## A.3.3 Planetary Atmospheres Program

### 1. Scope of Program

The Planetary Atmospheres program activity supports scientific investigations that contribute to the understanding of the general properties, origins, and evolution of the neutral and ionized atmospheres of planets and their satellites and of comets. Its broad objectives include the determination of compositions and chemical behaviors of planetary atmospheres; sources of and mechanisms for deposition of energy; characterization, and understanding of dynamical processes; and relationships between currently observed properties and/or states of matter, chemical abundances, physical conditions, and processes that prevailed at the time the planets were formed. The scope of the Planetary Atmospheres activity includes laboratory investigations that supply basic physical measurements that are currently needed to interpret planetary data. These include measurements and calculations of spectroscopic properties, (excitation, dissociation, and ionization cross-sections), optical properties, and thermodynamic properties of materials found in planetary atmospheres. Proposals for analysis of data from NASA missions that return significant amounts of data, which are in the public domain, are encouraged. These include released data from the Galileo, Mars Pathfinder, and Mars Global Surveyor missions.

In all cases, a Planetary Atmospheres investigation should propose to attack a specific problem of the highest intrinsic scientific value. Proposals that serve as an umbrella for a variety of research tasks are not appropriate. Note that atmospheres of extrasolar planets are included within the scope of the Planetary Atmospheres activity, but investigations of the Earth's atmosphere and atmospheres of nonplanetary astrophysical objects are not.

### 2. Programmatic Information

Proposals are sought for new projects that fall within the scope of the Planetary Atmospheres Program. Presently, about $7M is budgeted for this program in Fiscal Year 2000, for which this NRA solicits proposals, and approximately 100 investigations are expected to be supported by these funds. Of these, approximately 25 new proposals are expected to be selected through this NRA. Investigations may be proposed for a one, two or three-year period of performance. For multiyear grants, a progress report should be submitted to the Discipline Scientist (see address below) 90 days before the renewal date of the annual agreement. The Project Description should be limited to no more than five single-spaced, typewritten pages and include a brief statement of planned work for the coming year, a report of progress made during the previous year, publications generated by this research, a budget, and an estimate of the amount of previously awarded funds that remain available at the end of the award year. The five page limit does not include a Cover Page, detailed budgetary information, or reprints.

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 *Cover Page/Proposal Summary* (see Appendix C.5.3) is <http://cass.jsc.nasa.gov/panel/>; proposers without access to the Web or who experience difficulty in using this site may contact The Lunar and Planetary Institute by E-mail at <panel@lpi.jsc.nasa.gov> or by phone at (281) 486-2137 for assistance . Hard copies of the proposals are to be delivered to:

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The Lunar and Planetary Institute
3600 Bay Area Boulevard
Houston, TX 77058
Phone number for commercial delivery: (281) 486-2189

For further information, contact the Discipline Scientist:

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