



SUPPORT FUNDING FOR PLANETARY SCIENCE

The National Academy of Sciences decadal surveys are recognized by policy makers as the voice of the community. The surveys identify the most compelling science goals and present an ambitious program of activities for future investment. They are foundational to the leadership of the nation in science, technology, and workforce development.

The **Origins, Worlds, and Life: A Decadal Strategy for Planetary Science and Astrobiology 2023-2032** decadal survey identifies key scientific challenges for **planetary science** in the next decade.

The Origins, Worlds, and Life decadal survey outlines a balanced and inspirational plan for planetary science in the next decade, driven by key questions organized into broad themes:

Origins:

How did the solar system and Earth originate, and are systems like ours common or rare in the universe?

Worlds and Processes:

How did planetary bodies evolve from their primordial states to the diverse objects seen today?

Life and Habitability:

What conditions led to habitable environments and the emergence of life on Earth, and did life form elsewhere?

The planetary science decadal survey report emphasized the crucial role of sample return, understanding processes that influenced the formation of diverse planets, moons and asteroids and their evolution over time, exploration of ice-giant systems, the central question of how life on Earth emerged and evolved, and the compelling rationale to study habitable environments at Mars and icy ocean worlds.

Support a balanced portfolio to ensure a steady cadence of discoveries and provide a wide range of opportunities for future STEM professionals.

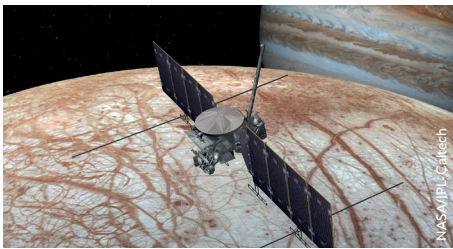
SUPPORT THE WORKFORCE AND COMPETITIVE GRANTS



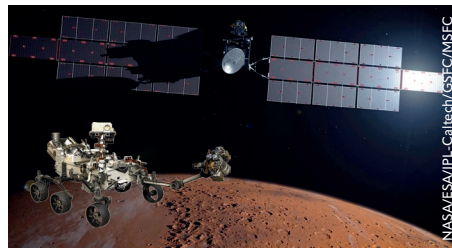
Students from Virginia State University participating in the Here to Observe (H2O) program meet with members of the Dragonfly team. Programs like H2O expand opportunities for early career researchers from a range of institutions to participate in missions like Europa Clipper, Lucy, Dragonfly, and DART. (NASA)

- Build STEM capacity and inspire the next generation.
- Competitive grant awards are based on the **scientific merit** and **potential impact** of proposed research.
- NASA, NSF, and DOE fund **students and researchers in all 50 states and territories** across the **academic, industry, government, and nonprofit sectors**.
- Sustainable support of NASA's **Research and Analysis** component of the planetary science program **requires funding levels tied to 10% of the PSD budget**, as directed in the most recent planetary science decadal survey.

LARGE MISSIONS ACHIEVE TRANSFORMATIONAL SCIENCE



EUROPA CLIPPER: Investigating the astrobiological potential of one of Jupiter's moons to provide unprecedented new information to guide the search for life in solar system ocean worlds.

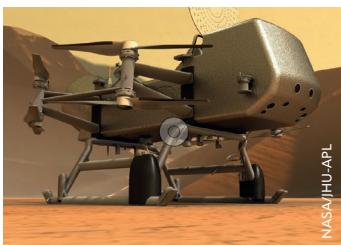


MARS SAMPLE RETURN/PERSEVERANCE: Analysis of samples collected by Perseverance in Earth labs promises transformational discoveries across all the decadal themes; a top priority of the last two planetary decadal surveys.

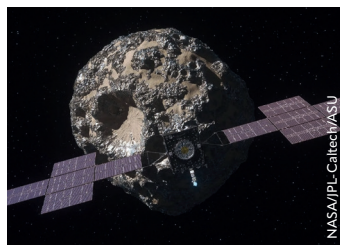


URANUS ORBITER AND PROBE: Unveiling the complex interactions of the planet, rings, and moons of the Uranian system addresses fundamental questions of our solar system's formation and delivers a rich data set for comparative studies with gas giants Jupiter and Saturn, as well as exoplanets.

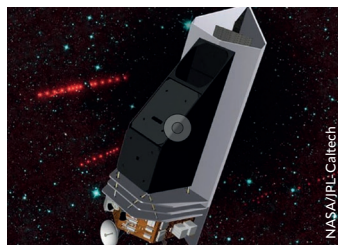
SMALL- AND MID-SCALE MISSIONS PROVIDE EXCEPTIONAL FOCUSED SCIENCE



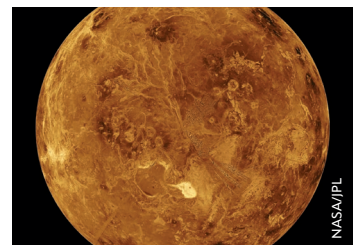
DRAGONFLY: Characterizing the environmental habitability of Titan through a search for chemical signatures indicating water and prebiotic chemical processes elsewhere in the solar system.



PSYCHE: Exploring a metal world that holds clues to the formation of planetary building blocks in the very earliest epoch of our solar system's formation.



NEO SURVEYOR: Discover and characterize most of the potentially hazardous asteroids that are near the Earth.



VERITAS & DAVINCI: Understand how the formation and evolution of Venus, our sister planet, led to stark contrasts with Earth.

Cover image: Composite image of solar system. Credit: Adobe Stock.