

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 needed to interpret planetary data. These include measurements and calculations of spectroscopic properties, excitation/dissociation/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 is in the public domain, are encouraged. These include released data from the Galileo, Mars Pathfinder, and Mars Global Surveyor missions. 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 Considerations

Proposals are sought for new projects that fall within the scope of the Planetary Atmospheres Program. Presently, about \$7M is budgeted for this program, and approximately 100 investigations are expected to be supported by these funds. Many projects are funded for two and three years, thus releasing approximately one-third of the resources for annual competition.

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) 486-2156 or -2166 for assistance .

Hard copies of the proposals are to be delivered to:

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Planetary Atmospheres Program

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