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TECHNICAL REPORT

**Summary of Results of
Research Conducted Under Provisions of
Grant AF-AFOSR-62-284**

604-5

Summary of Results of Research Conducted Under Provisions of Grant AF-AFOSR-62-284

to

**Air Force Office of Scientific Research
Washington 25, D. C.**

by

**Center for Atmospheric and Space Physics
Department of Physics and Astronomy
University of Maryland
College Park, Maryland**

March 1965

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INTRODUCTION

This report covers the period January 1 to December 31, 1962. The general aim of our research program has been to uncover relationships between cosmic rays and solar-terrestrial physics. This aim has gradually been broadened to include the intimately related subjects of trapped particles in the radiation belts and auroral particles.

EXPERIMENTAL WORK

An assembly of neutron detectors was prepared for possible observation of solar sources of neutrons, diurnal effects, and other directional effects for fast neutrons. This was described in reports for the previous contract, AF-49(638)530. The airborne neutron counting package was flown from Edwards Air Force Base on January 9, 10 and 11 at high altitudes for a total of fourteen hours flying time. Flight paths were made at constant geomagnetic latitude and also from Edwards to the Canadian border and back. The data is now being digitized at the Edwards data reduction facility; analysis and interpretation will commence as soon as the processed data is received from Edwards.