
PREFACE

In fiscal year 1997, under the sponsorship of the Air Force Assistant Deputy Chief of Staff for Air and Space Operations and the Air Force Director of Strategic Planning, RAND's Project AIR FORCE Strategy and Doctrine Program began a two-year effort to explore the role of air and space power in future conflicts. The primary objective of the study was to explore the prospects for developing a construct for air and space power that capitalizes on forthcoming air and space technologies and associated concepts of operation (CONOPS); that is effective against adversaries with diverse economies, cultures, political institutions, and military capabilities; and that offers an expansive concept of air and space power across the entire spectrum of conflict.

Under this broader study, the research team investigated the possibility that future adversaries might be able to mount effective missile attacks on U.S. Air Force (USAF) main operating bases in critical regions. Both emerging technologies and the proliferation of existing capabilities will give adversaries pursuing anti-access strategies a variety of new options against U.S. airbases, ports, troop concentrations, and ships at sea.

This report is not intended to assess the relative vulnerabilities of these various force elements and facilities. Rather, its purpose is to help the USAF address a potential vulnerability of its in-theater bases. The proliferation of Global Positioning System (GPS) guidance and submunition warhead technologies could make highly accurate attacks possible against USAF aircraft on parking ramps at these bases. If such attacks are feasible, the current USAF operational concept of high-tempo, parallel strikes from in-theater bases could be put

in jeopardy. It is for this reason that this operational problem was deemed relevant—indeed central—to the purposes of the overall study on the future of airpower. The research documented in this report concluded that these guidance and munition technologies could, in fact, put USAF bases at serious risk. We recommend that others with expertise in land and naval operations conduct similar assessments of their vulnerabilities to these and other new technologies. The report describes the threat technologies and concept of operation in detail, then explores both short- and long-term responses to these threats.

This report should be of interest to USAF planners and operators in the Air Staff, Major Command, and Numbered Air Force Headquarters and operational units, as well as to students of air and space power in the other services and the broader defense community.

Project AIR FORCE

Project AIR FORCE, a division of RAND, is the Air Force federally funded research and development center (FFRDC) for studies and analysis. It provides the Air Force with independent analyses of policy alternatives affecting the development, employment, combat readiness, and support of current and future air and space forces. Research is performed in four programs: Aerospace Force Development; Manpower, Personnel, and Training; Resource Management; and Strategy and Doctrine.