

IGNITION

SCIENCE

as only NASA can

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Associate Administrator,
Science Mission Directorate,
NASA Headquarters



Image: NASA Lunar Reconnaissance Orbiter (LRO)

NASA SCIENCE THEMES

Unlock the Secrets of the Universe

JAMES WEBB SPACE TELESCOPE

JWST shows us the Rho Ophiuchi cloud complex, the closest star-forming region to Earth. The young stars at the center of many of these disks are similar in mass to the Sun, or smaller.

Image: NASA's Goddard Space Flight Center

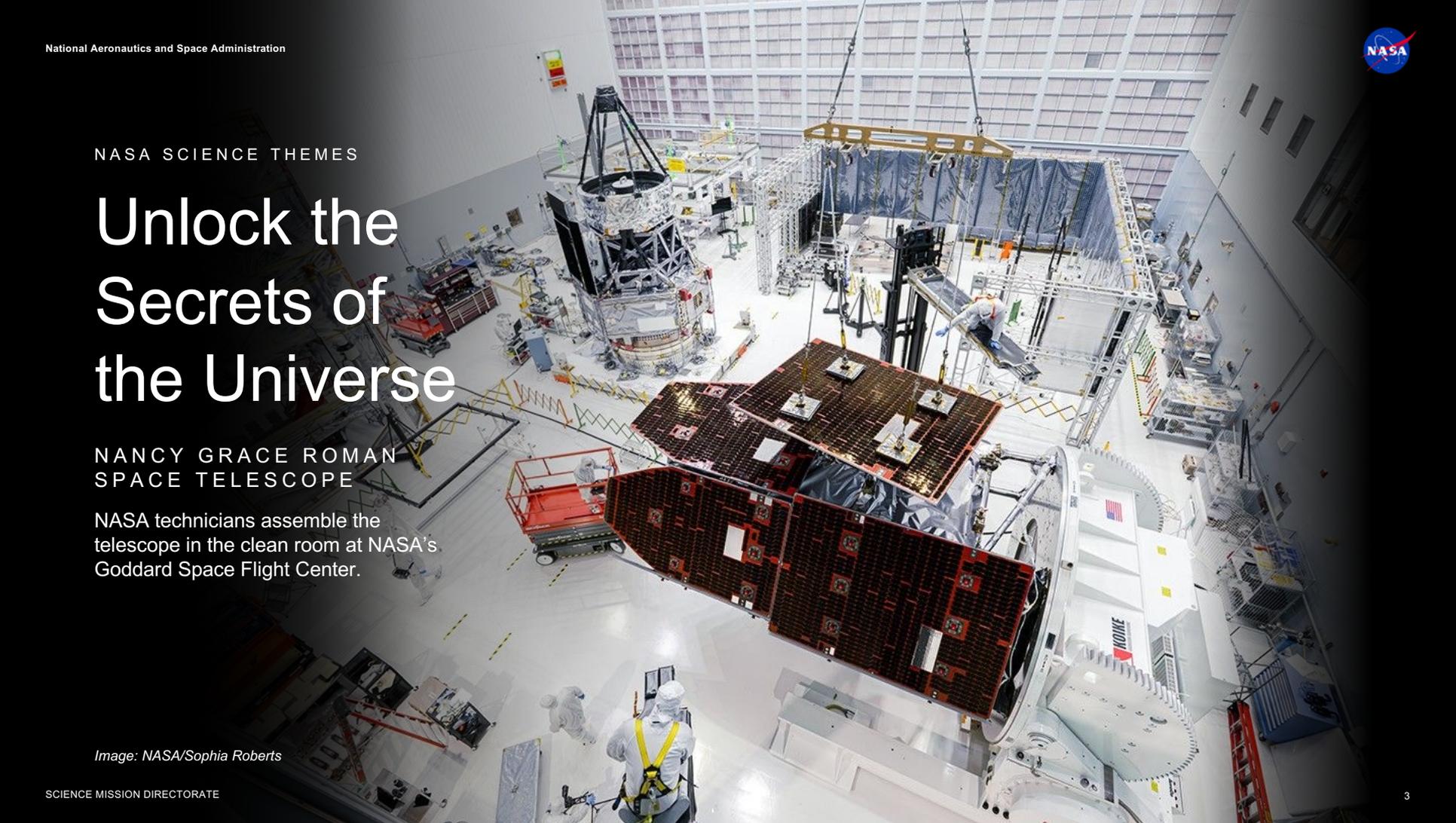
NASA SCIENCE THEMES

Unlock the Secrets of the Universe

NANCY GRACE ROMAN
SPACE TELESCOPE

NASA technicians assemble the telescope in the clean room at NASA's Goddard Space Flight Center.

Image: NASA/Sophia Roberts



NASA SCIENCE THEMES

Unlock the Secrets of the Universe

HABITABLE WORLDS
OBSERVATORY

This image shows one concept for the first space telescope designed to directly image Earth analogs and study them for signs of life.

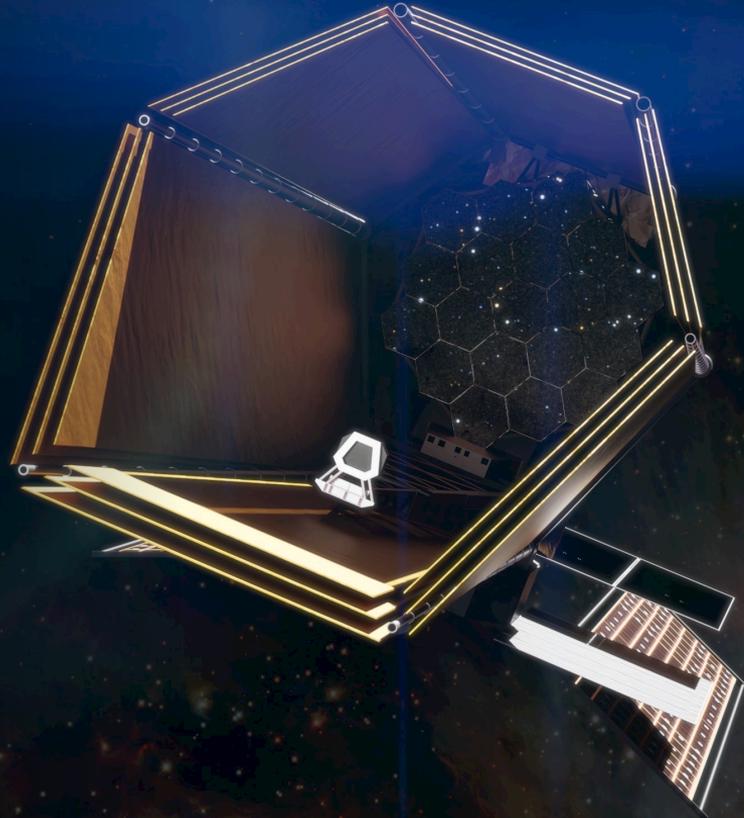


Image: NASA's Goddard Space Flight Center Conceptual Image Lab

NASA SCIENCE THEMES

Search for Life Elsewhere

DRAGONFLY

This first-of-its-kind rotorcraft mission will explore Saturn's moon Titan.



Image: NASA/Johns Hopkins APL

NASA SCIENCE THEMES

Search for Life Elsewhere

MARS ROVERS:
CURIOSITY AND PERSEVERANCE

Ours eyes on the ground as we map
and monitor the Red Planet.

Image: Mosaic panorama from Curiosity images, NASA/JPL-Caltech

NASA SCIENCE THEMES

Search for Life Elsewhere

ROSALIND FRANKLIN

The European Space Agency's Rosalind Franklin rover will search for signs of life on Mars, using the NASA-built Mars Organic Molecule Analyzer (MOMA) instrument.

Image: NASA's Goddard Space Flight Center

NASA SCIENCE THEMES

Sustain Life in Space

ESCAPADE

The twin Escape and Plasma Acceleration and Dynamics Explorers (ESCAPADE) spacecraft are on their way to Mars—the first heliophysics mission to the red planet.

Image: NASA Goddard Space Flight Center

NASA SCIENCE THEMES

Sustain Life in Space

VEGGIE

Expedition 44 crew member Kjell Lindgren tends to romaine lettuce grown as part of the Veggie experiment on the International Space Station.

Image: NASA Johnson Space Flight Center

NASA SCIENCE THEMES

Improve Life on Earth

EXTREME WEATHER –
RAPID RESPONSE

Data visualization of Hurricane Ian shows
the volume of humidity (in blue) and
wind flows near the surface.

Image: Cooperative Institute for Research in the Atmosphere and NOAA

September 27, 2022 18:00

SCIENCE MISSION DIRECTORATE



NASA SCIENCE THEMES

Improve Life on Earth

INCUS

The Investigation of Convective Updrafts (INCUS) will measure for the first time observe the evolution of the dynamics within a convective storm.

Image: NASA Goddard Space Flight Center

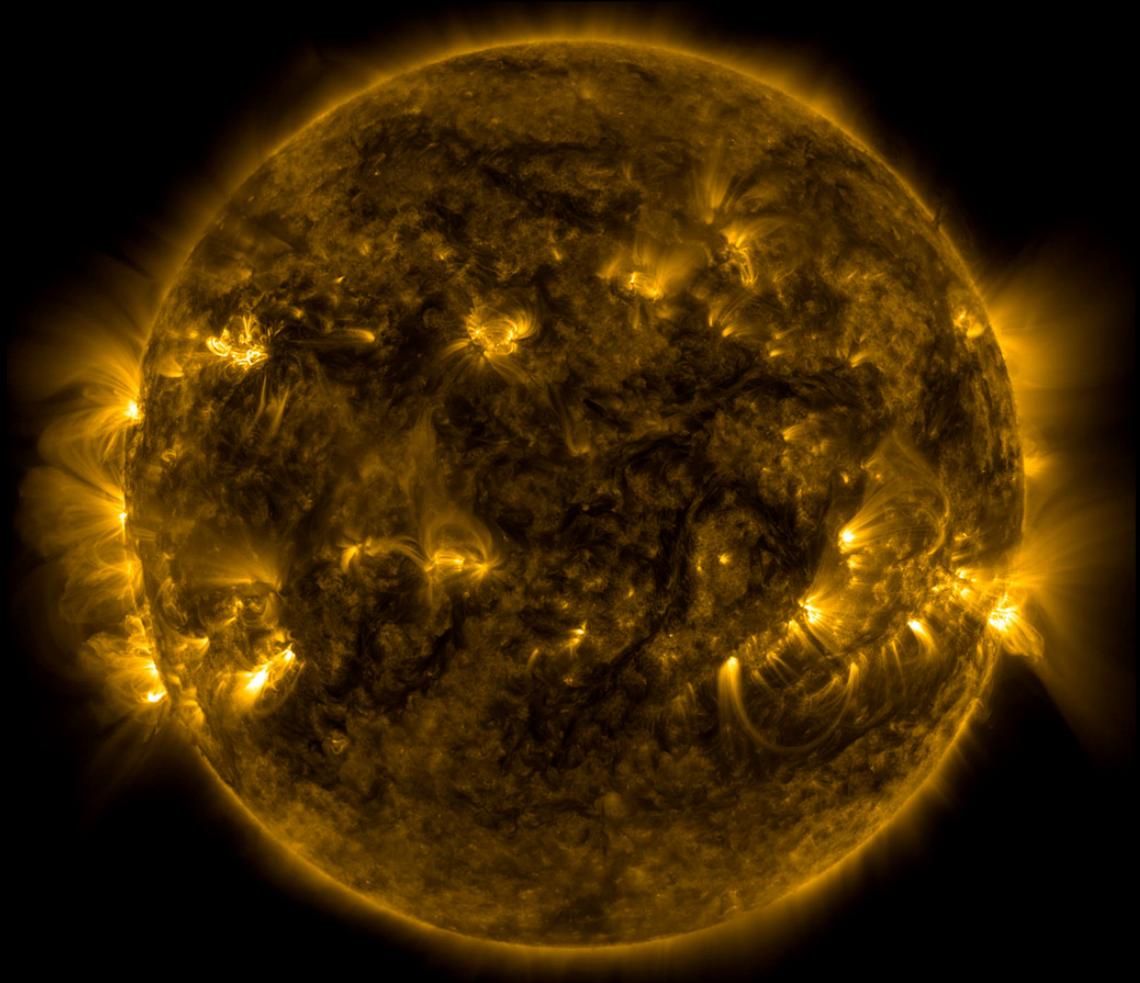
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FASTER, FARTHER, FIRST.

SOLAR DYNAMICS
OBSERVATORY

In February 2026, the Sun emitted more than 50 flares including several X-class events, the most intense category of solar flares.

Image: NASA Goddard Space Flight Center/SDO



NASA SCIENCE

Moon Base Science

A WORLD OF
OPPORTUNITIES

Landers, rovers, habitats, power, and other infrastructure offer huge science capability.



Image: NASA



NASA SCIENCE

Artemis Era Science

COMMERCIAL LUNAR PAYLOAD
SERVICES (CLPS): FIREFLY
BLUE GHOST MISSION 1

Firefly Aerospace's Blue Ghost Mission 1
delivered 10 NASA science and technology
instruments to the lunar surface in 2025.

Image: Firefly Aerospace

NASA SCIENCE

Artemis Era Science

COMMERCIAL LUNAR PAYLOAD
SERVICES (CLPS) SELECTION:

INTUITIVE MACHINES

NASA has selected Intuitive Machines (IM) to deliver seven NASA-sponsored payloads to the Moon's south polar region.

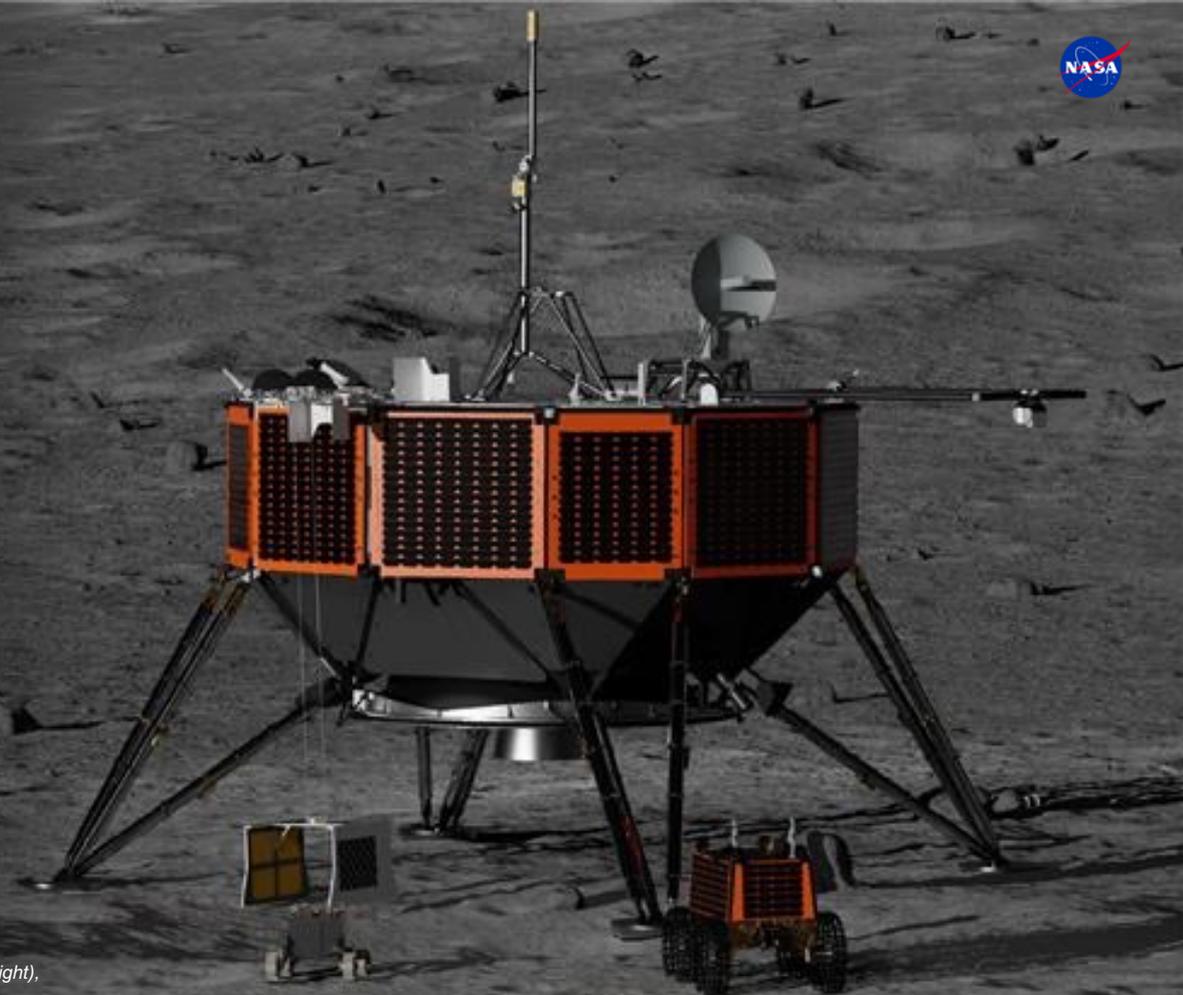


Image: IM large cargo class lander, Honeybee Robotics lunar rover (lower right), Australian Space Agency's Roo-Ver (lower left), courtesy of IM

NASA SCIENCE

Science Everywhere

NEW REQUEST FOR INFORMATION:

LUNAR SCIENCE AND TECHNOLOGY

Seeking “on the shelf and ready to fly” payloads to help accelerate CLPS, supporting Artemis, lunar exploration, and a permanent lunar presence by 2030.

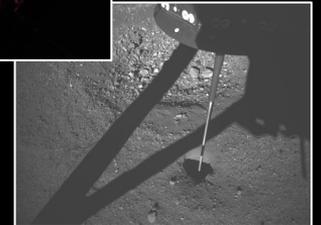
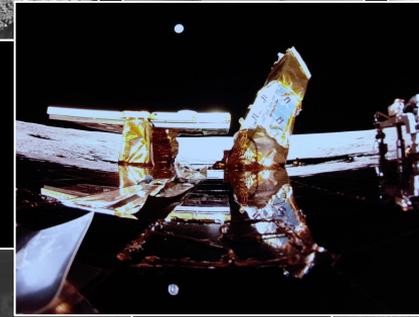
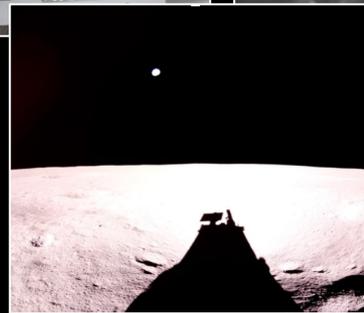
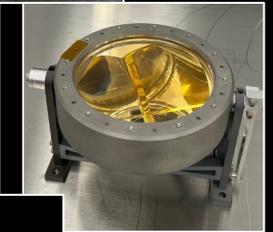
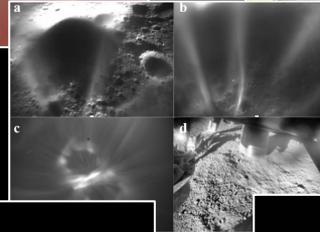
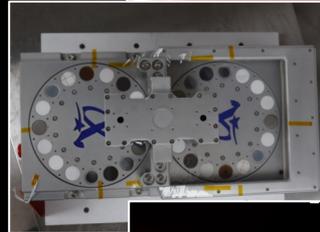


Image: Firefly Blue Ghost Mission-1 NASA Payloads

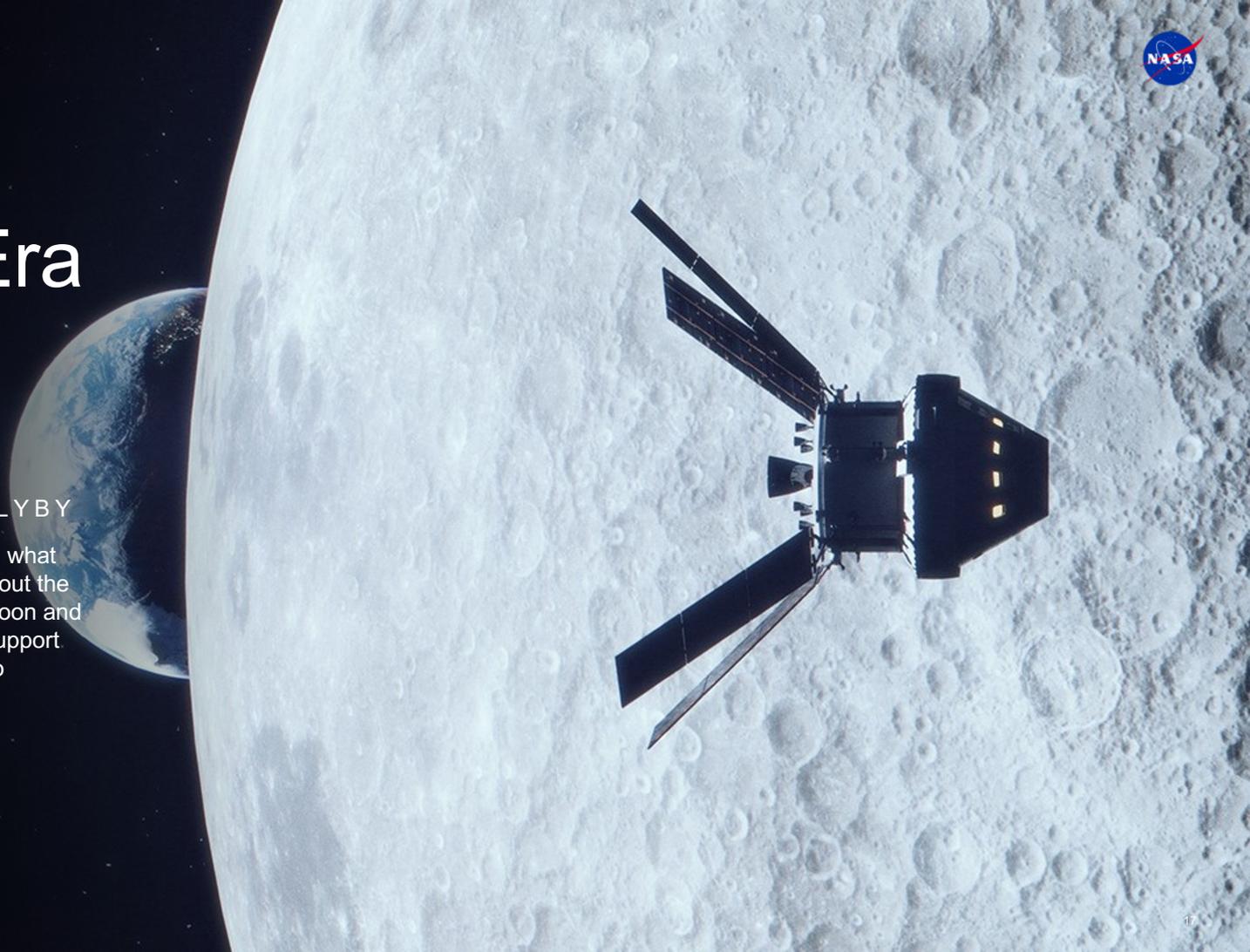
NASA SCIENCE

Artemis Era Science

ARTEMIS II LUNAR FLYBY

Visualization and video showing what Artemis II astronauts might see out the window as they approach the Moon and fly around its far side, and the support team on the ground practicing to support the mission in real time.

Images: NASA



NASA SCIENCE

Artemis Era Science

SCIENCE EVALUATION ROOM

The team runs a simulation for the Artemis II lunar flyby. Embedding science directly into the mission operations environment ensures we can maximize Artemis discoveries.

Images: NASA Johnson Space Center



Go Cmd [signal strength]

U/L (Kbps)	1000 (MDR2)	Selected DSN	DSN	TDRS	NEN	Umb
D/L (Kbps)	3000 (HDR)					
Target	CAN	O/E	1	O/E	2	

Opcomm W

Time 11:00:00
date: 11-6-25

12777 km (40221 mi)
138 km (86 mi)
0.41% (141.87%)
0.48% (181.74%)

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Artemis Era Science

PARTICIPATING SCIENTISTS TO JOIN THE SCIENCE TEAM FOR THE FIRST ARTEMIS CREWED LANDING

- Kristen Bennett, Northern Arizona University in Flagstaff
- Aleksandra Gawronska, The Catholic University of America in Washington
- Timothy Glotch, State University of New York, Stony Brook
- Paul Hayne, University of Colorado, Boulder
- Erica Jawin, Smithsonian Institution in Washington
- Jeannette Luna, Tennessee Technological University in Cookeville
- Sabrina Martinez, NASA's Johnson Space Center in Houston
- Jamie Molaro, Planetary Science Institute in Tucson, Arizona
- Hanna Sizemore, Planetary Science Institute
- Catherine Weitz, Planetary Science Institute



Image: Lunar Reconnaissance Orbiter

NASA SCIENCE

Artemis Era Science

SCIENCE TOOLS
AND DEPLOYED
INSTRUMENTS

Astronauts train to deploy specialized tools and conduct science while suited in Johnson Space Center's Neutral Buoyancy Lab.

Image: Johnson Space Center



NASA SCIENCE

Faster to Science

DIGITAL LAB

NASA science is developing a digital lab concept—a place to incorporate and transform science data into a continuously updated, central environment for all user groups.



Image: Prototype dashboard, Advanced Visualization Lab (AVL) at the University of Illinois Urbana-Champaign, National Center for Supercomputing Applications (NCSA)

NASA SCIENCE

Rideshares

SPHEREX & PUNCH

Spectro-Photometer for the History of the Universe, Epoch of Reionization, and Ices Explorer (SPHEREx) and Polarimeter to Unify the Corona and Heliosphere (PUNCH) launched together on a SpaceX Falcon 9 rocket in March of 2025.

Image: NASA/SpaceX



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Legacy Mission Optimization

Image: NASA's Goddard Space Flight Center

NASA SCIENCE

Innovating Together

NEW REQUEST FOR INFORMATION: ATMOSPHERIC MICROWAVE RADIOMETRY OBSERVATIONS FOR NASA FALCON

(Fleet for the Atmosphere Linking
Commercial Observations with NASA)

Seeking low-cost, commercially operated microwave radiometer concepts to fly in formation with NASA's FALCON constellation, targeting launch by Q3 FY 2029. This effort supports high-priority atmospheric science and turning Earth science data into action.

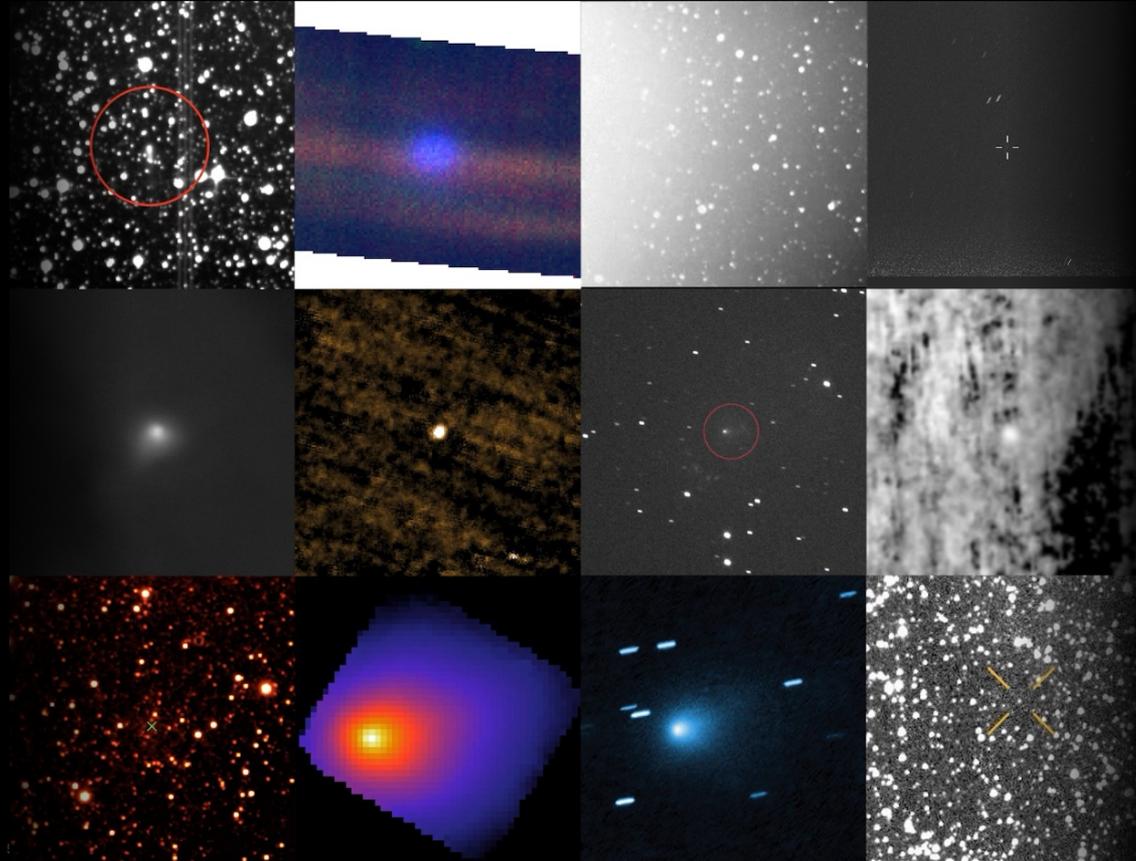
Image: NASA's Goddard Space Flight Center

NASA SCIENCE

Rapid Fleet Activation

COMET 3I/ATLAS

NASA missions are working together to track and study this rare, interstellar comet as it passes through our solar system.



Top row:
TESS
Europa Clipper
Parker Solar Probe
Perseverance

Middle row:
MRO
PUNCH
LUCY
STEREO

Bottom row:
SPHEREX
JWST
Hubble
Atlas Survey Telescope

Images: [NASA.gov 3I/ATLAS Image Gallery](https://www.nasa.gov/3I/ATLAS)

NASA SCIENCE

Planetary Defense

NEO SURVEYOR

Near Earth Object (NEO)
Surveyor is part of NASA's
strategy to protect our planet.

Images: Space Dynamics Laboratory/Allison Bills



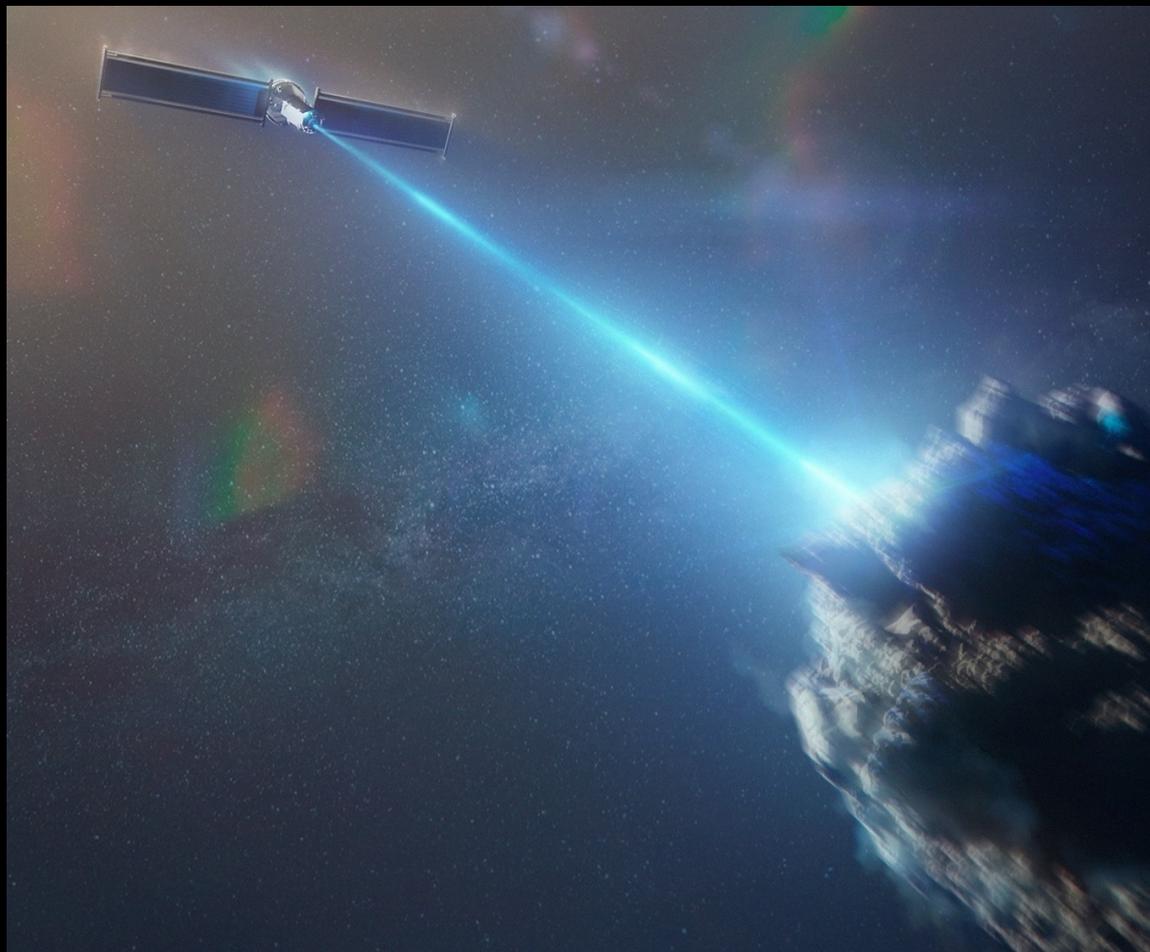
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Planetary Defense

NEO DISRUPTION

A Near Earth Object disruptor could be the next step towards developing and proving the technology and expertise needed for true planetary defense preparedness.

Image: JPL





NASA SCIENCE

The Spirit of NASA Science

VOYAGER

The iconic Pale Blue Dot
image showing Earth from
3.7 billion miles away.

Image: NASA Goddard Space Flight Center

NASA SCIENCE

Beyond the Edge

INTERSTELLAR EXPLORATION

A mission concept to travel farther than any human built object in history, explore our habitable astrosphere, and uncover new worlds.

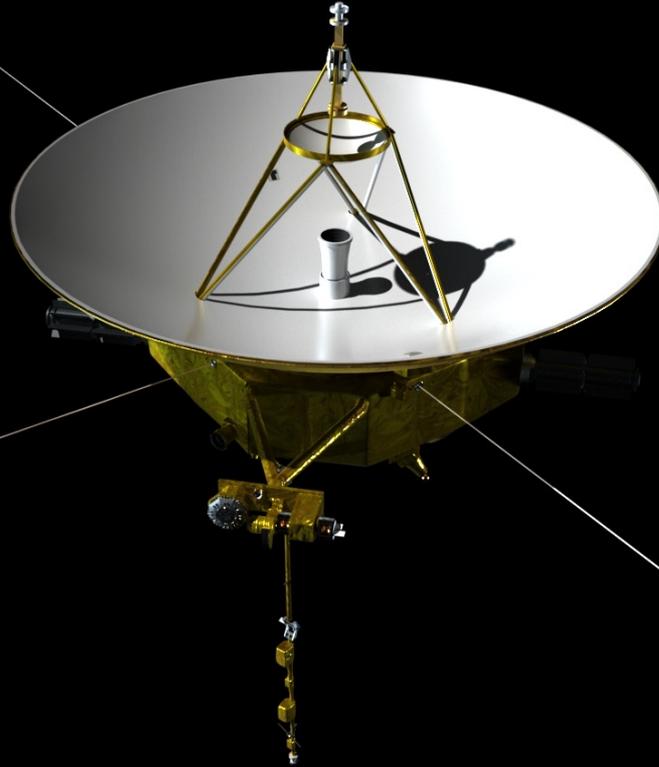


Image: NASA/Johns Hopkins APL

NASA SCIENCE

Extreme Environments

DAVINCI

Deep Atmosphere Venus
Investigation of Noble gases,
Chemistry, and Imaging (DAVINCI)
is designed to answer long
standing questions about Venus.



Images: NASA's Goddard Space Flight Center Conceptual Image Lab

NASA SCIENCE

Extreme Environments

URANUS

The next destination on our path to understanding the origins of our solar system.

Image: NASA's Goddard Space Flight Center Conceptual Image Lab

NASA SCIENCE

Science Everywhere

NEW REQUEST FOR INFORMATION:

**ADVANCEMENT OF “SCIENCE AS A
SERVICE” FOR NASA AND
COMMERCIAL PARTNERS**

Seeking input from industry, academia, non-profits, and other partners on how to tap commercial capabilities and focus NASA investments (validation, flight access, integration support) to cut risk and accelerate new technology for Earth Science, Heliophysics/Space Weather, and Astrophysics.



Image: NASA's Goddard Space Flight Center

JAMES WEBB SPACE TELESCOPE

This infrared view of Saturn shows its glowing icy rings, layered atmosphere, and several moons, including (left to right) Titan, Janus, Dione, Enceladus, Mimas, and Tethys.

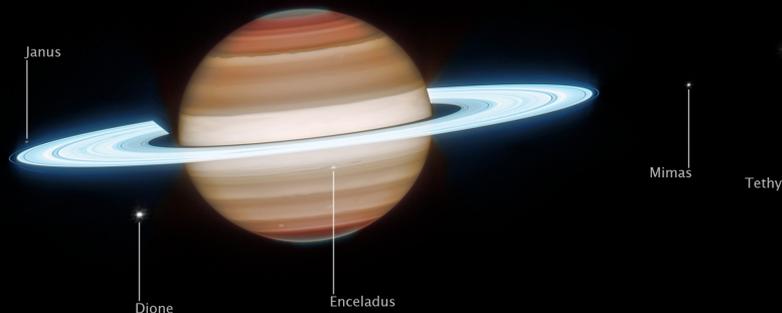
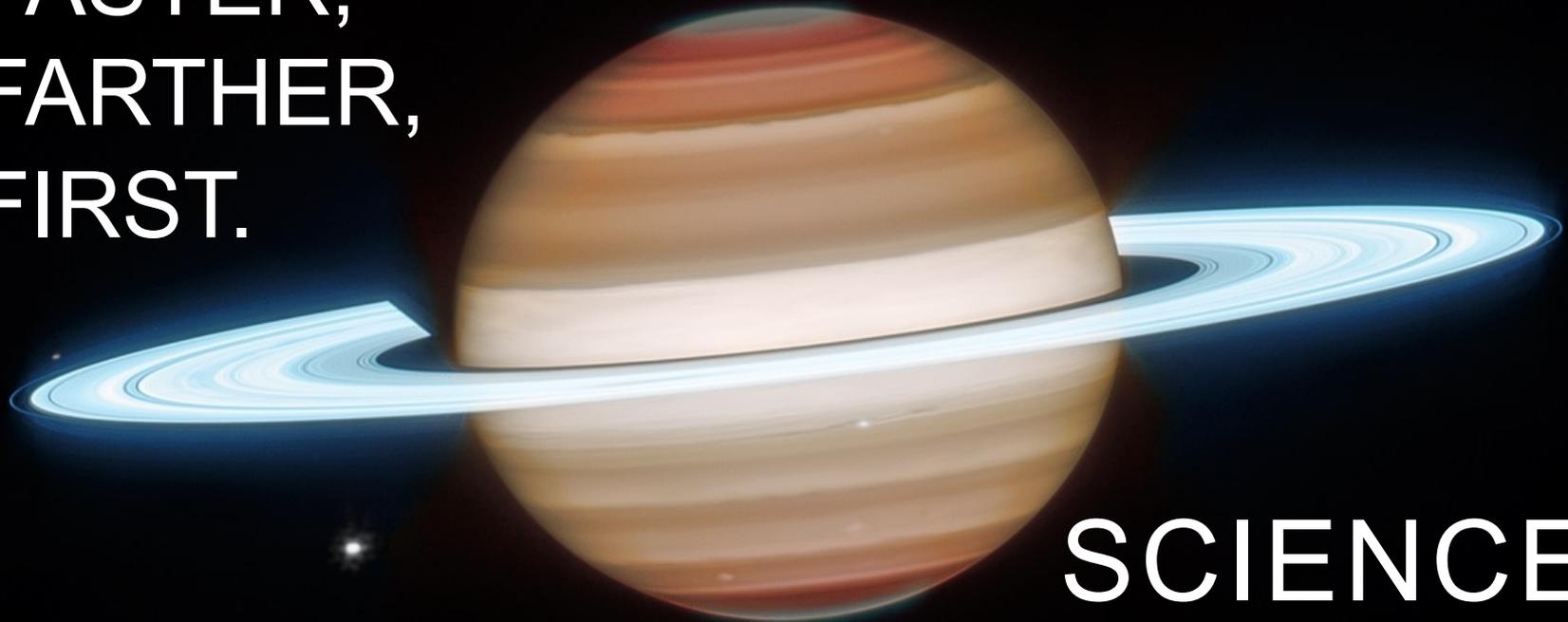


Image: NASA, ESA, CSA, STScI; Image Processing: Joseph DePasquale (STScI)

FASTER,
FARTHER,
FIRST.



SCIENCE
as only NASA can

JAMES WEBB SPACE TELESCOPE

Image: NASA, ESA, CSA, STScI; Image Processing: Joseph DePasquale (STScI)