SOARS®
Significant Opportunities in Atmospheric Science and Research

SOARS Overview
The mission of SOARS® is to broaden participation in the geosciences by increasing the number of African-American or Black, American Indian or Alaskan Native, and Hispanic or Latino students who enroll and succeed in graduate school in the atmospheric and related sciences. This mission contributes to national goals to develop a diverse, internationally competitive, and globally engaged workforce of scientists and engineers. SOARS is a multiyear undergraduate-to-graduate bridge program that is equal parts learning community, mentoring program, and research internship.

SOARS Values

Research
A central feature of the SOARS program is a ten-week summer immersion program in which protégés conduct scientific research at the National Center for Atmospheric Research (NCAR) or at laboratories of other SOARS sponsors. During this summer research experience, SOARS participants (protégés) perform original research, prepare scientific papers, and present their research at an end-of-the summer colloquium. They also participate in active learning workshops in which they develop and refine their writing and presentation skills.

Typically, SOARS protégés begin the program the summer before their junior or senior year, and each protégé can participate in the summer research program up to four times. This allows protégés to explore the breadth of geoscience over multiple summers, improves their application to graduate school, and eases the transition into graduate school.

Mentoring
A unique and important aspect of SOARS is its strong, formal mentoring structure. Strong mentoring helps protégés succeed academically and professionally, and the formal structure ensures equal access to strong mentoring. All SOARS protégés are supported by up to four mentors: a science mentor to guide research practice; a writing mentor to improve scientific communication skills; a community mentor to help navigate scientific and local culture; and a peer mentor—a protégé who has participated in the program in previous summers—to model effective scientific and professional practices.
**Community**
Another unique feature of SOARS is the strong and supportive community of protégés that develops from the critical mass of diverse students living together, working on related scientific projects, and collaborating to develop and refine their leadership, professional, and communication skills. This community is an important exception to the ubiquitous experiences of isolation that discourage academic and professional success.

SOARS also helps protégés hold on to this community as they move into the broader scientific community. SOARS encourages and funds protégé participation in national and regional conferences; provides protégé-led skill building seminars on topics including proposal writing, graduate school admission, and effective communication; and offers ongoing career and academic guidance.

**Financial Support**
SOARS provides comprehensive financial support to protégés. During the summer, SOARS protégés receive competitive wages, travel assistance to and from their research site, and paid housing. For many protégés, these benefits are essential—they depend on summer income to help support their continued education. SOARS also supports field experiences and other unique opportunities. In 2003, SOARS protégés participated in the Bow Echo and Mesoscale Convective Vortex Experiment; in 2004, two protégés attended a GPS colloquium that included a field experience in Taiwan and Japan. SOARS also provides funding for up to half of graduate school expenses and for expenses to participate in national and regional conferences.

**SOARS Successes**
- 90 protégés have participated in the program since its inception in 1996
- 20 protégés in the science & engineering workforce, including protégés employed in National Oceanic and Atmospheric Administration (NOAA) and NCAR laboratories
- Two PhDs successfully defended, fourteen PhD candidates
- 28 MS degrees earned in Science, Engineering, or Mathematics
- 34 protégés enrolled in science, engineering, or mathematics graduate degree programs
- Nine refereed, protégé co-authored papers from summer research
- Three AMS graduate fellows
- Three NSF graduate fellows
- 60 oral presentations by protégés at national or regional conferences
- 113 posters presented by protégés at national or regional conferences
- SOARS received the Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring in 2001

**SOARS Sponsors**
- National Science Foundation (NSF)
- Cooperative Institute for Research in Environmental Science (CIRES)
- National Aeronautical and Space Administration (NASA)
- National Oceanic and Atmospheric Administration (NOAA)
- University Corporation for Atmospheric Research (UCAR)