MODERN CALCULATORS

BY E. L. LOCKE

***Meteorologists** know how to calculate the exact weather conditions six hours in advance. It's sadly useless knowledge, at present, because the best staff of computers needs six weeks of calculating to do it. But a machine, now—*

[excerpt from page 102]

The other major contender in the field and one that seems to have almost everything in the way of desirable properties is the Selectron, now being developed by RCA for the Princeton Computer. It is an electronic device which in a three-inch diameter tube manages to store four thousand ninety-six bits and has an access time of only ten microseconds.

The basic principle is quite simple. There is a target of mica with a metal backing plate. In front of the target there is a square grid of wires, sixty-five in each direction. These wires are electrically insulated from one another and form four thousand ninety-six distinct windows. There is an electron beam which can cover all these windows simultaneously. If the four wires which form the sides of a particular window are all made positive, and the backing plate is pulsed positive, a charge will be deposited on that part of the mica which is just in front of this window. This constitutes the reading-in process. It is interesting to note, by the way, if only three sides of the window are made positive no electrons will get through to the mica. To read out the answer the proper window is again energized and the backing plate is pulsed negative'. If there is a charge there, a pulse of current will flow from it and not otherwise.

[Astounding Science Fiction,

January 1949]