

National Aeronautics and
Space Administration



Not So Hidden Figures: Extraordinary Individuals Ensuring an Inclusive and Diverse Future in Space

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Director, NASA's Johnson Space Center
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Vanessa Wyche

Director, NASA Johnson Space Center

Native of South Carolina

Bachelor of Science in Engineering, Clemson University

Master of Science in Bioengineering, Clemson University

NASA's Johnson Space Center (JSC) is home to

America's Astronaut Corps

Mission Control Center

International Space Station and Artemis programs

More than 11,000 civil service and contractor employees

JSC is recognized by Forbes and Statista

As #1 Best Employer among Texas' major employers



CHAPEA

Crew Health and Performance Exploration Analog



Mars Sample Return - SRP Sample Receiving Project





CHAPEA Mission 1 Crew



Kelly Haston
Commander



Ross Brockwell
Flight Engineer



Nathan Jones
Medical Officer



Alyssa Shannon
Science Officer

Astromaterials Research & Exploration Science

Mars Sample Receiving Project Office




NASA Johnson Space Center, Houston TX

Curation of all NASA-held Extraterrestrial Materials



Apollo program
lunar rocks and
soils; Luna
samples
1969

LUNAR



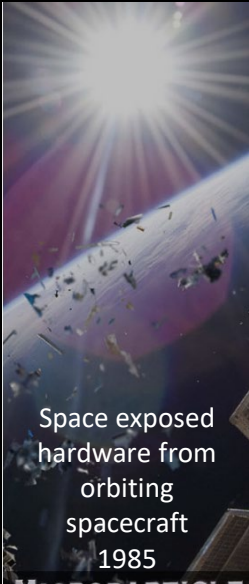
Antarctic Search
for Meteorites
(ANSMET)
program
1977

**ANTARCTIC
METEORITES**



Cosmic dust from
Earth's
stratosphere
from high
altitude aircraft
1981

**COSMIC
DUST**



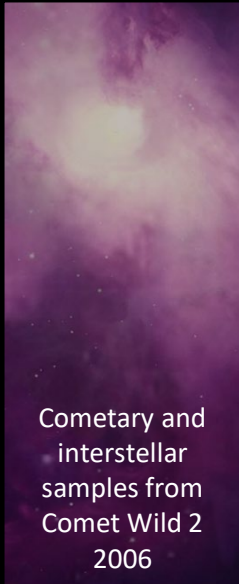
Space exposed
hardware from
orbiting
spacecraft
1985

**MICROPARTICLE
IMPACT**



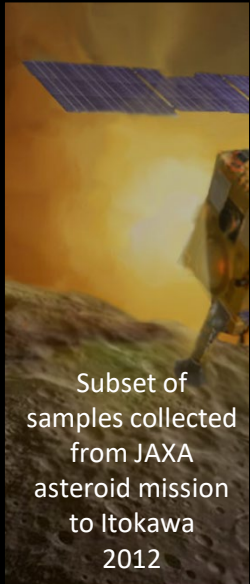
Solar wind
samples at Earth-
Sun L1 point
2004

GENESIS



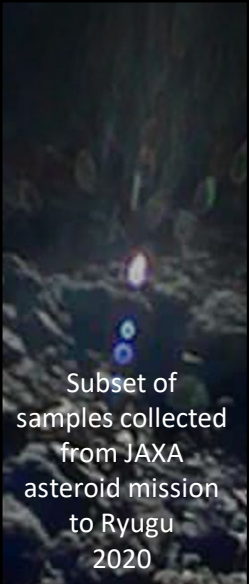
Cometary and
interstellar
samples from
Comet Wild 2
2006

STARDUST



Subset of
samples collected
from JAXA
asteroid mission
to Itokawa
2012

HAYABUSA

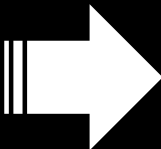


Subset of
samples collected
from JAXA
asteroid mission
to Ryugu
2020

HAYABUSA2

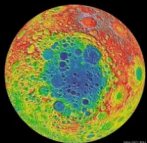
Coming Soon . . .

OSIRIS-REx
2023
Asteroid sample
return from Bennu



Our Future . . .

Moon
2020s
Various sample types,
Non-volatile farside,
polar samples



Phobos
2029
JAXA MMX mission to
bring back Phobos
material



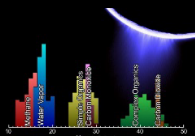
Mars
2033
NASA-ESA Joint Mars
Sample Return Campaign



**Comet Nucleus,
Icy Bodies**
2030s+
Enabling new types of
samples



Future
only limited
by our
imagination
and ability to
handle



Mars Sample Return Campaign

Following the Samples



Mars Sample Return Program

2

3



Mars 2020 Sample Caching

Collect rock, regolith & atmosphere samples

Cache samples on the surface



Sample Retrieval Lander (SRL)

Retrieve samples cached by Mars 2020 rover

Launch samples into orbit around Mars



Earth Return Orbiter (ERO)

Capture & contain samples in Mars orbit

Safely return samples to Earth for recovery at landing site

JSC-led

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Sample Receiving Project

Recover & transport contained samples to receiving facility

Safety assessment & sample containment

Initial sample science and curation



Long-term Curation and Science

Study, storage and processing



Primary Goal

Enable safe and rapid release of returned samples to world-wide labs for scientific investigations



Mars Sample Tube

