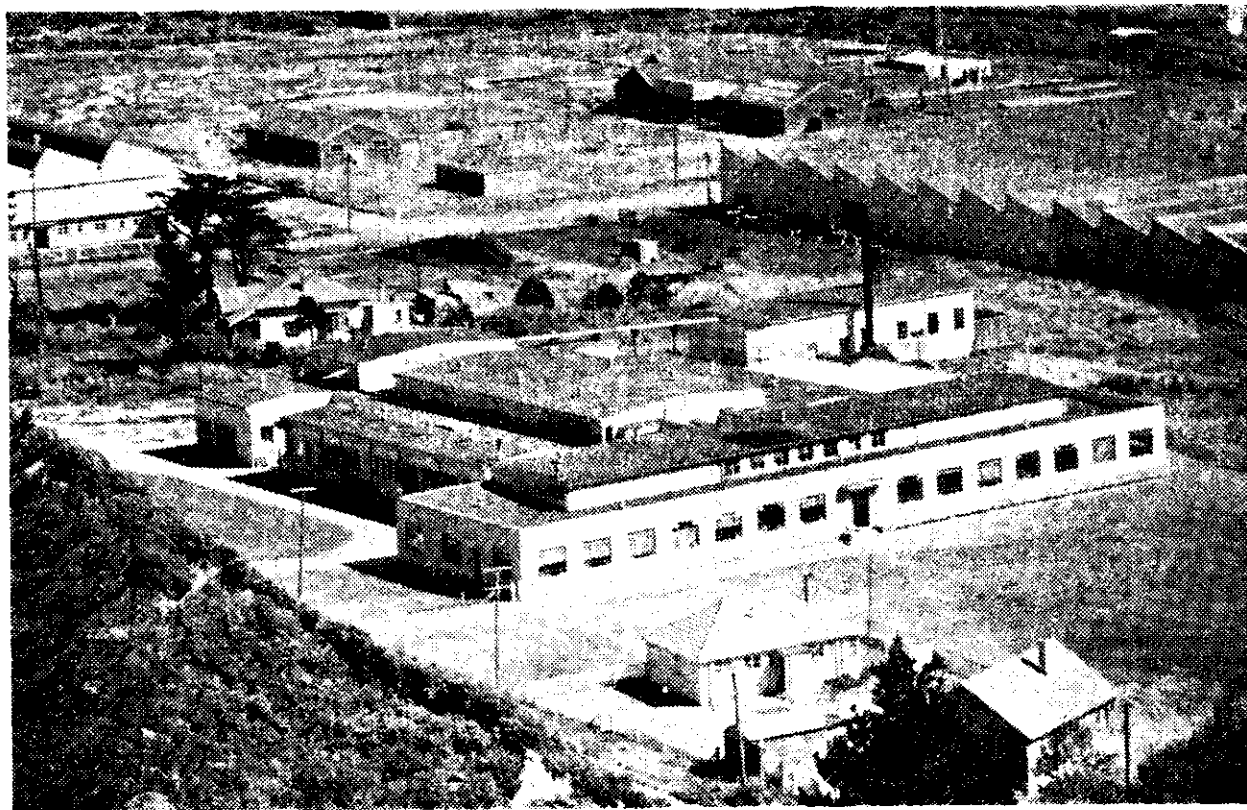


WHEN the late Dr. E. R. Cooper came back to New Zealand in 1938 from advanced study in Britain he joined the Department of Scientific and Industrial Research as physicist, and was put in charge of a very small Physics Section attached to the Dominion Observatory at Kelburn. From that small beginning, as a child of one of New Zealand's oldest scientific institutions, the Dominion Physical Laboratory has grown into the largest unit of the D.S.I.R. There was one step between Kelburn and the present home of the D.P.L. at Gracefield, Lower Hutt, and it was in that half-way house—as the Physical Testing Laboratory in premises in Molesworth Street—that the value of the work the unit might do during the war was seen. During the war the Laboratory grew rapidly, and in 1946 it absorbed the Radio Development Laboratory, which had been set up during the war. Dr. Cooper, who had played such a big part in building up the D.P.L., remained in charge until 1950.

The Dominion Physical Laboratory covers about 23 acres and has a staff of about 200, and according to the handbook of the D.S.I.R. the Laboratory's main responsibilities are "the custody of national standards of physical measurement, assistance to industry and agriculture, research and development work directed towards the exploitation of New Zealand's natural resources, and radio propagation, with their allied subjects." To any non-technical person this must seem a pretty tall order, and it seemed a pretty tall order to 2YA also when they began some time ago to work out a plan for two documentary programmes about the Laboratory.

Lawrence Constable, who produced the programmes—the first will be heard from 2YA at 8.0 p.m. on Friday, October 1, and repeated from the same station at 9.30 a.m. the following Sunday—told *The Listener* that they set out to explain the aims and purpose of the Laboratory and to illustrate its work. Several visits were paid to the D.P.L.

# THE LARGE BACK ROOM . . .



A GENERAL VIEW of the Dominion Physical Laboratory at Gracefield, taken from the lower slopes of the Eastern Hutt hills

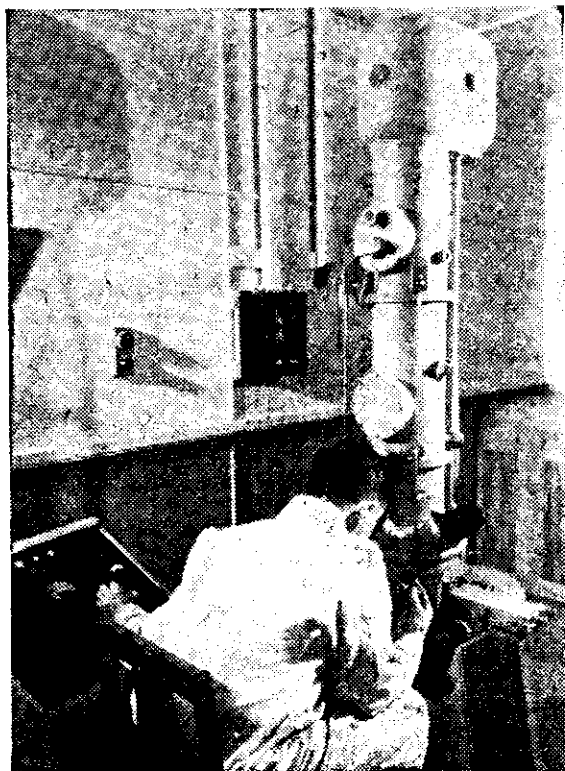
when the programmes were being worked out, and the material from which *The Big Back Room* was made was recorded on tape with plenty of sound effects to help bring it to life.

After a long walk down a shining corridor—"rather like a hospital, except that the bustling figures in white coats all carry slide rules instead of stethoscopes"—listeners meet the Acting

Director, I. D. Dick, an Assistant Secretary of the Department. Then they plunge right into a round of visits to various parts of the Laboratory.

"We've divided the programmes up under four main headings," Mr. Constable said. "First we take a look at the maintenance of standards—of pounds, feet, inches and degrees—with special reference to thermometers. Then we go

on to the development of natural resources, saying something about the electron microscope and its uses, concrete research, and geo-thermal development. That's all in the first programme. In the second we deal with the solution of the scientific problems faced by government and industry—the effect of earthquakes on typical man-made structures and the testing of metals are some examples; and with the better understanding of the physics of our environment—which brings in an item about measuring the speed of winds in the ionosphere."



LEFT: The electron microscope, which magnifies to 50,000 diameters. BELOW: The metallurgy laboratory where tests on metals and alloys are carried out

