world. From this point of view, it can not be appreciated too much that Prof. Bossolasco, who took the initiative to a first international meeting on Alpine meteorology, invited meteorologists and geophysicians not only from France, Switzerland, Germany, Austria and Italy, but also from more distant countries to participate, giving those who were happy enough to follow his invitation an excellent opportunity to get acquainted with the thoughts and endeavours of colleagues in many countries.

The congress opened on Sept. 20th in Milano, where lectures and discussions were held at the University Institute of Agriculture. The following brief summary of a greater part of the lectures held

during the congress will show that a wide sector of meteorological questions with bearing upon Alpine climatology and geophysics was dealt with, thus giving an all-round picture of what is known and what is doubtful in this field of natural science. For a more detailed study, reference is made to the official report of the congress¹.

Professor FULTZ (Chicago) gave an account of the experimental studies of a polar vortex carried out at the Hydrodynamics Laboratory of the Department of Meteorology, University of Chicago (see *Tellus* 2, 3, pp. 137—149). Professor SCHNEIDER-CARIUS (Bad Kissingen) discussed the vertical structure of the lower troposphere over the Alps; he pointed out that whilst the climate of a mountain range as a whole belonged to the *macroclimatology*, and the climate of the layer nearest the ground to the *microclimatology*, the complicated problems concerning the climate of the individual valleys and slopes might be said to be a matter of *mesoclimatology*. Of these problems, he discussed in some detail, i.e., the duration and thickness of snow-cover, the vertical distribution of the relative humidity, and the factors determining formation of

¹ 1950: Atti del Primo Convegno Internazionale Di Meteorologia Alpina, *Geofisica Pura E Applicata*, XVII, 3—4.

thunderstorms over high ground. Professor STEINHAUSER (Vienna) presented the results of a unique series of weekly measurement of snow cover on and near the Gross-Glockner highway, which gave a clear picture of the annual variation of the depth of snow at different localities as determined by precipitation, temperature, wind, and evaporation; the very great variability, locally and with time, of the snow depth was particularly stressed. Professor BERG (Cologne) discussed the effect of foehn winds on human beings, which varies from apathy in some cases to aggressivity in others; in connection with a summary of possible explanations he pointed out that the effects of the north foehn would seem to be negligible as compared with those of the south foehn. Dr. THAMS (Locarno), who described the variation of solar radiation as observed near Locarno, pointed out that the loss of incoming radiation in the layer between 1100 and 400 m is particularly small on days when a (northerly) foehn is blowing, and discussed whether it would be advisable or not to fix "normal" values of the radiation from a clear sky. Dr. BOUET (Montana) discussed peculiar wind conditions observed in the Rhone valley above the Lake Geneva: after the passage from the west of a cold front or a local thunderstorm, cold air flows rapidly down the valley and may even cross the eastern part of the Lake Geneva, giving rather strong southeast winds near Lausanne. Civil Engineer STRIFFLING (Lyons) presented some aspects of the distribution of precipitation in the French Alps, pointing out that there is a marked difference between the northern and the southern part of this area: in the northern part, the amounts are great, the summer being as wet as the autumn, or even wetter; in the southern part, the total annual amounts are considerable smaller, and the precipitation during autumn here is 50—100 % greater than that of the summer. Synoptical research, using upper air charts also, is being carried on to show which distribution of precipitation in the French Alps is characteristic for certain well-defined weather types. Professor BOSSOLASCO (Milano) described the occurrence of north foehn in the Italian Alps pointing out its peculiar character of radially converging winds inside the arc of mountain which surrounds the Po valley. Instructive records of thermo- and hygrographs were shown in connection with a discussion of the synoptical situations which give rise to this

type of foehn winds. A case of the so-called "Dimmer" foehn, a peculiarly strongly developed southerly foehn observed in Switzerland, was discussed in detail by Dr. K. FREY (Olten). Professor EKHART (Innsbruck) discussed the vertical and horizontal distribution of meteorological elements in the Alpine region. He defined the *slope* atmosphere (a thin layer nearest to the ground), the *valley* a. characterized by strong convection systems and valley winds, the *mountain* a. covering each mountain massive and influenced by this thermically or dynamically (or both), and the *free* a. where the influence of the mountains is negligible. As for the geographical zones, he distinguished between the central zone, northerly and southerly border zones and northerly and southerly foreland zones.

On the evening of the 21st, the members of the congress went by train to Torino, and the meeting was reopened there on Sept. 22nd. Lectures were held in the Physical Institute of the University and dealt with glaciological problems; above all problems concerning the decay of glaciers in the Alps which has been observed during this century. A very instructive series of photos showing the retreat of the Rhone glacier was shown by Prof. P.-L. MERCANTON (Lausanne).

Professor SOMIGLIANO, the 90 year old Dean of Italian geophysics, participated in the meeting at Torino and was honored by an official dinner to which all foreign participants in the conference were invited.

The following day, Sept. 23rd, was devoted to an excursion to a meteorological station, D'Ejola, 1800 m above sea-level, just to the south of Mt. Rosa. The weather was excellent, and the journey afforded an ideal opportunity to observe the nature of this part of Italy.

The meteorological station of D'Ejola, a few kilometers to the north of the small town, Gressoney-la-Trinité where the road terminates, was established by the late Italian scientist, Monterin, who was born in this neighbourhood and devoted his life to further our knowledge of the physical geography of this part of Italy. Prof. Somigliano, who had once been the teacher of Monterin, participated in the whole excursion and gave an account of his work, which was mainly within the field of glaciology.

E. Hovmöller, Stockholm.