MUCERPI

NASA Minority University and College Education and Research Partnership Initiative

Philip J. Sakimoto, Ph.D., June 30, 2021

MUCERPI

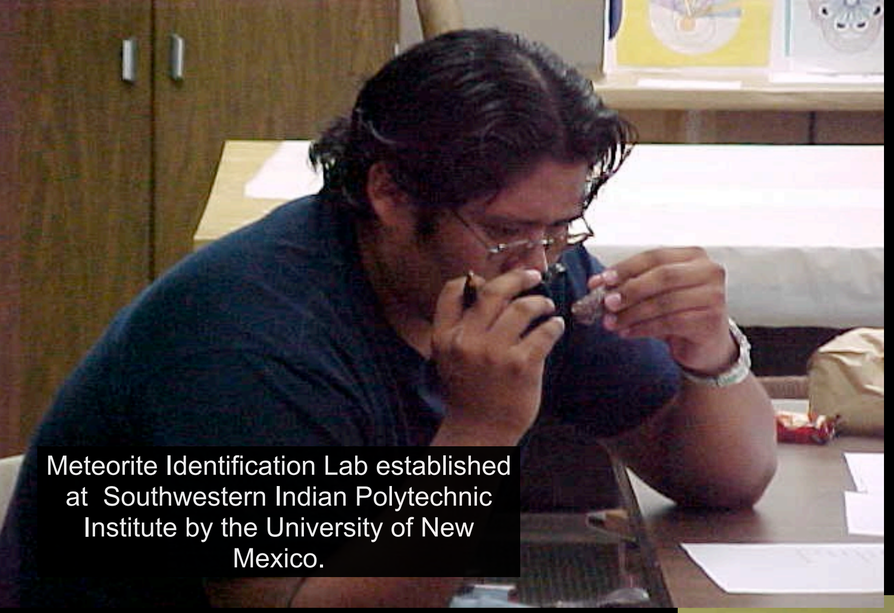
First Solicitation (2001-2003)

- Goal: Build Space Science capabilities at Minority Institutions
- Funding: 3 years, up to $250K per year
- Outcomes:
  - 15 proposals funded (out of 60 received)
  - 50 partnerships with major space science research groups
  - Involvement in 10 space science flight missions
  - 25 new or redirected space science faculty positions (17 tenure track)
  - 12 new space science majors or minors (~100 students signed up)
  - 68 new or revised space science courses (~1,800 students enrolled)

MUCERPI

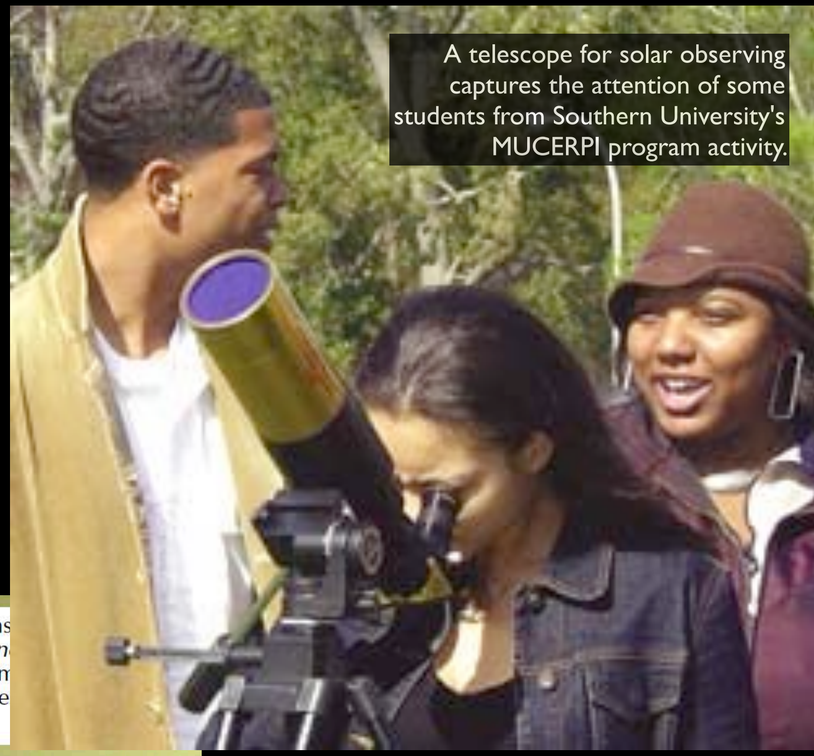
Second Solicitation (2003-2005)

- New projects only (renewable only if new work proposed)
- Funding: 3 years, up to $275K per year
- Outcomes:
  - 16 proposals funded (six new institutions)
  - Similar outcomes . . .
  - Space science became *institutionalized.*

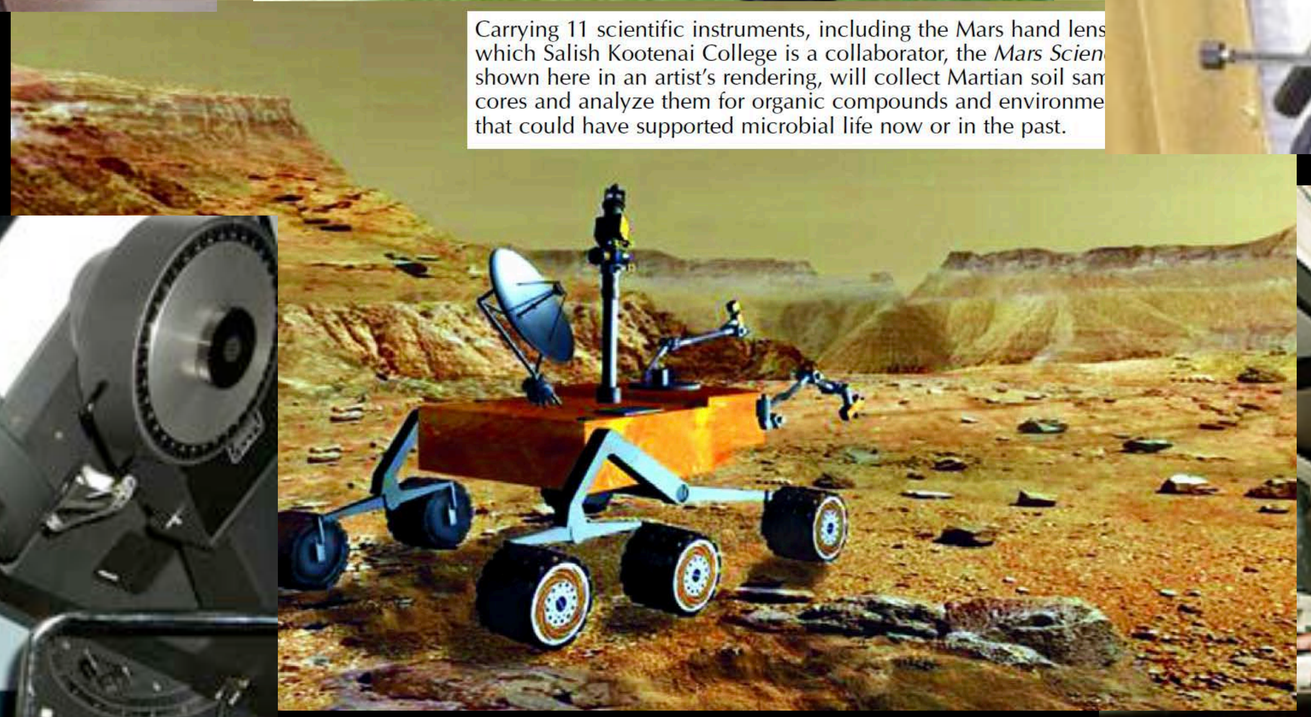


Meteorite Identification Lab established at Southwestern Indian Polytechnic Institute by the University of New Mexico.

York College students visiting Princeton to learn about the structure of the universe.



A telescope for solar observing captures the attention of some students from Southern University's MUCERPI program activity.



Carrying 11 scientific instruments, including the Mars hand lens which Salish Kootenai College is a collaborator, the *Mars Scien* shown here in an artist's rendering, will collect Martian soil sam cores and analyze them for organic compounds and environme that could have supported microbial life now or in the past.

The new Medgar Evers College major in space science is available to students throughout the City University of New York

HBCU students recruited by South Carolina State University interning at the National Optical Astronomy Observatories

Guiding Principles

1) Go, visit, listen

2) Don’t assume. Invite!

3) Target faculty

4) Provide genuine research collaborations

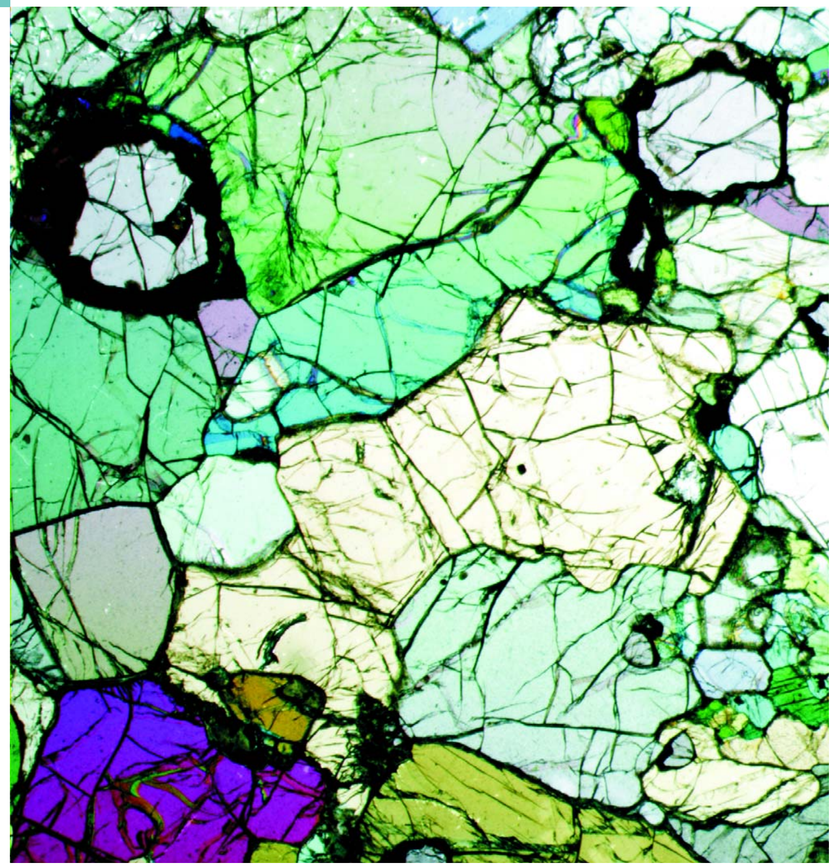
5) Get visible top level support

6) Put the PI at the MI

7) Let the MI’s define what works for them.

SEPTEMBER
2005

PHYSICS TODAY



Mantle under
the microscope

Get all the details

Obliterating Myths About Minority Institutions

A multiyear NASA initiative for developing research partnerships in space science demonstrates that such programs can have great success in attracting minorities to science.

Philip J. Sakimoto and Jeffrey D. Rosendhal

The shelves are full of public and private reports[1–3] that deal with the importance, in the US, of attracting more minorities to science and that propose a wide variety of solutions for achieving that goal. Countless conferences have been held and speeches made. But rhetoric and reality are vastly different, and despite substantial investments by a number of federal research agencies, shockingly little progress has been made. For example, an analysis conducted at our request by the American Institute of Physics showed that in the 31 academic years from 1973 to 2003, only 21 African Americans, 56 Hispanic Americans, and 11 Native Americans earned doctoral degrees in astronomy.

We believe the lack of significant progress to date arises at least in part from common myths that appear to underlie discussions about why certain racial and ethnic groups are underrepresented in the sciences. Although nobody likes to admit it, everyone has heard some of these myths: "They" are not interested, not qualified, not ready—perhaps even not capable of succeeding—in the sciences. Some people say that because federal agencies have spent many years (and a considerable amount of money) trying and failing to make any significant progress, noth-

right things. They matched minority institution faculty members with scientific mentors, and they funded projects that seemed to fall within NASA's scientific purview. However, on closer inspection, it became readily apparent there were many flaws. The mentors were often involved only superficially, and the projects frequently were set-aside projects managed by equal-opportunity personnel who were well meaning but essentially disconnected from the mainstream of the agency's science programs and from the universities themselves. Research institutes were set up that had little connection to the host university's academic program. Technology programs were established for NASA missions that had been canceled. And laboratories at minority institutions often did "piecework" for NASA centers.

We decided to do something fundamentally different. Working from inside the NASA office of space science, we made a commitment to devise a program that would break down barriers and bring minority institutions into the heart of the NASA space-science program. To develop our approach, we consulted extensively with administrators, faculty, and students at a wide variety of minority colleges and universities. The first thing we asked was whether they were even interested in having space-science programs at their institutions. Up to that point, we had been told another myth—that minority institutions were just not interested in something as esoteric as space science. Much to our surprise, the response to our question was a uniformly resounding and enthusiastic "yes." When we