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Sommario/riassunto

There is broad agreement in the scientific community that the solid earth beneath the Arctic Ocean basin contains answers to major unsolved problems in the earth sciences and that many of these pertain to questions that are of global scientific significance or pressing societal concern. Recent political and technological developments, including the end of the Cold War and the prospective availability of nuclear submarines and powerful icebreakers for use as research platforms, appear to provide remedies for formidable obstacles of communication and access in harsh environmental conditions. This book recommends that the Arctic Ocean basin and its margins be the focus of a research program in three stages of study based on selected criteria: geologic framework and tectonic evolution, the sedimentary record and environmental history, and arctic geologic processes and environmental indicators.