

It was in 1913, just prior to the outbreak of War, that plans were drawn up for the establishment of the Dominion Astrophysical Observatory at Victoria, B.C. At first, it had been decided to establish the Astrophysical Observatory at Ottawa, but careful tests at several selected stations across Canada indicated unmistakably that Victoria had a clear advantage over all other sites in the essential conditions for the successful operation of a large reflector telescope. The magnificent 73" reflector telescope was installed in 1918, and, although it does not now hold the record for size, it is a matter of national pride that in design, construction and operating convenience, as well as accuracy, the telescope in the Dominion Astrophysical Observatory is not, even to-day, excelled by any instrument in the world.

Dr. J. S. Plaskett was the founder of the Astrophysical Observatory and its first Director from 1917 to 1934. It was he who gave special attention to the design of the special spectrograph at the Observatory. This instrument complemented the work of the telescope and was among the best and most powerful in operation anywhere.

It is particularly in the field of stellar motions and the researches connected with them that a large reflector telescope is essential, for the only method of obtaining measurable spectra of faint stars is to use the fastest photographic plates, the largest possible telescope to make the stellar images more intense, and to make possible shorter exposures. Other smaller instruments are capable of carrying out some other important astronomical work quite as efficiently as a large telescope. It is for this reason that, from its installation, the 73" reflector in the Victoria Observatory has been used almost exclusively for spectrographic work and during the past twenty-nine years, a total of 38,000 spectra has been secured.

Since the establishment of the Observatory three decades ago, the number of known stellar radial velocities has increased from a few hundred to approximately 12,000. Of this total, the Victoria Observatory has contributed about 25 p.c., a very creditable contribution considering the small size of the staff.

Under the enthusiastic direction of Dr. Plaskett and his successors, the Dominion Astrophysical Observatory has taken its full share in formulating a policy of co-operation with other countries and in carrying out broad programs of research and co-ordinating results on a world basis. Each observatory while working according to a general plan carries out individual researches that, instead of overlapping, are tied in with those of other observatories to the general benefit of science as a whole.

It is difficult for the ordinary citizen to realize just how an abstract science like astronomy links in with the practical problems of day-to-day existence. But astronomy, as well as being the oldest science, is in some respects the most fundamental. As a branch of astronomy, astrophysics is concerned with the determination of the structure of the universe—the constitution and mode of evolution of the stars. The scientist follows the quest for truth for its own sake, but it must be remembered that the pure science of to-day is the applied science of to-morrow. Technicians and industrial scientists eagerly seize upon the discoveries achieved by pure science and lose no time in turning them to practical account, with results that are often of immense economic value. For instance, the apparently useless investigations of Faraday into the effects of magnets and electric currents on one another led to the generation and universal use of cheap electricity. Nothing in the realm of pure science is unimportant or unworthy of the scientist's attention: radio, radar, television, atomic energy and all the amazing sequence of discoveries