

A composite image of space. The top left shows the Earth's horizon with a blue and white sky. The top right shows the Moon. In the center, a small orange planet (Mars) is visible. The rest of the background is a dark starfield with a purple nebula.

**NASA Marshall Space Flight Center
Huntsville, Alabama**

**Academic Affairs Office
Frank Brannon**



Academic Affairs is a part of the Office of Human Capital

Human Capital's Mission:

“To build workforce capabilities
that assure current and future
mission success.”



**Academic
Affairs**

Pipeline Programs

College and University Recruiting

Co-op Program

Science and Technology Scholarship Program (STSP)

Minority Education Programs

Elementary and Secondary Programs

Student Volunteer Service Program

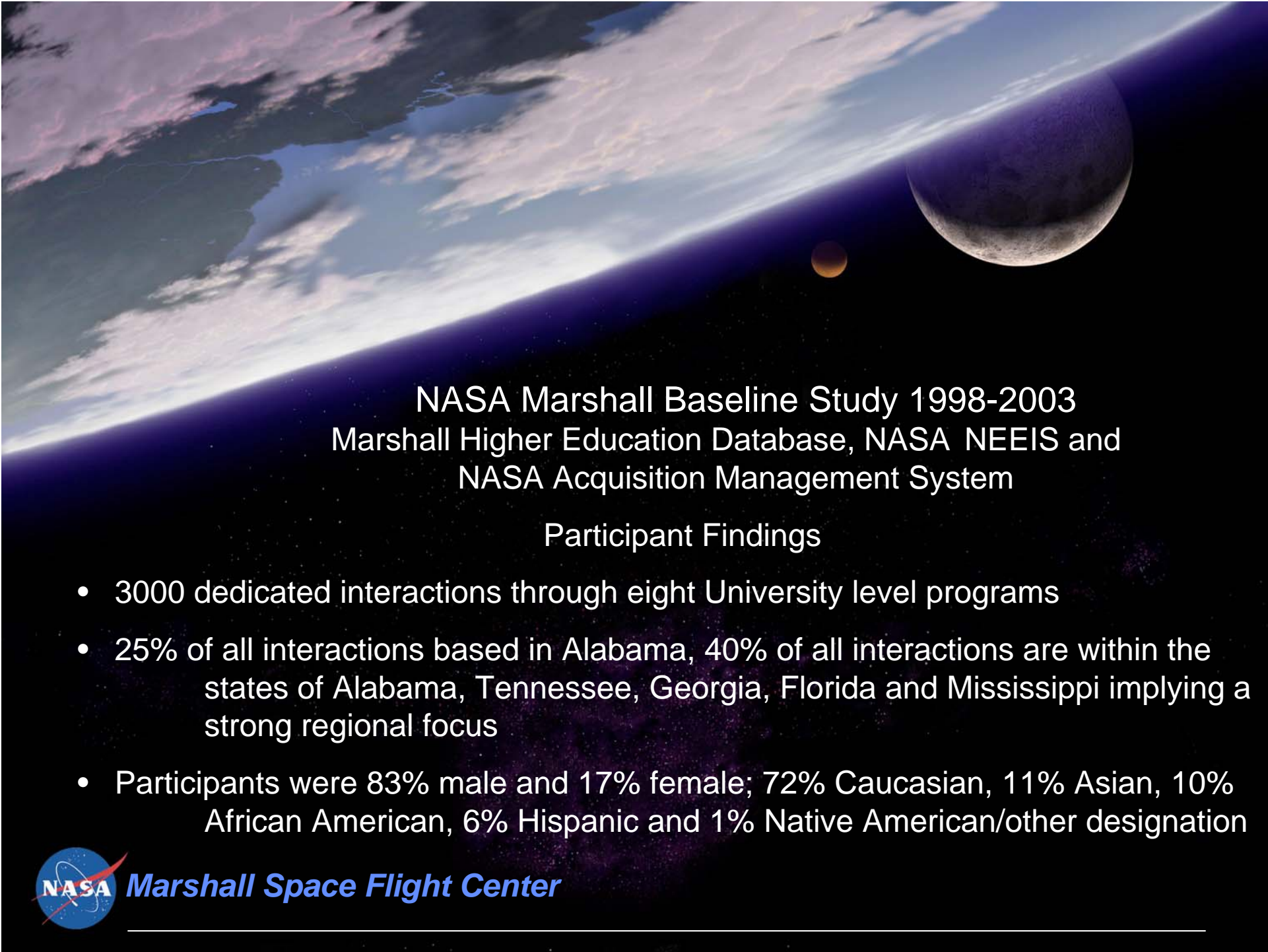
Intergovernmental Personnel Act (IPA)

Educational Alliances

Initiatives to Target Top Talent, College and University Relations



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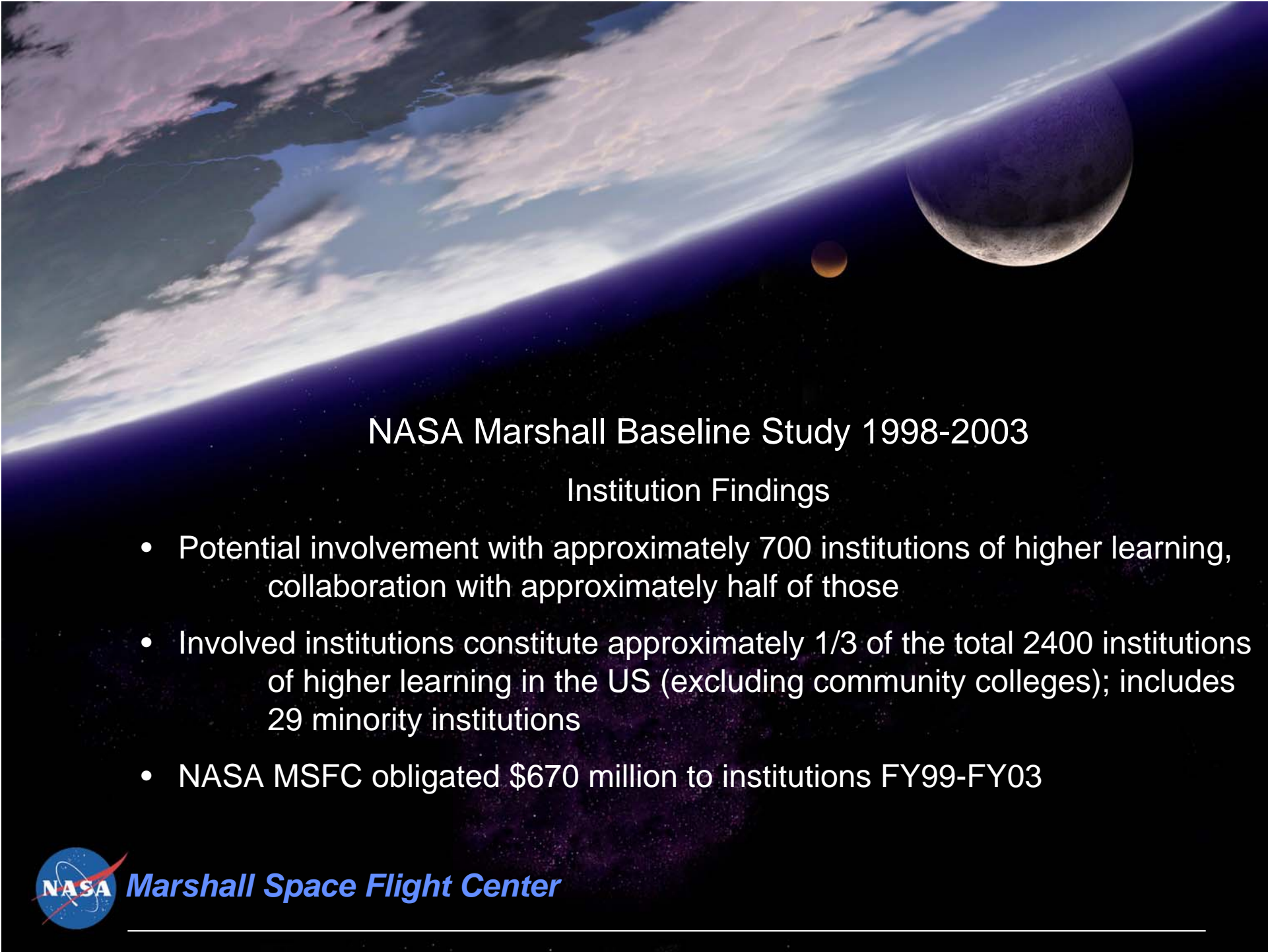
NASA Marshall Baseline Study 1998-2003
Marshall Higher Education Database, NASA NEEIS and
NASA Acquisition Management System

Participant Findings

- 3000 dedicated interactions through eight University level programs
- 25% of all interactions based in Alabama, 40% of all interactions are within the states of Alabama, Tennessee, Georgia, Florida and Mississippi implying a strong regional focus
- Participants were 83% male and 17% female; 72% Caucasian, 11% Asian, 10% African American, 6% Hispanic and 1% Native American/other designation



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NASA Marshall Baseline Study 1998-2003

Institution Findings

- Potential involvement with approximately 700 institutions of higher learning, collaboration with approximately half of those
- Involved institutions constitute approximately 1/3 of the total 2400 institutions of higher learning in the US (excluding community colleges); includes 29 minority institutions
- NASA MSFC obligated \$670 million to institutions FY99-FY03



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NASA Marshall 1998-2003

Diversity by Individual-Diversity in programs is driven largely by the diversity of applicants (i.e. if they apply, they are quality students and are selected)

Diversity by Institution-Success in involving minority institutions is driven by program focus (e.g. JOVE)

- 44% US minority institutions defined as HBCU's. 41% defined as HSI's
- 88% of all MSFC interactions with individuals from a minority institution were with an HBCU, 8% with those at an HSI



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Institutions
receiving over
\$10 million
FY99-03

STANFORD UNIVERSITY
UNIVERSITY ALABAMA HUNTSVILLE
UNIVERSITY ALABAMA BIRMINGHAM
UNIVERSITY CALIF IRVINE
MASS INSTITUTE TECHNOLOGY
UNIVERSITY COLORADO BOULDER
SPELMAN COLLEGE
COLORADO SCHOOL MINES
AUBURN UNIVERSITY AUBURN
PENNSYLVANIA STATE UNIVERSITY
UNIVERSITY WISCONSIN MADISON
NORTHEASTERN UNIVERSITY
UNIVERSITY NEW ORLEANS

10% of the MSFC Higher
Education Program
interactions 1998-2003 were
with these universities



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Baseline Study

Great Midwestern 1998-2003

- Direct involvement with 26 Institutions
- Participants: Illinois (37), Indiana (17), Iowa (12), Michigan (23), Minnesota (8), Missouri (32), Ohio (10), Wisconsin (18)
- \$26 million from NASA Marshall to region's universities
- Roughly 10% of interactions/potential interactions/funds/ with this region

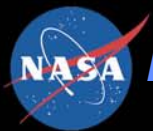



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Future Effort from Baseline Study

- Focus on promoting programs outside region, and funding those individuals, to attract necessary skills for MSFC's mission
- Stronger alignment with universities receiving MSFC monetary support in order to support that effort (improve our "value")
- Stronger focus to improve pipeline movement of participants
- Increased promotion of programs to minority students and institutions, especially HSI's and Hispanics



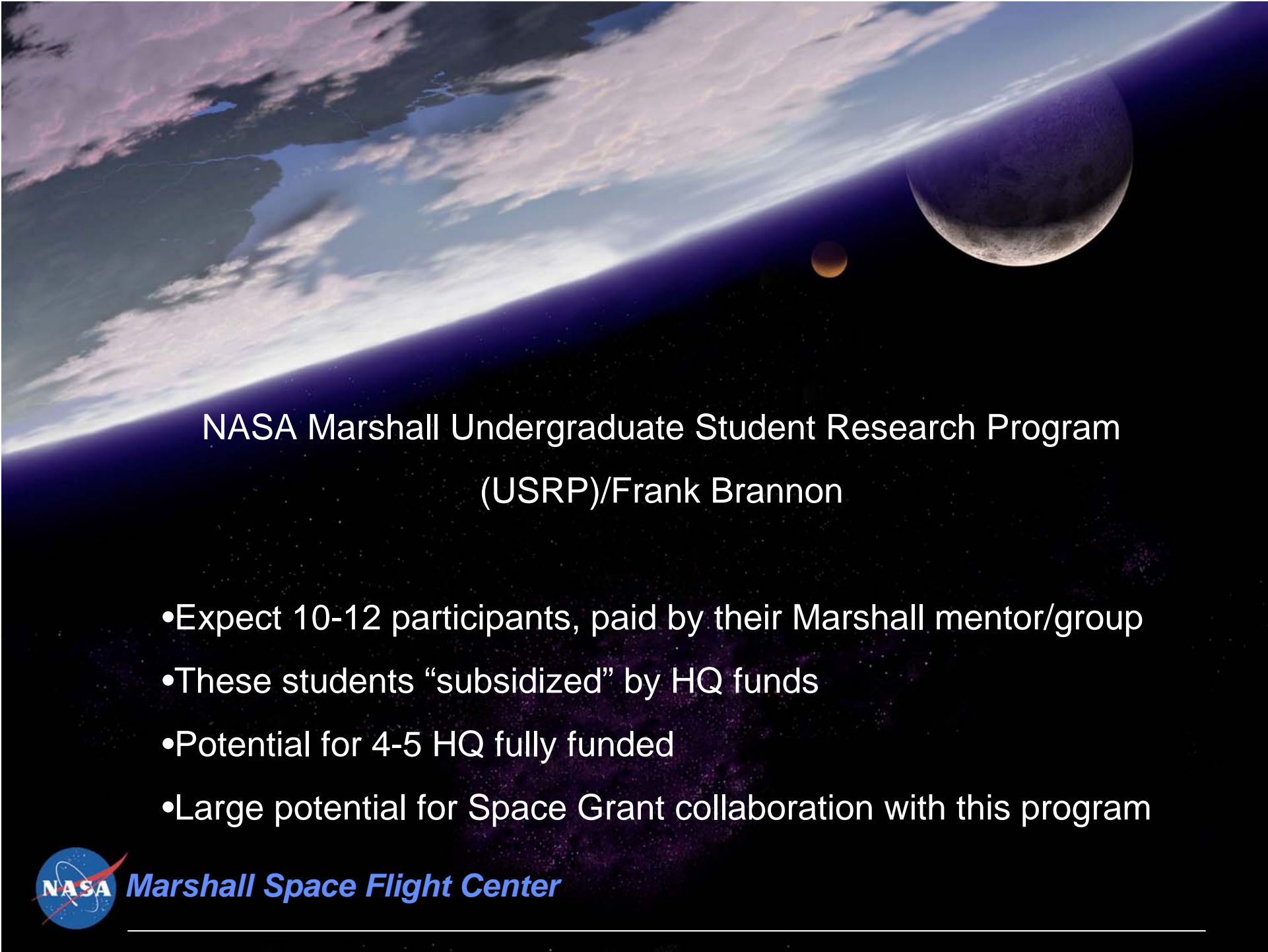


Previous Collaborative Activities

**Academic
Affairs &
Space Grant**

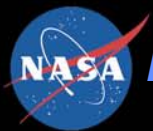
- Space Grant supporting Undergraduates Fellowships-
Arkansas, Rocky Mountain (UT), Maine, Alabama
- Space Grant supporting Graduate Fellowships-
Tennessee
- Space Grant supporting Great Moonbuggy Race-
Arizona, Tennessee
- Space Grant supporting student Travel- New York






NASA Marshall Undergraduate Student Research Program (USRP)/Frank Brannon

- Expect 10-12 participants, paid by their Marshall mentor/group
- These students “subsidized” by HQ funds
- Potential for 4-5 HQ fully funded
- Large potential for Space Grant collaboration with this program



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NASA Marshall Summer Faculty Research Opportunity (SFRO)/Frank Brannon

- Expect 20-25 participants, paid by their MSFC colleague
- Additional cost for local administration of program
- Potential of 4-6 HQ fully-funded
- Some potential for Space Grant collaboration



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Marshall Visiting Researcher Exchange & Outreach (VREO)/Julie Mills

- Partnership between Marshall Academic Affairs and Universities Space Research Association (USRA)
- Designed to stimulate involvement of university, private-sector, and government agency researchers with NASA/MSFC
- Goal is to provide an effective link for collaboration between NASA/MSFC scientists, engineers, and technologists and the higher education and the aerospace industry communities.



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NASA Marshall Great Moonbuggy Race

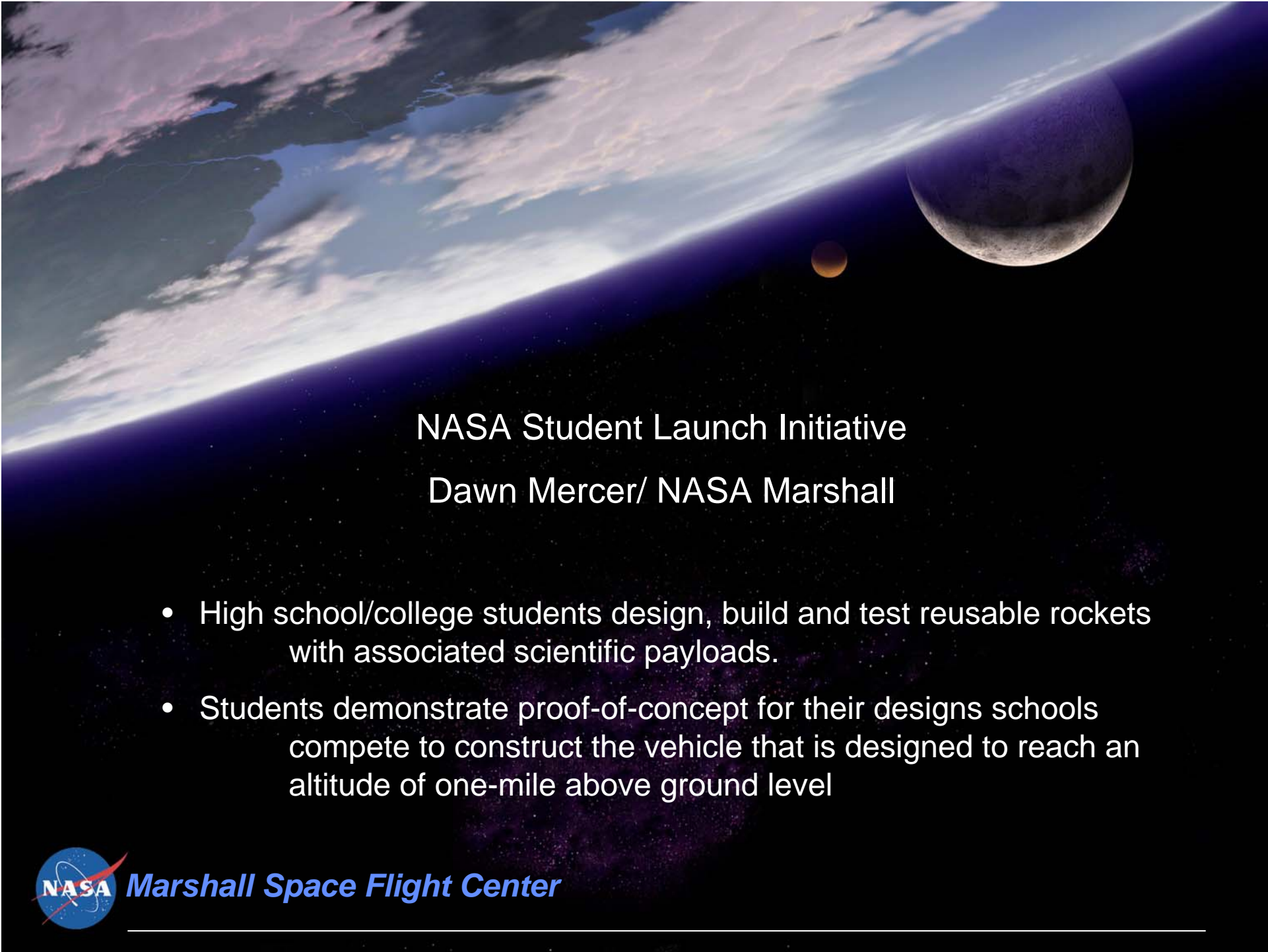
Durlean Bradford/NASA Marshall

- Held annually in April, gives undergraduate and high school students from around the nation an opportunity to apply engineering skills and develop team skills
- Moonbuggies are built from the students' own design recreating the lunar experience of the Apollo astronauts and looking ahead to further human exploration of the solar system. Two-person crews-one male and one female

<http://moonbuggy.msfc.nasa.gov>



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NASA Student Launch Initiative
Dawn Mercer/ NASA Marshall

- High school/college students design, build and test reusable rockets with associated scientific payloads.
- Students demonstrate proof-of-concept for their designs schools compete to construct the vehicle that is designed to reach an altitude of one-mile above ground level




NASA Marshall Deep Space Test Bed Project
Student Payload Program

Program Contact: Dr. John Gregory, Alabama Space Grant

Technical Contact: Frank Szofran, NASA Marshall

- Opportunity to fly a science or engineering experiment aboard a Deep Space Test Bed gondola

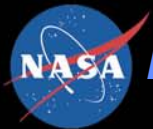


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