

A.2.5 Cosmic Ray Physics Program

1. Scope of Program

A. Cosmic Ray Physics Experimental Program.

This experimental research program supports studies of the origin, acceleration, and transport of galactic cosmic rays. Fundamental measurements include the elemental abundance, isotopic composition, and energy spectra of galactic cosmic rays, as well as antimatter, exotic particles, and dark matter to provide tests of cosmological models. This program primarily supports science investigations utilizing large stratospheric balloons to carry instruments above about 99% of the Earth's atmosphere. It also supports the exploration and demonstration of new instrument concepts pertinent to the science goals of the discipline. The balloon payloads funded over the past decade have been similar in many respects to space flight instruments for a focused science investigation (e.g., level of technological sophistication, management approach, etc.). In fact, the term “balloon mission” would be appropriate for describing several of the investigations that have been supported.

This program underwent a comprehensive review in 1998, which resulted in a substantial number of awards that fully subscribe the available funds through 2001. Consequently, proposals to this program are not solicited in this ROSS-99 NRA.

B. Cosmic-Ray Theory and Data Analysis Program

Theoretical investigations of galactic cosmic rays should be submitted to the Astrophysics Theory Program (ATP) element described in Section A.2.6 of this Appendix A. .

2. Programmatic Considerations

Question concerning this program element may be addressed to the Discipline Scientist:

Dr. James C. Ling
Research Program Management Division
Code SR
Office of Space Science
NASA Headquarters
Washington DC 20546-0001
Telephone: (202) 358-0897
Fax: (202) 358-3097
E-mail: jling@hq.nasa.gov