Digital Computer Laboratory
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SUBJECT: BIWEEKLY REPORT, DECEMBER 9, 1956

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From: Scientific and Engineering Computation Group

1. MATHEMATICS, CODING AND APPLICATIONS

1.1 Introduction

During the past two weeks 423 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 41 of the problems that have been accepted by the S and EC Group.

1.2 Programs and Computer Operation

Problem No.	Title	Minutes
100	Comprehensive System of Service Routines	67.4
106 C.	MIT Seismic Project	8.1
126 D.	Data Reduction	105.1
131	Special Problems (Staff Training, etc.)	11.2
141	S and EC Subroutine Study	13.7
162 N.	Nuclear Scattering Phase-Shifts	8.6
193 L.	E, V Problem for Propagation of E.M. Waves	207.1
194 B,N.	Augmented Plane Wave Method (Sodium)	30.2
203 D,N.	Response of a Building Under Dynamic Loading	530.1
226 D.	Circulation of the Atmosphere	27.9
231 B,N.	Reactor Runaway Prevention	56.1
253 N.	APW as Applied to Face- and Body-Centered Iron	51.0
257 C.	Horizontal Stabilizer Analysis	194.3
260 N.	Energy Levels of Diatomic Hydrides	25.0
261 C.	Fourier Synthesis for Crystal Structures	81.6
262 N.	Evaluation of Two-center Molecular Integrals	3.3
273 N.	Cosmic Ray Air Shower	181.4
274 N.	Multiple Scattering	21.0
278 N.	Energy Levels of Diatomic Hydrides LiH	407.0
288 N.	Atomic Wave Functions	157.7
300 L.	Tropospheric Propagation	30.0
310 C.	Rocket Trajectory Calculations	463.4
312 L.	Error Analysis	14.4
317 C.	Stability Derivatives from Flight Test Data	45.8
327 L.	Prediction Analysis	262.5

1.3 Computer Time Statistics

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

S and EC Programs	47 hrs.	4.9 min.
Lincoln Programs	9 hrs.	18.0 min.
Magnetic Tape Test		53.8 min.
Scope Calibration		21.4 min.
PETR Test		29.7 min.
Test Storage Check		10.2 min.
Demonstrations (No. 131)		11.2 min.
Total Time Logged	58 hrs.	29.2 min.
Div. 6 Conversions, Inter-run Operations, etc.	6 hrs.	38.3 min.
Total Time Assigned	70 hrs.	14.5 min.
Usable Time, Percentage	92.72%	
Number of Programs	423	