

and her western scions : it is something to know that Science has gained new and important truths, interesting and replete with promise, alike for the Old World and the New.

Thus it is that in pursuing one line of inquiry we are almost imperceptibly led into another and seemingly totally independent one. Thus it is that the connexion of the physical sciences is ever revealing itself in new phases ; and with every extension of our knowledge we are the more taught to recognize in them an intimately related sister-band. Geology and Natural History, Astronomy, Electricity, and Magnetism, are all found to have their points of contact, and mutually minister to each others completeness, while each presents its special claims on our sympathy and interest. In the observation of magnetic phenomena, and the patient accumulation of data calculated to determine the solar magnetic influence on the earth, the laws of periodicity connected with terrestrial magnetic force, and the search for those hidden truths which comprehend the mysterious power by which the electrician already triumphs over time and space, Toronto, with its efficient staff of workers at the Provincial Observatory, already takes a prominent place. The novel truths to which Le Verrier's observations seem to point relative to the physical constitution of the sun involve new views, which if once established must modify the whole theory of solar magnetic influence, and lead to further investigations of the apparent relations between the changes observed on the cloudy envelope of the solar photosphere, and the periodical changes of variation in the elements of the earth's magnetic force. Theory and observation go hand in hand in demonstrating the physical characteristics of the sun, and the influences which control the genial despotism with which that luminary reigns supreme, the monarch of our system. The accelerated motion of Enke's comet at each return has sufficed to suggest the abandonment of the idea that planetary and cometary motions are performed in vacuo, and leads to the belief that space is everywhere pervaded by an ether, too rare to effect a perceptible change on the motions of the planets, but sufficient by its resistance to subject such attenuated substances as the comets more completely to the attractive force of gravity, and urge them onward, with an ever diminishing orbit and increasing velocity, until they fall into the sun. These strange wanderers of the heavens that sweep at times their streaming train across the sky, "with fear of change perplexing nations," are thus shown, in their attenuated