the earth at depths of 1, 2, 3, 4 feet *, their stems rising above the surface, so as to be easily inspected, we find that the variations of temperature continually diminish downwards ; — at 1 foot, the extreme monthly differences corresponding to summer and winter were 21° and 19·6° ; at 2 feet, 16·5° and 16·3° ; at 3 feet, 11·4° and 11·5° ; at 4 feet, 8·0° and 8·2°.

2. The epochs of highest and lowest temperature continually differ more and more from the summer and winter solstices, according as the depth in the earth is greater ; or, in other words, the time taken by the sun's rays to penetrate and warm the ground augments with the depth.

Thus, at 1 foot from the surface, January is the coldest and July the hottest month ; at 4 feet from the surface, February and March are the coldest months, and September the hottest.

3. The average mean temperature of the year augments from the surface downwards ; but does not reach the average of the air temperature, in the range of these experiments.

These results have been more than confirmed — they have been enlarged — by the experiments of Arago in Paris, Quetelet in Brussels, and Forbes in Edinburgh ; and extended to the depth of 25 feet. M. Quetelet has founded on the experiments at Brussels a mathematical investigation of the highest interest.

Among the data for computation employed by M. Quetelet, are experiments analogous to those of Leslie, made in 1762 at Zurich by M. Ott ; a series made at Strasburg by Herrenschneider, in 1821, 1822, and 1823 ; another at Heidelberg by M. Muncke ; one made at Upsal in 1832-3, by M. Rudberg ; others at the observatories at Paris and Brussels descending to 25 feet. The original memoir * must be consulted for the mathematical

* M. Quetelet quotes Dr. Ure for information that the depths were 1, 2. 4. 8 feet ; but, in the Dictionary of Chemistry of that author the numbers are 1, 2, 3, 4 feet.

† Sur les Variations des Températures de la Terre. Bruxelles, 1837.