

# NASA Hubble Fellowship Program

- Since 2018, the NHFP postdoctoral fellowship program now covers all of NASA astrophysics. Sponsored by NASA, administered at STScI.
- The 3 original categories of fellowships are preserved under the NHFP corresponding to their relevant science questions
  - *How does the Universe work? – Einstein Fellows*
  - *How did we get here? – Hubble Fellows*
  - *Are we alone? – Sagan Fellows*
- Hubble Lead **Andy Fruchter** at STScI, Sagan Lead **Dawn Gelino** at IPAC and Einstein Lead **Paul Green** at CXC, Hubble Deputy Lead **Katy Alatalo**

# NHFP Selection

- **2021** Fellows selected last Jan 19-26 via GoogleMeet & Slack
  - 7 topical panels, 7 reviewers each + Merging Panel Chair
  - 406 applicants, 3 declines, 27 Offers  
(16 F, 2 declined; 7 URMs, none declined)
- **2022** Fellows Call Sept 2, application deadline Nov 4
  - Received 450 applications
- Reference letters due Nov 11
- Selection will be Jan 18-25, Zoom and Slack, followed by offers and host juggling
- Selection uses new rubric to make grading more balanced and consistent.

# NHFP Selection Panels

- Compact Objects & /Accretion
- Physics & Cosmology
- Galaxies/IGM
- Milky Way & Stellar Populations
- Stellar Physics
- Proto-planetary/Debris Disks
- Exoplanets

⇒ Merging Panel

# 2021 NHFP Symposium

- Survey gathered input from fellows. Fellows on the SOC, Fellows chaired sessions.
- Oct 25-29, noon-5pm EDT; Zoom, Slack and GatherTown. FB Live for general public.
- 63 science talks, organized by science category
- Non-science sessions
  - Fellows report on DEIA in the NHFP
  - Presentation and Discussion by STScI Diversity Officer Sharron Gatling
  - Benefits & Policies (w/STScI Admins & Program Scientist Pat Knezek )
  - Open Mic (E/PO work, embroidery, LGBTQ 2body issues, songs,...)

# Benefits Changes

● Allow applications up to 4 years post-PhD for extenuating personal circumstances*. Blanket extensions for applicants for 2022 due to pandemic.	✓
● All NHFP hosts must offer employees status for Fellows $\geq 2022$	✓
● Fund collaborator or grad student travel* to support research	✓
● Fellows can accept honoraria	✓
● Expand hosts to include NASA research centers - Goddard, Marshall, Ames	✓

\* *Intention is to be more “family- (and now COVID-) friendly”.*

# NHFP Review by NASA

- NASA panel chaired by Rita Sambruna and Nicole Zellner + 7 faculty + sociologist Sherard Robbins. Worked from June - October 2021
- Extensive input sought from Fellows and Leads.
- NHFP co-designed comprehensive survey for Applicants, Fellows and Alumni. 792 responses will be used going forward to track representation, suggestions for improvement.
- Some potential improvements, have been implemented. Others may be impossible to achieve, some are feasible with effort within current structures, some require new funding.

# NASA NHFP

## Review meeting

### Jan 18-21, 2021

#### **Meeting Day 1: Kick-off**

- Introductions
- Purpose of the Review and Discussion of the Charter
- Establishment of Panel Interactions

#### **Meeting Day 1: Program Implementation Review**

- Presentation by the HSTP
- Presentation by the NHFP Leads on the Program in general

#### **Meeting Day 2: Health and Well-being I**

- Presentation by the Grant Administration office
- Presentation by the NHFP Leads on the Selection Process

#### **Meeting Day 3: Equity, Diversity, and Inclusion I**

- Presentation by members of the NHFP Fellows' EDI Working Group

#### **Meeting Day 4: Health and Well-being II**

- Presentation by the NHFP Leads on the Application Process

#### **Meeting Day 5: Equity, Diversity, and Inclusion II**

- Discussion session with former NASA and NHFP Fellows

# Findings: High-level View

NASA NHFP  
Review report  
APAC Mtg  
Oct 13, 2021

- 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.



# SDSS-V 2020 - 2025

<http://www.sdss.org/future>

## All-Sky Spectroscopy

### ❑ Black Hole Mapper

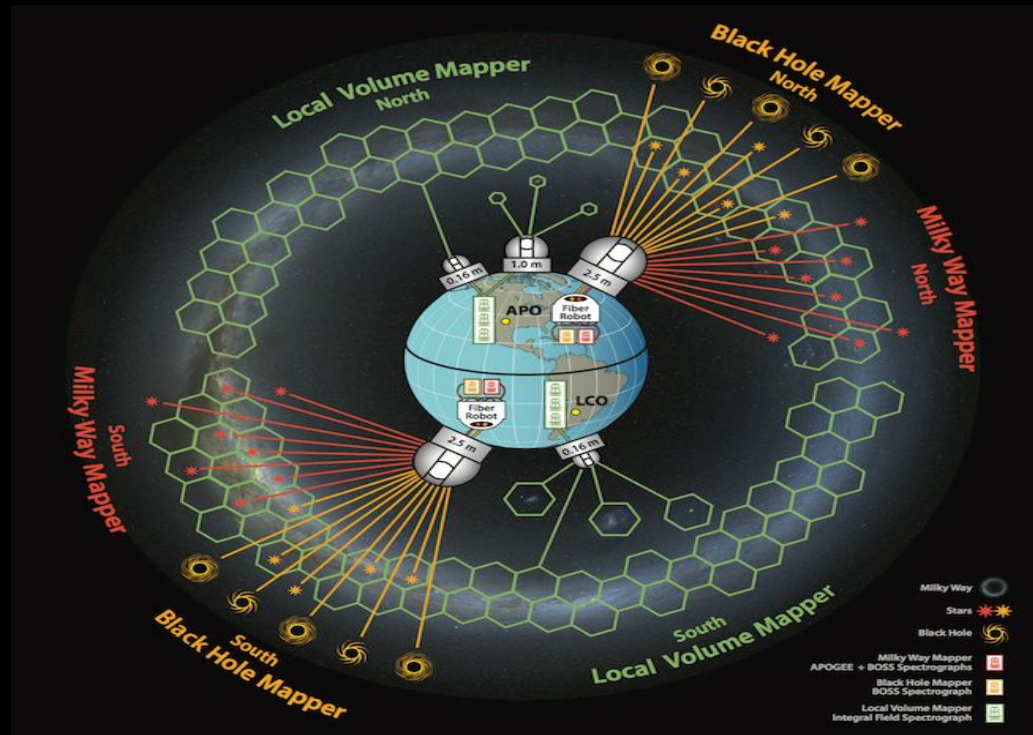
*Repeat QSO spectra*  
*eROSITA followup*

### ❑ Milky Way Mapper

*stars in IR at high-res*

### ❑ Local Volume Mapper

*IFU of nearby galaxies*



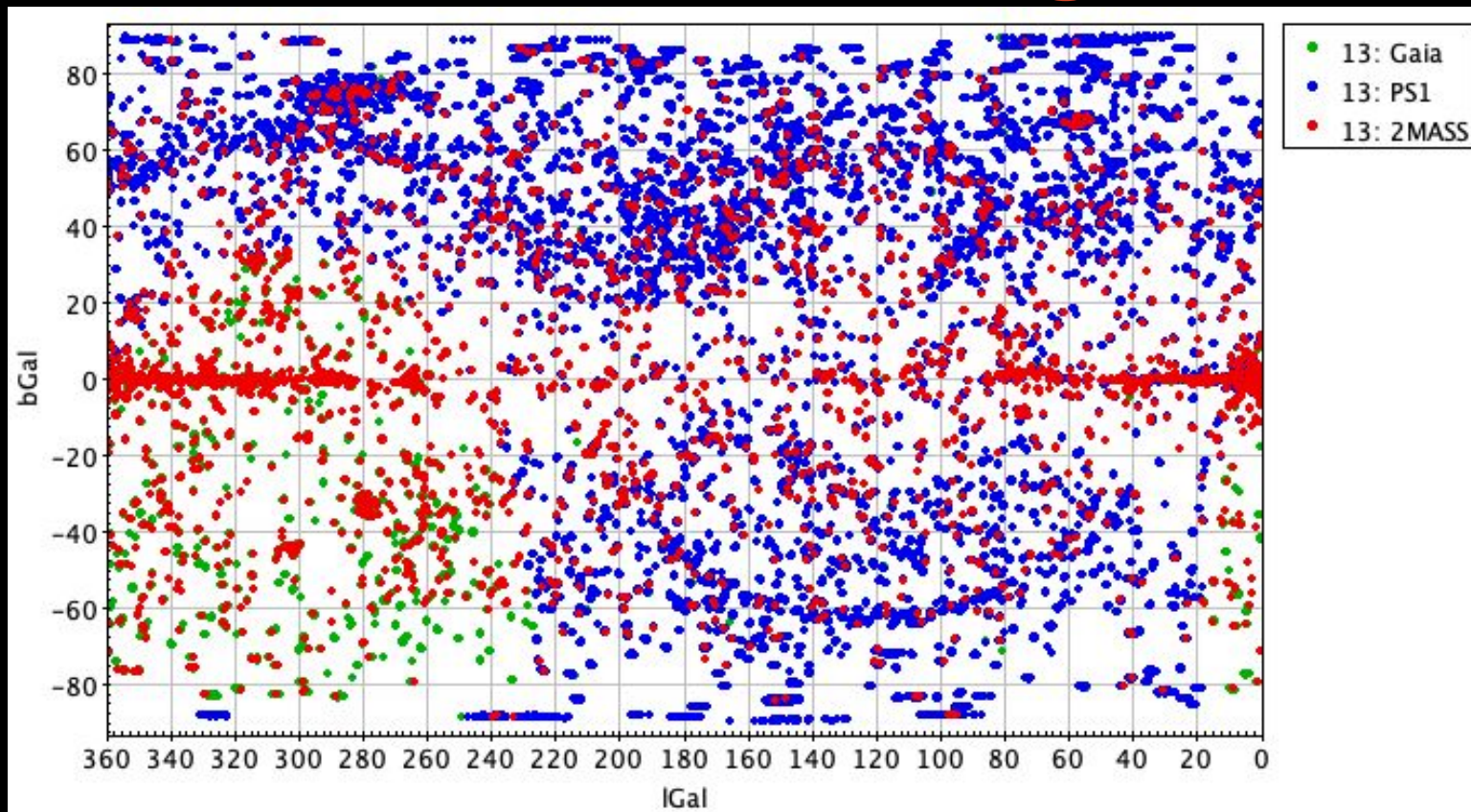
# SDSS-V, SAO + CSC

- ❑ SAO joined SDSS-V as a full member, includes CXC/MIT
- ❑ CXC chipping in 50% of membership cost (\$115k/yr)

**CSC:** *315k sources through 2014* <http://cxc.harvard.edu/csc2/>

- ❑ CXC footprint only covers ~2% of sky
- ❑ Much better sensitivity and spatial resolution than eROSITA!
- ❑ ~45% CSC2 have optical counterparts with mag <21

# CSC2 Matching



# SDSS-V, SAO + CSC

- ❑ Spectra obtained from northern plug plates:
  - ❑ 10k objects already have SDSS spectra public in DR16
  - ❑ 4k objects with new (proprietary) SDSS-V spectra in 2021
- ❑ CXC may serve SDSS-V data products (spectral properties and flux-calibrated digital spectra) to the community on a regular schedule. Or CXC may just broker links to SDSS Data Release products.
- ❑ Timely expansion of the CSC to newer archival data is important.