

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
Research Laboratory of Electronics

Quarterly Progress Report

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Introduction

This report is the fourth of a series of quarterly progress reports issued by the Research Laboratory of Electronics, and contains a review of the activities of the Laboratory during the period, October 1, 1946 through December 31, 1946. At the last meeting of the Services Technical Advisory Committee, it was decided that in addition to the regular brief accounts of progress, each issue include a more expanded discussion of certain selected projects. These more detailed reports are intended not to give complete technical information, but rather to provide some necessary background and to indicate the problems involved, the methods of attack, and the direction of the projected program.

For this particular issue, the groups that have submitted such reports are those engaged in research on oxide cathodes, Section IC1, microwave spectroscopy, Section IIA, low pressure gas discharges, Section IIC, packaged units employing subminiature tubes, Section IIIE. It is expected that within the year, the remaining groups will be asked to write similar detailed reports.

Since the last progress report was issued, the following projects have been either discontinued or completed: high voltage spark gap tubes, high speed oscilloscopes and high voltage pulse-measuring techniques, photoelectric photo-spectrometry, liquid-filled chamber to be used in the photography of very high energy ionizing particles.

During the same period, several projects have been initiated: travelling-wave tube, cyclotron r-f project, development of flash tube, three-cm sweep-frequency oscillator; and wave analyzer auxiliary equipment.