Wednesday, June 24, 2026

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GENTLE.NEWS

In Today's Edition

"The only way to get through life is to laugh your way through it. You either have to laugh or cry. I prefer to laugh. Crying gives me a headache."

— Marjorie Pay Hinckley

ARMD Research Solicitations (Updated June 23)

9 min read Preparations for Next Moonwalk Simulations Underway (and Underwater) NASA / Lillian Gipson/Getty Images THIS PAGE WAS UPDATED ON JUNE 23, 2026 This Aeronautics Research Mission Directorate (ARMD) solicitations page compiles the opportunities to collaborate with NASA's aeronautical innovators and/or contribute to their research to enable new and improved air transportation systems. Most opportunities to participate in research are officially announced through the Web-based NASA Solicitation and Proposal Integrated Review and Evaluation System, better known as NSPIRES. You are encouraged to visit the NSPIRES web site , create an account, and sign up for automated email announcements. Other types of collaborative opportunities, such as those involving Requests for Information or academic research contests, also are included on this page. This ARMD Solicitations page has four major sections: Quick list of open solicitations with key dates listed. Current open solicitations with more details and helpful links. Closed solicitations in case it is helpful to see other examples of the kind of research opportunities NASA Aeronautics makes available. Summary of NASA's Research Opportunities in Aeronautics (ROA) NASA Research Announcement (NRA) selection process. Upcoming Key Dates August 3, 2026 Deadline for proposals on Open Fan Flight Demonstrations NRA Currently Open Solicitations NASA Research Announcement – Development

Source: NASA

Plan for Open Fan Flight Demonstration – OPEN As part of NASA's Advanced Air Vehicles Program, the Subsonic Vehicle Technologies and Tools project endeavors to advance knowledge, technologies, and concepts that enable accelerated introduction of radical aircraft and engine technologies across a range of vehicle classes. This is achieved through partnerships with industry to ensure that these technologies are applicable to planned products to increase the chances of inclusion in future aircraft systems. This research announcement solicits proposals for providing an open fan flight demonstration plan with optional accompanying risk reduction activities. The flight demonstration plan will inform the project of the scope of a possible future flight demonstration and provide insight into the roadmap, risk reduction areas, and areas of potential investment. See the full research announcement text on SAM.gov. Proposals Due: August 3, 2026, by 5:00 PM EDT The Project F.I.R.E. team receives their "Future Game-Changer" award during the 2024 Gateways to Blue Skies forum held at NASA's Ames Research Center in California. Gateways to Blue Skies is one of several Aeronautics Innovation Challenges open to the academic community. NASA / Brandon Torres Aeronautics Innovation Challenges – OPEN NASA's nationwide team of aeronautical innovators are committed to giving students of all ages opportunities to solve some of the biggest technical challenges facing the aviation community today. Through NASA-sponsored challenges and competitions, students representing multiple disciplines will put their skills to work by designing and building solutions to real-world problems. See the Complete List of

Source: NASA

Challenges Currently Closed Solicitations NASA’s X-59 quiet supersonic research aircraft lifts off for its first flight Tuesday, Oct. 28, 2025, from U.S. Air Force Plant 42 in Palmdale, California. The aircraft’s first flight marks the start of flight testing for NASA’s Quesst mission, the result of years of design, integration, and ground testing and begins a new chapter in NASA’s aeronautics research legacy. NASA/Lori Losey NASA ARMD Aeronautics Flight Accelerator – CLOSED NASA’s Aeronautics Research Mission Directorate is seeking information from U.S. industry, academia, and government organizations regarding potential partnerships for research, development, and flight testing under the Aeronautics Flight Accelerator initiative. NASA is requesting input on technologies, concepts, and flight test campaigns suitable for cost shared maturation leading to flight within the next three years. Areas of interest span subsonic (including vertical lift), supersonic, and hypersonic flight technologies. THIS IS NOT A REQUEST FOR PROPOSAL. NO PROPOSALS SHOULD BE SUBMITTED. RFI Release Date: April 7, 2026 Responses Were Due: May 7, 2026, 1:00PM Pacific Daylight Time (PDT) For more detailed information, see the RFI listing on SAM.gov . High school students visit the Glenn Research Center Manufacturing Facility and learn about careers in the STEM manufacturing field. NASA/Marvin Smith FY26 NASA Aerospace Skilled Technical Workforce Hubs (NAS_Hub) – CLOSED This opportunity seeks proposals to establish state or regionally focused Skilled Technical Workforce Hubs (NAS_Hubs) that will serve as strategic centers for developing and

Source: NASA

sustaining a skilled technical workforce aligned with aerospace industry and NASA mission needs. The NAS_Hub Notice of Funding Opportunity has been released and may be found in NASA's Solicitation and Proposal Integrated Review and Evaluation System (NSPIRES) on the NAS_Hub landing page . Key Dates Pre-Proposal Webinar: February 18, 2026, 2:00 to 3:00 p.m. ET Office Hours Session: March 3, 2026, 2:00 to 3:00 p.m. ET Proposal Deadline: March 23, 2026, at 11:59 p.m. ET Anticipated Award Notification: June 2026 About the Opportunity The rapid expansion of the space economy and renewed national priorities in human space exploration have created an urgent demand for a robust skilled technical workforce—individuals in critical science- and engineering-based roles who do not require a bachelor's degree. To address nationwide shortages and ensure U.S. competitiveness in aerospace and defense, NASA's Office of STEM Engagement is launching the NASA Aerospace Skilled Technical Workforce Hubs (NAS_Hub) initiative. Through this notice NASA seeks lead organizations to establish hubs that: Collaborate with aerospace employers to align education and training with industry-defined workforce needs. Partner with community colleges and high school Career and Technical Education programs to deliver hands-on, industry-aligned learning experiences. Coordinate with state or regional workforce development system. Build clear and sustainable employment pathways into high-demand aerospace technical careers. NAS_Hubs will serve as focal points for aligning education, workforce, industry, and government partners to accelerate workforce readiness over a three-year period of

Source: NASA

performance. Eligibility Eligible applicants include: State, county, city, township, special district, and tribal governments Public and private institutions of higher education Nonprofit organizations For-profit organizations and small businesses Proposals must include partnerships with, at a minimum: Three aerospace industry collaborators supporting NASA's work Community college career and technical education program High school career and technical education program State or regional workforce development system NASA Center or other NASA facility Award Information Maximum Annual Award : $500,000 Maximum Total Award: $1,500,000 over three years Cost Sharing: Not required How to Apply Proposals must be submitted electronically via NSPIRES . Registration in NSPIRES and an active SAM.gov registration are required. Pre-Proposal Webinar and Technical Assistance NASA will host an interactive pre-proposal webinar for the NAS_Hub opportunity on Feb. 18, 2026, from 2:00 to 3:00 p.m. ET. This session will provide an in-depth overview of this funding opportunity, including program goals, eligibility requirements, proposal preparation guidance, and submission tips. Proposers will also have the opportunity to receive technical assistance and clarification from NASA staff. Prior to attending a webinar, proposers are strongly encouraged to review the full NAS_Hub notice and to check the NAS_Hub landing page in NSPIRES regularly for updates and additional guidance. Please note that registration is required for the webinar. Connection details will be provided upon completion of registration. Webinar dates, times, registration links, and connection information will

Source: NASA

be posted on the NAS_Hub landing page in NSPIRES, which also will feature recordings and presentation materials from the webinar after the event for those unable to attend. Office Hours Session March 3, 2026, 2:00 to 3:00 p.m. ET Last opportunity for questions prior to the proposal deadline. Join the office hours session here. Contact Information For technical assistance with NSPIRES NSPIRES Help Desk available Monday–Friday, 8:00 AM–6:00 PM ET (202) 479-9376 nspires-help@nasaprs.com Program Contact Maria Arredondo Next Gen STEM Program Manager NASA Office of STEM Engagement Mary W. Jackson NASA Headquarters Email: NAS_Hub@nasaprs.com Advanced Capabilities for Emergency Response Operations RFI – CLOSED View the full ACERO RFI announcement here. NASA's Advanced Capabilities for Emergency Response Operations (ACERO) project used this request for information to identify technologies that addressed current challenges facing the wildland firefighting community. NASA was seeking information on data collection, airborne connectivity and communications solutions, unmanned aircraft systems traffic management, aircraft operations and autonomy, and more. This would support development of a partnership strategy for future collaborative demonstrations. Interested parties were requested to respond to this notice with an information package submitted via https://nari.arc.nasa.gov/acero-rfi no later than 4 pm ET, October 15, 2023. Submissions were accepted only from U.S. companies. Advanced Air Mobility Mission RFI – CLOSED View the full AAM RFI announcement here . This request for information is being used

Source: NASA

to gather market research for NASA to make informed decisions regarding potential partnership strategies and future research to enable Advanced Air Mobility (AAM). NASA is seeking information from public, private, and academic organizations to determine technical needs and community interests that may lead to future solicitations regarding AAM research and development. This particular RFI is just one avenue of multiple planned opportunities for formal feedback on or participation in NASA's AAM Mission-related efforts to develop these requirements and help enable AAM. The respond by date for this RFI closed on Feb. 1, 2025, at 6 p.m. EST. ROA-2025 NRA Amendment 1 – CLOSED Advanced Air Vehicles Program Fellowship Opportunities (View the full ROA-2025 NRA Amendment 1 text here.) This announcement solicits proposals from accredited U.S. institutions for research training grants to begin the academic year. This Notice of Funding Opportunity is designed to support independently conceived research projects by highly qualified graduate students in disciplines needed to help advance NASA's mission, thus affording these students the opportunity to directly contribute to advancements in STEM-related areas of study. These opportunities are focused on innovation and the generation of measurable research results that contribute to NASA's current and future science and technology goals. Research proposals are sought to address the key challenges summarized in the Elements section at the end of the Amendment 1 document , and which reference NASA's Hypersonic Technology project. Reflecting the Fiscal Year 2026 budget changes, the Transformational Tools & Technolo-

Source: NASA

gies project opportunities originally described in this announcement were cancelled. Proposals citing this project will not be evaluated. Notices of Intent are not required. A budget breakdown for each proposal is required, detailing the allocation of the award funds by year. The budget document may adhere to any format or template provided by the applicant’s institution. Two pre-proposal teleconferences for potential proposers will be held and meeting links will be posted on NSPIRES. Proposals were due by 5 p.m. EDT on June 11, 2025. NASA Research Opportunities in Aeronautics Competition for NRA awards is open to both academia and industry. The current open solicitations for ARMD Research Opportunities are ROA-2024 and ROA-2025 . Here is some general information to know about the NRA process. NRA solicitations are released by NASA Headquarters through the Web-based NASA Solicitation and Proposal Integrated Review and Evaluation System (NSPIRES). All NRA technical work is defined and managed by project teams within these four programs: Advanced Air Vehicles Program , Airspace Operations and Safety Program , Integrated Aviation Systems Program , and Transformative Aeronautics Concepts Program . NRA awards originate from NASA’s Langley Research Center in Virginia, Ames Research Center in California, Glenn Research Center in Cleveland, and Armstrong Flight Research Center in California. Competition for NRA awards is full and open. Participation is open to all categories of organizations, including educational institutions, industry, and nonprofits. Any updates or amendments to an NRA is posted on the appropriate NSPIRES web pages

Source: NASA

as noted in the Amendments detailed below. ARMD sends notifications of NRA updates through the NSPIRES email system. In order to receive these email notifications, you must be a Registered User of NSPIRES. However, note that NASA is not responsible for inadvertently failing to provide notification of a future NRA. Parties are responsible for regularly checking the NSPIRES website for updated NRAs. Keep Exploring Discover More Topics From NASA Missions Artemis Aeronautics STEM Explore NASA’s History Share Details Last Updated Jun 23, 2026 Editor Jim Banke Contact Jim Banke jim.banke@nasa.gov Related Terms Aeronautics Aeronautics Research Mission Directorate For Colleges & Universities Learning Resources Research and Technology Mission Directorate

Source: NASA

Predicting Future Northeast Ocean Conditions: Forecast Debuts in 2026 State of the Ecosystem Reports

Fishermen, fisheries managers, and scientists have observed changes in our oceans that are impacting the location and growth of fish stocks. Until recently, there was no reliable way to predict these changes. This year, the 2026 Mid-Atlantic and New England State of the Ecosystem reports contain the first operational seasonal and decadal ocean forecasts for U.S. coastal fisheries regions. These ocean forecasts provide predictions of future marine ecosystem conditions that could impact the availability of commercial, recreational, and protected fisheries species. They can help resource managers make more informed decisions. The Northeast Integrated Ecosystem Assessment team produces the State of the Ecosystem reports annually for the New England and Mid-Atlantic Fisheries Management Councils. They provide a synthesis of Northeast Shelf ecosystem information. They are part of a holistic approach to maintain healthy and productive fisheries by considering environmental and socioeconomic information in decision making. The reports: Contain current and long-term information about the Northeast Shelf ecosystems Document how well the ecosystems are currently meeting fishery management objectives Highlight potential risks to meeting those objectives. However, resource managers have long sought forward-looking ocean forecasts that predict future ocean conditions to help them make more informed decisions. “Due

Source: NOAA Fisheries

to limited resources, we have moved to more multi-year specifications for stocks, so the impacts of our decisions are now longer lasting. Given the increasingly dynamic nature of the ocean, and management's sometimes-limited ability to be as dynamic in response, delivery of ocean forecasts to the Council provides more tools at our disposal to make better decisions that span multiple years," said Megan Ware, member of the New England Fisheries Management Council. NOAA scientists in the Northeast are now providing their Councils with predicted ocean temperatures in this year's" State of the Ecosystem reports using NOAA's Modular Ocean Model version 6 ocean forecasts, referred to as MOM6, developed by NOAA's Geophysical Fluid Dynamics Laboratory . The inclusion of the forecasts marks the agency's first application of an ocean forecast in an ecosystem-based fisheries management product. Dr. Joseph Caracappa, research fisheries biologist at the Northeast Fisheries Science Center and one of the lead editors of the State of the Ecosystem reports, explains, "By including ocean forecasts in our State of the Ecosystem reports, we are providing scientists and managers with information that allows them to consider future environmental impacts on marine resources and ultimately be more informed on decisions." What do the ocean forecasts in the 2026 reports predict? The 2026 State of the Ecosystem reports contain MOM6 forecasts that predict conditions over two time periods: seasonal (3 month forecasts that are updated 4 times per year) and decadal (annual forecasts over the next 10 years that are updated once a year). The seasonal forecasts predicted cooler than average winter and spring (January–June) bottom

Source: NOAA Fisheries

temperatures in the Gulf of Maine and the Mid-Atlantic Bight in 2026 (depicted by the blue color in the maps below). This prediction was accurate, as early 2026 conditions in these areas were, and continue to be, cooler than average. As the year progresses, these areas are expected to return to historically near-average temperatures (yellow). Much of the Northeast U.S. shelf is predicted to experience above average bottom temperatures (red) by the fall (October–December). Much like weather forecasts, the uncertainty of these predictions increases as they extend farther into the future. Throughout the year, new iterations of the forecasts incorporate recent environmental conditions to produce more accurate, near-future predictions that can be delivered to and used by fishery managers. Most recent seasonal forecasts for the Northeast U.S. shelf . There were cooler-than-average conditions in 2024 and 2025 along the Northeast U.S. shelf . The decadal model predicts a return to average temperatures in the region over the next 10 years. Scientists were happy to see that the decadal model accurately predicted the region’s recent cold spell during its retrospective forecast trials . The cooler waters observed since 2024 are a reprieve from the anomalously high temperatures of the past decade. These ocean conditions are more suitable for bottom species like scallop, lobster, cod, and haddock. While this cold spell remains, scientists continue to monitor the ecosystems to measure their ability to bounce back from warm ocean temperatures. Variations in ocean temperatures can: Alter species migration and distribution patterns Effect metabolic rates and growth Influence predator-prey relationships, distribution, and

Source: NOAA Fisheries

movement outside of previously inhabited locations Affect overall ecosystem productivity Making Strides Towards Ecosystem-Based Fisheries Management This year’s delivery of the forecasts is a collaborative success and a major advancement in NOAA’s efforts towards adopting ecosystem-based fisheries management . Dr. Andrew C. Ross, research scientist at the Geophysical Fluid Dynamics Laboratory explained, “These forecasts are the first fruits from a years-long effort by many NOAA scientists in NOAA’s Office of Oceanic and Atmospheric Research and NOAA Fisheries working together. We hope to continue improving and applying the forecasts in the Northwest Atlantic and are working to develop similar forecasts for all of the U.S. coastline including the West Coast, Alaska and Arctic, and Pacific Islands regions.” While the delivery of the ocean forecasts is a highlight of this year’s reports, it is just a fraction of the whole report. These reports have been well-received by the fisheries management councils for 10 years and are considered in management decisions. Ware said, “The New England Council is currently in the process of integrating aspects of the State of the Ecosystem report into our updated risk policy, so we will be directly integrating information from the report into our management decisions. To me, that speaks to the value and weight this Council puts on the information provided in that report.” To learn more about the 2026 State of the Ecosystem reports and the MOM6 bottom temperature forecasts, you can tune in to “ State of the Ecosystem - 2026 Overview ”, a NOAA Library seminar on Tuesday, June 30 at 1pm.

Source: NOAA Fisheries

3 common sleep habits may be tied to brain aging signs

A new study has found that several common sleep behaviors may be linked to signs of brain aging. The study in the journal Alzheimer's & Dementia used existing brain scans and questionnaire responses from more than 23,000 middle-aged and older adults from a large biomedical database. The work is part of a broader collaborative project between the University of Arizona psychology department, the Zuckerman College of Public Health, and the University of Southern California. The researchers identified three sleep behaviors distinctly associated with a marker of brain aging in healthy people: sleeping outside the recommended seven-to-nine-hour range, frequent daytime napping , and sleeplessness. All three were linked to greater volume of white matter lesions, areas of damage in the brain that can accumulate with age and are tied to a higher risk of dementia, including Alzheimer's disease. Madeline Ally, the study's lead author and a graduate researcher at the psychology department, says that sleep is often studied as one overall measure rather than a collection of distinct patterns and habits, which can obscure how sleep relates to brain aging. "Sleep is a universal but complex behavior, and there is still much to learn about how different aspects of sleep relate to brain health," Ally says. For the study, participants completed a baseline questionnaire from 2006 to 2010 on five sleep behaviors: sleep duration, daytime napping, sleeplessness, unintentional daytime dozing, and snoring. About nine years

Source: Futurity.org

later, the same participants underwent brain MRI scans, which the researchers used to measure white matter lesion volumes. The study was conducted in collaboration with David Raichlen, the lead collaborator at the University of Southern California, and a professor of human and evolutionary biology. All five behaviors were initially associated with greater lesion volume. But after the researchers accounted for related blood vessel health and lifestyle factors that can also affect the brain, such as high blood pressure, smoking, and physical inactivity, three behaviors continued to stand out: sleeping outside the recommended range, frequent daytime napping, and greater sleeplessness. Snoring and unintentional daytime dozing did not. The findings on daytime napping were particularly interesting, since research shows short naps may also be helpful for alertness and cognition. Gene Alexander, the study's senior author and a professor in the psychology department, says that the questionnaire did not capture details on the length or timing of individual naps. Future work will need to test whether shorter, occasional naps have different effects on the brain over time compared to longer, more frequent ones. In a follow-up analysis, the researchers took a closer look at sleep duration and found that participants sleeping fewer than seven hours per night had increased lesion volume compared to those sleeping within the recommended range. "Our findings suggest that having too little sleep may lead to greater white matter lesion volumes in the brain as we age," says Alexander. "We didn't see greater white matter impacts in people who reported longer sleep durations, but this needs to be followed up in cohorts with more long

Source: Futurity.org

sleepers.” Nevertheless, Alexander says the three behaviors share a feature that makes them particularly important to study: each can be changed. “Sleep is one of those potentially modifiable risk factors. If we can improve the quality of our sleep, it may help reduce the impacts of brain aging and maybe even lower the risk for dementias like Alzheimer’s disease,” Alexander says. Source: University of Arizona The post 3 common sleep habits may be tied to brain aging signs appeared first on Futurity .

Source: Futurity.org

Forest Service debuts new recreation mobile app

To kick off Great Outdoors Month, the Forest Service is launching a new, single visitor-information mobile app, National Forests and Grasslands, now available for download as visitors plan their summer trips to recreation sites across the National Forest System. For the first time the app provides the most complete and accurate collection of Forest Service recreation sites that has ever been made available to the public, along with important planning tools like critical safety alerts, closures, amenity details and more. “Due to the sheer size and remote nature of our 165,000 miles of trails and more than 30,000 recreation sites, we know that mobile service can be limited once you reach your destination,” said Forest Service Chief Tom Schultz . “We encourage everyone to download the National Forests and Grasslands app – your own pocket-sized Forest Service guide – to check trail conditions, download offline maps, and view safety alerts before your trip.” With the app, users can design their own adventure by identifying and favoriting recreation activities on national forest lands within a selected radius. Visitors can search for opportunities such as hunting and fishing, water activities like canoeing or rafting, bike – or equestrian - friendly trails, and campsites based on available amenities. Downloading maps ahead of time allows users to access their location even in remote areas. Optional, map layers, including fire information and National Weather Service alerts, can be toggled on to

Source: U.S. Forest Service

provide a complete picture of the environment at your destination. This debut will retire nearly 30 similar, outdated agency apps, improving overall visitor safety, access and consistent information to the nearly 164 million visitors who recreate on national forests and grasslands each year. Download the app, explore your favorite trails and check out events happening during National Trails Day on Saturday, June 6, 2026. The National Forests and Grasslands app is available for download on Apple store for iOS and Google Play for Android .

Source: U.S. Forest Service

New National Coral Reef Resilience Strategy

Coral reefs are national treasures that support coastal communities, protect shorelines, sustain fisheries, and draw visitors from around the world. From the beautiful reefs of Florida and the Caribbean to the vibrant atolls of the western Pacific and Hawai'i, the United States is home to some of the planet's most biodiverse and productive coral reef ecosystems. Coral reefs contribute over $3.4 billion each year to the U.S. economy, supporting more than 70,000 jobs in tourism and recreation in southeast Florida alone. They also provide flood protection benefits of $2.6 billion annually across the United States. However, coral reef ecosystems are under threat from stressors, including land-based sources of pollution, fishing impacts, disturbances such as disease, invasive species, and coral bleaching, and changing ocean chemistry. Global and national-scale studies have shown that coral reefs have been declining for 50 years. There is an urgent need to protect, manage, and restore coral reef ecosystems in the face of these threats. Despite the numerous and varied threats to coral reefs, there is a path forward to conserve and restore these vital marine ecosystems. NOAA, along with its partners, has developed a National Coral Reef Resilience Strategy that will guide the actions of the U.S. coral reef conservation community through 2040, with the goal of healthy, resilient coral reef ecosystems in the United States that provide a variety of valuable services to current and future generations. This strategy

Source: NOAA Ocean Service

is ambitious, covers far more work than a single organization can achieve alone, and seeks to inspire and catalyze action for positive change. The strategy's multidisciplinary approach includes capacity building, research, monitoring, mapping, social science, and communication. It uses an adaptive management framework and resilience-based management to provide a broad context for how the coral reef conservation community will achieve the goals outlined in this document. Specific strategies under six focus areas will drive the research, monitoring, and management actions needed to achieve the vision of thriving, diverse, resilient coral reefs that are able to sustain valuable ecosystem services for current and future generations.

Source: NOAA Ocean Service

Activity Time - Word Search

Find the words below in the puzzle. Words go across or down only.

Words to Find:

J	P	E	K	J	F	D	L	T	O	G
P	W	M	J	Q	V	W	A	C	Z	S
L	U	W	L	S	O	Q	D	S	A	W
E	C	H	U	D	W	Y	K	R	S	V
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P	V	U	O	I	F	F	Y	X	A	F
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