

NASA GUIDELINES FOR PROMOTING SCIENTIFIC AND RESEARCH INTEGRITY



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National Aeronautics and Space Administration
Office of the Chief Scientist

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NASA Guidelines for Promoting Scientific and Research Integrity

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
OFFICE OF THE CHIEF SCIENTIST

COMMONLY USED ABBREVIATIONS AND ACRONYMS

AWA Animal Welfare Assurance
CFR Code of Federal Regulations
FAC Federal Advisory Committee
FACA Federal Advisory Committee Act
FAR Federal Acquisition Regulation
GSA General Services Administration
HRP Human Research Program
IPA Intergovernmental Personnel Act
IRB Institutional Review Board
MDAA Mission Directorate Associate Administrator
MSO Mission Support Office
NASA National Aeronautics and Space Administration
NIH National Institutes of Health
NPD NASA Policy Directive
NPR NASA Procedural Requirements
OA Office of Audits (Office of the Inspector General)
OC Office of Counsel (Office of the Inspector General)
OCS Office of the Chief Scientist
OI Office of Investigations (Office of the Inspector General)
OIG Office of the Inspector General
OLAW Office of Laboratory Animal Welfare
OSTP Office of Science and Technology Policy
P.L. Public Law
SBIR Small Business Innovation Research
SPD Science Mission Directorate Policy Document
STI Scientific and Technical Information
STTR Small Business Technology Transfer
U.S.C. United States Code

INTRODUCTION

The National Aeronautics and Space Administration (NASA) seeks to explore and expand human knowledge of the Earth, solar system, and universe and to enable the development of aeronautical and space exploration systems. NASA's ability to achieve these purposes depends on the integrity of the research and technology activities the agency conducts and supports. The NASA workforce—as well as all external entities who review

proposals for or receive NASA funding—must maintain the highest standards of scientific integrity. These responsibilities include selecting the most meritorious research activities through open and fair competition, peer review and other appropriate merit review processes, and avoidance of actual and perceived conflicts of interest; avoiding fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results; openly sharing results and methods not subject to classification or privacy standards; disclosing assumptions and biases in sharing and applying scientific information and data; and acting honestly and transparently in using and serving on advisory committees and in engaging in professional development activities.

Purpose and Scope

NASA has a long history of supporting scientific and research integrity across its technical disciplines and programs. Multiple NASA Policy Directives (NPDs) and NASA Procedural Requirements (NPRs) as well as Federal laws, regulations, and directives address these various aspects of research integrity. As technologies change and relevant issues arise, policies are often revised or are added to complement and supplement existing policies in order to foster honesty and transparency in professional and research conduct. NASA is committed to continuously evaluating, assessing, upholding and enhancing its policies to maintain the highest standard of scientific integrity, now and in the future.

This guidebook provides an overarching summary of existing policies, activities, and guiding principles for scientific and research integrity with which NASA's workforce and affiliates (such as grantees) must conform. This document addresses NASA's obligations as both a research institution, host laboratory in space, and as a funder of research, NASA's use of federal advisory committees, NASA's public communication of research results, and professional development of NASA's workforce. This guidebook is intended to provide a single resource for NASA researchers, NASA research program administrators and project managers, external entities who use NASA research facilities, NASA's present and future funding recipients under research or technical projects, evaluators of NASA research proposals, NASA advisory committee members, NASA communications specialists, and members of the general public so that they can understand NASA's commitment to and expectations for scientific and integrity.

This document covers a variety of aspects of scientific integrity. While we have organized this document into five key dimensions of scientific and research integrity, many of NASA's scientific and research integrity policies address more than one of the key areas identified above and thus appear in multiple sections of the guidebook.

Roles and Responsibilities

The **Office of the Chief Scientist (OCS)** holds the broad responsibility for ensuring the culture of scientific and research integrity at NASA. The OCS compiles, coordinates, and codifies (in the case of [NASA Policy Directive 1920, Scientific Integrity](#)) relevant NASA policy and guidance in regards to scientific integrity for research conducted and used by NASA or research at NASA facilities. The OCS performs all research integrity related duties not specifically delegated to non-OCS NASA agency officials. Non-OCS NASA officials are delegated with research integrity functions through [NASA Policy Directive 1920](#) at NASA, or other Federal or NASA laws, regulations and directives.

The NASA Chief Scientist is responsible for leading an internal review, once every three years, to ensure that NASA has appropriate research integrity standards in place. The OCS also develops, maintains, and makes publically available this reference handbook that explains: (1) NASA's research integrity policies,

(2) protocols and processes used by NASA to ensure research integrity, and (3) relevant research integrity resources to draw upon.

The OCS also works with NASA's Mission Directorate Associate Administrators, NASA Center Directors, the Jet Propulsion Laboratory Director, and the heads of other NASA offices to ensure that the entire NASA workforce—including civil servant employees, contractors, and affiliated agents (affiliated with grantee institutions) who conduct research for and with NASA and in/on NASA facilities —are informed of NASA's research integrity policies and protocols.

External researchers and external subject matter experts can serve as proposal reviewers for NASA, and can also be recipients of NASA research funding. The OCS is responsible for identifying any apparent conflicts between the research integrity policies of these external institutions, and applicable Federal and NASA laws, regulations and directives. The OCS then must communicate these identified conflicts to the Office of the General Counsel to ensure that they are properly addressed and actively managed by the appropriate mission directorate official.

NASA's Mission Directorate Associate Administrators (MDAAs) and Center Directors (CD) have responsibility for the technical, scientific, and programmatic accuracy of all information that is related to their respective programs and released by NASA. Each MDAA and CD must also designate a point of contact who handles—at least initially—issues related to research integrity within that Mission Directorate or Center. This individual may then reach out to other research integrity-oriented resources either in that Mission Directorate or Center, or elsewhere in NASA, to help resolve the issue.

The MDAAs and CDs are responsible for developing and maintaining the processes that assure that the NASA workforce is informed of and complies with NASA's research integrity policies and protocols. This responsibility extends to ensuring that external entities—such as parties who review proposals or receive NASA research funding through these Mission Directorates or Centers—agree to compliance with these research integrity policies and protocols. If a potential conflict is discovered between the external entities' home institution research integrity policy and Federal and NASA laws, regulations and directives, the MDAA and/or CD is responsible for informing the OCS.

Finally, the heads of all NASA organizations (e.g., MDs, Centers etc.) must assist in the internal review (which occurs once every three years) to ensure that NASA has appropriate research integrity standards in place. The heads of all NASA organizations, as needed, may be required to support the OCS, in furtherance of this review. The heads of all NASA organizations must foster by practice and culture research integrity and completely fulfill their responsibilities under all applicable Federal and NASA laws, regulations and directives.

The **Office of the Inspector General (OIG)** is tasked with handling allegations related to research misconduct. If the OIG receives an allegation of research misconduct that meets the criteria laid out in [14 CFR 1275.101\(a\)](#), the OIG then addresses the matter in accordance with [14 CFR 1275.](#)

The OIG informs the OCS of all received allegations that meet the definition of non-criminal research misconduct and of the determinations of the OIG inquiry. The NASA Office of the Chief Scientist then notifies the NASA Office of the Chief Engineer or the NASA Office of the Chief Technologist if the research is either engineering or technology research. The OCS should also notify the appropriate NASA Office or Program that has oversight of the research being questioned.

The **Assistant Administrator for Communications** is responsible for developing and administering an integrated Agency-wide communications program, establishing agency public affairs policies and priorities, and coordinating and reviewing the performance of all agency public affairs activities. The Assistant

Administrator develops criteria to identify which news releases and other types of public information will be issued nationwide by NASA Headquarters.

NASA AS A RESEARCH INSTITUTION



FIGURE 1 NASA PARTICIPATION IN RESEARCH CONFERENCE (CREDIT NASA)

As the nation's aeronautics and space agency, NASA is committed to transparency, integrity and thorough consideration of all outcomes of the research performed by the Agency. NASA adheres to rigorous standards regarding professionalism and complies strictly with policies and systems for preserving the quality of information as well as objectively evaluating data and research findings, and maintaining the publications of peer-reviewed results. Additionally, NASA implements policies that protect human subjects in the course of research conducted for, and by, NASA (NASA Policy Directive (NPD) 7100.8E and NASA Procedural Requirements (NPR) 7100.1A Protection of Human Research Subjects). Furthermore, the agency has policies in place that require the proper care of animals when used in the

course of research. (NPD 8910.1B and NPR 8910.1C, Care and Use of Animals) Issues such as protecting privacy, engaging in the responsible conduct of research, and professional integrity are carefully controlled through NASA policies and various procedures.

NASA's commitment to scientific and research integrity is reflected in many NASA and Government-wide policies, beginning with [NPD 1000.0A, NASA Governance and Strategic Management Handbook](#), which stipulates that integrity is a NASA core value and that the Agency "is committed to maintaining an environment of trust, built upon honesty, ethical behavior, respect, and candor." Requirements and policy for maintaining scientific integrity in the conduct of research and technology activities can be found in [NPD 1080.1, Policy for the Conduct of NASA Research and Technology](#), and [NPR 1080.1, Requirements for the Conduct of NASA Research and Technology](#).

Hiring Practices

Scientific positions at NASA are filled based on merit. Candidates for positions are evaluated on the basis of their scientific and technological knowledge, credentials, experience, and integrity, as outlined in [NPR 3335.11, Internal Placement of NASA Employees, Merit Promotion and Placement](#) and in [5 CFR 300.102, Employment Practices](#). These criteria ensure that preeminent talent is recruited and retained to staff and lead the research programs of the agency.

Ethical Conduct of Research

Human Test Subject Protection

All human research conducted, or supported, by NASA, whether on the ground, in aircraft, or in space, follow the provisions of all regulations contained in [14 Code of Federal Regulations \(CFR\) Part 1230](#) and [45 CFR Part 46, Protection of Human Subjects](#) and [NPD 7100.8E and NPR 7100.1A](#). All human research that is funded,



FIGURE 2 MICROGRAVITY HABITAT FOR MICE (CREDIT NASA)

sponsored, conducted, or supported by NASA is reviewed by an Institutional Review Board (IRB), and adheres to the principles of appropriate informed consent, as described in [14 CFR Part 1230](#) and [45 CFR Part 46 and the NASA regulations](#).

Several NASA Centers have their own IRB that reviews all ground based research involving human test subjects, which either occurs at that center or involves the center's equipment or personnel. All human subject research performed on NASA spacecraft, or involving United States/NASA crewmembers, is subject to review by the NASA Flight IRB (NFI) at the Johnson Space Center. All human subject research performed for aeronautics is subject to review by the NFI or the Langley Research Center IRB. NASA policy for the protection of human research subjects is codified in [NPD 7100.8E](#), and [NPR 7100.1](#), both entitled Protection of Human Research Subjects.

Animal Welfare

NASA is dedicated to the ethical treatment of animals, as well as maintaining animal welfare during the course of performing research. NASA uses live animals in agency-supported research, testing, and hardware development activities only when it is determined that there is no other way to obtain the information and that the use of animal subjects is ethical and humane. When animals are required, the agency complies with all applicable laws, regulations, and guidelines and ensures that the NASA principles

for the ethical care and use of animals are incorporated in its programs. All NASA Centers and Facilities that conduct activities involving animals are covered at all times by a current Animal Welfare Assurance (AWA) approved by the National Institutes of Health (NIH), Office of Laboratory Animal Welfare (OLAW). These centers and facilities must also receive and maintain accreditation by the Association for Assessment and Accreditation of Laboratory Animal Care, International. NASA policy regarding animal welfare is encapsulated in [NPD 8910.1B](#), and [NPR 8910.1C](#), both entitled Care and Use of Animals.

Scientific Misconduct

It is incumbent on all NASA employees to report observed, apparent, or suspected scientific or research misconduct to the NASA Office of Investigations within the Office of the Inspector General for any intramural research. Allegations of scientific misconduct, including fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results associated with research funded by NASA are thoroughly investigated. NASA handles allegations as outlined in the [Federal Research Misconduct Policy published by the Office of Science and Technology Policy \(65 Federal Register 76260, Dec. 6, 2000\)](#); [14 Code of Federal Regulations \(CFR\) 1275, Research Misconduct](#); and [NPR 1080.1, Requirements for the Conduct of NASA Research and Technology](#). All NASA employees must take any allegations of research misconduct that may have occurred within or outside NASA to the NASA Inspector General. The OIG must inform the NASA Office of the Chief Scientist of all allegations received that meet the definition of research misconduct according to the above policies.

Whistleblower Protection

NASA is committed to protecting employees and other individuals and/or group entities who report research misconduct allegations from retaliation, as outlined in various statutes such as the [Whistleblower Protection Act of 1989, Public Law \(P.L.\) 101-12](#), and its expanded protections enacted by [the Whistleblower Protection Enhancement Act, P.L. 112-199](#); the [No FEAR Act, P.L. 107-174](#); 10 USC 2409 (for employees of contractors, subcontractors, grantees, and sub-grantees); the Intelligence Authorization Act for Fiscal Year 2014 and PPD-19 (which protect individuals with access to classified information); and [NASA's Whistleblower Protection Plan](#). All NASA staff is required to undergo mandatory training regarding the No Fear Act; this training can be accessed online through the [SATERN system](#). Supervisors are required to undergo training in whistleblower protection, also available in SATERN. NASA is dedicated to complying with the policies, regulations and procedures outlined above to ensure a safe and fair workplace.

Conflicts of Interest

NASA has set and enforces clear standards regarding conflicts of interest. NASA civil servants in center positions and all personnel performing services for NASA under the Designated Representative Agreement in covered positions must file financial disclosure reports annually. NASA employees and IPAs subject to these filing requirements receive annual training on conflict of interest rules and other federal ethics requirements as outlined in NPR 1900.1, Ethics Program Management. This training can be accessed online through the [NASA SATERN system](#).

Scientists participating in NASA peer reviews of research proposals and conducting NASA research, whether NASA civil servants or members of the external scientific community, must follow documented standards for conflicts of interest to eliminate or mitigate conflict and perception of conflict in peer review processes, as outlined in [SPD-01, Handling Conflicts-of-Interest for Peer Reviews](#); [HRP-47053, Science Management Plan](#); and the [Guidebook for Proposers Responding to a NASA Research Announcement or Cooperative Agreement Notice](#).

NASA detailees from academia, other government agencies and the private sector who serve in a civil servant capacity act to mitigate potential conflicts of interest between their home institutions and NASA using measures outlined in [Science Mission Directorate Policy Document \(SPD\)-05, Preventing Financial Conflicts for IPA Employees](#).

Publication Policies and Public Accessibility

See the section entitled [Publication and Communication of Research Results](#).

NASA AS A FUNDER OF RESEARCH

NASA seeks to ensure the quality and credibility of the research it funds. Policies related to the [Responsible Conduct of Research](#), as well as [Publication Policies and Public Accessibility](#), mirror those covered in the previous section, and are applicable to NASA funded research.

Funding and Proposal Policies

NASA ensures the integrity of the award process for grants, contracts, and acquisitions by adhering to the [NASA Federal Acquisition Regulation \(FAR\) Supplement, Part 1872, Acquisitions of Investigations](#). Entities considered associated with an award include the awardee, the agency and the funding Mission Directorate, and any contractors or subcontractors engaged by either of these parties in the administration or execution of the award. All participants must prevent their employees, consultants, governing body members and any other persons engaged by the entity in supporting the award from using their positions for private gain. A person may be

considered to be using their position for gain if they are, or give the appearance of being, motivated by a desire for private or financial gain. Similarly, these entities must prevent their employees, consultants, governing body members and any other persons engaged by the entity in supporting the award from injecting bias into the research being performed.

Peer Review

NASA employs an open competition process when practicable, and uses peer review by non-conflicted experts to ensure selection for funding of the most meritorious research and technology proposals for both NASA investigators and NASA-sponsored extramural investigators. It is also NASA policy to have peer review of publications resulting from all scientific investigations by NASA investigators and NASA-sponsored investigators and to conduct quality and performance assessments of NASA research and technology programs. These policies are outlined in [NASA FAR Supplement, Part 1872, Acquisitions of Investigations](#); [NPD 1000.0A, NASA Governance and Strategic Management Handbook](#); [NPD 1080.1, Policy for the Conduct of NASA Research and Technology](#); [NASA NPR 1080.1, Requirements for the Conduct of NASA Research and Technology](#); [NPR 2200.2, Requirements for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information](#); [NPR 7120.8, NASA Research and Technology Program and Project Management Requirements](#); [Science Mission Directorate \(SMD\) 2014 Science Plan](#); and [Human Research Program \(HRP\)-47053, Science Management Plan](#).

Directed Research

Additionally, directed research is used as an acquisition method for obtaining selected research data and technology development when:

- a. There is insufficient time for solicitation. In certain cases, NASA must define scientific activities in a short time (e.g., because of the emergence of new opportunities to carry out activities in space). When this is the case, use of a directed study may be the only practical way to respond.
- b. The research is highly constrained. In this case, the project requires constrained data gathering and analysis that is more appropriately obtained through a well-defined solicitation using a Request for Proposal (RFP) or by a non-competitively developed proposal (e.g., the research task may involve extensive operational practices and associated operational personnel who must be heavily involved in the development of the study design).

Participating NASA Centers also utilize competitive contracts for procurement of support to intramural project tasks. The centers have multiple options for procurements and select the optimal procurement method based on the Agency policy of the widest possible use of competitive processes.

Regardless of the acquisition method, the review and selection of science is in accordance with NASA policies. Furthermore, the selection of science is merit reviewed (e.g., see [Human Research Program Science Management Plan, HRP-47053, Rev D](#)).

Conflicts of Interest

All NASA civil servants must certify the absence of financial conflicts of interest before participating in peer reviews of projects proposed for agency support by completing the "[NASA Conflicts of Interest and Confidentiality Self Certification for NASA Peer Reviewers who are Federal Government Employees Form](#)," (internal NASA link) which is incorporated into the online NASA Solicitation and Proposal Integrated Review and Evaluation System (NSPIRES).

To ensure the scientific integrity and objectivity of all research, all personnel (including NASA civil servants, contractors, and grant awardees) involved in the funding, conduct and dissemination of research should avoid situations in which financial or other interests may compromise, or give the appearance of compromising, the work. NASA requires institutions that apply for or receive funding under grants or cooperative agreements, except Phase I Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) applicants, to address financial conflicts of interest by complying with the requirements of [42 CFR, Part 50, Subpart F, Promoting Objectivity in Research](#). Conformance to the regulations provides a reasonable expectation that the design, conduct and reporting of research funded under NASA will be free from bias due to financial conflicts of interest. These policies are outlined in [NPD 1080.1, Policy for the Conduct of NASA Research and Technology](#); [NASA Policy Requirements \(NPR\) 1080.1, Requirements for the Conduct of NASA Research and Technology](#); and [NPR 7120.8, NASA Research and Technology Program and Project Management Requirements](#).

Research Misconduct

When an allegation is made to the NASA Office of the Inspector General, rather than to the awardee institution, the OIG determines whether the allegation concerns NASA research and whether the allegation, if true, falls within the definition of research misconduct in [14 CFR 1275.101\(a\)](#). If the research in question is being conducted at an awardee institution, another Federal Agency, or is a collaboration between NASA researchers and co-investigators at either academia or industry, the OIG must refer to the entities involved the allegation that meets the definition of research misconduct and determine what role if any OIG will play in the investigation.

Fraud, Waste and Abuse

The NASA Office of Inspector General examines all reports of fraud, waste and abuse. Any NASA employee who observes fraud, waste, and abuse, or who receives an allegation of fraud, waste, and abuse from a Federal employee, contractor, grantee, or any other source must report such observation or allegation to the OIG. NASA contractor employees and other individuals are also encouraged to report fraud, waste, and mismanagement in NASA's programs to the OIG. NASA policy that addresses this issue can be found in [NASA Policy Directive \(NPD\) 2086.1, Coordination of Remedies for Fraud and Corruption Related to NASA Acquisition Activities](#); [NPD 9800.1B, NASA Office of Inspector General Programs](#); and [NPR 9010.3, Financial Management Internal Control Program](#).

Publication Policies

See the section entitled [Publication and Communication of Research Results](#).

USE OF FEDERAL ADVISORY COMMITTEES

NASA ensures the integrity of its use of Federal Advisory Committees (FAC) tasked with giving scientific advice.

FAC Membership



FIGURE 3 FIRST MEETING OF THE NATIONAL ADVISORY COMMITTEE FOR AERONAUTICS, 1915 (CREDIT NACA/NASA)

NASA fosters transparency and ethical standards in its recruitment and selection of members for and use of FACs tasked with giving scientific advice, as outlined in [NPD 1150.11, Federal Advisory Committee Act Committees](#), and [NPR 1900.3B, Ethics Program Management](#), and in compliance with the [Federal Advisory Committee Act \(5 U.S.C. App., as amended\)](#) and the [General Services Administration \(GSA\) Final Rule on Federal Advisory Committee Management \(41 CFR Parts 101-6 and 102-3\)](#).

When practicable and appropriate, NASA announces FAC member vacancies widely, including notification in the Federal Register with an invitation for the public to recommend individuals for consideration and for self-nominations to be submitted.

Professional biographical information (including current and past professional affiliations) for appointed committee members is made widely available to the public (e.g., via a website) subject to Privacy Act and other statutory/regulatory considerations. NASA ensures that the publically available biographical information highlights the individuals' qualifications for serving on the committee. This is implemented in NASA through [NPD 1150.11, Federal Advisory Committee Act Committees](#), and [NPR 1900.3B, Ethics Program Management](#).

Under NASA policy ([NPD 1150.11, Federal Advisory Committee Act Committees](#)), the selection of members to serve on a scientific or technical FAC should be based on expertise, knowledge, and contribution to the relevant subject area. Additional factors that may be considered are availability of the member to serve, diversity among members of the FAC, and the ability to work effectively on advisory committees. NASA encourages the formation of FACs with membership that is fairly balanced in terms of points of view represented with respect to the functions to be performed by the FAC.

All FAC members who are Special Government Employees (SGEs) members and the designated federal officers of each committee complete a financial disclosure form and receive cautionary letters from NASA's Office of General Counsel where conflicts of interest may exist between their financial interest and their advisory roles. The designated federal officers of each committee should ensure that any individual with an identified conflict is recused from committee activities that involve a conflicted entity or issue.

Federal Advisory Committee Reports, Recommendations, and Products

All reports, recommendations, and products generated by FACs should be treated as solely the findings of such committees rather than of the United States Government, and thus are not subject to intra- or inter-Agency revision, except when explicitly stated in a prior agreement between an agency and a FAC.

PUBLIC COMMUNICATION OF RESEARCH RESULTS

Publication and Communication of Research Results

NASA facilitates the free flow of scientific and technological information among scientists and engineers, between NASA staff and the scientific and technical community, and between NASA employees and the public, as consistent with the [National Aeronautics and Space Act as amended](#), which stipulates that NASA shall “provide for the widest practicable and appropriate dissemination of information concerning its activities and the results thereof.”

NASA makes publically available the scientific and technical information, peer-reviewed publications, and unclassified, digital, scientific and technical, development data sets arising from NASA-funded research, development, and technology programs, as outlined in [NPR 2200.2, Requirements for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information](#), and [NPD 2230.1, Research Data and Publication Access](#). NASA makes publications and technical information publically available through the [STI homepage](#).

Scientific documents, such as publications (e.g., papers, addenda etc.), translations, internal reports, guidelines and recommendations, from civil servant conducted research and where permitted for extramural researchers, undergo review by NASA subject matter experts, and progress through a clearance process that captures comments and considerations, as well as iterations and approvals, prior to releasing information to the public. NASA collects, manages, disseminates, safeguards, and archives the results (publications and technical reports) of NASA-conducted research and development activities for use by the scientific community and the public. Unless a determination is made that public dissemination of such information must be prohibited or restricted due to privacy or classification standards, as outlined in [NPD 2200.1, Management of NASA Scientific and Technical Information](#), the results of all NASA research and development activities (publications and technical reports) will be made available to the public by request.

NASA employees and NASA-funded researchers publish the results of their research and development activities using mechanisms that include the [NASA Scientific and Technical Information \(STI\) Report Series](#) (internal NASA Link), NASA websites, and non-NASA scientific and technical channels such as professional society journals, conference proceedings, and to the greatest extent practical, peer-reviewed literature, as outlined in [NPR 1080.1, Requirements for the Conduct of NASA Research and Technology](#).

**FIGURE 4 NASA COMM ROOM FOR NEW HORIZONS REHERSAL
(CREDIT NASA)**

The Agency advocates open communication among scientists and engineers, between NASA staff and the technical community, and between NASA employees and

the public. NASA requires the results of NASA-funded research, both internal and external, to be made available to the scientific community and to the public. NASA civil servants are encouraged to share their results with their peers and colleagues at professional meetings, science conferences, and other venues to the extent permitted by available funding and law. Peer reviewed publications are to be made available at no cost to the public on NASA’s Pubspace website no later six months following publication.

A key agency goal is to convey to the public scientific and technological information derived from NASA research and development activities. In the context of conveying this information, NASA encourages a clear explanation of underlying assumptions, accurate contextualization of uncertainties, and the probabilities associated with both optimistic and pessimistic projections, including best-case and worst-case scenarios when appropriate.

These NASA objectives are supported by the [National Aeronautics and Space Act, as amended](#); [NPD 2200.1, Management of NASA Scientific and Technical Information](#); [NPR 2200.2, Requirements for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information](#); [NPD 1001.0, NASA Strategic Plan](#); and the [2010 Science Plan for NASA's Science Mission Directorate](#).

Resolution of Disputes in the Publication Dissemination Process

For NASA employees or others who fall under the STI requirements, if an author does not agree with the decision regarding dissemination of a document, as established by the original document availability authorization process at the Center through which approval is sought, they may appeal the decision by requesting a re-review of the document by Center management within 30 days of notification and notify the STI Program Office. If the author does not agree with this appeal process decision, they may raise the issue to the Agency Chief Information Officer, who will involve the pertinent Center Program Manager, Center Director or designee, and Mission Directorate within 30 days of notification. The Agency Chief Information Officer then responds to the person appealing the decision within 30 days. The relevant NASA policy and guidance are found in [NPR 2200.2D, Requirements for Documentation, Approval and Dissemination of NASA Scientific and Technical Information](#), and the [NASA Publications Guide for Authors \(NASA/SP-2015-7602/Rev 2\)](#).

Media Policies



FIGURE 5 NASA PARTICIPATION IN A MEDIA FORUM (CREDIT AIAA/NASA)

It is vital for the NASA mission to maximize openness with the media and the American people, as supported by the [National Aeronautics and Space Act as amended](#). Policies governing NASA media relations can primarily be found in [14 CFR 1213.105, Release of Information to News and Information Media](#). NASA is dedicated to cultivating articulate and knowledgeable spokespersons, as specified in [14 CFR 1213.105\(b\)](#). NASA encourages employees to speak to the media and the public about their work, provided that they coordinate with their immediate supervisor and public affairs office ([14 CFR 1213.105\(c\)](#)). NASA also encourages its supported extramural

researchers to share their research with the media and public. NASA believes that the scientific and technical information that employees (and extramural researchers) share about NASA programs and projects should be timely, accurate and unfiltered ([14 CFR 1213.102\(a\)](#)), and that in no circumstance may public affairs officers ask or direct Federal scientists to alter scientific findings ([14 CFR 1213.103\(c\)](#)).

Resolution of Disputes Related to Media Release

Any disputes arising from a decision to proceed or not proceed with the issuance of a news release or other type of public information is addressed and resolved by the Assistant Administrator for Communications, with the appropriate Mission Directorate Associate Administrator, Mission Support Office head, Center Director, and others, such as Center Communications Directors, as necessary. However, the appropriate MDAA shall be the arbiter of disputes about the accuracy or characterization of programmatic, technical, or scientific information. Additional appeals may be made to agency leadership, including the Office of the Administrator. When

requested by a Center Communications Director, an explanation of the resolution will be provided in writing to all interested agency parties. This policy is articulated in [14 CFR 1213.104\(e\)](#).

PROFESSIONAL DEVELOPMENT OF NASA SCIENTISTS AND ENGINEERS

NASA supports the professional development of its workforce in keeping with ethical standards, honesty and transparency. NASA encourages the publication of research findings in peer-reviewed, professional or scholarly journals, as stated in [NPR 1080.1, Requirements for the Conduct of NASA Research and Technology](#), and [NPR 2200.2, Requirements for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information](#). NASA also promotes the presentation of research findings at professional meetings, as embodied in [NPR 1080.1, Requirements for the Conduct of NASA Research and Technology](#).

NASA employees serve as editors or editorial board members of professional or scholarly journals, when such participation is an integral part of professional development. This is regarded as being a part of the employee's official duties, once the activity has been approved by a supervisor. NASA recognizes not only that such service is important for the professional development of NASA scientists and engineers but also that such development serves the interests of the government and the U.S. taxpayer by improving the quality and professional standing of employees.

Scientists, engineers and other employees at NASA serve as officers in professional societies, when such participation is an integral part of professional development. While there are no NASA-specific barriers to participation as officers or directors of professional societies, the Department of Justice Office of Legal Counsel has stated that, with the exception of certain standard-setting organizations, [18 U.S.C. 208](#) prohibits outside board service in an official capacity. NASA has ethics officials who work with interested employees to ensure that outside activities are performed in compliance with all legal and ethics requirements.

An [Agency-wide memorandum](#) dated July 26, 2011, confirms the agency's support for NASA employees to serve as society officers or board members, where appropriate, and summarizes the Agency's processes for them to obtain approval for such service.

Civil servants and NASA contractors may receive honors and awards from outside entities for their research and discoveries, as outlined in [5 CFR 2635.204\(d\)](#).



FIGURE 6 SCIENCE, TECHNOLOGY, AND MATH (STEM) AWARDS CEREMONY (CREDIT NASA)

RELEVANT DOCUMENTS, LINKS AND CONTACT POINTS

REGULATION AND POLICY DOCUMENTS

- 1) NASA Policy Directive (NPD) 1000.0A, NASA Governance and Strategic Management Handbook, <http://nodis3.gsfc.nasa.gov/displayDir.cfm?t=NPD&c=1000&s=0A>
- 2) NPD 1080.1, Policy for the Conduct of NASA Research and Technology, <http://nodis3.gsfc.nasa.gov/displayDir.cfm?t=NPD&c=1080&s=1B>
- 3) NPR 1080.1, Requirements for the Conduct of NASA Research and Technology, <http://nodis3.gsfc.nasa.gov/displayDir.cfm?t=NPR&c=1080&s=1A>

- 4) National Aeronautics and Space Act of 1958, as amended, https://www.nasa.gov/offices/ogc/about/space_act1.html
- 5) NASA Policy Directive (NPD) 8910.1B, Care and Use of Animals, <https://nodis3.gsfc.nasa.gov/displayDir.cfm?t=NPD&c=8910&s=1B>
- 6) NASA Procedural Requirements (NPR) 8910.1C Care and Use of Animals, https://nodis3.gsfc.nasa.gov/displayDir.cfm?Internal_ID=N_PR_8910_001C_&page_name=Preface
- 7) 42 U.S.C. 2473 (c)(1) The Public Health and Welfare, Chapter 26 National Space Program, Subchapter II Coordination of Aeronautical and Space Activities Section 2473 Functions of Administration, <https://www.gpo.gov/fdsys/pkg/USCODE-2009-title42/html/USCODE-2009-title42-chap26-subchapII-sec2473.htm>
- 8) 14 CFR 1230, Protection of Human Subjects, <https://www.gpo.gov/fdsys/granule/CFR-2012-title14-vol5/CFR-2012-title14-vol5-part1230/content-detail.html>
- 9) 45 CFR Part 46, Protection of Human Subjects, http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title45/45cfr46_main_02.tpl
- 10) NASA Policy Directive (NPD 7100.8E) Protection of Human Research Subjects https://nodis3.gsfc.nasa.gov/displayDir.cfm?Internal_ID=N_PD_7100_008E_&page_name=main
- 11) NASA Procedural Requirements (NPR) 7100.1 —Protection of Human Research Subjects <https://nodis3.gsfc.nasa.gov/displayDir.cfm?t=NPR&c=7100&s=1>
- 12) NPR 3335.1, Internal Placement of NASA Employees, <http://nodis3.gsfc.nasa.gov/displayDir.cfm?t=NPR&c=3335&s=1H>
- 13) 5 CFR 300.102, Employment Practices, <https://www.gpo.gov/fdsys/granule/CFR-2002-title5-vol1/CFR-2002-title5-vol1-sec300-102>
- 14) Whistleblower Protection Act of 1989, Public Law (P.L.) 101-12, <https://www.congress.gov/bill/101st-congress/senate-bill/20>
- 15) Whistleblower Protection Enhancement Act of 2012, P.L. 112-199, <https://www.gpo.gov/fdsys/pkg/PLAW-112publ199/pdf/PLAW-112publ199.pdf>
- 16) Title 10 United States Code, section 2409 (2016 version) <https://www.law.cornell.edu/uscode/text/10/2409>
- 17) No FEAR Act (P.L. 107-174), <https://www.gpo.gov/fdsys/pkg/PLAW-107publ174/html/PLAW-107publ174.htm>
- 18) NASA's Whistleblower Protection Plan, https://www.nasa.gov/pdf/611174main_WhistleblowerProtectionPlan.pdf
- 19) Federal Research Misconduct Policy, Office of Science and Technology Policy (65 Federal Register 76260, Dec. 6, 2000), <https://www.gpo.gov/fdsys/pkg/FR-2000-12-06/html/00-30852.htm>
- 20) 14 CFR 1275, Research Misconduct, <http://www.ecfr.gov/cgi-bin/text-idx?SID=52709f6aaf8f383da42dfe0dff5276ad&mc=true&node=pt14.5.1275&rgn=div5>
- 21) NASA Procedural Requirements (NPR) 1080.1, Requirements for the Conduct of NASA Research and Technology, <http://nodis3.gsfc.nasa.gov/displayDir.cfm?t=NPR&c=1080&s=1A>
- 22) NPR 1900.3B, Ethics Program Management. Intergovernmental Personnel Act (IPA), https://nodis3.gsfc.nasa.gov/displayDir.cfm?Internal_ID=N_PR_1900_003B_&page_name=Chapter_4
- 23) Science Mission Directorate Policy Document (SPD)-01, Handling Conflicts-of-Interest for Peer Reviews, <https://smd-prod.s3.amazonaws.com/science-green/s3fs-public/mnt/medialibrary/2010/03/31/SPD-01APeerReviewConflicts-of-Interest.pdf>
- 24) Human Research Program (HRP)-47053, Science Management Plan, <https://www.nasa.gov/hrp/research/documents>

- 25) Guidebook for Proposers Responding to a NASA Research Announcement or Cooperative Agreement Notice, <https://www.hq.nasa.gov/office/procurement/nraguidebook/>
- 26) SPD-05, Preventing Financial Conflicts for IPA Employees, https://smd-prod.s3.amazonaws.com/science-green/s3fs-public/mnt/medialibrary/2011/08/04/SPD-05_Preventing_Conflicts_for_IPAs.pdf
- 27) NPD 2200.1, Management of NASA Scientific and Technical Information, <https://nodis3.gsfc.nasa.gov/displayDir.cfm?t=NPD&c=2200&s=1B>
- 28) NASA Federal Acquisition Regulation (FAR) Supplement, Part 1872, Acquisitions of Investigations, <http://www.farsmarterbids.com/regs/fars/part.php?partID=1872>
- 29) NPD 1000.0A, NASA Governance and Strategic Management Handbook, https://nodis3.gsfc.nasa.gov/npg_img/N_PD_1000_000B_/N_PD_1000_000B_.pdf
- 30) NPR 2200.2, Requirements for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information, <http://nodis3.gsfc.nasa.gov/displayDir.cfm?t=NPR&c=2200&s=2C>
- 31) NPR 7120.8, NASA Research and Technology Program and Project Management Requirements, <http://nodis3.gsfc.nasa.gov/displayDir.cfm?t=NPR&c=7120&s=8>
- 32) The 2010 Science Plan for NASA's Science Mission Directorate, <https://science.nasa.gov/about-us/science-strategy/>
- 33) 42 CFR, Part 50, Subpart F, Promoting Objectivity in Research, <http://www.ecfr.gov/cgi-bin/text-idx?rgn=div5&node=42:1.0.1.4.23>
- 34) NASA Policy Directive (NPD) 2086.1, "Coordination of Remedies for Fraud and Corruption Related to NASA Acquisition Activities," <https://nodis3.gsfc.nasa.gov/displayDir.cfm?t=NPD&c=2086&s=1>
- 35) NPD 9800.1B, NASA Office of Inspector General Programs, <https://nodis3.gsfc.nasa.gov/displayDir.cfm?t=NPD&c=9800&s=1B>
- 36) NPR 9010.3, Financial Management Internal Control Program, https://nodis3.gsfc.nasa.gov/displayDir.cfm?Internal_ID=N_PR_9010_0003_&page_name=Chapter_1
- 37) NPD 1150.11, Federal Advisory Committee Act Committees (under revision), <https://nodis3.gsfc.nasa.gov/displayDir.cfm?t=NPD&c=1150&s=11>
- 38) Federal Advisory Committee Act (5 U.S.C. App., as amended), <https://www.gpo.gov/fdsys/pkg/USCODE-2012-title5/pdf/USCODE-2012-title5-app-federalad.pdf>
- 39) General Services Administration (GSA) Final Rule on Federal Advisory Committee Management (41 CFR Parts 101-6 and 102-3), https://energy.gov/sites/prod/files/2015/07/f25/faca41CFRParts101_6_102_3_0.pdf
- 40) 14 CFR 1213, Release of Information to News and Information Media, <https://www.gpo.gov/fdsys/granule/CFR-1999-title14-vol5/CFR-1999-title14-vol5-part1213>
- 41) NPD 2230.1, Research Data and Publication Access, https://nodis3.gsfc.nasa.gov/displayDir.cfm?Internal_ID=N_PD_2230_0001_&page_name=main
- 42) NPD 1001.0, NASA Strategic Plan, <https://nodis3.gsfc.nasa.gov/displayDir.cfm?t=NPD&c=1001&s=0A>
- 43) NASA Publications Guide for Authors (NASA/SP-2015-7602/REV 2), <https://ntrs.nasa.gov/search.jsp?R=20150013303>
- 44) 18 U.S.C. § 208, Acts affecting a personal financial interest, <https://www.gpo.gov/fdsys/pkg/USCODE-2012-title18/html/USCODE-2012-title18-part1-chap11-sec208.htm>
- 45) Agency-wide memorandum dated July 26, 2011, Regarding Professional Service, <http://www.spaceref.com/news/viewstr.html?pid=38104>
- 46) 5 CFR 2635.204(d) Exceptions to the prohibition for acceptance of certain gifts,

http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title05/5cfr2635_main_02.tpl

47) NASA Scientific and Technical Information (STI) Report Series, <https://www.sti.nasa.gov/>

48) NASA Conflicts of Interest and Confidentiality Self Certification for NASA Peer Reviewers who are Federal Government Employees Form,

https://www.nasa.gov/sites/default/files/atoms/files/ocs_website_-_self_certification_form_cs.pdf

USEFUL LINKS

- 1) Review of Federal Agency Policies on Scientific Integrity, <https://www.ida.org/idamedia/Corporate/Files/Publications/STIPubs/2016/D-8305.ashx>
- 2) Centers for Disease Control Guidance on Scientific Integrity, <https://www.cdc.gov/od/science/integrity/index.htm>
- 3) National Institute of Health Policies and Procedures for Promoting Research Integrity, https://grants.nih.gov/policy/research_integrity/index.htm
- 4) US Department of Agriculture Scientific Integrity and Research Misconduct Policies, <https://www.usda.gov/our-agency/staff-offices/office-chief-scientist-ocs/scientific-integrity-and-research-misconduct>
- 5) US Environmental Protection Agency Scientific Integrity Policy, <https://www.epa.gov/osa/basic-information-about-scientific-integrity>
- 6) US Department of Health and Human Services, Policies and Principles for Assuring Scientific Integrity, <https://www.hhs.gov/sites/default/files/open/pres-actions/scientific-integrity-principles-12-19-11.pdf>

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