

Smithsonian's National Air and Space Museum Presents

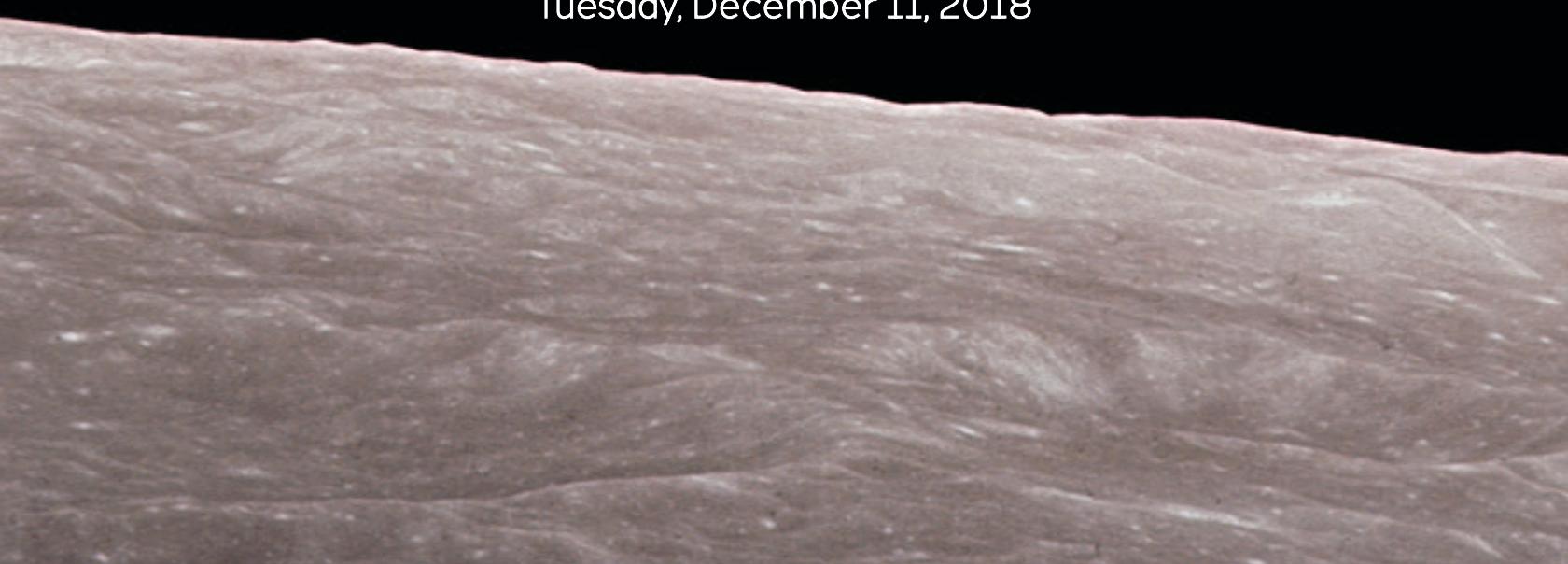


THE SPIRIT OF APOLLO

Commemorating the 50th Anniversary of Apollo 8

Washington National Cathedral

Tuesday, December 11, 2018



To see the earth as it truly is,
Small and blue and beautiful
In that eternal silence where it floats,
Is to see ourselves as riders on the earth together,
Brothers on that bright loveliness in the eternal cold—
Brothers who know now they are truly brothers.

Archibald MacLeish
American Poet and Playwright
New York Times
December 25, 1968

Support for Apollo 50 programming is generously provided by



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On behalf of the Smithsonian's National Air and Space Museum, it is my pleasure to welcome you to a special celebration of our first voyage to another world.

We are honored to reflect on the spirit of Apollo 8 here at Washington National Cathedral, the site of some of the country's most important commemorations of the American space program.

Tonight's program is the first of a series of events commemorating the 50th anniversary of the Apollo missions. As we help lead the national celebration of history's highest achievement, we will explore the legacy of the Moonshot, and challenge a new generation to define history's next great adventure.

Apollo 8 was a groundbreaking test flight, a bold feat of exploration, and a moment in history experienced by hundreds of millions of people. As our first journey to the Moon and back, the mission is remembered by many as the most daring, consequential flight of the Apollo program.

The power and meaning of Apollo 8 was clear from the first crewed launch of the giant Saturn V, to the moving Christmas Eve message from lunar orbit, and finally in the stunning photo of Earthrise in newspapers and magazines worldwide.

The National Air and Space Museum seeks to inspire that same spirit of wonderment with the full history of human flight. Behind each artifact and exhibit are stories of people with improbable dreams, facing overwhelming odds or limited expectations.

The ideas that gave rise to human flight on our shores defied preconceptions, defied imagination, and finally defied gravity itself. The vision of the National Air and Space Museum is to share those ideas to help build a nation of innovators and explorers.

And tonight's program celebrates pivotal ideas that defy: that a sublime moment of unity would come in the closing hours of 1968. That we can leave our planet to explore the unknown. And that by leaving our world, we would truly see it for the first time.

Thank you for joining us.

A handwritten signature in black ink, appearing to read "Ellen R. Stofan".

Ellen R. Stofan, PhD
John and Adrienne Mars Director
Smithsonian's National Air and Space Museum



Program

The Very Reverend Randy Hollerith

Dean of Washington National Cathedral

Ellen R. Stofan, PhD

John and Adrienne Mars Director of the National Air and Space Museum

The Firmament

NASA Archival Audio with Washington National Cathedral Choir

The Most Reverend Michael B. Curry

Presiding Bishop and Primate of the Episcopal Church

Astronaut Reflections

Courtesy of TIME

James F. Bridenstine

13th Administrator of the National Aeronautics and Space Administration

Captain James A. Lovell Jr. USN (Ret.)

Apollo 8 Command Module Pilot

Earthrise

Narration by Sir David Attenborough

Speakers

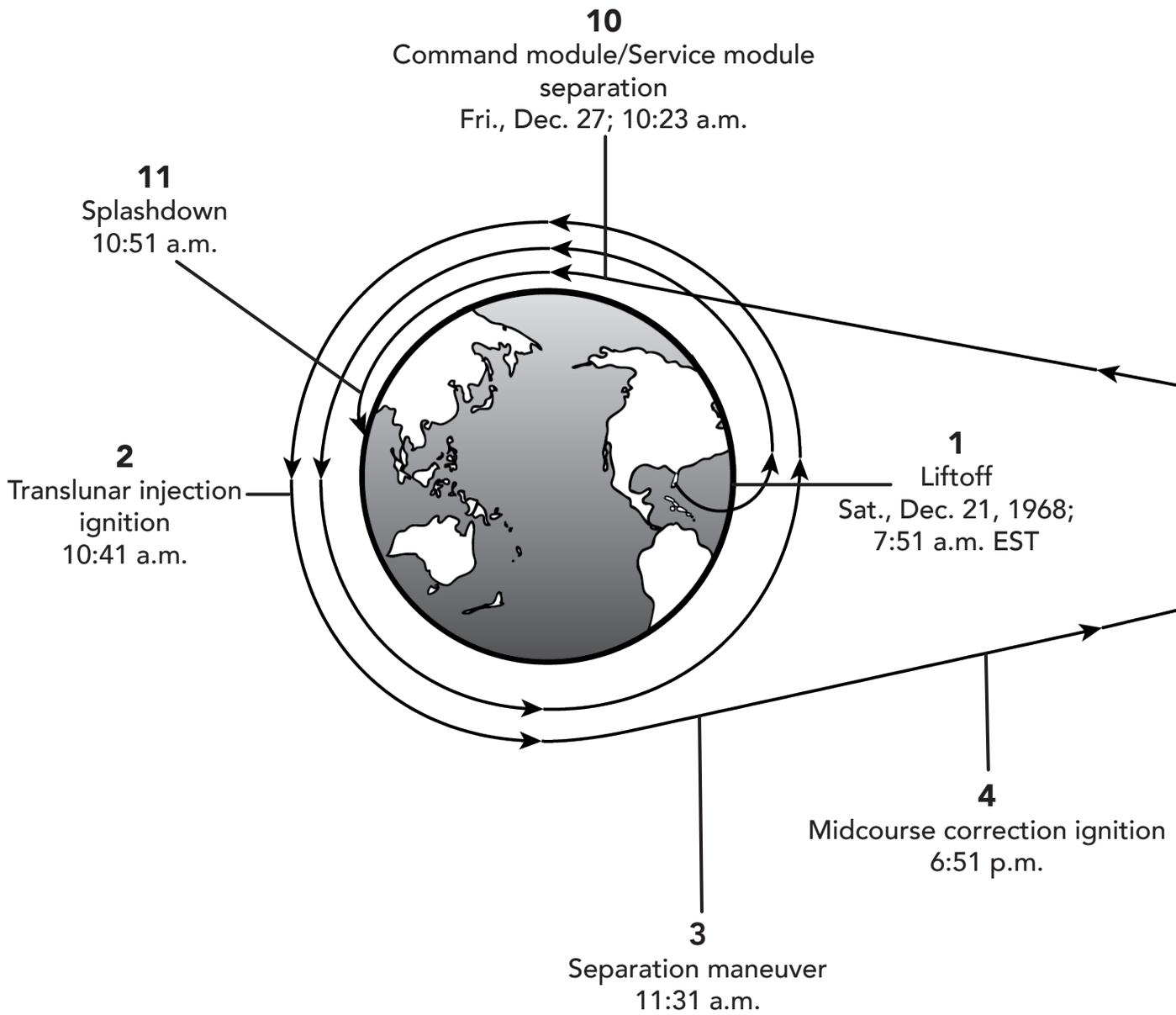
The Very Reverend Randy Hollerith is the 11th Dean of Washington National Cathedral. In his role as Dean, he has led the creation of a five-year strategic plan and reoriented the institution toward radical welcome and hospitality. Under Dean Hollerith's leadership, the Cathedral has seen growing attendance at worship, back-to-back budget surpluses, and significant progress in ongoing repairs from the 2011 earthquake. Before being named Dean of the Cathedral, he served as rector of St. James's Episcopal Church in Richmond, Virginia, for 16 years. Dean Hollerith holds degrees from Denison University and Yale Divinity School.

Ellen R. Stofan, PhD, is the John and Adrienne Mars Director of the National Air and Space Museum. As director, she is leading the Museum through a major renovation project that includes the transformation of all 23 galleries and exhibition spaces at its location in Washington, DC. Dr. Stofan is passionate about inspiring the next generation of innovators and explorers, and seeks to ensure that every person who walks through the doors can see themselves reflected in air and space history. She has more than 25 years of experience in space science, with a focus on planetary research, serving as Chief Scientist at NASA from 2013 to 2016.

The Most Reverend Michael B. Curry is Presiding Bishop and Primate of the Episcopal Church. He is the Chief Pastor, and serves as President and Chief Executive Officer, and as Chair of the Executive Council, of the Episcopal Church. He was elected to a nine-year term at the 78th General Convention of the Episcopal Church on June 27, 2015, and installed as Presiding Bishop and Primate on November 1, 2015. Throughout his ministry, Presiding Bishop Curry has been active in issues of social justice, reconciliation, immigration policy, and marriage equality.

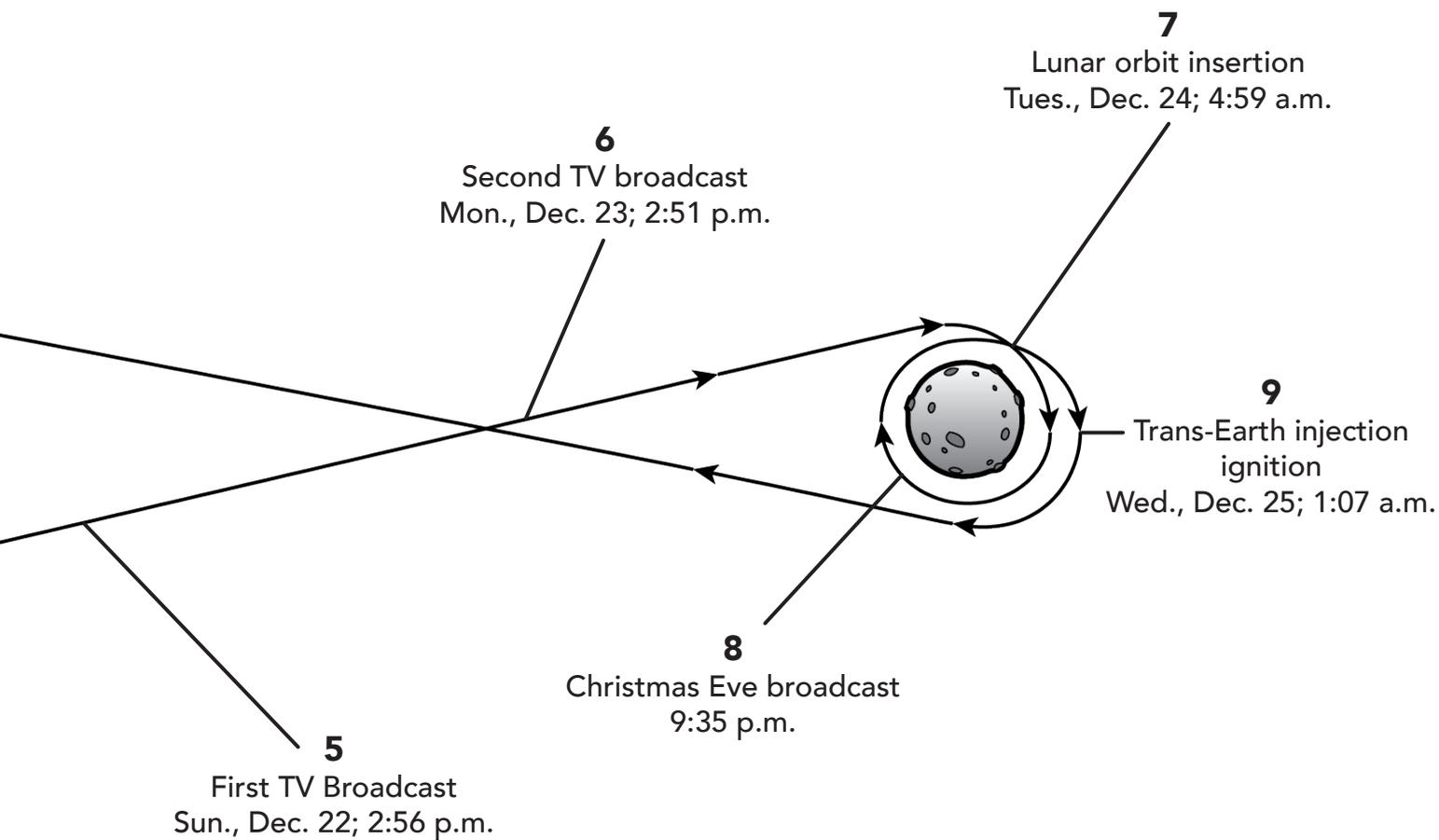
Administrator James Frederick "Jim" Bridenstine serves as the 13th Administrator of the National Aeronautics and Space Administration (NASA). He oversees the United States' space program, driving its plans to send humans back to the Moon and on to Mars, and leading a vast portfolio of science, technology, and aeronautics initiatives. Administrator Bridenstine served in the U.S. House of Representatives, U.S. Navy, and the U.S. Navy Reserve, and was Executive Director of the Tulsa Air and Space Museum & Planetarium. He was promoted to Lieutenant Commander in 2012 and recently transitioned to the 137th Special Operations Wing of the Oklahoma Air National Guard.

Captain James A. "Jim" Lovell Jr., USN (Ret.) is a Gemini and Apollo astronaut. He served as pilot on Gemini 7, commander of Gemini 12, command module pilot on Apollo 8, and commander of Apollo 13. Before joining NASA, Captain Lovell graduated from the United States Naval Academy and served as a naval aviator, logging more than 7,000 flight hours. Captain Lovell has received the National Air and Space Museum Trophy; the Harmon, Collier, and Goddard Aerospace Trophies; the Presidential Medal of Freedom; the French Legion of Honor; and the Congressional Space Medal of Honor. He is an emeritus board member of the National Air and Space Museum.



THE VOYAGE OF **APOLLO 8**

Illustration from *Apollo 8* by Jeffrey Kluger
Published by Henry Holt and Company



Apollo 8: Our First Journey to the Moon

By Valerie Neal, PhD, Chair of Space History Department
National Air and Space Museum

From December 21 to 27, 1968, the Apollo 8 crew of Frank Borman, James A. Lovell Jr., and William A. Anders journeyed to the Moon, into lunar orbit, and back to Earth. Launched by a Saturn V rocket, traveling in the Apollo spacecraft, and finally descending under parachutes into the Pacific Ocean, they completed an epic voyage, marking the boldest mission yet in the nation's decade-long mission—to land an American on the Moon. Apollo 8 was humanity's first foray beyond nearby space—our first venture to another world.

Three men, nestled shoulder to shoulder in a vehicle with barely as much interior room as a typical family's automobile, sped toward the Moon. The Moon! The first ever to attempt such an audacious feat, these pilots ranked among the best of America's best.

The astronauts were the first to ride atop the powerful behemoth Saturn V rocket, and they reached a velocity never before achieved by humans—almost 25,000 miles per hour—fast enough to escape from Earth and cross the void to the Moon.

Thus began their quarter-million-mile voyage to the Moon. As their home planet grew smaller behind them, Earth's gravitational pull weakened until the Moon's gravity embraced them.

Their spacecraft disappeared behind the Moon, out of sight and out of contact with the world they had left behind, then emerged from the far side and curved into orbit just 60 miles above the surface. In 10 orbits, they saw lunar features never before viewed by human eyes, including a basaltic plain called Mare Tranquillitatis—the Sea of Tranquility.

In 20 hours circling the Moon, they passed through the soft twilight of Earthshine and witnessed an extraordinary sight—Earth, rising above the horizon of the gray, lifeless lunar landscape. Had they been travelers from another world, would they have guessed that this shining blue and white planet was inhabited? As Earth's first emissaries to another world, they suddenly saw their home planet's beauty, fragility, and solitude in the vast cosmos.

Before leaving lunar orbit to return home, the crew of Apollo 8 broadcast a Christmas Eve message to all citizens of the world. Turning to scripture, they jointly read the timeless first verses of Genesis and then offered a benediction: "God bless all of you, all of you on the good Earth." Those moments of simple eloquence captured the spirit of Apollo, transcending the particulars of the mission and fostering a sense of awe, wonder, and unity felt around the world.

"Looking back, we were the luckiest people in the world. There was no choice but to be pioneers; no time to be beginners."

*-Margaret Hamilton
Lead Flight Software Designer, Apollo Program*

"Perchance, coming generations will not abide the dissolution of the globe, but, availing themselves of future inventions in aerial locomotion, and the navigation of space, the entire race may migrate from the earth, to settle some vacant and more western planet.... It took but little art, a simple application of natural laws, a canoe, a paddle, and a sail of matting, to people the isles of the Pacific, and a little more will people the shining isles of space."

-Henry David Thoreau, 1843

Transcript of Genesis Reading from Lunar Orbit

December 24, 1968

William Anders

We are now approaching lunar sunrise.
And for all the people back on Earth the crew of
Apollo 8 has a message we would like to send you.

In the beginning God created the heaven and the earth.
And the earth was without form, and void;
and darkness was upon the face of the deep.
And the Spirit of God moved upon the face of the waters.
And God said, Let there be light: and there was light.
And God saw the light, that it was good: and God divided the light from the
darkness.

Jim Lovell

And God called the light Day, and the darkness he called Night.
And the evening and the morning were the first day.
And God said, Let there be a firmament in the midst of the waters, and let it
divide the waters from the waters. And God made the firmament,
and divided the waters which were under the firmament from the waters which
were above the firmament: and it was so.
And God called the firmament Heaven.
And the evening and the morning were the second day.

Frank Borman

And God said, Let the waters under the heavens be gathered together unto
one place, and let the dry land appear: and it was so.
And God called the dry land Earth;
and the gathering together of the waters called he Seas:
and God saw that it was good.

And from the crew of Apollo 8, we close with good night, good luck, a Merry
Christmas – and God bless all of you, all of you on the good Earth.



The design of the Apollo 8 patch reflects the mission's milestone lunar flight with a figure eight, representing both the mission designation and the spacecraft's circumlunar trajectory. Astronaut Jim Lovell first conceived and drew the patch design.

Apollo 8 Crew

Frank Borman, Commander
James A. Lovell Jr., Command Module Pilot
William A. Anders, Lunar Module Pilot

Apollo 8 Backup Crew

Neil A. Armstrong, Commander
Edwin E. Aldrin Jr., Command Module Pilot
Fred W. Haise Jr., Lunar Module Pilot

Views of Our Sphere

We deserved that earth-shot from the
moon's asbestos-grey horizon: a
family portrait of the old homestead, yet
not a single one of us could be
seen and the only history being made was
storm swirls over rocks and oceans.

So our prophets from as long ago as the
close of paradise had at last a
picture to illustrate their remarks.

As the atoms in our invisible heads
go on blasting out toward darker and
darker lights what can we hope for but
smaller and smaller snapshots of this place
already small and lonesome enough.

The countdown, however, is pulsing in all our
engineered spaces of mind, and each flight
now must explode into the next till
we and our shape in the sun and our weather
vanish altogether (all together).

Ernest Sandeen, American Poet

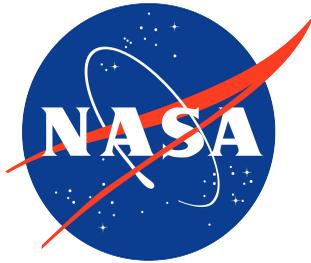
Collected Poems, 1953-1994

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Smithsonian
National Air and Space Museum

The Smithsonian's National Air and Space Museum maintains the largest collection of historic air and space artifacts in the world. It is also a vital center for research into the history, science, and technology of aviation and spaceflight, as well as planetary science and terrestrial geology and geophysics. The Museum's location on the National Mall in Washington, DC, is home to thousands of artifacts on display, including the original 1903 Wright Flyer, the *Spirit of St. Louis*, and a lunar rock sample that visitors can touch. The Steven F. Udvar-Hazy Center in Chantilly, Virginia, displays many more artifacts, including a Lockheed SR-71 Blackbird, the Boeing B-29 Superfortress *Enola Gay*, and Space Shuttle *Discovery*.

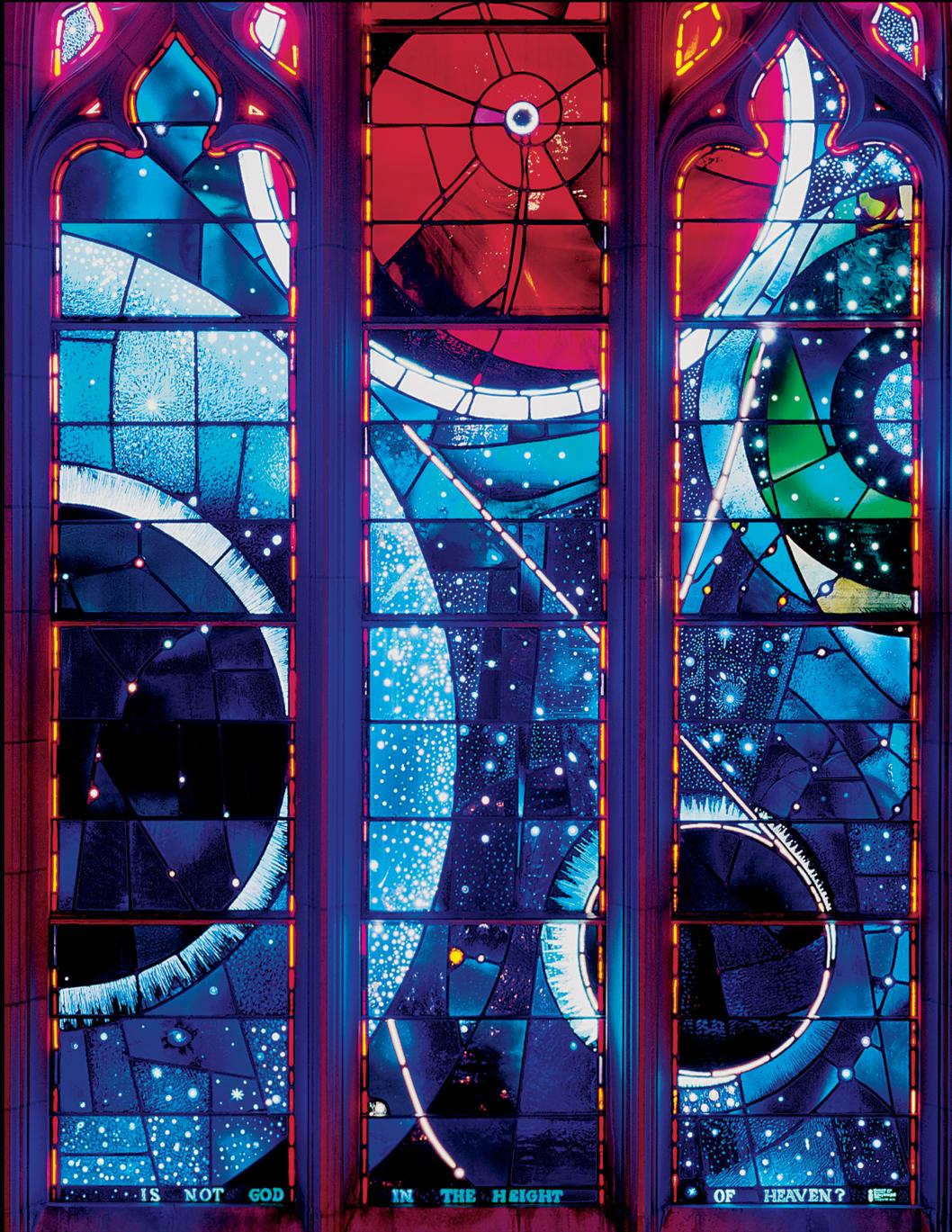


The National Aeronautics and Space Administration strives to discover and expand knowledge for the benefit of humanity. Its mission is to lead an innovative and sustainable program of exploration with commercial and international partners to enable human expansion across the solar system; bring new knowledge and opportunities back to Earth; support growth of the nation's economy in space and aeronautics; increase understanding of the universe and our place in it; work with industry to improve America's aerospace technologies; and advance American leadership.



WASHINGTON
**NATIONAL
CATHEDRAL**

Washington National Cathedral is called to be the spiritual home for the nation. It seeks to be a catalyst for spiritual harmony in our nation, renewal in the churches, reconciliation among faiths, and compassion in our world. The Cathedral holds a unique place at the intersection of sacred and civic life. As the Cathedral of the Episcopal Diocese of Washington, it strives to serve God and its neighbors as agents of reconciliation, a trusted voice of moral leadership, and a sacred space where the country gathers during moments of national significance. The Cathedral's four missional priorities include Welcoming, Deepening, Convening, and Serving.



Space Window
Washington National Cathedral

From the crew of Apollo 8, we close with good night, good luck, a Merry Christmas — and God bless all of you, all of you on the good Earth.

-Lunar Orbit
December 24, 1968