

ASTRONOMICAL NOTES.

BY THOS. LINDSAY, TORONTO.

AN instance of the rapidity with which our knowledge of the solar system increases, and how, almost daily, something is added to the general stock, is within our very recent experience. Two months ago we could say no more of the rings of Saturn than that they were composed of minute bodies, this being the only constitution that could allow stability under the laws of gravitation; to-day we can add, in proof of the theory, that, in the hands of Prof. Keeler, of Allegheny, the spectroscope has given evidence indisputable, that the inner bodies composing the ring perform their revolution more rapidly than the outer particles, following Kepler's third law that the square of the periodic time is proportional to the cube of the mean distance, the particulars of Prof. Keeler's work on this line appeared in *Astrophysics* for May. Saturn is on the meridian at a convenient hour for observation during June and the retrograde motion among the stars of Virgo is quite apparent. After July 4th the motion is direct.

Jupiter is too near the sun now for good seeing; conjunction occurs on July 9th, and we need not look for the satellites until the August mornings. At the near approach of Venus in May, the weather was very unfavourable for observation. The planets are now separating at the rate of about one degree daily and when Jupiter is at conjunction Venus is at her greatest elongation east, and in the telescope a very beautiful half-moon. On the 25th of June the moon, then three days old, is in conjunction with Venus and an occultation occurs, but not until after setting at Toronto; it will be visible in the Pacific ocean.

It will be interesting to note the path of Venus with reference to Mars during June. The latter is a tiny red speck about one degree south of the brilliant evening star, on June 4th, after which both planets approach the Bee-hive cluster (Praesepe) in Cancer. Mars will be directly in the group on June 19th. A telescope of moderate power resolves the cluster into stars.

Observers will have noticed that we have now above the horizon, in the evening, Arcturus, Vega, and Spica, three of the brightest stars in the heavens. The stars in the neighbourhood of Vega are especially interesting for telescopic observation. The quadruple Epsilon Lyrae is a good test for 3-inch, and the ring Nebula, between Beta and Gamma of the same constellation, is a wonderful object, within the power of the amateur's instrument though it does not bear magnifying well.

Two occultations of small stars in Virgo occur on the evenings of June 29th and 30th.

— — —

A CHRISTIAN SCHOOL is made by the atmosphere, the general tone, the surrounding objects, the character of the teacher, the constant endeavor, the loving tact, the gentle skill by which the light and spirit of Christianity—its lessons for the head, for the heart, for the whole character—are made to pervade and animate the whole school life of the child, just as the good parent desires that they should animate his whole future life in all his manifold duties and relations as man and citizen.—*Rev. J. J. Keane.*