

SOLAR SPOTS OBSERVED AT TORONTO, IN JANUARY,
FEBRUARY AND MARCH, 1858.

BY COLONEL BARON DE ROTTENBURG, C. B., F. R. A. S.

Read before the Canadian Institute, 13th March, 1858.

The following remarks may not possess any novelty—the forms of the Solar Spots recorded in this paper and its accompanying drawings having, in all probability, been often seen by others. But the subject is one of the greatest interest, and the observations of amateur astronomers, on the Solar Spots, may possibly be of essential service to those laborious men who make the nature and constitution of the Solar Atmosphere the business of their lives. Thus, for example, observations made here on any particular day, may supply a link in a series of observations which the systematic observer was unable, from unfavourable atmospheric conditions, to ascertain; and tend possibly to elucidate some general law or conclusion. At any rate, I believe this is the first attempt made to record the daily changes in the Spots on the Sun, by any member of the Institute, for the purpose of communicating them at its meetings, and I offer the following abstract of the phenomena, taken from my Register of Observations, with the accompanying drawings,—which furnish very feeble and inadequate representations of the original,—in the hope that others will be induced to join me in this attempt to give a more prominent place in the records of the Journal of the Institute to familiar natural phenomena.

Extract from Register.

January 21st, 12 hours 15 minutes, apparent time. A large spot seen near the Sun's north-eastern limb, with a well defined Nucleus and Penumbra—two small spots on each side of the Penumbra, the small spot towards the Sun's centre being darker than the one towards the limb—the smallest part of the Nucleus being towards the limb. The definition excellent—air calm—prominent faculæ seen between the spot and the north-eastern limb.

January 22nd. Spot observed again about the same hour as yesterday. Nucleus had materially changed its form—having become much more elongated—shewing a probability of its breaking up into several spots—definition indifferent—Sun's limb tremulous—strong wind blowing from east—the two small spots could not be seen, nor