

ENGINEERING RESEARCH INSTITUTE
UNIVERSITY OF MICHIGAN
ANN ARBOR

PROGRESS REPORT

1 December 1952 to 1 March 1953

UPPER ATMOSPHERE TEMPERATURE AND PRESSURE MEASUREMENT

REPORT NO. A-15

By

H. F. SCHULTE

PROJECT DIRECTOR: W. G. DOW

Submitted to the Geophysics Research Division, Air Force Cambridge Research Center, Cambridge, Massachusetts. The work reported herein is of a preliminary nature and the results are not necessarily in final form.

Approved by:
N. W. Spencer
Project Engineer



Project M824

U. S. AIR FORCE, AIR FORCE CAMBRIDGE RESEARCH CENTER
CONTRACT NO. AF 19(122)-55

March, 1953

PERSONNEL EMPLOYED DURING PERIOD OF REPORT

W. G. Dow	Project Director	
H. C. Early	Research Engineer	Part-time
H. S. Sicinski	Research Physicist	Part-time
H. L. Smith	Research Engineer	Part-Time
N. W. Spencer	Project Engineer	

Note: With the exception of the above personnel, members of the group previously listed here were engaged in work supported by Contract No. AF 19(604)-545, which is a continuation of the present contract.

ABSTRACT

The results of the ambient temperature measurement from the September 1951 Aerobee firing are presented in this report. Completion of a paper for publication in the Physical Review is also reported.

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DATA ANALYSIS

With the exception of the air-density measurement utilizing the Pasdren Law,* all data analysis has been completed for the University of Michigan Aerobee (USAF 18) fired 13 September 1951. Figure 1 presents the results of the ambient temperature measurement for this firing. The limits indicated with each point represent the probable error associated with the point.

It is expected that more detailed data will be presented in the final report to be issued at the termination of this contract.

*Progress Report No. A-8, Contract No. AF 19(122)-55, October, 1951.

**AMBIENT TEMPERATURE MEASUREMENT RESULTING FROM
U OF M. 13 SEPTEMBER 1951. AEROBEE ROCKET FIRING.**

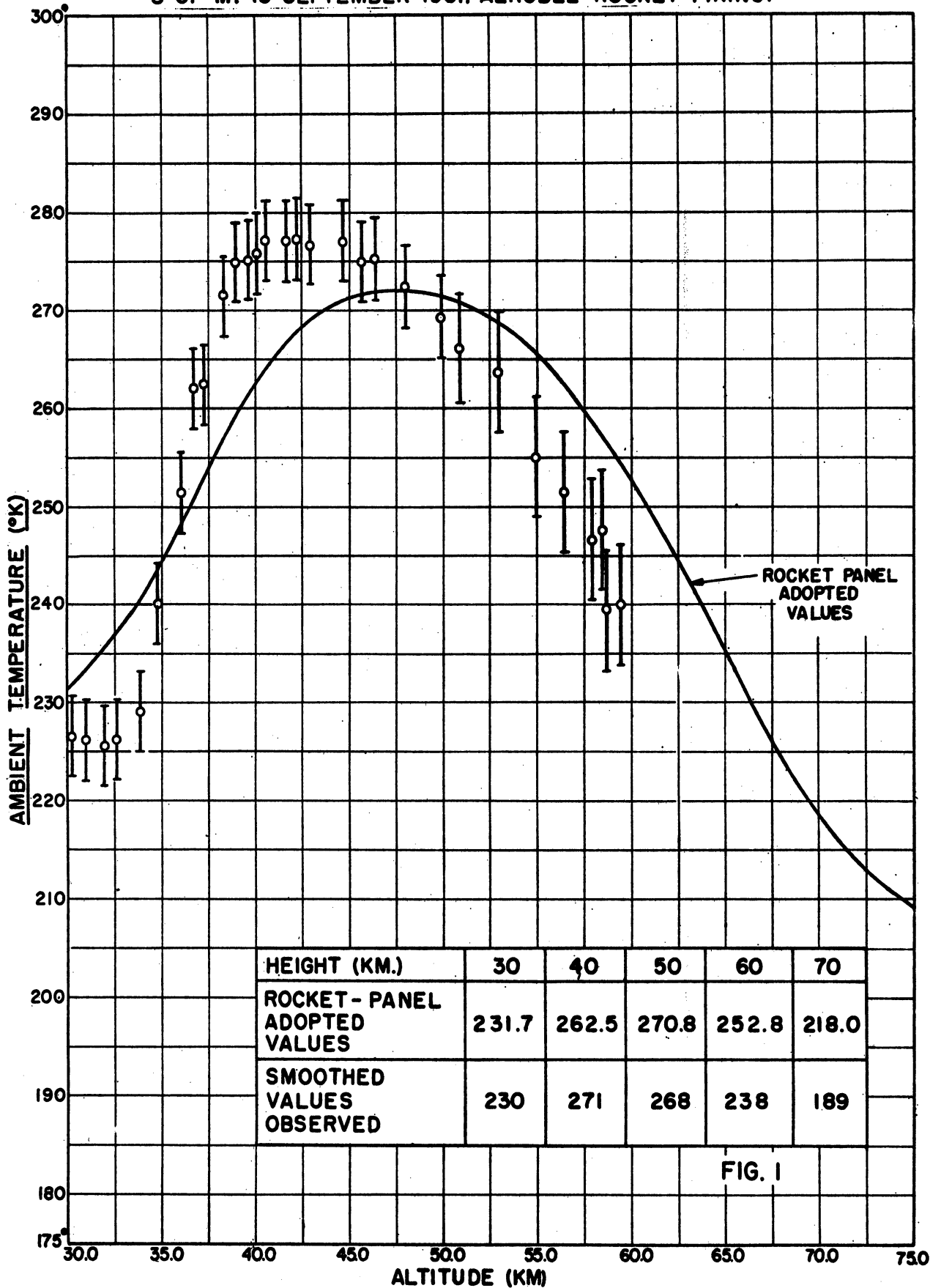


FIG. 1

PUBLICATIONS

A paper titled "Rocket Measurement of Upper Atmosphere Ambient Temperature and Pressure in 30 to 75-Kilometer Region", was completed during this period. Copies were sent to the Air Force Cambridge Research Center in January, 1953, and clearance for release was received in February. The manuscript was then submitted for publication in the Physical Review.

PERSONNEL AND FISCAL INFORMATION

No additional personnel were added to the project during this period. No property was acquired during this reporting interval.

