

THE NASA SPACE GRANT PROGRAM : AN AID IN PROPOSAL PLANNING; E.J. Dasch and L. Keffer, NASA Headquarters, Code FEH, Washington, DC, 20546, and K.Pruzan, INS, Inc., Washington, DC, 20024.

The NASA National Space Grant College and Fellowship Program-- Space Grant--has completed its first five years of operation and conducted an extensive evaluation of the 52 State Consortia and the national program. The purposes of this presentation are: (1) to describe the program and its present configuration; and (2) to illustrate how Space Grant may be of help in providing resources for proposal writing across the spectrum of research, education, and public service.

Space Grant was initiated by the U.S. Congress in 1987 with the passage (Public Law 100-147) of the National Space Grant College and Fellowship Act, which is a part of the agency authorization bill. Modeled after the U.S. Department of Agriculture's 130-year-old Land Grant College program, and the U.S. Dept. of Commerce-National Oceanic and Atmospheric Administration's (NOAA) 30-year-old Sea Grant program, the Space Grant program was brought about primarily as a result of the efforts of Lloyd Bentsen, then-Democratic Senator from Texas, to respond to the need for a coordinated effort to help maintain America's preeminence in aerospace science and technology. The Act cites broad objectives of the Space Grant program, such as assuring the economic vitality of the United States, and the quality of life of its citizens through the understanding, assessment, development and utilization of space resources. In addition, the law holds that research and development of space science, space technology and space commercialization will contribute to the quality of life, to national security and to the enhancement of commerce. In recognizing these objectives, Congress urged a "broad commitment and intense involvement on the part of the Federal government in partnership with state and local governments, private industry, universities, organizations, and individuals concerned with the exploration and utilization of space;..."

To translate the objectives of the legislation into realistic and achievable goals, NASA developed the following program objectives: (1) to establish a national network of universities with interests and capabilities in aeronautics, space and related fields; (2) to encourage cooperative programs among universities, aerospace industry and Federal, state and local government; (3) to enable the development of interdisciplinary education, research infrastructure and public

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service programs related to aeronautics, space science and technology; (4) to recruit and train professionals, especially women, underrepresented minorities and persons with disabilities, for careers in aeronautics and space-related science and engineering; and, (5) to develop a strong science, mathematics and technology education base from elementary through university levels.

Implementation of the Space Grant program resulted in the formation of a national network consisting of colleges and universities with varying degrees of aeronautics and space-related resources and capabilities, industry, state and local governments, and nonprofit organizations. Space Grant Consortia have been established in all 50 states, the District of Columbia, and the Commonwealth of Puerto Rico. Currently, nearly 500 organizations take part in the program, including about 360 institutions of higher education, about 60 industrial affiliates, and nearly 100 other organizations. Each consortium implements balanced programs of education, research, and public service. The annual \$15M in NASA funds are currently more than tripled by matching funds, resulting in a total annual program of more than \$45M.

In 1993 Space Grant funded nearly 1600 undergraduate and graduate fellowships (\$8.2M); 22% were awarded to members of underrepresented groups, including disabled students, and 38% went to women. Other expenditures were: 223 higher education programs (\$5.8M); 263 research infrastructure programs (\$11.8M); 444 precollege programs (\$9.5M); and 193 general public programs (\$1.9M.)

Increasingly, agency initiatives such as the Discovery Program permit, or even require, that proposals include educational components. State Space Grant Consortia can be excellent vehicles for organizing and implementing these components, which may be potential factors in proposal evaluation. Several consortia have been useful in assisting in design of Discovery-education plans, and many have been consulted for ideas. The academic-industry-government network provided by Space Grant in the several states offers proposal planners a unique matrix for coordinating, implementing, and evaluating initiatives such as Sounding Rocket/balloon launches and Mission to Planet Earth studies, among many others. Space Grant additionally provides a tested matrix for the insertion of programmatic science and technical results into precollege-university curricula, while targeting diverse and non-traditional participants and audiences.