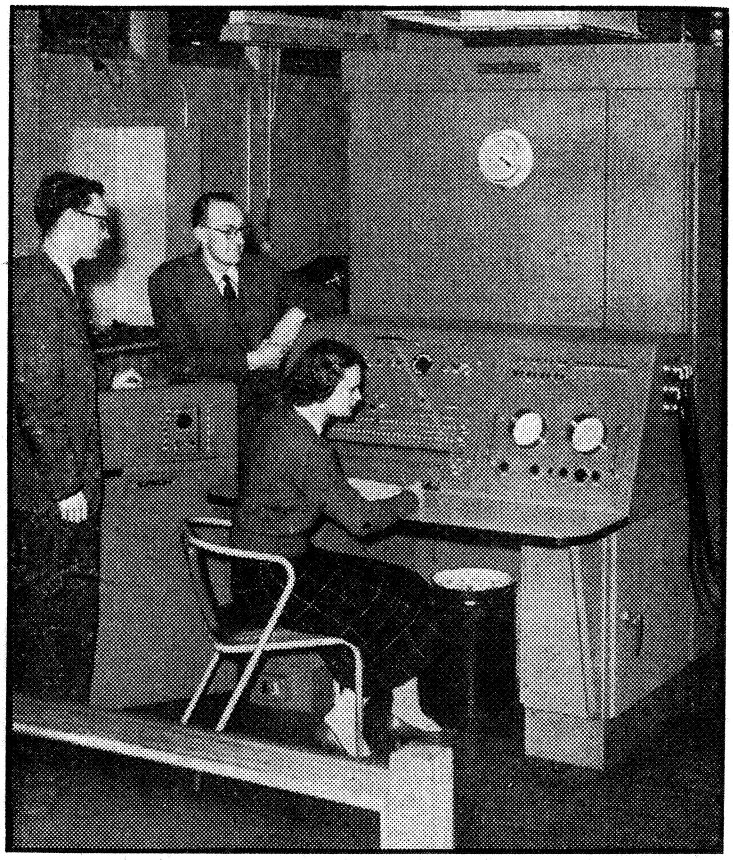

Dr D. C. Gilles (centre), director of Glasgow University's computing laboratory, and two of his staff, Mr D. G. Williams and Miss Anne Low, watch Deuce, the university's new electronic digital computer, in operation. It is the first of its type to be installed in a Scottish university.

COMPUTER DOES 10,000 ADDITIONS IN SECOND

First Machine Installed in Scottish University

An electronic digital computer to be inaugurated this afternoon at Glasgow University by Lord Halsbury, chairman of the National Research Development Corporation, will enhance the value of post-graduate research courses at the university.

Using the computer, which was installed last October and is named Deuce, chemistry students have completed in five hours' work on which they might formerly have spent six months. Dr D. C. Gilles, director of the university's computing laboratory, said at the week-end that the time saved on mundane calculations will be applied to "more intelligent operations," so that a research degree will now mean more.

Deuce—the initials stand for digital electronic universal computing engine—weighs two tons and measures about 5ft. by 10ft. A special grant from the University Grants Committee, and the subscriptions of interested firms in the West of Scotland, paid for the computer, which cost £60,000 with its auxiliary equipment, and was built by the English Electric Company.

AT £30 AN HOUR

The machine is only the third in Scotland, and is the first to be installed in a Scottish university. It will be available to the staff and research students of all the Scottish universities, colleges, and research institutes, and to local industry at a cost not exceeding £30 an hour.

Deuce has a built-in memory in the shape of storage space for over 8000 numbers or instructions. In one second it can perform over 10,000 additions or about 500 multiplications. It is between 500 and 1000 times as fast as an operator using a conventional desk calculating machine; it can do his week's work in less than five minutes. And it can play noughts and crosses.

Instructions and numbers are fed into the machine and punched out by standard Hollerith punched-card equipment. An apparatus using five-hole standard teleprinter ticker tape will shortly be added. Deuce works in the binary scale, but this need present no diffficulty to the average user, since conversion to and from the decimal—or sterling—system is carried out automatically.

Dr Gilles described the computer as "simply a calculating tool." Its primary use, he added, was to save time on long and involved calculations, but in doing this it would make possible research which could not otherwise be done.

The machine, said Dr Gilles, would be used on three main types of activity. Courses would be given on the use of the machine—indeed more than 140 persons have already attended such courses given by the laboratory staff.

It would be employed on research projects, such as crystallographic calculations in chemistry, problems in nuclear physics for the Natural Philosophy department, and problems of frequency vibrations, torsional modes, and structural analysis for the Engineering department. It would also be engaged on statistical calculations for economists, and general mathematical work.

FIVE YEARS AGO

The machine would be available also for use by bodies outside the university, including industry. Dr Gilles thought the shipbuilding and engineering industries might be interested in it, but he felt that it was not particularly suitable for commercial activity, since it had been designed with scientific work in view. A circular is to be sent to Scottish industrial concerns telling them about the computer.

Proposals for the installation of such equipment at the university were first made five years ago, largely at the instigation of the heads of the Departments of Natural Philosophy and Physical Chemistry, who foresaw the need for such a machine in the research activities of their departments.

The National Research Development Corporation, of which Lord Halsbury is chairman, has had much to do with the encouragement and exploitations of the techniques used in machines of this nature.