

Digital Computer Laboratory
Massachusetts Institute of Technology
Cambridge 39, Massachusetts

SUBJECT: BIWEEKLY REPORT, NOVEMBER 29, 1954

To: Jay W. Forrester

From: Scientific and Engineering Computation Group

1. MATHEMATICS, CODING AND APPLICATIONS

1.1 Introduction

During the past two weeks 264 coded programs were run on the time allocated to the Scientific and Engineering Computation (S&EC) Group. These programs represent part of the work that has been carried on in 22 of the problems that have been accepted by the S&EC Group.

1.2 Programs and Computer Operation

<u>Problem No.</u>	<u>Title</u>	<u>WWI Time</u>
100.	Comprehensive System of Service Routines	579.6 minutes
106 C.	MIT Seismic Project	55.7 minutes
108 C.	An Interpretive Program	6.9 minutes
120 D.	The Aerothermopressor	49.0 minutes
122 B.	Coulomb Wave Functions	11.1 minutes
123 C.	Earth Resistivity Interpretation	35.2 minutes
126 C.	Data Reduction	246.8 minutes
131.	Special Problems (Staff training, etc.)	8.8 minutes

141.	S&EC Subroutine Study	50.8 minutes
155 D.	Synoptic Climatology	816.6 minutes
166 C.	Construction and Testing of a Delta-Wing Flutter Model	2.5 minutes
183 D.	Blast Response of Aircraft	5.3 minutes
197.	Three Address Computer	4.2 minutes
211 C.	Servo Response to a Cosine Pulse	30.4 minutes
212 C.	Dispersion Curves for Seismic Waves: multilayered media	18.3 minutes
216 C.	Ultrasonic Delay Lines	36.1 minutes
217 A.	Variation-Perturbation of Atomic Wave Functions and Energies	17.4 minutes
218 C.	Transformation of Integrals for Diatomic Molecules	13.3 minutes
221.	Course 6.25, 1954	335.4 minutes
223 C.	Investigation of Turbulent Flow	7.4 minutes
225 B.	Neutron-Deuteron Scattering	4.1 minutes
227 B.	Determination of the Critical Buckling B^2	2.9 minutes

1.3 Computer Time Statistics

The following indicates the distribution of WWI time allocated to the S&EC Group.

Programs	40 hours, 0.9 minutes
Magnetic Drum Test	36.2 minutes
Magnetic Tape Test	39.5 minutes
Scope Calibration	10.0 minutes
Test Storage Check	7.0 minutes
Demonstrations(#131)	8.8 minutes
Total Time Used	41 hours, 42.4 minutes
Total Time Assigned	50 hours, 52.4 minutes
Usable Time, Percentage	81.9%
Number of Programs Run	264