

National Aeronautics and
Space Administration



EXPLORESCIENCE

R&A Status

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R&A Lead



The background of the slide features a vibrant space scene. On the left, a curved blue arc frames a view of the Earth's horizon. Above it, the Moon is visible. Further up, Mars and Saturn are depicted against a backdrop of a colorful nebula and a starry field. The overall color palette is dominated by blues, greens, and yellows.

Research and Analysis Update

Overall

- Maintaining healthy R&A Program
- Selected 3 Space Weather Science Centers
- Maintaining DRIVE initiative
- Engaging in efforts to increase diversity in research
 - Dual anonymous, diversity and inclusion-specific solicitations
- Cross-Divisional programs:
 - F.3 Exoplanets (1 selection in 2022)
 - F.4 Exoplanets (1 selection in 2022)
 - F.19 Multidomain Reusable Artificial Intelligence Tools (3 selections in 2022)
- Solar Orbiter Guest Investigators in ROSES23

Dual-Anonymous Peer Review (DAPR)

In Dual Anonymous Peer Review (DAPR), not only are proposers unaware of identities of panel reviewers, but the reviewers do not have explicit knowledge of proposing team identities during the scientific evaluation of the proposal.

- DAPR Primary Intent: To eliminate “the team” as a topic of discussion during the scientific evaluation of a proposal. Thereby creating a shift in the tenor of discussions, away from the individuals, and towards deliberations about the scientific merit of the proposed research.
- NOT designed to make it absolutely impossible to guess who might be on the proposing team.
 - DAPR designed to MITIGATE bias but is not necessarily bias-free.

A space-themed background featuring a curved view of Earth at the bottom left, with various celestial bodies including Saturn, Mars, and the Moon against a starry blue and green cosmic backdrop.

Why Dual Anonymous Peer Review?

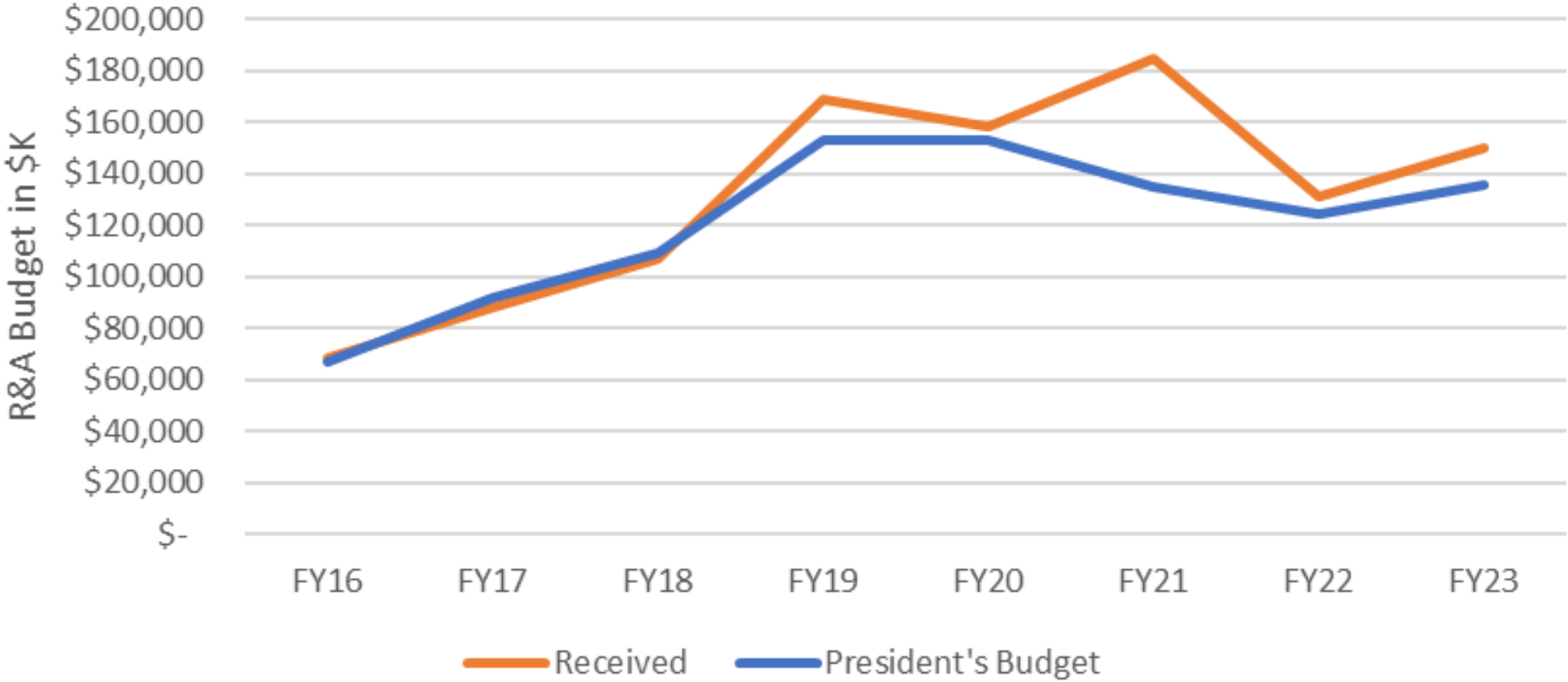
- Human brains naturally take shortcuts
- Leads to unconscious biases, even for people who are not consciously biased
- Unintended consequences, e.g., ability to identify the best scientific merit
- Lasting negative effects on careers, particularly underrepresented groups in STEM
- DAPR is designed to help mitigate biases, it is not bias-free

A space-themed background featuring a curved view of Earth at the bottom left, a bright sun, and various celestial bodies including Saturn, Mars, and the Moon against a starry blue and green sky.

Current and Future DAPR Programs

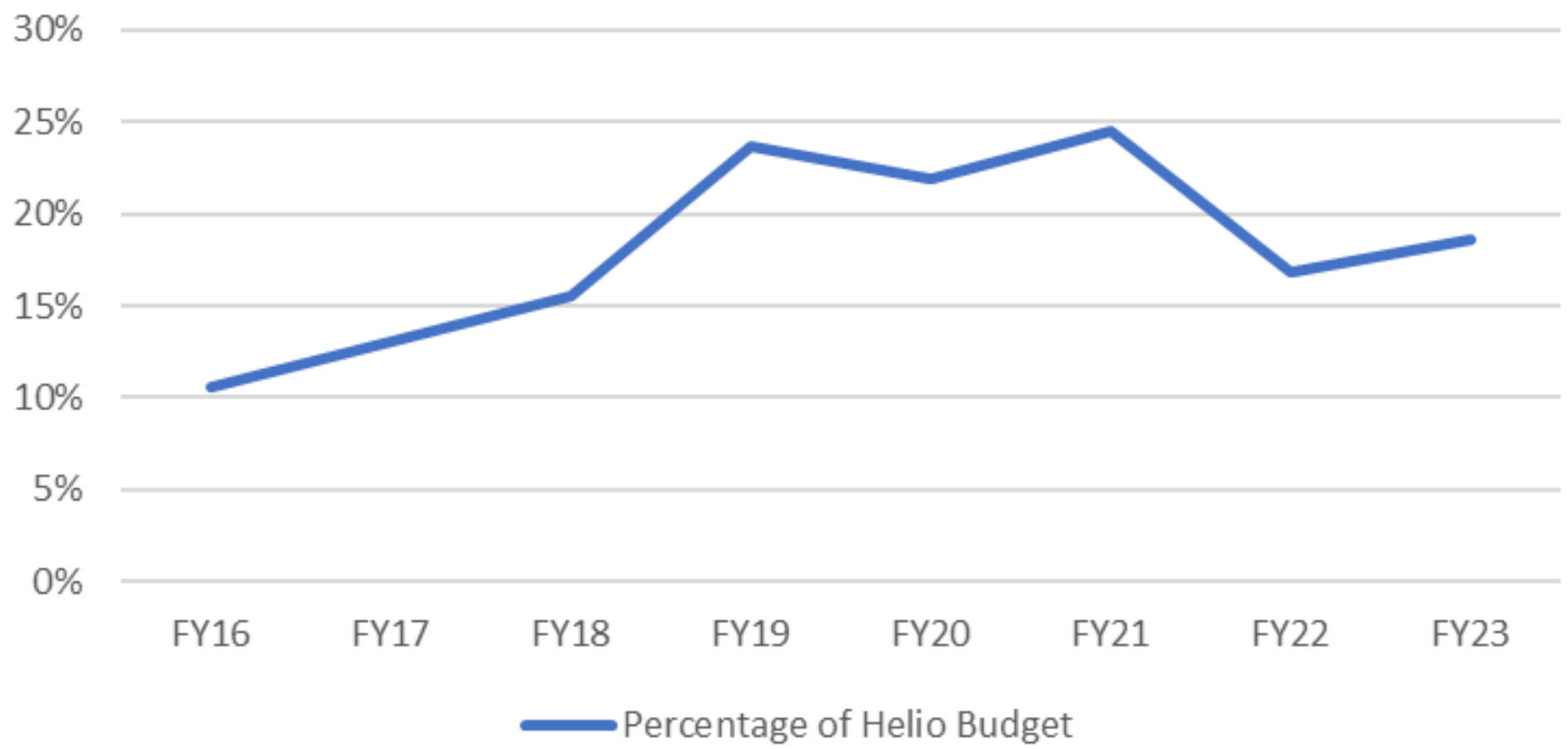
- Current DAPR Participants:
 - HGIO
 - HSR
 - H-ARD
- ROSES 2024 DAPR additions:
 - LWS-Science
 - H-CSI
- DAPR will be the norm starting in ROSES 2025

R&A Appropriations





R&A Percentage of Helio Budget



Funding Profile for Selected Groups

	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23
Open Research	\$ 29,356,091	\$ 29,991,030	\$ 42,165,062	\$ 51,278,617	\$ 49,283,554	\$ 43,247,646	\$ 28,124,751	\$ 40,314,061
Targeted Research	\$ 18,441,000	\$ 18,027,030	\$ 38,391,587	\$ 31,770,449	\$ 20,284,237	\$ 34,568,423	\$ 26,359,072	\$ 27,346,392
Flight Tech	\$ 21,019,875	\$ 23,920,853	\$ 34,781,950	\$ 52,487,099	\$ 38,870,222	\$ 46,985,806	\$ 24,104,529	\$ 34,170,562

Selections and Submissions for Selected Groups

		FY16	FY17	FY18	FY19	FY20	FY21	FY22
Open Research	Submitted	407	334	310	304	291	187	194
	Selected	107	76	70	74	86	49	49
	%	26%	23%	23%	24%	30%	26%	25%
Targeted Research	Submitted	64	117	116	113	94	93	56
	Selected	21	29	35	41	36	29	18
	%	33%	25%	30%	36%	38%	31%	32%
Flight Tech	Submitted	71	88	74	57	69	106	53
	Selected	16	34	28	26	31	36	15
	%	23%	39%	38%	46%	45%	34%	28%

Research Opportunities in Heliophysics

ROSES-23 (New or restructured)

- Heliophysics Supporting Research (Dual Anonymous)
- Solar Orbiter Guest Investigator (new)

ROSES-24 (New or restructured)

- Living With a Star Science (Dual Anonymous)
- Heliophysics Citizen Science Investigations (Dual Anonymous)

2023 Research and Analysis Program Elements

The background of the slide is a vibrant space-themed image. It features a large, dark blue planet in the foreground, with a bright yellow sun or star in the lower left. In the upper left, there is a ringed planet (resembling Saturn) and a reddish planet (resembling Mars). The background is filled with a colorful nebula in shades of blue and green, and numerous stars of varying brightness.

- HLCAS: Low Cost Access to Space
- HFOS: Flight Opportunity Studies
- HTIDS: Technology and Instrument Development for Science
- HGIO: Guest Investigator
- HSR: Supporting Research
- FINESST
- Living With a Star (LWS) Science
- Space Weather R2O2R
- Data Environment Enhancement/Tools and Methods
- HARD: AI/ML-Ready Data
- HITS: Heliophysics Innovation in Technology and Science
- Citizen Science
- Solar Orbiter Guest Investigators

The background of the slide is a composite of two cosmic images. The top half features a dark blue and black space filled with numerous small, bright stars and a prominent, wispy blue nebula on the right side. The bottom half shows a similar starry field but with a warm, golden-orange glow on the left side, transitioning into a greenish-blue hue on the right, where a faint, ethereal nebula is visible. The word "Backup" is centered in a clean, white, sans-serif font across the dark blue horizontal band that separates the two images.

Backup