

From the *Canadian Journal*, September, 1862, p. 462:—
 NOTICE OF MOCK SUNS, AS SEEN NEAR THE MUSKOKA RIVER, IN
 NOVEMBER, 1861.

BY A. CLIFFORD THOMSON, P.L.S.

"While camped near the mouth of the Muskoka River, Canada West, on the 10th of November, 1861, I observed at about 9.40 a.m. the somewhat remarkable phenomenon of seven mock-suns, as shown in the accompanying sketch. In this drawing the line H.H. represents the horizon, and the point Z the zenith. Unfortunately, I had not any instrument with me at the time, to enable me to note the position of the halos; but two of these were quite eccentric, both with regard to the sun and the zenith. The sun was too bright to be regarded with the naked eye, though the atmosphere was slightly hazy. The wind was light, and from the N.W.

"I venture to send this brief notice to the *Canadian Journal*, as I believe the phenomenon to which it refers is rarely witnessed in so southern a latitude. It was observed on this occasion at Orillia, and other places more or less distant from the point at which the above sketch was taken on the Muskoka River. The latitude of this point is $45^{\circ} 10' N$."

When we compare together the two diagrams (Fig. 2 and Fig. 3), it will appear that, of the so-called intersecting circles in Fig. 3, the inner segments might be taken to form a circle, and the outer segments, an ellipse. At the time Mr. Thomson recorded this observation fifty-six years ago, it was usual to interpret this portion of a halo as two intersecting circles. And it would appear to be still an interpretation, if we may judge from the article by Dr. Besson on halos in the *Washington Monthly Weather Review* for July, 1914. As an example of a halo containing elements similar to those seen by Mr. Thomson, we reproduce just one example, viz., one seen by Vice-Admiral Kalmar at Pola, on March 26, 1896, and described by Dr. Besson with a diagram to which is affixed an interpretation as above mentioned (Fig. 4). Pola is