

## Inspiring and Preparing the Next Generation of Explorers and Innovators

### SPACE GRANT BACKGROUND AND VISION

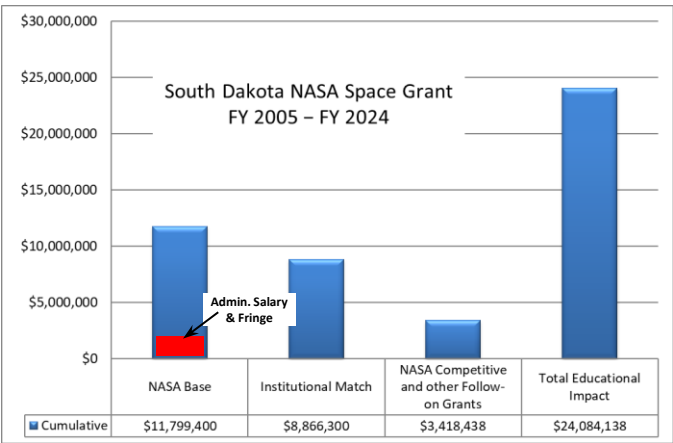
- ❑ The South Dakota Space Grant is one of 52 state-based consortia authorized by Congress and supported by NASA’s Office of Education with the goal of maintaining the nation’s leadership in aeronautics and space exploration.
- ❑ Established in 1991, the vision of the South Dakota Space Grant Consortium (SDSGC) is “to expand opportunities for all South Dakotans through education, research, and public service in the fields of aerospace, earth science, and supporting disciplines in science, technology, engineering, and mathematics (STEM).”

### MAJOR SPACE GRANT PROGRAMS

- ❑ Fellowships for college students in STEM degrees
- ❑ Internships at NASA centers and aerospace industry
- ❑ College robotics and interdisciplinary engineering design teams
- ❑ Seed grants for innovative research and education projects (Project Innovation Grants)
- ❑ K-12 teacher grants and student/classroom opportunities including precollege robotics
- ❑ Diversity targets in all educational programs consist of at least 16% minority participants and 45% female.

### FUNDING AND RETURN ON INVESTMENT

- ❑ Non-federal matching funds and competitive follow-on grant awards provide a return on investment of more than one dollar for every dollar of NASA base funding (2005-2024)
- ❑ Only 16.8% of 2024 base funding went to program administrative salaries and benefits



### FELLOWSHIPS/SCHOLARSHIPS (2005 – 2024)

- ❑ 1,077 undergraduate and graduate students at 10 public, private and tribal colleges in South Dakota directly received over \$3.42 million in Space Grant funds
- ❑ 18.4% of funded students are minority, mostly Native American, and 41.9% female
- ❑ 130 student internships: 88 at NASA Centers, 39 at aerospace industries (some paid by industry), 2 State and 1 Navy
- ❑ Funding allows students to participate in NASA center and aerospace industry internships, participate in multi-disciplinary student led design team competitions, perform NASA STEM-related research on campus, present findings at professional conferences, and earn their degrees
- ❑ Longitudinal tracking shows that 95% of Space Grant funded students from FY2006-24 who have taken their next step are working in STEM careers or pursuing advanced STEM degrees

### PRECOLLEGE (2024 program year only)

- ❑ 1,305 teachers reached through teacher training, NASA STEM experiences, and NASA educational material
- ❑ 24,338 precollege students participated in Space Grant instructional/enrichment activities
- ❑ 430 middle school students (65 teams across South Dakota) competed in SD FIRST LEGO League and BEST Robotics sponsored by Space Grant in 2024 with 220 students (35 teams) advancing to the FLL State Championship in Feb 2025
- ❑ Six Space Grant-supported Women in Science conferences held in 2024 in Aberdeen, Pierre, Rapid City, Sioux Falls, Spearfish, and Watertown reaching 2,797 MS/HS girls.

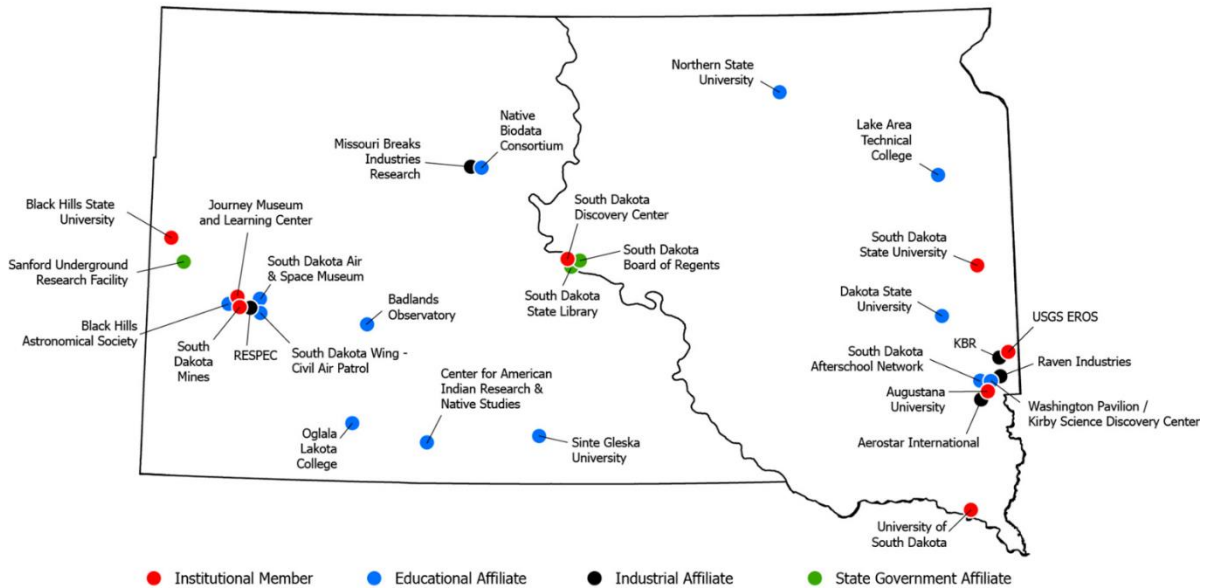
### SEED GRANTS FOR RESEARCH & EDUCATION (2005 – 2024)

- ❑ 86 Project Innovation Grants totaling \$1,453,493 awarded to 17 SDSGC affiliates for research and education projects that align with NASA and SGS GC goals
- ❑ 94 robotics and NASA-STEM precollege teacher grants (\$315,460)

### IMPACT AND ACCOUNTABILITY

- ❑ Measurable outcomes with national and state-level evaluation and tracking of performance
- ❑ Low administrative costs—approximately 1.0 FTE
- ❑ On a per-capita basis, South Dakota’s NASA base funding is seven times the national average

# South Dakota Space Grant Consortium Members and Affiliates



## Recent Highlights

- 2023—2024 SDSU Engineering Teams Excell in Five NASA Competitions



- Three NASA SBIR Phase 1 Proposals; new start-up aerospace company
- 2023—2024: seven students employed in space industry: SpaceX, Northrup Grumman, Raytheon, Aerostar, AeroFly



## Six Finalists Named in NASA's \$3.5 Million Break the Ice Challenge



## Brookings-based AeroFly earns NASA contract

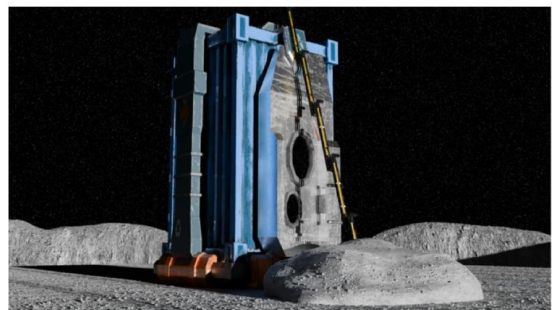


ILLUSTRATION COURTESY AEROFLY

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- 2025: student hired at NASA Marshall Space Flight Center Jenna Saylor; Sioux Falls, SD Mines