

A.4.1 Sun-Earth Connection Theory Program (SECTP)

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 NASA Office of Space Science (OSS) Sun-Earth Connection (SEC) science theme.

The SECTP is a continuation of the previously funded Space Physics Theory Program (SPTP), with the exception of galactic cosmic rays investigations, which beginning with this ROSS-98 NRA are now included in the Astrophysics Theory Program (see Section A.2.6). The scientific purview of the SECTP encompasses solar physics; heliospheric physics; magnetospheric physics; and ionospheric, thermospheric and mesospheric physics. The new title and scope of this program element reflect organizational changes within OSS.

The SECTP supports theory and modeling investigations of the highest scientific quality dealing with problems of fundamental importance within or transcending the boundaries of these individual disciplines. The key characteristics of successful SECTP investigations are that they are of the highest intrinsic scientific quality, and that they also propose to attack problems falling within OSS SEC science theme of sufficient breadth that their successful completion requires the efforts of a synergistically interacting group of investigators. Proposals that serve only as an umbrella for a variety of separate research tasks, even though the tasks are related by a common theme, are not appropriate for the SECTP. Likewise, proposals for narrowly focused and/or smaller scope theoretical efforts should be submitted to the individual SEC science discipline program elements described in Section A.4 of this Appendix.

The group perspective of SECTP is sufficiently important that proposing teams, especially those without a prior history of close associations, should address carefully how future collaboration will be organized and effected. An important characteristic of the SECTP is that it encourages the exploration and development of new areas in The Sun-Earth Connection theme, especially interdisciplinary ones, and, in so doing, may develop objectives for future but as yet undefined space missions.

Anyone seeking funding from the SECTP for the current cycle must submit a proposal in response to this NRA. Funding for proposals selected for the next three-year period of performance will begin in the first quarter of FY 1999.

Proposals should include a clear, concise, and incisive description of the scientific problem(s) to be addressed, the methodologies to be used, and the significance of the expected results in the context of the SEC. The bearing of the proposed science on observational programs, past and future, should be discussed briefly but explicitly.

It is also important that proposals clearly indicate the role of each investigator, the commitment of his/her time, and the nature and extent of support to be provided by the proposers' institutions.

Groups proposing to continue participation from the last triennium selection should include a clear but concise statement of what they previously proposed and the specific portions thereof that were carried out, successfully or unsuccessfully. Achievements should be documented in the form of a list of references to relevant publications. Such materials dealing with prior performance may be presented in an Appendix to the main proposal.

An important aspect of the SECTP has been the support rendered by the investigators' home institution(s), should the proposal be chosen. Such support may take the form of institutionally provided resources and/or concrete measures, e.g., the establishment of permanent positions, which manifests the importance of SEC science to the organizational mission. Such support plays a role in the selection process, and it is important that it be clearly identified in the main proposal in a short section entitled "Proposed Institutional Support." In addition, those seeking continuation should include in their Appendix a review of the last three years' activity a statement of prior commitments and how they have been fulfilled. Since SECTP objectives frequently use supercomputers, such usage should be pointed out, resources identified, and costs estimated (note especially the availability of NASA-sponsored computer facilities; see Section C.1.1 of Appendix C of this NRA).

2. Programmatic Information

All SECTP proposals will be evaluated and selected as indicated in Sections C.1.4 and C.1.5 of Appendix C. It is stressed again, however, that adherence to the unique programmatic guidelines for this program will play an important role in determining selection: scientific and programmatic merits will be considered on an equal basis. Continuity of support for a currently selected SECTP group (i.e., one from the SPTP selection activity carried out in 1995) will be considered only as needed to discriminate between two proposals of otherwise equal merit. Finally, achievement of a balanced distribution of investigations across the various SEC disciplines is a goal, but such will be effected only to the extent that proposals of the highest merit exist in all areas.

Selections will be nominally for a three-year period of performance with annual funding allotments contingent upon the submission of a satisfactory progress reports and available funding. Funding for the previous SPTP in Fiscal Year (FY) 1998 was \$4M, which was distributed to 14 participating groups. In part owing to the redefined scope of SECTP as discussed in the beginning of Section 1.1 of this program element, the FY 1999 funding for SECTP is expected to be about \$3.5 M, with no increase anticipated for the

rest of the triennium. This lower budget, plus the need to allow for inflation, may necessitate a reduction in the total number of selections from that carried in the past.

Owing to the larger scope and personnel involvement in SECTP proposals, the page limit identified in Section C.5.1 of Appendix C is revised to 20 pages for the proposal's *Science/Technical/Management Section* instead of 15 pages. All other page limits identified in Appendix C.5.2 apply.

The schedules for submission of the Notice of Intent (NOI) 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 *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. Hard copies of the proposals are to be delivered to:

ROSS-98 NASA Research Announcement
Sun-Earth Connection Theory Program
Jorge Scientific Corporation
Suite 700
400 Virginia Avenue, SW
Washington, DC 20024
Phone number for commercial delivery: (202) 554-2775

Questions concerning this program may be addressed to the Discipline Scientist:

Dr. David S. Evans
Research Program Management Division
Code SR
NASA Headquarters
Office of Space Science
Washington, DC 20546-0001
Telephone: (202) 358-0894
Facsimile: (202) 358-3087
E-mail: devans@hq.nasa.gov