

104. Moved, That the Conference recommend that, pending their final decision as to the method of ascertaining the velocity of the wind, observers at second-class stations should use Mr. Russell's hand form of Robinson's anemometer.

The decision on this motion was deferred.

*Cable Arrangements, and Financial Matters connected therewith.*

105. Moved by Dr. Hector, seconded by Mr. Todd, and resolved,—XXXII. That all accounts for weather cablegrams be rendered to Mr. Russell, and be paid by him.

*Synoptical Telegrams.*

106. The consideration of this subject was deferred, to be resumed in connection with the subject of isobaric analysis to be brought forward by Dr. Hector.

*Time at which Observations are to be made in the various Colonies.*

107 Mr. Todd, in introducing the subject, said that he considered it desirable to take the observations at the same hour by local time, but that in order to get out the results in time to be of service to the general public, especially to persons interested in shipping, they should be taken earlier than at present—say at 8 o'clock a.m. If this were done, South Australia would receive Sydney and Melbourne observations at 9 a.m., and the eastern colonies would receive South Australian observations about 9.30.

108. Mr. Russell considered that no alteration in the present system was practicable.

109. Dr. Hector said that evening observations were far preferable for weather prediction purposes to observations taken at 9 a.m.

110. Mr. Russell suggested that if 9 a.m. observations were transmitted with the 9 p.m. observations of the previous evening predictions could fairly be made for the one day.

111. Mr. Todd moved, and it was resolved,—XXXIII. That no alteration be made at present in the time at which observations are to be made. A standing footnote to be made that the observations taken in Western Australia are made at 7.30 a.m. local time.

*Form of Telegrams from Tasmania.*

112. Resolved,—XXXIV., That weather telegrams from Tasmania shall be similar to those received from Cape Otway, Portland, &c., and shall be transmitted in this form to Adelaide and Sydney.

*Form of Telegrams to New Zealand.—Adoption of Isobaric Analysis.*

113. Dr. Hector submitted the outline of a telegraphic code based on the isobaric analysis, and pointed out that the whole system depended upon the assumption that the deductions which had led to the adoption of the isobaric system in the Northern Hemisphere were applicable to these colonies, and, with sufficient accuracy, to our present observing stations. He considered that the work done in New Zealand since 1877 had completely established that proposition. He saw no benefit in any other system that could not be secured by the one he proposed, which would confer this one in addition—namely, that the members of this Conference would use the terms now used by meteorologists at Home, those terms having been hitherto avoided in order to prevent any appearance of attachment, on the part of the members, to certain theories. The method of curves hitherto adopted was well adapted for the study of storms after the disturbances had passed over, but did not show where the centres of storms passed, the observing stations not being movable to follow the centres, which moved very irregularly. The geographical curves used by the Sydney Observatory were very useful, but he did not think that they gave a true idea of the grades of the atmospheric disturbances. He moved that it was desirable to use the isobaric method of representing the weather upon our coasts.

114. Mr. Russell concurred with Dr. Hector's remarks as to isobars. He had not hitherto adopted them, because he had felt that the observatories were not sufficiently numerous to enable us to trace the lines; but as the number of stations was being increased from time to time, and as New Zealand and Tasmania were now probably about to join in the scheme, he would be very glad to adopt the isobaric system.

115. Dr. Hector pointed out that the use of isobars would prevent the need for communicating so many instrumental readings for weather purposes as are now sent, since, if a centre was mentioned and the grade given for particular winds, the general character of the weather would be a matter of almost necessary inference. He had no doubt, however, that for other purposes those readings would be desirable.

116. Mr. Todd was in favour of the isobaric method, and had been carrying it out for some time in connection with the intercolonial system of weather telegraphy, but had not published the results, feeling that they rested upon insufficient data, owing to the fewness of barometric stations.

117 Mr. Ellery said that seventeen years ago work was done at the Melbourne Observatory in drawing curves from logs of ships and tracing out the isobars. This was continued for nearly two years, but had been given up as perfectly useless, since there were no observations to be combined with those made at the Observatory, except such as were got at sea. The work was only given up because there were not a sufficient number of observing stations in Australia to carry on the system. He thought it could now be carried out, and therefore supported the motion.

118. Resolved, unanimously,—XXXV. That the isobaric system of analysis of the weather reports as in use in America and Europe be adopted throughout Australasia on the basis of the instructions contained in the pamphlet by Mr. Ley, published by the Meteorological Council of Great Britain.

119. Dr. Hector, as a basis for suggestions, had taken the study of two months' isobaric charts, which he produced. He had not been able to find any critical place for New Zealand, the atmospheric relations of different parts of that colony being so varied that no one place would give the means in Australia of carrying the isobars through New Zealand: in other words, the range of pressure within the New Zealand area was greater than the great range between the centre and the outside of a dis-