New Hampshire Space Grant Consortium

NH SPACE GRANT CONSORTIUM

Established by Congress (Public Law 100-147) in 1988 and implemented through the NASA Office of STEM Engagement, the National Space Grant College and Fellowship Program (known as 'Space Grant') contributes to the nation's space enterprise by funding related research, education, and public service projects through a national network of 52 university-based Space Grant consortia: one in each state, the District of Columbia, and Puerto Rico. Each consortium consists of multiple independent affiliate institutions, such that there is currently a network of over 850 Space Grant institutions nationwide. These affiliates represent more than 600 colleges and universities as well as industry, local government agencies, federal agencies, and nonprofit organizations. A key aspect of the Space Grant Program is that it is a Cost Share program, with federal dollars matched by state and affiliate funding contributions.

NH SPACE GRANT HIGHLIGHTS:

- **New Hampshire Space Grant Consortium** (NHSGC) was established in 1991 as a collaboration between the University of New Hampshire (UNH) and Dartmouth College. In the fall of 1999, through a NASA competitive process, NHSGC became a Designated consortium, the top rating given to consortia. NHSGC now includes seven NH institutions at 20 locations in the state: University of New Hampshire, Dartmouth College, Plymouth State University, the Community College System of NH, the McAuliffe-Shepard Discovery Center, Mount Washington Observatory, and BAE Systems. (See map on following page for full list of locations.)
- **Undergraduate and graduate student STEM workforce development opportunities** sponsored through the consortium include scholarships, fellowships, NASA Center hands-on experiences, conference travel allowances, student symposia support, and individual student and team research experiences. This past year, these student opportunities included summer internships at NASA's Marshall Space Flight Center and Ames Research Center; support for undergraduate research in Earth/Sun magnetohydrodynamics, atmospheric waves, and auroral plasma; mentorship and teaching experience through STEM camps and internships at MSDC; and travel to AGU and Lunar & Planetary Science conferences, among others.
- **NHSGC is committed to diversifying the STEM workforce.** Among directly funded student awardees this past year, 14.4% are underrepresented participants and 55% are women.
- **Public outreach events include students and citizens across the state.** AerospaceFest and Superstellar Fridays at MSDC, the MWO distance learning programs, Tech Camp for middle and high school students at UNH, and Girls' Tech Day at the Community Colleges, all allow K-12 students to gain hands-on research experience and get a taste of STEM careers and research. A wide range of NASA K-12 resources are also available through our website.

EXECUTIVE COMMITTEE MEMBERS:

Dr. Antoinette Galvin, Director
University of New Hampshire
toni.galvin@unh.edu

David Heirtzler, Assistant Director
University of New Hampshire
david.heirtzler@unh.edu

Dr. James LaBelle
Dartmouth College

Dr. Eric Hoffman
Plymouth State University

Lisa Clark
Community College System of NH

Jeanne Gerulskis
McAuliffe-Shepard Discovery Center

Brian Fitzgerald
Mount Washington Observatory

Peter Bird
BAE Systems North America

BY THE NUMBERS: FY 2021

NASA INTERNSHIPS FELLOWSHIPS & SCHOLARSHIPS

73

UNH: 5

PSU: 15

DARTMOUTH: 9

COMMUNITY COLLEGES: 42

MSDC: 2

DIVERSITY IN DIRECT-FUNDED AWARDS

55%
FEMALE

14.4%
UNDER-REPRESENTED MINORITY OR ETHNIC GROUPS

INFORMAL EDUCATION & PRE-COLLEGE

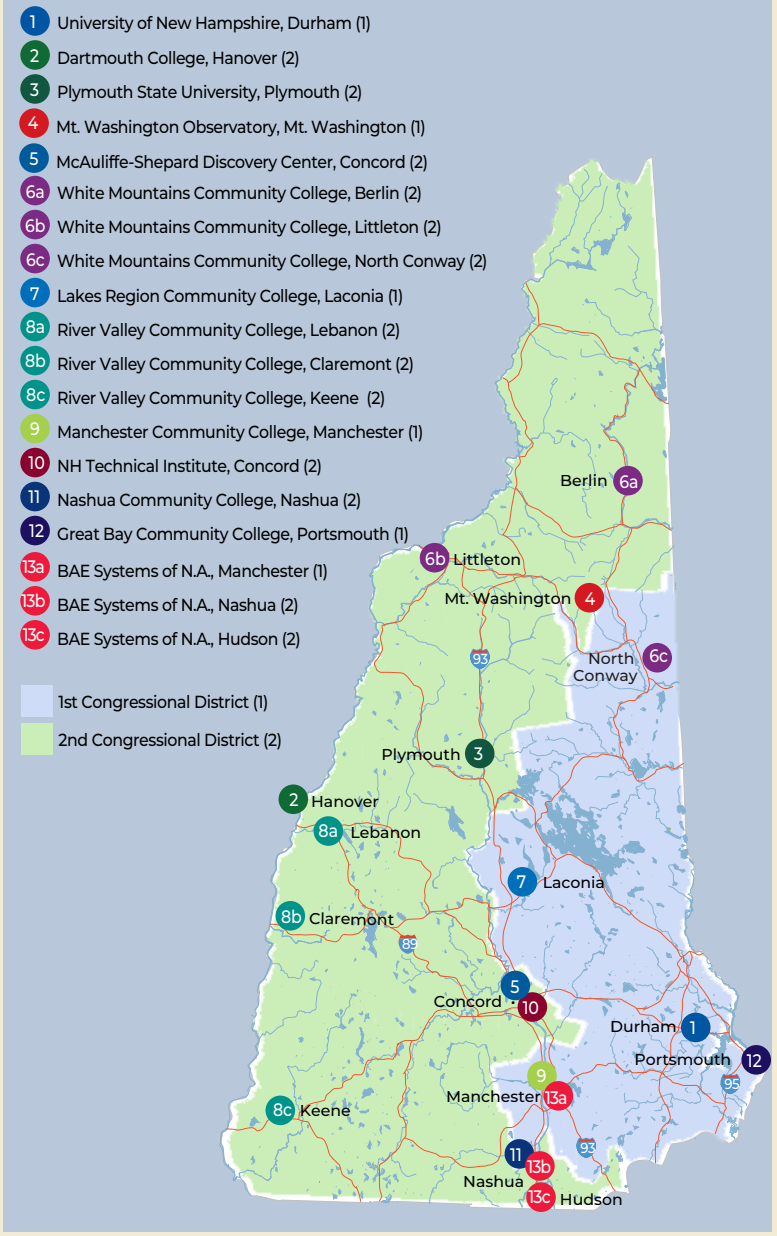
>10,750
PARTICIPANTS STATEWIDE

>10,500 K-12 STUDENTS
>270 K-12 TEACHERS

engaged via:

McAuliffe-Shepard Discovery Center
Aerospace Festival, STEM camps and clubs
Mount Washington Observatory
Science of Weather and Climate Programs
University of New Hampshire
Tech Camps

New Hampshire Space Grant Affiliates



SPACE GRANT HIGHLIGHTS

"[Space Grant] helped me to get through college and allowed me to see how much fun stem can be. I found that for me engineering was the field I wanted to be in, I just did not know which field specifically as I like mechanical and electrical. So I decided to pursue a degree in robotic engineering at Worcester Polytechnic University."

Jason Dominguez, 2019 NH Space Grant Scholarship
Essco calibration laboratory - Calibration Technician

"The grant assisted with various activities during my undergraduate studies such as participation at the NASA Lunabotics Mining Competition and general scholarship. The grants helped me pursue the education and gain valuable experiences. "

Zhangxi Feng, 2014 Space Grant Scholarship
Los Alamos National Lab, Graduate Research Assistant

EPSCoR HIGHLIGHTS

▸ Four seed grants were dispersed at the University of New Hampshire: *Improved Infrastructure for Ionosphere-Thermosphere Research* at and *Electrostatic Analyzer Instrument Development*, both of which are part of the Geospace Dynamics Constellation (GDC) Mission proposal. *Evaluating the Portential for New England Agricultural Soils to Sequester Carbon using Satellite Remote Sensing* enables scaling prior research from a small number of sites to the entire region. *Compact Proton and Alpha Monitoring for Slowly Rotating Spacecraft* improves the current design of such an instrument. These grants collectively involve eleven professors, faculty, staff, and graduate students at UNH.

▸ A seed grant on Auroral Studies at Dartmouth College investigates improvements in our understanding of the Earth's magnetotail via measurements made in low-earth orbit. Four faculty, research scientists, and students at Dartmouth are involved in the project.