

Discussion of the Charge with the Sponsor

Michael H. New, PhD

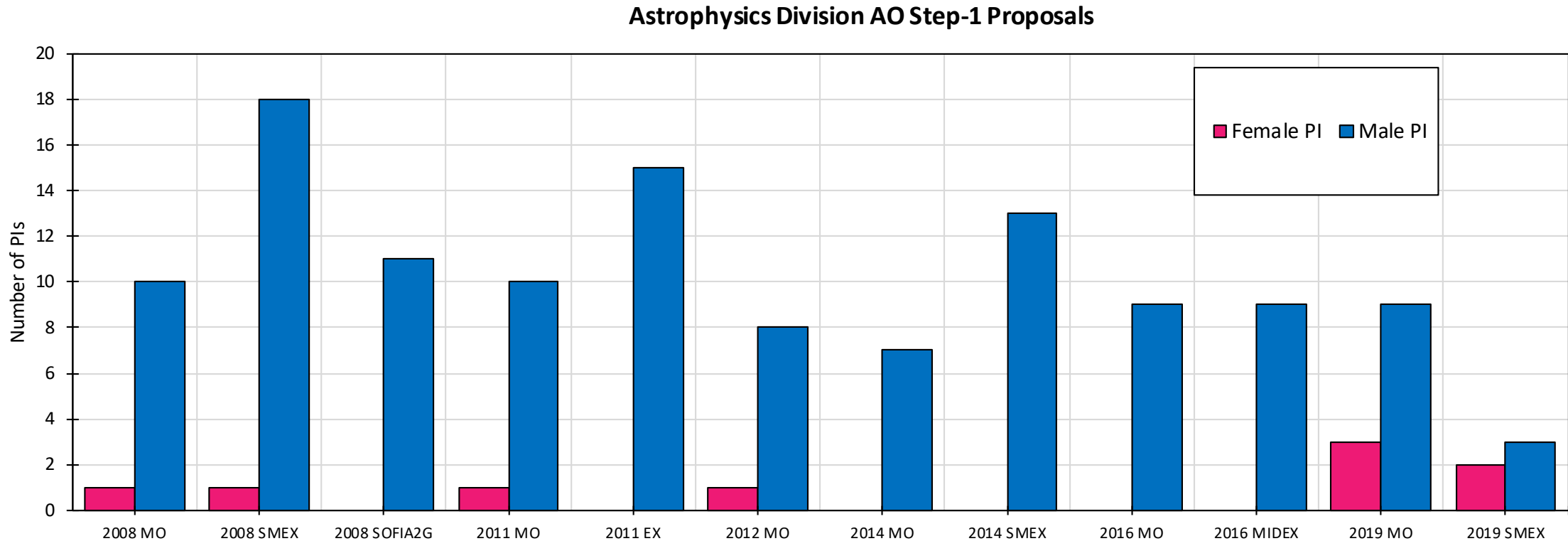
Deputy Associate Administrator for Research

NASA Science Mission Directorate

Why diversity and inclusion?

- In a June 2019 presentation, Dr. Thomas Zurbuchen noted that the population of principal investigators (PIs) proposing space missions does not reflect the diversity of the space science community at large.
- Consistent with priority 4.1 of *Science 2020-2024: A Vision for Scientific Excellence*, NASA Science believes its ability to build excellent teams is critical to mission success.
- Research shows that greater diversity contributes critically to creativity and innovation.
- SMD therefore seeks to increase the diversity and inclusion of talent contributing varied viewpoints and approaches across all elements of our work.
- SMD seeks to have its mission teams, especially from a leadership standpoint, reflect the diversity of the NASA science community.
- The success of NASA's competed space mission programs depends on enabling the participation of the most innovative and capable members of the space science community.

Why request this study?

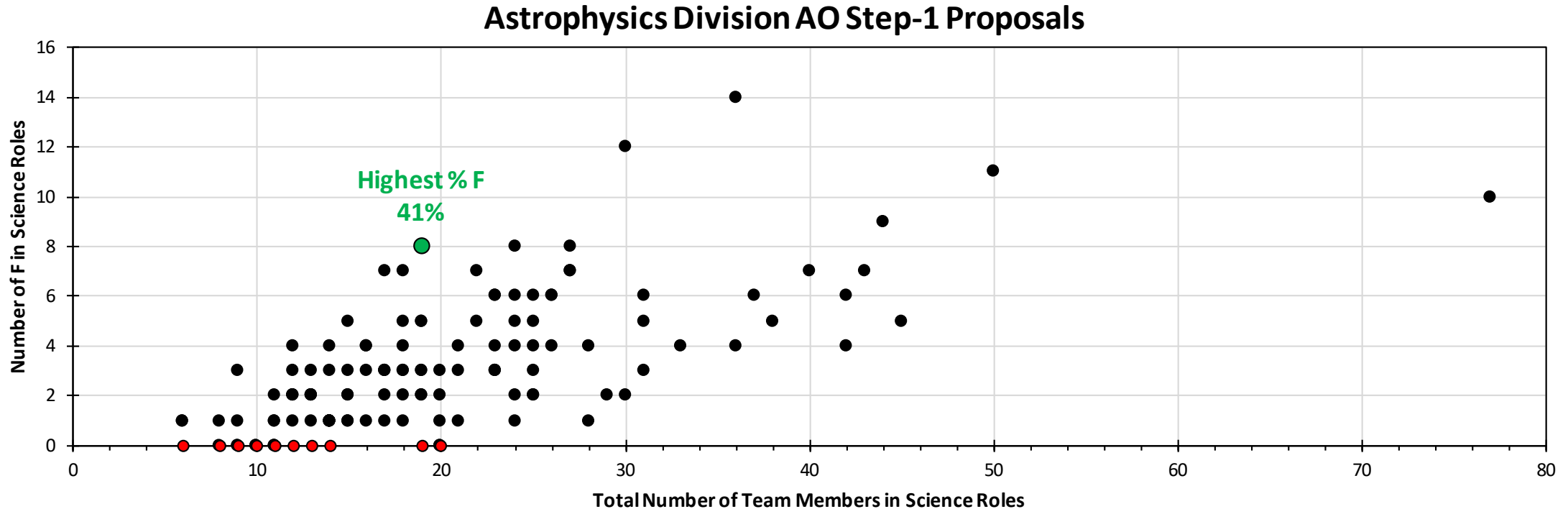


Sources:

[1] J. Centrella, M. New and M. Thompson, *Leadership and Participation in NASA's Astrophysics Explorer-Class Missions: Astro2020 State of the Profession Considerations White Paper* (2019)

[2] H. Jensen, L. Pappas, and M. New, *Private communication* (2021)

Why request this study (2)?



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Mission proposals are social creations

- Space mission proposals are the product of a complex system involving many stakeholders.
- For each proposal, the system is defined by the participating organizations and the cultures, processes, and human networks unique to each.
- This system is also influenced by peripheral processes, such as: formal and informal networking, community education about the proposal process, and access to resources that include personnel, organizational capabilities, funding to develop the proposal, and the ability of the PI to focus significant fractions of their time and effort during mission formulation and early implementation.
- Identifying common points in the proposal system and its peripheral processes at which diversity is more likely to be lost or where inclusion of diversity is more likely to be frustrated can reveal pathways for reaching the goal of increasing diversity in proposed mission team leadership.

What was the request?

- "The purpose of this committee is to recommend actions that will increase demographic diversity and inclusion in the leadership of space mission proposals..."
- Specifically:
 - ❖ Map the current space mission proposal system.
 - ❖ Identify elements of the system that may present barriers or bottlenecks to potential proposers...
 - ❖ Identify humanistic elements of the system that may present impediments to applicants...
 - ❖ Compare the pool of current and past proposers with the demographics of the NASA science community, the larger US science community and the national population.
 - ❖ Compare and contrast the space mission proposal system to other processes involving large, PI-led, multi-institutional projects with life-cycle costs exceeding \$10M...
 - ❖ Recommend practical and effective actions that NASA SMD and its partners can take to help proposers overcome barriers to diversity and inclusion...
 - ❖ Recommend ranges of activities and choices that individuals may make during their career to enhance the likelihood of individual success as a future leader of a competed space mission.

Questions? Comments?