

Digital Computer Laboratory
Massachusetts Institute of Technology
Cambridge 39, Massachusetts

SUBJECT: BIWEEKLY REPORT, March 31, 1957

To: Frank M. Verzuh

From: Scientific and Engineering Computation Group

1. MATHEMATICS, CODING AND APPLICATIONS

1.1 Introduction

During the past two weeks 479 coded programs were run on the time allocated to the Scientific and Engineering (S and EC) Group. These programs represent part of the work that has been done on 42 of the problems that have been accepted by the S and EC Group.

1.2 Programs and Computer Operation

<u>Problem No.</u>	<u>Title</u>	<u>Minutes</u>
100	Comprehensive System of Service Routines	86.1
106 C.	MIT Seismic Project	63.8
126 D.	Data Reduction	206.9
131	Special Problems (Staff Training, etc.)	12.8
193 L.	E.V. Problem for Propagation of E.M. Waves	166.7
194 B,N.	Augmented Plane Wave Method (Sodium)	245.0
203 D,N.	Response of a Building Under Dynamic Loading	58.7
219	Linear Programming	22.9
253 N.	APW as Applied to Face- and Body-Centered Iron	70.0
256 C.	WWI-1103 Translation Program	19.9
257 C.	Horizontal Stabilizer Analysis	100.8
260 N.	Energy Levels of Diatomic Hydrides	31.1
261 C.	Fourier Synthesis for Crystal Structures	3.0
262 N.	Evaluation of Two-center Molecular Integrals	26.6
273 N.	Cosmic Ray Air Shower	369.1
274 N.	Multiple Scattering	26.1
278 N.	Energy Levels of Diatomic Hydrides LiH	509.9
285 N.	APW as Applied to Chromium Crystal	42.7
290 N.	Polarizability Effects in Atoms and Molecules	45.4
312 L.	Error Analysis	72.0
317 C.	Stability Derivatives from Flight Test Data	183.7
327 L.	Prediction Analysis	194.0
328 B.	Buried Elastic Wave Source	52.3
336 C.	Pattern Identification	15.0
337 N.	Nonlinear 2nd Order Diff. Eqs.	29.6