

A.4.4 Magnetospheric Physics

1. Scope of Program

Proposers interested in submitting in response to this program element should also read Section A.4.0 of this Appendix for an overview of the Sun-Earth Connection space science theme of the NASA Office of Space Science.

The Magnetospheric Physics program supports research investigations seeking to resolve science questions concerning the structure and dynamics of magnetospheres and the interactions of solar system space plasmas with planetary magnetospheres and natural space bodies. The discipline focus is on naturally occurring space plasma phenomena with attention given to both the large-scale system structures and processes and to the underlying physics that give rise to those structures and processes. Within that focus, the emphasis is on the geospace portion of the solar-terrestrial linkage including solar-wind magnetosphere interactions and the behavior of particles and fields within the magnetosphere, whether as a consequence of those interactions or other, internal processes. Investigations seeking to resolve science questions concerning comparative magnetospheres and plasma-solar system body interactions are also appropriate.

This program element supports theoretical research, the development and exercise of models and simulations, and the analysis and interpretation of data for the purposes of identifying and understanding the physical processes important to magnetospheric structure and dynamics. The development and testing of new instrument concepts or of new observing techniques that are pertinent to discipline goals may also be supported, providing the proposed activity is in the context of a clearly defined magnetospheric physics science problem. The program does not support the development of specific engineering, protoflight, or flight instrumentation nor the routine, long-term gathering of observational data.

NASA OSS also supports research on magnetospheric, ionospheric, thermospheric, and mesospheric physics using a variety of methods for providing low cost access to space, including standard and long-duration balloons, sounding rockets, Shuttle-based carriers, Space Station, and sounding rocket-class payloads flown as secondary payloads or on other flights of opportunity. See the separate Magnetospheric and ITM Suborbital Program description in Section A.4.6 of this Appendix for further details.

2. Programmatic Information

Total funding in this program element has been about \$4M per year. Of the approximately 60 investigations currently being funded, about one third will expire in FY 1999.

In past years the Magnetospheric Physics program has permitted grants to be made separately to the Principal and Co-Investigators of the same investigation, but at different institutions, in order to avoid the overhead costs associated with subcontracts. However, beginning with investigations accepted as a result of this competition through ROSS-99 (FY 2000 funding), this practice will no longer be done except in those cases where the Co-Investigator is affiliated with a U.S. Government Laboratory (see the subsection entitled "*Budget Summary and Details* in Section 5.3 of Appendix C).

NOTE: Appendix C contains critical information necessary for the preparation and submission of proposals submitted in response to this NRA. In particular, Section C.5.3 contains detailed standards concerning the format, page limits, and contents of a proposal. The submission of a proposal not in compliance with these standards may complicate and/or hinder its efficient and complete evaluation. Therefore, deficiencies in format and/or omission of key information may result in a proposal being found unacceptable for evaluation, or if evaluated, being adversely affected during the evaluation process.

The schedules for submission of the Notice of Intent and proposal are given in Table 1 of the cover letter of this NRA. The World Wide Web site for submitting both the NOI and the proposal *Cover Page/Proposal Summary* (see Appendix C.5.3) is <<http://props.oss.hq.nasa.gov>>; proposers without access to the Web or who experience difficulty in using this site may contact Ms. Debra Tripp (E-mail: deb.tripp@hq.nasa.gov) for assistance. Deliver hard copies of the proposals delivered to:

ROSS-99 NASA Research Announcement
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Obtain further information about this program element from the Discipline Scientist:

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