

Charter for the ARM Science Board

Revision 1

June 2018



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Office of Science, Office of Biological and Environmental Research

Acronyms and Abbreviations

ARM	Atmospheric Radiation Measurement
ASR	Atmospheric System Research
BER	Office of Biological and Environmental Research
DOE	U.S. Department of Energy
IMB	Infrastructure Management Board

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1.0 Mission Statement

The Atmospheric Radiation Measurement (ARM) user facility, managed by the Office of Biological and Environmental Research within the U.S. Department of Energy (DOE)'s Office of Science, provides the atmospheric science research community with strategically located in situ and remote-sensing observatories designed to improve the understanding and representation in earth system models of clouds and aerosols, as well as their interactions and coupling with the earth's surface. The earth's cloudiness is associated with a large spectrum of cloud types, ranging from low-level boundary-layer clouds to deep convective clouds and anvils, and the characteristics of aerosols varies greatly with geographic location. Thus, ARM operates in situ and remote-sensing observatories in climatically distinct locations to sample continental and marine conditions in tropical, mid-latitude, and arctic environments. Three fixed sites (U.S. Southern Great Plains, North Slope of Alaska, and the Eastern North Atlantic) and three mobile facilities are used in experiments across the globe in under-observed regions critical for model improvement. ARM also has an aerial measurement capability to complement the ground measurements. The simultaneous and parallel operation of multiple instrument systems provides an unparalleled capability for understanding climatic impacts by "interrogating" the three-dimensional growth and decay of individual clouds and their interactions with aerosols in the larger associated weather systems.

2.0 Objective of the ARM Science Board

The objective of the ARM Science Board is to promote the nation's scientific enterprise by ensuring that the best-quality science is conducted at the ARM user facility.

3.0 Function of the ARM Science Board

The function of the ARM Science Board is to review proposals for use of the ARM user facility. These proposals may be submitted by Atmospheric System Research (ASR)-funded scientists or by any other interested users of ARM, including U.S. government agencies engaged in scientific research, colleges and universities, and other interested international scientific and educational bodies. While ARM does not provide direct funding for scientific research, small amounts of funding might be provided to users to allow ARM to assist with logistics, the development of datastreams and archiving, and other activities associated with facility usage. Proposals may include a section on proposed research to be conducted with ARM observations to support the science goals and objectives of the proposal. The intent of such a section is to illustrate the scientific potential of the proposed observations. It is expected that research described in this section will be supported with external funding.

All proposals to use ARM facility resources (fixed, mobile, or aerial capabilities) that exceed \$300,000 in costs to ARM will be reviewed by the ARM Science Board. The ARM Science Board typically convenes in August to consider the merits of the facility proposals.

The full science board or individual science board members may also be asked to review proposals for use of ARM facility resources that range from \$25,000 to \$300,000 in costs to ARM. The ARM Science Board will review the proposals based on the following criteria:

- Scientific and/or technical merit of the project.

- Appropriateness of the proposed method or approach.
- Competency of applicant's personnel and adequacy of proposed resources.
- Reasonableness and appropriateness of the requested ARM facility resources for the activity.
- Relevance of the proposed activities to the DOE Office of Biological and Environmental Research (BER), including relevance to ARM and/or to other science programs within BER.

4.0 ARM Science Board Members

The ARM Science Board consists of up to 11 members chosen from both the ASR-supported science community and the broader external community of scientists. The DOE ARM program manager will select the members based on their scientific expertise. All board members will serve a term of two years, and this term is renewable. Membership is updated annually to ensure excellence of the review process.

The DOE will provide financial support for travel to the annual ARM Science Board meeting.

5.0 ARM Science Board Meetings and Communications

The Board will meet, either virtually or in person, once a year to review facility proposals that exceed \$300,000 in costs to ARM. In addition, the DOE program manager may schedule other teleconferences, or request writer reviews, to review proposals that range from \$25,000 to \$300,000 in costs to ARM. Most communications are expected to take place via email.

The ARM associate director for operations is responsible for managing the ARM infrastructure logistical and feasibility reviews of the proposals and coordinating between the ARM Science Board and the ARM Infrastructure Management Board (IMB). The ARM field campaign administrator will assist the associate director for operations and will be responsible for organizing meetings and teleconferences of the science board. The field campaign administrator will serve as the executive secretary for the science board, keep the minutes of the board meeting, and provide administrative support to the ARM Science Board.



Office of Science