



***The NHFP:  
A Review of 30 Years of  
Excellence in Astrophysics***

Presentation to the Astrophysics Advisory Committee

Rita Sambruna and Nicolle Zellner  
Co-Chairs, on behalf of the Review Panel  
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# The Charter

1. Success of the NHFP under its current structure
2. Diversity, equity, and inclusion of the program

.... several specific questions for each area, and additional ones for selected issues

# The Team

- Rita Sambruna, NASA's GSFC, co-Chair
- Nicolle Zellner, NASA HQ and Albion College, co-Chair
- Marcel Agueros, Columbia University
- Kate Follette, Amherst College
- Stefanie Johnson, University of Colorado
- N. Jeremy Kasdin, Princeton University
- Xin Liu, University of Illinois
- Sherard Robbins, Visceral Change
- Keivan Stassun, Vanderbilt University
- Bianca Chavez and Hannah Woods, Executive Secretaries  
(Purdue University and Albion College)

# Fact Gathering Phase

- **Program Implementation**
  - Structure of the Program
  - Administration of the grants
- **Application and Selection Processes**
  - Criteria for evaluation
  - Peer review
  - Selection of the Fellows
- **Health and Well Being of the Fellows**
  - Tenure issues
  - Benefits , salary, etc.
- **Equity, Diversity, and Inclusion Topics**
  - Applicant pool
  - Selected Fellows
  - Host institutions

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# Contributors

- The Hubble Project, the NHFP Leads, the Grant Administration office, the Fellows' Equity, Diversity, and Inclusion Working Group
- Q&A session with former and current Fellows
- Survey of Administrators and Chairs of host institutions that have not been frequently selected
- Survey of previous and current Fellows (30 yrs of the Program) - Dr. S. Johnson

# 27 Findings in 5 Broad Topics

- Mission of the NHFP
- Management of the Program
- Application and Review Processes
- Diversity and Accessibility of the Program
- Support of the Fellows

*.... Generated 32 recommendations from the Chairs*

# Findings: High-level View

- The dedication of the NHFP Leads and supporting personnel, who strive to maintain the prestige of the Fellowship and integrity of the review process;
- The importance of the NHFP Fellowship in shaping careers and defining the field and the culture of Astrophysics;
- The need for the NHFP to formulate a shared mission statement, in alignment with NASA and SMD core values;
- The value of a holistic evaluation of applicants, including an assessment of inclusive leadership, which will require a restructuring of the application and review processes;
- The need to provide additional information and discussion sessions for applicants, reviewers, and other stakeholders; and
- The necessity of data collection about applicants, and also about Fellows' experiences, so that the Program can be effectively evaluated over time.

# Findings: Overarching Theme

- Need to align with the core values of NASA and SMD:

Leadership  
Excellence  
Integrity  
Teamwork  
Safety  
Inclusion

- Excellence in both science and **collaborative, inclusive leadership**

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# An Opportunity for a Culture Change

**Finding 1:** *NHFP is a singularly important vehicle by which NASA SMD can continue to influence the future of the field, through the identification, support, and development of the field's future leaders.*

**Finding 19:** *There is a missed opportunity for NASA to use the Fellowship as a vehicle to improve equity of our field, and to set the standards for the inclusive leadership attributes that will define the Astrophysicists of tomorrow.*

*“The NHFP is without a doubt one of our most prestigious fellowships in Astronomy. As such, it really is well-suited to help change the culture ..., and to help open up opportunities in Astronomy (and other sciences) to a broader and more diverse pool of participants.”*

K. Bjorkman, University of Toledo  
Provost and Executive Vice President for Academic Affairs  
Distinguished University Professor  
Helen Luedtke Brooks Endowed Professor of Astronomy

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# The Report in a Nutshell (1/2)

- The NHFP aims at excellence, and the 21<sup>st</sup>-century Astrophysics landscape calls for more than just scientific excellence (...) if the great challenges of the future are to be met. **Teamwork, mentoring, and community building** skills should be paramount for the leaders of tomorrow.
- A **new definition of excellence** is crucial for the NHFP and it must embrace the NASA/SMD core values. It must place a focus on inclusive, collaborative leadership as one of the defining criteria for the selection of Fellows.

# The Report in a Nutshell (2/2)

- **Changing the demographics of the Fellows is imperative** for the field, as the NHFP embodies the aspirations, values, and standards of the Astrophysics community.
- While “first order” changes have been presented and suggested in the review report as the first essential step, a much more challenging endeavor is **to change the *culture* of the community** - a “second order” change - to fully reflect the values of diversity and inclusion, without which significant innovation is not possible.

# Message to the Astronomy Community

**Table 2.** Organizational Alignment Card (*Visceral Change*, 2021).

<b>Organizational Design</b>		<b>Organizational Behavior</b>		<b>Sustainable Outcomes</b>
Same Design	+	Same Behavior	=	Same Outcome
Same Design	+	Changed Behavior	=	Same Outcome
Changed Design	+	Same Behavior	=	Same Outcome
<b>Changed Design</b>	<b>+</b>	<b>Changed Behavior</b>	<b>=</b>	<b>Changed Outcome</b>