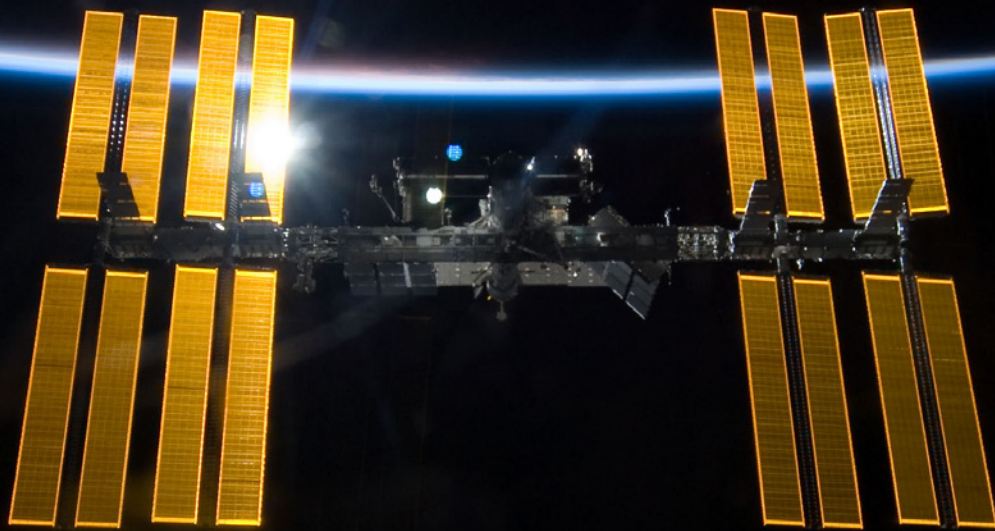


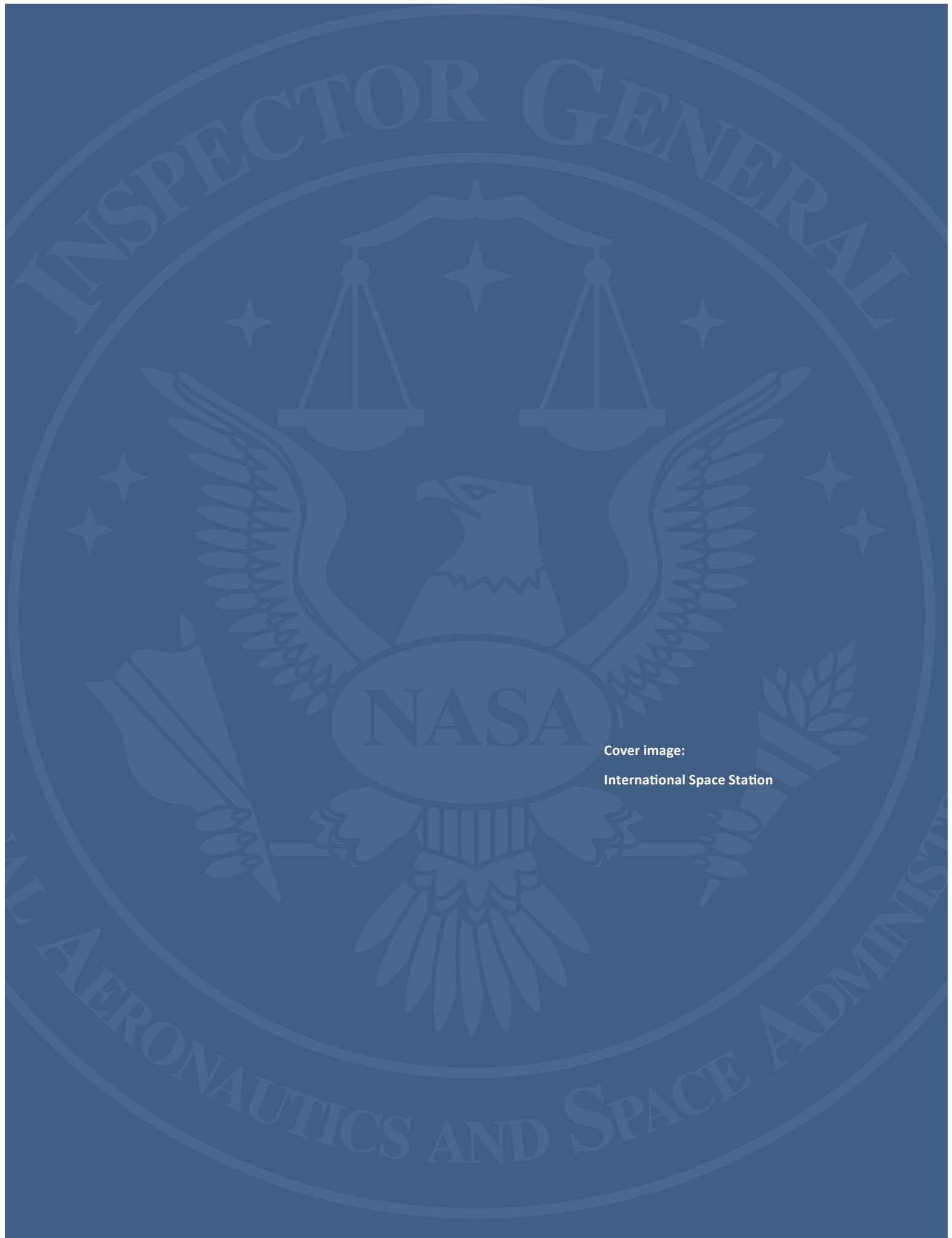


NASA OFFICE OF INSPECTOR GENERAL



SEMIANNUAL REPORT

OCTOBER 1, 2017–MARCH 31, 2018



Cover image:

International Space Station



FROM THE INSPECTOR GENERAL

NASA's extensive portfolio of science-, space-, and aeronautics-related activities presents the Office of Inspector General (OIG) with a wide variety of issues to examine. Two topics we paid special attention to this reporting period: information technology (IT) governance and NASA's efforts to resupply and fully utilize the International Space Station (ISS or Station).

With respect to IT governance, we found in a 2013 review that the decentralized nature of NASA operations and a longstanding culture of autonomy hindered the Agency's ability to implement effective IT governance. We made eight recommendations, and NASA agreed to take action to address our concerns. In a follow-up audit released this reporting period, we evaluated NASA's progress in implementing changes to its IT governance structure and found that in the past 4 years the Office of the Chief Information Officer (OCIO) has made insufficient progress to improve NASA's IT governance, casting doubt on its ability to effectively oversee the Agency's IT assets. Specifically, the OCIO continues to have limited visibility into IT investments across the Agency, and the process NASA developed to correct this shortcoming is flawed. This lack of visibility limits NASA's ability to consolidate IT expenditures, realize cost savings, and drive improvements in the delivery of IT services. We made five recommendations for corrective action in this follow-up report.

With respect to the ISS, the President's fiscal year 2019 budget envisions NASA ending direct financial support for the Station beginning in 2025 even though many members of Congress prefer an extension through at least 2028. The OIG has examined multiple aspects of Station operations over the years, including research conducted onboard to reduce health-related risks to astronauts and NASA's use of commercial companies to provide cargo resupply and crew transportation.

During the past reporting period, the OIG released an audit examining the Center for the Advancement of Science in Space (CASIS), a private entity responsible for managing non-NASA research activities on the U.S. portion of the ISS, as well as an audit examining a \$484 million cooperative agreement with the National Space Biomedical Research Institute (NSBRI), a consortium of universities and science organizations focused on research to mitigate human health and performance risks associated with space travel. In spring 2018, the OIG plans to release an audit examining the Agency's efforts to maximize utilization of the ISS prior to its scheduled retirement in 2024, its efforts to reduce operating costs, and the challenges associated with the Station's eventual deorbit.

While the auditors audit, our Office of Investigations continues to pursue allegations involving misuse of NASA funds; misconduct by NASA employees, contractors, and grant recipients; and cyberattacks on Agency systems. During the reporting period, NASA OIG investigators helped convict a small business owner of six counts of wire fraud related to research contracts valued at over \$2 million. In addition, a former Kennedy Space Center employee was convicted of violating post-employment ethics restrictions after accepting a position with a contractor he worked closely with during his tenure and representing

the company back to NASA. Finally, the OIG recommended discipline for a NASA senior manager whose misconduct included improperly promoting an employee and directing contract employees to provide personal services.

This Semiannual Report summarizes the OIG's activities and accomplishments between October 1, 2017, and March 31, 2018. We hope you find it informative.

A handwritten signature in black ink, appearing to read "PKM-A". The letters are stylized and connected.

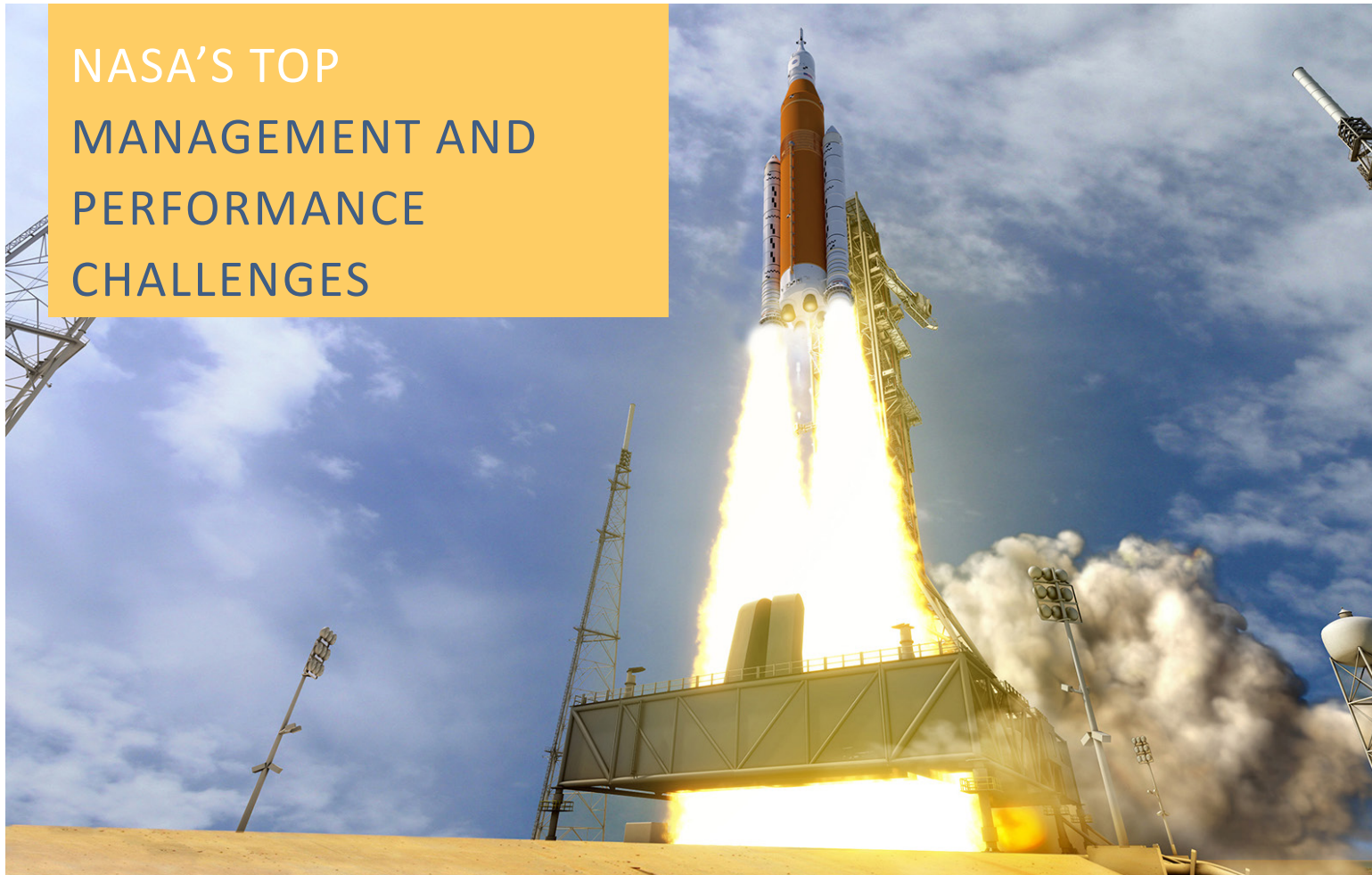
Paul K. Martin
Inspector General
April 30, 2018



TABLE OF CONTENTS

NASA's Top Management and Performance Challenges	2
Office of Audits	4
Acquisition and Project Management	5
Information Technology Security and Governance	8
Space Operations and Human Exploration	12
Infrastructure	15
Financial Management	16
Other Audit Matters	18
Statistical Data	19
Office of Investigations	26
Procurement and Acquisition Fraud	27
Computer Crimes	29
Employee Misconduct	29
Statistical Data	31
Legal Issues	34
Whistleblower Cases	35
Regulatory Review	36
Statistical Data	37
Appendixes	39
A. Inspector General Act Reporting Requirements	40
B. Awards	41
C. Debt Collection	42
D. Peer Reviews	43
E. Acronyms	44
F. Office of Inspector General Organizational Chart	45
G. Map of Field Offices	47

NASA'S TOP MANAGEMENT AND PERFORMANCE CHALLENGES



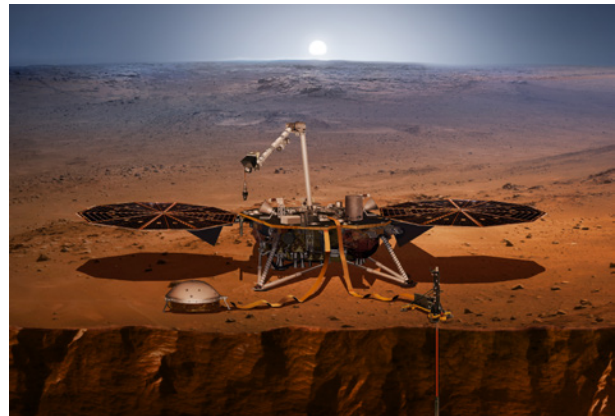
Artist's rendering of Space Launch
System (SLS) at launch

As required by the Reports Consolidation Act of 2000, the annual report summarized below provided the Office of Inspector General’s (OIG) independent assessment of the top management and performance challenges facing NASA.

In our November 2017 report, we organized the top management and performance challenges facing NASA under the following topics:

- Deep Space Exploration
- NASA’s Science Portfolio
- Information Technology Governance and Security
- Aging Infrastructure and Facilities
- Contracting and Grants

In deciding whether to identify an issue as a top challenge, we considered its significance to NASA’s mission; whether its underlying causes are systemic in nature; and its susceptibility to fraud, waste, and abuse. Identification of an issue as a “top challenge” does not necessarily denote significant deficiencies or lack of attention on the part of NASA. Rather, all of these issues are long-standing and inherently difficult challenges central to the Agency’s mission and, as such, will remain challenges for years. Consequently, these issues require consistent, focused attention from NASA management and engagement on the part of Congress and the public. For our part, the OIG plans to continue conducting audits and investigations that focus on NASA’s efforts to meet these challenges.



Artist’s rendering of the InSight lander operating on the surface of Mars (scheduled to launch in May 2018)

NASA’s 2017 Top Management and Performance Challenges (November 6, 2017)

[\(Report\)](#)

[\(Video\)](#)

OFFICE
OF AUDITS



NASA's barge Pegasus delivers SLS hardware to Marshall Space Flight Center for testing

ACQUISITION AND PROJECT MANAGEMENT

Effective contract, grant, and project management remains a top challenge for NASA. Through its audits, the OIG helps ensure NASA engages in sound procurement and acquisition practices that provide the Agency and taxpayer with the best possible value.

NASA'S MANAGEMENT OF SPARE PARTS FOR ITS FLIGHT PROJECTS

Spare parts are critical to developing and maintaining a wide variety of NASA systems including aircraft, launch vehicles, spacecraft, satellites, ground communications, ground support, and test materials. NASA policy requires the Assistant Administrator for Strategic Infrastructure to establish supply support and material management policies and assess their effectiveness on an ongoing basis. In a review examining how the Agency manages its spare parts inventory, we found that NASA was not properly accounting for or effectively using available resources to manage its inventory for flight projects. In addition, spare parts disposal practices at some NASA Centers were inefficient and untimely. Effectively procuring, accounting for, and managing flight inventory, including spare parts, saves money and reduces the size and cost of NASA inventory by using existing resources rather than procuring new parts. Effective flight inventory practices also provide project managers more accurate information to make prudent procurement decisions and help the Agency obtain fair proceeds when selling excess parts to outside entities. NASA management concurred with and described actions to address our seven recommendations.

NASA's Management of Spare Parts for its Flight Projects (IG-18-001, October 5, 2017)

[\(Report\)](#)

[\(Video\)](#)

NASA'S SURFACE WATER AND OCEAN TOPOGRAPHY MISSION

NASA's Surface Water and Ocean Topography (SWOT) mission, scheduled to launch in April 2021, will produce the first global survey of Earth's surface water, observe details of the ocean's surface topography, and measure how water bodies change over time. In evaluating NASA's management of the mission, we found that SWOT has experienced cost growth and schedule delays due to the technical complexity of the Project's instruments and the difficulty of working with multiple international partners. Deficiencies in SWOT's baseline estimate and the downward trend in cost performance metrics indicate the Project faces a likelihood of further cost growth and schedule slippage. NASA management concurred with and described actions to address our six recommendations.

NASA's Surface Water and Ocean Topography Mission (IG-18-011, January 17, 2018)

[\(Report\)](#)

[\(Video\)](#)

ONGOING AUDIT WORK

NASA's Management of the Goddard Institute for Space Studies

Since 1961, NASA's Goddard Institute for Space Studies (GISS) has collaborated with scientists throughout the world in researching the structure and atmosphere of planetary bodies, the Sun and other stars, and our solar system. More recently, GISS research has focused on global climate change – the study of natural and man-made changes in our environment and the effect these changes have on the habitability of Earth. In this audit, we are examining NASA's management of GISS, including its role in helping NASA achieve its science goals, its use of appropriated and non-appropriated funds, and how well GISS coordinates with other members of the science community.

NASA's Management of its Heliophysics Portfolio

Heliophysics is the study of the Sun's effects on the solar system. Many of NASA's active heliophysics spacecraft have long outlived their original design lives, which threatens NASA's ability to continue to collect valuable data on space weather. This review will assess NASA's management of its heliophysics portfolio, which includes missions such as the Parker Solar Probe, Solar Dynamics Observatory, and Voyager, and examine whether the Agency is meeting its science goals and priorities.

Audit of NASA's Use of Service Contracts

In fiscal year 2016, NASA awarded approximately \$18.3 billion in contracts. Of this amount, about 90 percent was spent on contracting for services. Because of issues we previously identified with

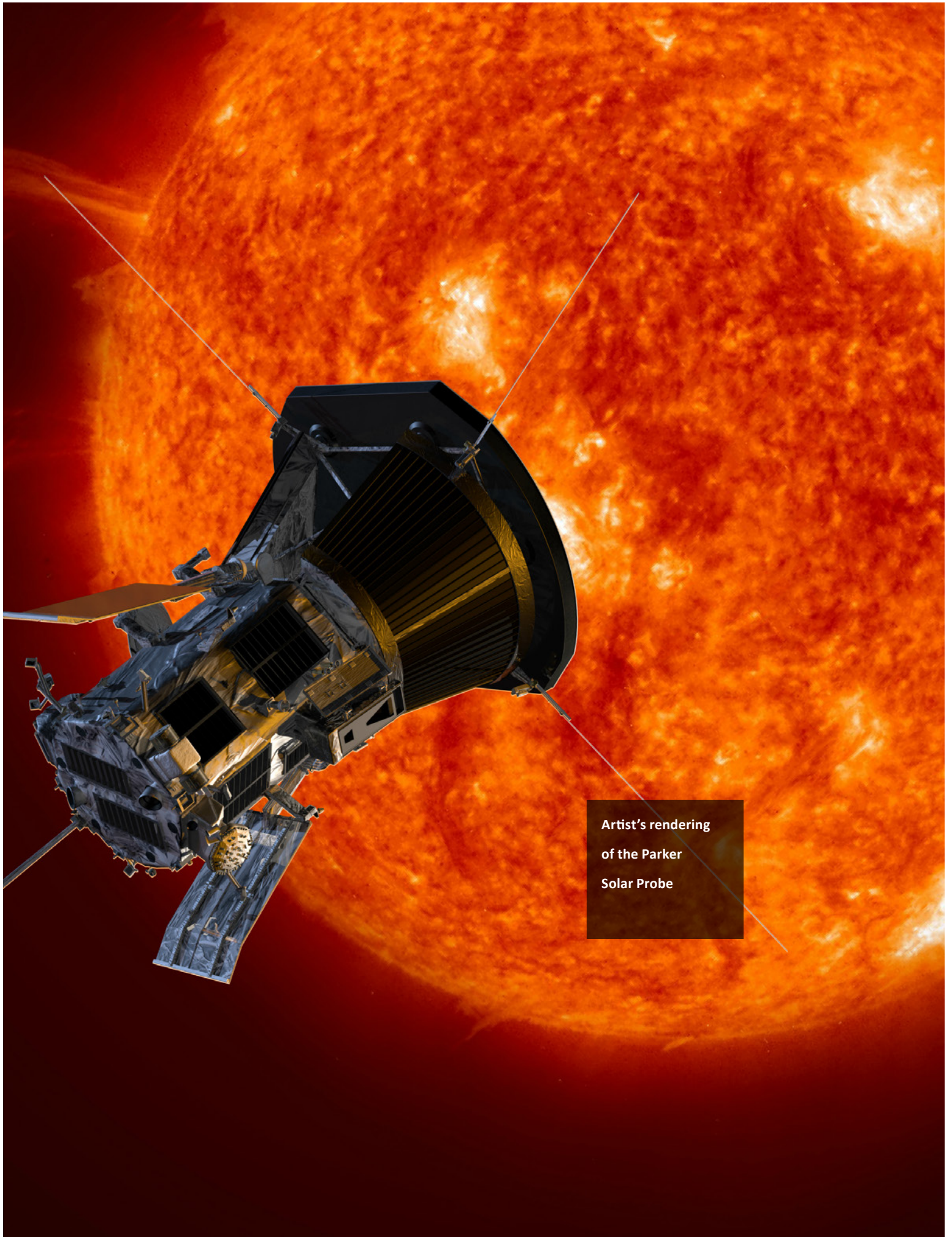
NASA's contracting process, we initiated this audit to examine the Agency's process for acquiring and managing service contracts.

Audit of the SETI Institute

The SETI Institute is a private, nonprofit organization established to explore, explain, and understand the origin and nature of life in the universe through scientific research, education, and public outreach. According to NASA records, the Institute has 85 active awards from NASA in fiscal year 2018 totaling about \$81 million. This audit will assess the extent to which the Institute supports NASA's science goals and objectives and evaluate its use of NASA funds in support of the Agency's mission.

Audit of NASA's Technology Transfer Program

Technology transfer is the process of moving inventions from the laboratory to the marketplace, promoting commerce, encouraging economic growth, stimulating innovation, and offering benefits to the public and industry. NASA encourages the widest possible utilization of its technological assets by the Nation's public and private sectors to benefit the economy and the public. While technology transfer and commercialization are fundamental to NASA's mission, in a 2012 audit we found a general lack of awareness of NASA policy governing the technology transfer and commercialization process. This audit will assess whether NASA is effectively managing the technology transfer process in accordance with the National Aeronautics and Space Act of 1958 and Agency policy.



Artist's rendering
of the Parker
Solar Probe

INFORMATION TECHNOLOGY SECURITY AND GOVERNANCE

Information Technology (IT) plays an integral role in every facet of NASA's space, science, and aeronautics operations. In fiscal year 2017, the Agency spent approximately \$1.4 billion on a portfolio of IT assets that includes hundreds of information systems used to control spacecraft, collect and process scientific data, provide security for its IT infrastructure, and enable NASA personnel to collaborate with colleagues around the world. Through audits and investigations, the OIG has identified systemic and recurring weaknesses in NASA's IT security program that adversely affect the Agency's ability to protect the information and information systems vital to its mission. Achieving the Agency's IT security goals will require sustained improvements in NASA's overarching IT governance and management practices.

NASA'S EFFORTS TO IMPROVE THE AGENCY'S INFORMATION TECHNOLOGY GOVERNANCE

For more than two decades, NASA has struggled to implement an effective IT governance framework, a critical component to making decisions that balance compliance, cost, risk, and mission success. Conversely, ineffective IT governance can result in security breaches, increased costs, missed deadlines, and provision of low-quality IT products and services.

This audit, a follow-up to a 2013 review, assessed NASA's efforts to improve its IT governance. We found that IT governance at NASA remains ineffective for a number of reasons: the NASA Chief Information Officer continues to have limited visibility into IT investments across the Agency, enterprise architecture is immature and new IT governance boards are ineffective, Office of the Chief Information Officer roles and responsibilities tied to governance remain unclear, the Agency suffers from a high turnover of senior IT managers, and the Office lacks credibility on IT issues in the eyes of its

customers. NASA management concurred or partially concurred with and described actions to address our five recommendations.

NASA's Efforts to Improve the Agency's Information Technology Governance (IG-18-002, October 19, 2017)

[\(Report\)](#)

[\(Video\)](#)

NASA'S COMPLIANCE WITH THE DIGITAL ACCOUNTABILITY AND TRANSPARENCY ACT OF 2014 (DATA ACT)

The DATA Act expanded requirements for Federal agencies to report financial and award data. As mandated by the Act, we assessed the completeness, timeliness, accuracy, and quality of NASA's spending data as well as its implementation of the data standards. We found that NASA's financial and award data submission to the U.S. Department of the Treasury for publication on USAspending.gov complied with the requirements of the Act and was complete,

timely, and properly used the data standards. However, we identified minor errors with the accuracy and overall quality of the Agency’s submission. If uncorrected, these minor errors increase the risk that inaccurate data will be uploaded to USAspending.gov, decreasing the reliability and usefulness of the data. NASA management concurred with and described actions to address our three recommendations.

NASA’s Compliance with the Digital Accountability and Transparency Act of 2014 (DATA Act)
(IG-18-004, November 7, 2017)

[\(Report\)](#)

[\(Video\)](#)



Hurricane Matthew closing in on the Atlantic coast
(image taken by the Moderate Resolution Imaging Spectroradiometer on NASA’s Terra satellite)

FEDERAL INFORMATION SECURITY MODERNIZATION ACT: FISCAL YEAR 2017 EVALUATION

This annual report, submitted as a memorandum from the Inspector General to the NASA Administrator, provides the OIG’s independent assessment of the Agency’s IT security posture as required by the Federal Information Security Modernization Act of 2014 (FISMA). For our fiscal year 2017 review, we assessed NASA’s information security policies, procedures, and practices by examining seven information systems. We also assessed the Agency’s overall cybersecurity posture using a variety of techniques and leveraged work performed by NASA and other oversight organizations. We found that while NASA is steadily working to improve its overall information security posture, information security remains a significant challenge for NASA, and the Agency needs to take considerable action to close cybersecurity capability gaps and combat evolving cyber threats.

Federal Information Security Modernization Act:
Fiscal Year 2017 Evaluation
(IG-18-003, November 6, 2017)

[\(Report\)](#)

ONGOING AUDIT WORK

Audit of NASA's Information Technology Supply Chain Risk Management Efforts

NASA's IT operations rely on global supply chains to fulfill mission needs. Such reliance can pose a significant risk as foreign-developed or -manufactured technology may be counterfeit or compromised in production. This audit will examine the effectiveness of NASA's security controls related to its IT supply chain risk management efforts. Specifically, we are assessing whether NASA has implemented Agency-wide controls to meet IT security requirements to protect the confidentiality, integrity, and availability of NASA data, computer systems, and networks.

Audit of NASA's Security Operations Center

The Security Operations Center (SOC) serves as the Agency's nerve center for detecting and monitoring security incidents and providing continuous event detection, situational awareness, and incident management and tracking. In this review, we are assessing NASA's management of the SOC, including its capability, workload, and resource management.

Federal Information Security Modernization Act: Fiscal Year 2018 Evaluation

In this required annual review, we are evaluating NASA's IT security program against the 2018 FISMA metrics. Specifically, we are reviewing a sample of NASA- and contractor-owned information systems to assess the effectiveness of information security policies, procedures, standards, and guidelines. Additionally, we are evaluating whether deficiencies identified in our 2017 FISMA review have been addressed.



Swirling cloud formations in Jupiter's north temperate belt (image taken by NASA's Juno spacecraft)

Jet Propulsion Laboratory Network Security Management

Protecting NASA's technical information housed at the Jet Propulsion Laboratory (JPL) is dependent in part on the strength of JPL's system and application control environment and its system configuration and patching process. This audit is assessing whether JPL has adequate processes in place to identify, control, and protect the IT systems most vulnerable to intrusion, and whether personnel responsible for those applications have the necessary training to manage those responsibilities.



The Kounotori 2 H-II
Transfer Vehicle
docked to the ISS

SPACE OPERATIONS AND HUMAN EXPLORATION

Space operations and human exploration are among NASA's most highly visible missions, with the Agency operating the International Space Station (ISS or Station), managing the commercial crew and cargo programs that support the Station, and planning for future exploration beyond low Earth orbit with the Space Launch System and Orion crew capsule.

AUDIT OF THE NATIONAL SPACE BIOMEDICAL RESEARCH INSTITUTE

The National Space Biomedical Research Institute (NSBRI) was formed in 1997 to partner with NASA, academia, and industry to advance biomedical research focused on long-term human presence in space. In this audit, we examined NASA's management of its 20-year, \$484 million cooperative agreement with NSBRI and assessed how the group's work contributed to the Agency's biomedical research efforts. We found that NSBRI delivered research products that helped NASA make progress toward the goal of mitigating human health and performance risks associated with space travel; however, while most NSBRI charges under the cooperative agreement complied with applicable laws and the award's terms, NASA improperly permitted NSBRI to use \$7.8 million of research funds to renovate and pay rent for laboratory space in a private building during the final 7 years of the agreement. Of our four recommendations, the Agency concurred with one and partially concurred with the other three. Two of the four recommendations have been resolved while two remain unresolved pending further discussion with the Agency.

Audit of the National Space Biomedical Research Institute (IG-18-012, February 1, 2018)

[\(Report\)](#)

NASA'S MANAGEMENT OF THE CENTER FOR THE ADVANCEMENT OF SCIENCE IN SPACE

The Center for the Advancement of Science in Space (CASIS) is responsible for managing non-NASA research activities on the U.S. portion of the ISS. In examining NASA's management of CASIS, we found that after more than 5 years of operation the organization had not met a majority of the expectations set out in its cooperative agreement with NASA. We determined that NASA shares responsibility for CASIS's failure to meet expectations because of its failure to actively oversee the organization's performance. NASA management concurred or partially concurred with and described actions to address our seven recommendations.

NASA's Management of the Center for the Advancement of Science in Space
(IG-18-010, January 11, 2018)

[\(Report\)](#)

[\(Video\)](#)

ONGOING AUDIT WORK

Audit of NASA's Commercial Resupply Services Contracts

Since 2012, NASA has relied on private companies to deliver cargo to the ISS through Commercial Resupply Services (CRS) contracts. Although contractors have experienced launch failures, schedule delays, and capability limitations, overall these cargo missions have proven successful and are NASA's most visible and active launch activities. In this audit, we are examining the Agency's second round of these cargo resupply contracts – known as CRS-2 – as well as technical and schedule risks to these contracts and assessing their impact on the ISS Program budget and its research activities.

NASA's Management and Utilization of the International Space Station

Since 1998, the ISS has served as the preeminent platform to learn about living and working in space. However, operation and maintenance of the Station consume roughly half of the Agency's total human space flight budget, a funding level that limits development of systems needed to visit destinations beyond low Earth orbit, including Mars. Given this substantial annual investment, NASA must ensure it is managing the ISS in an efficient and effective manner to accomplish the Station's objectives prior to its transition in 2024. In this follow-up review, we are assessing NASA's progress in maximizing utilization of the ISS, its efforts to reduce operating costs, and the Agency's plans and challenges associated with the Station's eventual disposition.



SpaceX Dragon docking with the ISS



NASA astronauts successfully reconnect cables and electrical connections during a 7-hour spacewalk outside the ISS

INFRASTRUCTURE

NASA's real property includes more than 5,000 buildings and other structures, such as wind tunnels, laboratories, launch pads, and test stands, which occupy 44 million square feet and are valued at more than \$34 billion. However, over 70 percent of NASA's facilities are more than 50 years old and reaching the end of their design life. Managing its expansive real property portfolio is an ongoing challenge for the Agency and one we continue to monitor.

ONGOING AUDIT WORK

NASA's Management of Historic Property

Since NASA's establishment in 1958, much of the real property used to accomplish its mission has been identified as historic property under the National Historic Preservation Act of 1966. Additionally, NASA has many other historically significant assets it is preserving for future generations. In this audit, we are reviewing the Agency's management of its historic property, including the processes used to identify, account for, and maintain the property; determining the extent to which historic property is being used to further NASA's current missions; and identifying Agency challenges in managing such property.

Audit of NASA's Security Management

NASA provides security and protection for its personnel – including employees, contractors, subcontractors, tenants, and visitors – and its facilities and property in its possession or under its control. The Office of Protective Services is the Agency's focal point for policy formulation, oversight, coordination, and management of Agency security, fire, and medical services. This audit will assess NASA's management of security across the Agency.



Hangar One at Ames Research Center in 1992

FINANCIAL MANAGEMENT

The OIG continues to assess NASA's efforts to improve its financial management practices and make recommendations to assist the Agency in addressing weaknesses.

AUDIT OF NASA'S FISCAL YEAR 2017 FINANCIAL STATEMENTS

The OIG contracted with the independent public accounting firm CliftonLarsonAllen LLP (CLA) to audit NASA's fiscal year 2017 financial statements. CLA performed the audit in accordance with the Government Accountability Office's Government Auditing Standards and the Office of Management and Budget's Bulletin No. 17-03, "Audit Requirements for Federal Financial Statements."

The audit resulted in an unmodified opinion on NASA's fiscal year 2017 financial statements. An unmodified opinion means the financial statements present fairly, in all material respects, the financial position and results of NASA's operations in conformity with U.S. generally accepted accounting principles. CLA also reported on NASA's internal control and compliance with laws and regulations. For fiscal year 2017, CLA identified two significant deficiencies: (1) IT management and (2) recording certain liabilities related to JPL. Further, this year NASA resolved the previously reported noncompliance with implementing guidance for the Single Audit Act. CLA did not identify any new instances of noncompliance this year.

Audit of NASA's Fiscal Year 2017 Financial Statements (IG-18-005, November 15, 2017)

[*\(Report\)*](#)

REVIEW OF NASA'S PURCHASE AND TRAVEL CARD PROGRAMS

This audit was part of the Council of the Inspectors General on Integrity and Efficiency's (CIGIE) Government-wide project to analyze purchase card data to determine risks associated with purchase and travel card transactions. During fiscal year 2017, NASA made over 112,000 purchase card transactions totaling more than \$75 million and approximately 413,000 travel card transactions totaling about \$62 million. We found that NASA's internal controls over its travel and purchase card programs generally were effective in detecting misuse, fraud, waste, and abuse, and that, overall, NASA employees did not charge personal transactions on their travel cards and purchase cards. However, weaknesses existed where travelers did not consistently use the travel card for official travel expenses as required. Further, some purchases lacked documentation supporting the request and receipt of goods. In addition, sales tax was improperly paid on several transactions, and the team found examples of purchase transactions split into smaller purchases to avoid a cardholder's spending limit. NASA management concurred with and described actions to address our five recommendations.

Review of NASA's Purchase and Travel Card Programs (IG-18-014, February 28, 2018)

[*\(Report\)*](#)

ONGOING AUDIT WORK

Audit of NASA's Use of Extended Temporary Duty Travel

NASA is a geographically diverse agency, with 10 Centers located throughout the United States. In order to accomplish their work, NASA employees often are required to travel. If an employee is traveling more than 50 miles away from his or her permanent duty station for longer than 30 days, the employee is considered to be in extended temporary duty status and is subject to special rules regarding reimbursement for travel expenses. This audit will review NASA's management of extended temporary duty travel and evaluate whether the Agency is effectively and efficiently implementing Federal and Agency policy.

NASA's Management of Reimbursable Agreements

NASA has relied on authority granted by the Space Act of 1958 to enter into a variety of agreements, including reimbursable agreements, with diverse organizations to advance its program objectives. Currently, reimbursable agreements are projected to provide more than \$2.5 billion annually of additional spending authority to NASA. Prior OIG audits have identified deficiencies in the Agency's management of contracts, grants, and other types of agreements. This audit is assessing the Agency's transparency, execution, and administration processes for reimbursable agreements.



Image of Ireson Hill on Mount Sharp taken by the Mars Curiosity rover

Audit of NASA's Compliance with the Improper Payments Information Act for Fiscal Year 2017

The Improper Payments Information Act of 2002, as amended by the Improper Payments Elimination and Recovery Act of 2010, seeks to enhance the accuracy and integrity of Federal payments. As mandated, the OIG is assessing NASA's compliance with these requirements.

Audit of NASA's Fiscal Year 2018 Financial Statements

The Chief Financial Officers Act of 1990, as amended by the Government Management Reform Act of 1994, requires an annual audit of NASA's consolidated financial statements. We are overseeing the fiscal year 2018 audit conducted by the independent public accounting firm CLA.

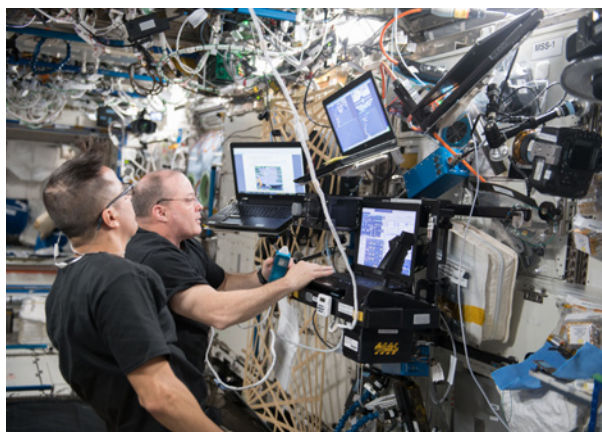
OTHER AUDIT MATTERS

NASA'S COMPLIANCE WITH FEDERAL EXPORT CONTROL LAWS

In a February 2018 letter to Congress, we summarized our work relating to NASA's compliance with Federal export control laws. During the past year, we verified Agency actions taken in response to our May 2016 report on NASA's Export Control and Foreign National Access Management Programs and, satisfied with these actions, closed the recommendations. We also completed four audits examining NASA's controls over its IT assets and IT security systems, many of which contain data subject to export control laws, and initiated two audits related to IT security. In addition, our Office of Investigations closed two investigations related to the misuse of and unauthorized access to export-controlled information. The OIG continues as an active member of the Department of Homeland Security's Export Enforcement Coordination Center, which coordinates export enforcement efforts and intelligence activities among Federal agencies to resolve conflicts involving violations of U.S. export control laws.

NASA's Compliance with Federal Export Control Laws (IG-18-013, February 8, 2018)

(Letter)



Spacecraft-release training onboard the ISS in the U.S. Destiny Laboratory

STATISTICAL DATA

TABLE 1: AUDIT PRODUCTS AND IMPACTS

Report No. and Date Issued	Title	Impact
Acquisition and Project Management		
IG-18-011 1/17/2018	NASA's Surface Water and Ocean Topography Mission	Provided recommendations to help the SWOT mission achieve its technical objectives, meet its milestones, and control its costs; to ensure JPL projects have the technical support needed for their missions; and to ensure NASA science projects are performing accurate and complete cost, schedule, and risk analyses on which to establish development baselines.
IG-18-010 1/11/2018	NASA's Management of the Center for the Advancement of Science in Space	Provided recommendations to help improve the effectiveness of NASA's cooperative agreement with CASIS.
IG-18-001 10/5/2017	NASA's Management of Spare Parts for its Flight Projects	Provided recommendations to increase accountability for and accuracy of NASA's flight spare parts inventory.
Information Technology Security and Governance		
IG-18-004 11/7/2017	NASA's Compliance with the Digital Accountability and Transparency Act of 2014	Provided recommendations to improve the accuracy and quality of NASA's DATA Act submissions.
IG-18-003 11/6/2017	Federal Information Security Modernization Act: Fiscal Year 2017 Evaluation	Identified improvements in internal controls for IT security through the enhancement of management programs and processes.
IG-18-002 10/19/2017	NASA's Efforts to Improve the Agency's Information Technology Governance	Provided recommendations to increase transparency, accountability, and oversight of NASA's IT investments and strengthen its governance framework.
Space Operations and Human Exploration		
IG-18-012 2/1/2018	Audit of the National Space Biomedical Research Institute	Provided recommendations to ensure the proper closeout of the agreement with NSBRI and ensure that NASA is receiving all promised services, and to ensure efficient operations and prevent unnecessary duplication of research and administrative costs.
Financial Management		
IG-18-014 2/28/2018	Review of NASA's Purchase and Travel Charge Card Programs	Identified opportunities for NASA to strengthen its controls over its purchase and travel card programs.
IG-18-005 11/15/2017	Audit of NASA's Fiscal Year 2017 Financial Statements	Identified improvements in NASA's ability to provide auditable financial statements and sufficient evidence to support the financial statements throughout the fiscal year and at year end.
Other Audit Matters		
IG-18-013 2/8/2018	NASA's Compliance with Federal Export Control Laws	Notified Congress of program weaknesses that may affect NASA's compliance with export control laws.

TABLE 2: AUDIT PRODUCTS ISSUED AND NOT DISCLOSED TO THE PUBLIC, CURRENT SEMIANNUAL REPORT

Report No. and Date Issued	Title	Identified Improvements
IG-18-009 12/20/2017	Fiscal Year 2017 Vulnerability Assessment and Penetration Testing of NASA's Financial Network	Identified improvements in the security of the Agency's financial systems.
IG-18-008 12/14/2017	Fiscal Year 2017 Financial Accounting Management Letter	Identified improvements in the effectiveness of the controls over financial reporting.
IG-18-007 12/4/2017	Fiscal Year 2017 Financial Statement Audit Information Technology Management Letter	Identified improvements in the effectiveness of the controls over the IT control environment.
IG-18-006 11/16/2017	Audit of NASA's Fiscal Year 2017 Closing Package Financial Statements	Identified improvements in NASA's ability to provide auditable closing package financial statements and sufficient evidence to support those statements at year end.

TABLE 3: AUDIT RECOMMENDATIONS YET TO BE IMPLEMENTED, CURRENT SEMIANNUAL REPORT

Report No. and Date Issued	Report Title	Date Resolved	Number of Recommendations		Latest Target Completion Date	Potential Cost Savings
			Open	Closed		
Acquisition and Project Management						
IG-18-011 1/17/2018	NASA's Surface Water and Ocean Topography Mission	1/17/2018	4	2	6/30/2018	\$0
IG-18-010 1/11/2018	NASA's Management of the Center for the Advancement of Science in Space	-	7	0	1/31/2019	\$0
IG-18-001 10/5/2017	NASA's Management of Spare Parts for its Flight Projects	10/5/2017	7	0	12/31/2021	\$0
IT Security and Governance						
IG-18-002 10/19/2017	NASA's Efforts to Improve the Agency's Information Technology Governance	12/14/2017	5	0	3/30/2019	\$0
Space Operations and Human Exploration						
IG-18-012 2/1/2018	Audit of the National Space Biomedical Research Institute	-	3	1	4/30/2018	\$7,841,788

Report No. and Date Issued	Report Title	Date Resolved	Number of Recommendations		Latest Target Completion Date	Potential Cost Savings
			Open	Closed		
Financial Management						
IG-18-014 2/28/2018	Review of NASA's Purchase and Travel Charge Card Programs	2/28/2018	5	0	2/1/2019	\$0
IG-18-009 12/20/2017	Final Report, Vulnerability Assessment and Penetration Testing of NASA's Financial Network, Prepared by CliftonLarsonAllen, in Connection with the Audit of NASA's Fiscal Year 2017 Financial Statements	12/20/2017	12	0	12/31/2018	\$0
IG-18-008 12/14/2017	FY 2017 Financial Statement Audit – Financial Management Letter	12/14/2017	34	0	12/31/2018	\$0
IG-18-007 12/4/2017	FY 2017 Financial Statement Audit – IT Management Letter	12/4/2017	24	0	12/31/2018	\$0
IG-18-005 11/15/2017	Audit of NASA's Fiscal Year 2017 Financial Statements	11/15/2017	9	0	11/30/2018	\$0

TABLE 4: AUDIT RECOMMENDATIONS YET TO BE IMPLEMENTED, PREVIOUS SEMIANNUAL REPORTS

Report No. and Date Issued	Report Title	Date Resolved	Number of Recommendations		Latest Target Completion Date	Potential Cost Savings
			Open	Closed		
Acquisition and Project Management						
IG-17-025 9/18/2017	NASA's Research Efforts and Management of Unmanned Aircraft Systems	9/18/2017	6	0	12/31/2018	\$17,308
IG-17-016 3/29/2017	NASA's Parts Quality Control Process	3/29/2017	7	1	12/31/2018	\$0
IG-17-003 11/2/2016	NASA's Earth Science Mission Portfolio	11/2/2016	1	1	6/30/2019	\$0
IG-16-017 5/5/2016	Audit of NASA's Engineering Services Contract at Kennedy Space Center	9/30/2016	1	3	3/29/2019	\$0
IG-16-013 2/18/2016	Audit of NASA Space Grant Awarded to the University of Texas at Austin	2/18/2016	2	2	6/30/2018	\$322,500

Report No. and Date Issued	Report Title	Date Resolved	Number of Recommendations		Latest Target Completion Date	Potential Cost Savings
			Open	Closed		
IT Security and Governance						
IG-17-011 2/8/2017	Industrial Control System Security within NASA's Critical and Supporting Infrastructure	2/8/2017	5	1	10/1/2018	\$0
IG-17-010 2/7/2017	Security of NASA's Cloud Computing Services	6/9/2017	5	1	1/31/2019	\$0
IG-16-016 4/14/2016	Review of NASA's Information Security Program	4/14/2016	1	0	12/6/2019	\$0
IG-14-015 2/27/2014	NASA's Management of its Smartphones, Tablets, and Other Mobile Devices	2/27/2014	1	1	1/24/2019	\$0
IG-12-017 8/7/2012	Review of NASA's Computer Security Incident Detection and Handling Capability	8/7/2012	2	1	5/1/2018	\$0
Space Operations and Human Exploration						
IG-17-017 4/13/2017	NASA's Plans for Human Exploration Beyond Low Earth Orbit	8/10/2017	4	2	7/31/2018	\$0
IG-17-012 3/9/2017	NASA's Management of Electromagnetic Spectrum	3/9/2017	1	1	11/30/2019	\$0
IG-16-025 6/28/2016	NASA's Response to SpaceX's June 2015 Launch Failure: Impacts on Commercial Resupply of the International Space Station	10/17/2016	2	4	12/31/2018	\$0
IG-16-015 3/28/2016	Audit of the Spaceport Command and Control System	3/28/2016	1	0	9/30/2018	\$0
IG-16-014 3/17/2016	NASA's Management of the Near Earth Network	8/10/2016	7	7	7/31/2018	\$0
IG-15-023 9/17/2015	NASA's Response to Orbital's October 2014 Launch Failure: Impacts on Commercial Resupply of the International Space Station	12/2/2015	1	6	12/31/2018	\$0
IG-15-013 3/26/2015	NASA's Management of the Deep Space Network	3/26/2015	3	9	11/30/2018	\$0

Report No. and Date Issued	Report Title	Date Resolved	Number of Recommendations		Latest Target Completion Date	Potential Cost Savings
			Open	Closed		
Space Operations and Human Exploration						
IG-14-031 9/18/2014	Extending the Operational Life of the International Space Station Until 2024	9/29/2014	1	2	9/30/2018	\$0
IG-14-026 7/22/2014	Audit of the Space Network's Physical and Information Technology Security Risks	7/22/2014	1	3	4/30/2018	\$0
Infrastructure						
IG-17-021 5/17/2017	Construction of Test Stands 4693 and 4697 at Marshall Space Flight Center	10/5/2017	3	0	7/31/2019	\$17,115,009
IG-17-015 3/21/2017	NASA's Efforts to "Rightsize" its Workforce, Facilities, and Other Supporting Assets	3/21/2017	4	0	9/30/2018	\$0
IG-13-008 2/12/2013	NASA's Efforts to Reduce Unneeded Infrastructure and Facilities	2/12/2013	2	3	4/30/2018	\$0
Financial Management						
IG-17-020 5/15/2017	NASA's Compliance with the Improper Payments Information Act for Fiscal Year 2016	11/7/2017	9	0	5/31/2018	\$0
IG-16-021 5/12/2016	NASA's Compliance with the Improper Payments Information Act for Fiscal Year 2015	10/28/2016	4	1	5/31/2018	\$0
IG-15-015 5/15/2015	NASA's Compliance with the Improper Payments Information Act for Fiscal Year 2014	5/15/2015	6	4	5/31/2018	\$0
Other Audit Matters						
IG-16-001 10/19/2015	NASA's Education Program	10/19/2015	2	3	6/29/2018	\$0

TABLE 5: AUDITS WITH QUESTIONED COSTS

	Number of Audit Reports	Total Questioned Costs	Total Unsupported Costs
Management decisions pending, beginning of reporting period	0	\$0	\$0
Issued during period	1	\$7,841,788	\$7,841,788
Needing management decision during period	1	\$7,841,788	\$7,841,788
Management Decision Made During Period			
Amounts agreed to by management	0	\$0	\$0
Amounts not agreed to by management	1	\$41,788	\$41,788
No Management Decision at End of Period			
Less than 6 months old	1	\$7,800,000	\$7,800,000
More than 6 months old	0	\$0	\$0

Notes: "Questioned Costs" (the Inspector General Act of 1978, as amended) are costs questioned by the OIG because of (1) alleged violation of a provision of a law, regulation, contract, grant, cooperative agreement, or other agreement or document governing the expenditure of funds; (2) a finding that, at the time of the audit, such cost is not supported by adequate documentation; or (3) a finding that the expenditure of funds for the intended purpose is unnecessary or unreasonable.

"Management Decision" (the Inspector General Act of 1978, as amended) is the evaluation by management of the findings and recommendations included in an audit report and the issuance of a final decision by management concerning its response to such findings and recommendations, including actions that management concludes are necessary.

TABLE 6: AUDITS WITH RECOMMENDATIONS THAT FUNDS BE PUT TO BETTER USE

	Number of Audit Reports	Funds To Be Put to Better Use
Management decisions pending, beginning of reporting period	0	\$0
Issued during period	0	\$0
Needing management decision during period	0	\$0
Management Decision Made During Period		
Amounts agreed to by management	0	\$0
Amounts not agreed to by management	0	\$0
No Management Decision at End of Period		
Less than 6 months old	0	\$0
More than 6 months old	0	\$0

TABLE 7: STATUS OF SINGLE AUDIT FINDINGS AND QUESTIONED COSTS RELATED TO NASA AWARDS

Audits with findings	11	
Findings and Questioned Costs		
	Number of Findings	Questioned Costs
Management decisions pending, beginning of reporting period	3	\$0
Findings added during the reporting period	26	\$0
Management decisions made during reporting period	(14)	
Agreed to by management		\$0
Not agreed to by management		\$0
Management decisions pending, end of reporting period	15	\$0

Note: The Single Audit Act, as amended, requires Federal award recipients to obtain audits of their Federal awards. The data in this table is provided by NASA.

DEFENSE CONTRACT AUDIT AGENCY AUDITS OF NASA CONTRACTORS

The Defense Contract Audit Agency (DCAA) provides audit services to NASA on a reimbursable basis. DCAA provided the following information during this period on reports involving NASA contract activities.

DCAA AUDIT REPORTS ISSUED

During this period, DCAA issued 18 audit reports on contractors who do business with NASA. Corrective actions taken in response to DCAA audit report recommendations usually result from negotiations between the contractors doing

business with NASA and the Government contracting officer with cognizant responsibility (e.g., the Defense Contract Management Agency and NASA). The cognizant agency responsible for administering the contract negotiates recoveries with the contractor after deciding whether to accept or reject the questioned costs and recommendations for funds to be put to better use. The following table shows the amounts of questioned costs and funds to be put to better use included in DCAA reports issued during this semiannual reporting period and the amounts that were agreed to during the reporting period.

TABLE 8: DCAA AUDIT REPORTS WITH QUESTIONED COSTS AND RECOMMENDATIONS THAT FUNDS BE PUT TO BETTER USE

	Amounts in Issued Reports	Amounts Agreed To
Questioned costs	\$6,360,000	\$5,834,000
Funds to be put to better use	\$0	\$0

Note: This data is provided to the NASA OIG by DCAA and may include forward pricing proposals, operations, incurred costs, cost accounting standards, and defective pricing audits. Because of limited time between the availability of management information system data and legislative reporting requirements, there is minimal opportunity for DCAA to verify the accuracy of reported data. Accordingly, submitted data is subject to change based on subsequent DCAA authentication. The data presented does not include statistics on audits that resulted in contracts not awarded or in which the contractor was not successful.



OFFICE OF
INVESTIGATIONS

The Unitary Plan Wind Tunnel at
Ames Research Center

As the law enforcement arm of NASA OIG, the Office of Investigations (OI) is responsible for investigating crime, fraud, waste, abuse, mismanagement, and misconduct involving NASA programs, personnel, and resources. Typically, OI refers its findings to the Department of Justice for prosecution or to NASA management for corrective action.

Since 2000, OI investigations have resulted in more than \$1 billion returned to the U.S. Government in recoveries, restitution, and fines. Working with state, local, and Federal law enforcement partners, OI participated in 148 arrests and secured over 437 criminal and civil convictions. In addition, 167 contractors and companies have been suspended or debarred from doing work with the Federal Government as a result of OI's efforts.

PROCUREMENT AND ACQUISITION FRAUD

Small Business Owner Convicted by Jury Trial

As a result of an investigation by the NASA OIG, Defense Criminal Investigative Service (DCIS), and Naval Criminal Investigative Service, a small business owner was convicted of six counts of wire fraud related to five NASA research contracts and one Navy research contract valued at over \$2 million.

Business Owner Sentenced

Following a joint investigation by the NASA OIG, Small Business Administration (SBA) OIG, and Department of Labor OIG, a small business owner holding over \$6 million in NASA contracts was sentenced to 3 years probation, 100 hours of community service, and ordered to pay a fine of \$2,500 for making a false statement on her SBA Form 912, Statement of Personal History, which the SBA uses to assess 8(a) Business Development Program eligibility.

Small Business Owner Sentenced

As a result of an investigation by the NASA OIG, National Science Foundation OIG, Department of Health and Human Services OIG, and Federal Bureau of Investigation (FBI), a small business owner was sentenced to 12 months of probation and ordered to forfeit \$185,000 for making false statements. The owner was previously charged with multiple counts of identity theft and wire fraud related to proposals totaling over \$1.8 million.

Ohio Business Owner Convicted

The co-owner of a Beavercreek, Ohio, firm pled guilty to conspiracy to convert U.S. Government money for personal use following a joint investigation by the NASA OIG, U.S. Air Force Office of Special Investigations, and DCIS. An investigation revealed the co-owner and her business partner falsely claimed disabled veteran status to improperly secure subcontract work at NASA. Both owners and their company were suspended from receiving Federal contracts.

Former NASA Employee Convicted

A retired Kennedy Space Center employee was ordered to pay a \$1,000 fine for violating post-employment ethics restrictions by accepting a position from a contractor whose work he evaluated during his Government tenure. He then represented the company in its business dealings with NASA.

Recovery of Government Property

A Goddard Space Flight Center contractor failed to account for \$382,000 in Government assets on a property survey report. Investigative efforts by the NASA OIG resulted in the recovery of more than 80 percent of the missing property, valued at \$337,000.

Reimbursement for Contractor Misuse of Resources

A joint investigation by the NASA OIG and Brevard County, Florida, Sheriff's Office led to the arrest of a Kennedy Space Center contractor employee for stalking, criminal mischief, and extortion, for which he entered into a pre-trial diversion program and received 12 months probation. The investigation also resulted in the recovery of \$175,000 in contract costs for the employee's misuse of NASA resources.

Former Contractor Employee Sentenced

As a result of an investigation by the NASA OIG, a former contractor employee at Johnson Space Center was sentenced to 10 days imprisonment for presenting a fraudulent temporary driver's license to gain access to the Center.

Subcontractor Indicted for Theft

Following a joint investigation by the NASA OIG and Brunswick, Ohio, Police Department, a NASA subcontractor was indicted for the theft of 43 contractor-owned laptop computers scheduled for disposal.

Contractor Charged with Theft

In December 2017, a Goddard Space Flight Center contractor employee confessed to stealing a NASA laptop computer. The NASA OIG recovered the computer, and the subject was terminated.

Software Company Owner Charged

The president of a Houston, Texas, software development company was charged with making false statements after an investigation by the NASA OIG revealed the contractor had mischarged NASA more than \$2 million.

University Professor Charged with Theft of Government Funds

As the result of a joint investigation by the NASA OIG and FBI, a University of New Hampshire professor was charged with 31 counts of theft of government property for using a university-issued credit card to purchase \$6,900 in personal items. The card was intended to cover NASA grant-related expenses.

COMPUTER CRIMES

Former Contractor Employee Indicted for Child Pornography

A proactive investigation by the NASA OIG revealed that from September to December 2013, a former Wallops Flight Facility contractor employee conducted numerous Internet searches indicative of searches for child pornography. In October 2017, the employee was indicted and subsequently arrested for engaging in activities involving material constituting or containing child pornography.

Unauthorized Access and Damage to NASA Systems

A former Johnson Space Center contractor employee damaged NASA databases after gaining unauthorized access to the systems following his termination. In November 2017, the subject pled guilty to fraud and related activity in connection with the computer incident and was sentenced to 12 months imprisonment, 3 years supervised release, and ordered to pay \$10,000 in restitution.

Former Contractor Employee Indicted for Child Pornography

In April 2017, a former Stennis Space Center contractor employee was indicted on two counts of possession of child pornography. In May 2017, a grand jury returned a superseding indictment of two counts of possession of child pornography and one count of receipt of child pornography. In October 2017, the subject was sentenced to 20 years imprisonment with lifetime supervised release and ordered to pay \$119,000 in restitution.

EMPLOYEE MISCONDUCT

Misconduct Involving a Wallops Senior Manager

A Wallops Flight Facility senior manager was found to have improperly granted staff access to several of their NASA online accounts, improperly promoted an employee, inappropriately monitored an employee's email account in real time, and directed contract employees to provide personal services. The NASA OIG recommended disciplinary action against the senior manager.

Former Goddard Employee Sentenced for Video Voyeurism in the Workplace

A former Goddard Space Flight Center employee who confessed to using a disguised recording device to surreptitiously video a female colleague during meetings was sentenced to 18 months probation, mental health counseling, and ordered not to contact the victim or enter NASA property while on probation.



Magnetospheric
Multiscale
mission spacecraft
processed
for launch

STATISTICAL DATA

TABLE 9: OFFICE OF INVESTIGATIONS COMPLAINT INTAKE DISPOSITION

Source of Complaint	Zero Files ^a	Administrative Investigations ^b	Management Referrals ^c	Preliminary Investigations ^d	Total
Hotline	29	8	3	14	54
All others	25	30	2	51	108
Total	54	38	5	65	162

^a Zero files are those complaints for which no action is required or that are referred to NASA management for information only or to another agency.

^b Administrative investigations include non-criminal matters initiated by OI as well as hotline complaints referred to the Office of Audits.

^c Management referrals are those complaints referred to NASA management for which a response is requested.

^d Preliminary investigations are those complaints where additional information must be obtained prior to initiating a full criminal or civil investigation.

TABLE 10: FULL INVESTIGATIONS OPENED THIS REPORTING PERIOD

Full Criminal/Civil Investigations^a	29
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^a Full investigations evolve from preliminary investigations that result in a reasonable belief that a violation of law has taken place.

TABLE 11: INVESTIGATIONS CLOSED THIS REPORTING PERIOD

Full, Preliminary, and Administrative Investigations	101
---	-----

Note: The NASA OIG uses closing memorandums to close investigations. Investigative reports are used for presentation to judicial authorities, when requested.

TABLE 12: CASES PENDING AT END OF REPORTING PERIOD

Preliminary Investigations	50
Full Criminal/Civil Investigations	147
Administrative Investigations	79
Total	276

TABLE 13: QUI TAM INVESTIGATIONS

Qui Tam Matters Opened this Reporting Period	1
Qui Tam Matters Pending at End of Reporting Period	4

Note: Number of Qui Tam investigations is a subset of the total number of investigations opened and pending.

TABLE 14: JUDICIAL ACTIONS

Total Cases Referred for Prosecution ^a	46
Individuals Referred to the Department of Justice ^b	33
Individuals Referred to State and Local Authorities ^b	13
Indictments/Informations ^c	12
Convictions/Plea Bargains	14
Sentencing/Pre-Trial Diversions	14
Civil Settlements/Judgments	0

^a This includes all referrals of individuals and entities to judicial authorities.

^b Number of individuals referred to Federal, state, and local authorities are a subset of the total cases referred for prosecution.

^c This includes indictments/informations on current and prior referrals.

TABLE 15: ADMINISTRATIVE ACTIONS

Referrals to NASA Management for Review and Response	11
Referrals to NASA Management - Information Only	21
Referrals to the Office of Audits	5
Referrals to Security or Other Agencies	9
Recommendation to NASA Management for Disciplinary Action	
Involving a NASA Employee	18
Involving a Contractor Firm	1
Involving a Contractor Employee	7
Other	2
Recommendations to NASA Management on Program Improvements	
Matters of Procedure	7
Safety Issues or Concerns	2
Total	83
Administration/Disciplinary Actions Taken	
Against a NASA Employee	11
Against a Contractor Employee	8
Against a Contractor Firm	1
Procedural Change Implemented	8
Other	3
Total	31
Suspensions or Debarments from Government Contracting	
Involving an Individual	3
Involving a Contractor Firm	3
Total	6

TABLE 16: INVESTIGATIVE RECEIVABLES AND RECOVERIES

Judicial	\$175,984
Administrative ^a	\$2,237,200
Total	\$2,597,169
Total NASA	\$2,247,200

^a Includes amounts for cost savings to NASA as a result of investigations.

TABLE 17: SENIOR GOVERNMENT EMPLOYEE CASES NOT DISCLOSED TO THE PUBLIC

Case Number	Closure Date	Allegation	Disposition
17-0295-S	1/17/18	Abuse of Position	Substantiated. Employee received additional ethics training.
17-0324-HL-S	2/07/18	Violation of Federal Records and Hatch Acts	Unsubstantiated. No violation found, but Agency is updating policies on Freedom of Information Act compliance on NASA websites.

LEGAL ISSUES



Vehicle Assembly Building at
Kennedy Space Center

WHISTLEBLOWER CASES

During this period, we found that a NASA contractor's termination of one of its employees was partly in retaliation for a safety-related protected disclosure. The factual findings included evidence that the termination was driven by the contractor's desire to please the NASA manager of the facility where the safety incident occurred. This Government manager harbored long-term animus against the contractor employee and expressed his opinion to the contractor that the employee should be terminated. We found that the contractor was aware of the existing animus, which was heightened by the safety disclosure, and the timing of the termination decision was in close proximity to the Government manager learning of the safety incident. The contractor did not demonstrate by clear and convincing evidence that it would have terminated the employee had there been no protected disclosure. We are awaiting a decision on this matter from the NASA Administrator.

In another case, the Office of Protective Services referred to the OIG a complaint pursuant to Presidential Policy Directive 19 (PPD-19), which protects Federal employees holding security clearances from acts of retaliation. We engaged in alternative dispute resolution in an attempt to resolve this matter. Ultimately, the complainant and the Agency reached a settlement agreement resolving the issues to the satisfaction of both parties. Having been made whole, the complainant withdrew the complaint of retaliation.

During this reporting period, we reviewed four NASA regulations and policies under consideration by the Agency. The following are considered the more significant regulations and reviews.

NASA Procedural Requirement (NPR) 7120.8A, NASA Research and Technology Program and Project Management Requirements,

establishes the program and project management requirements by which NASA will formulate and execute research and technology, consistent with the governance model contained in NASA Policy Directive 1000.0. Research and technology program and project management is based on life cycles, Key Decision Points, and evolving products that are embedded in NASA's four-part process, consisting of formulation, approval, implementation, and evaluation. The OIG submitted comments and recommendations intended to strengthen the Agency's process and promote consistency in managing other significant programs and projects.

NPR 8735.1D, Exchange of Problem Data Using NASA Advisories and the Government-Industry Data Exchange Program (GIDEP), establishes general requirements and procedures for NASA to ensure that information concerning significant problems involving parts, materials, processes, software, and safety are exchanged internally and externally. The proper utilization of this data can improve the total quality, reliability, and maintainability of systems and components during the acquisition and logistic phases of the life cycle while reducing costs in the development and manufacture of complex systems and equipment. This directive provides the procedures for the

authoring, distribution, assessment, and response of NASA Advisories and GIDEP Alerts, GIDEP Safe-Alerts, GIDEP Problem Advisories, and GIDEP Agency Action Notices (collectively called GIDEP Notices). The OIG provided comments intended to eliminate internal inconsistencies and strengthen the GIDEP process.

NPR 9710, General Travel Requirements, sets forth NASA's general policies regarding official travel, and **NPR 9760 Draft 10, Relocation Allowances,** provides the specific travel provisions and policies related to NASA relocation allowances. The Federal Travel Regulation, published by the General Services Administration, is the source for Federal Policy on travel. The NASA Office of the Chief Financial Officer promulgates these two NPRs, among others, to interpret statutory and other policy requirements as needed for implementation within NASA and to communicate the resulting policies in a clear manner to employees. These NPRs are intended to address matters for which NASA has authority or responsibility to set specific policy or establish specific procedures that apply only to NASA, and matters not covered by the Federal Travel Regulation. The OIG shared comments intended to remedy deficiencies in NASA's NPR that failed to address certain requirements of the Federal Travel Regulation.

STATISTICAL DATA

TABLE 18: LEGAL ACTIVITIES AND REVIEWS

Freedom of Information Act Matters	39
Appeals	0
Inspector General Subpoenas Issued	90
Regulations Reviewed	23



First Ogive panel
installed on Orion
at Kennedy
Space Center

APPENDIXES

Appendixes

A. Inspector General Act Reporting Requirements	40
B. Awards	41
C. Debt Collection	42
D. Peer Reviews	43
E. Acronyms	44
F. Office of Inspector General Organizational Chart	45
G. Map of Field Offices	47

APPENDIX A. INSPECTOR GENERAL ACT REPORTING REQUIREMENTS

Inspector General Act Citation	Requirement Definition	Cross Reference Page Numbers
Section 4(a)(2)	Review of legislation and regulations	36–37
Section 5(a)(1)	Significant problems, abuses, and deficiencies	5–18
Sections 5(a)(5) and 6(b)(2)	Summary of refusals to provide information	–
Section 5(a)(6)	OIG audit products issued – includes total dollar values of questioned costs, unsupported costs, and recommendations that funds be put to better use	15–19
Section 5(a)(8)	Total number of reports and total dollar value for audits with questioned costs	24
Section 5(a)(9)	Total number of reports and total dollar value for audits with recommendations that funds be put to better use	24
Section 5(a)(10)	Summary of audit, inspection, and evaluation reports	15–19
Section 5(a)(10)(A)	Summary of prior audit products for which no management decision has been made	20–23
Section 5(a)(10)(B)	Reports for which no Agency comment was provided within 60 days	–
Section 5(a)(10)(C)	Unimplemented recommendations and associated potential cost savings	20–23
Section 5(a)(11)	Description and explanation of significant revised management decisions	–
Section 5(a)(12)	Significant management decisions with which the Inspector General disagreed	–
Section 5(a)(13)	Reporting in accordance with Section 5(b) of the Federal Financial Management Improvement Act of 1996 Remediation Plan	–
Section 5(a)(14)	Peer review conducted by another OIG	43
Section 5(a)(15)	Outstanding recommendations from peer reviews of the NASA OIG	–
Section 5(a)(16)	Outstanding recommendations from peer reviews conducted by the NASA OIG	–
Section 5(a)(17)(A)	Summary of investigations	27–33
Section 5(a)(17)(B)(C) and (D)	Matters referred to prosecutive authorities	32
Section 5(a)(18)	Descriptions of table metrics	–
Section 5(a)(19)(A) and (B)(i)(ii)	Summary of investigations involving senior Government employees	–
Section 5(a)(20)	Summary of whistleblower investigations	35
Section 5(a)(21)(A) and (B)	Agency attempts to interfere with OIG independence	–
Section 5(a)(22)(A)	Closed inspections, evaluations, and audits not disclosed to the public	20
Section 5(a)(22)(B)	Closed investigations of senior Government employees not disclosed to the public	33

APPENDIX B. AWARDS

On October 19, 2017, CIGIE hosted its 20th Annual Awards ceremony in Washington, D.C., recognizing the outstanding accomplishments of OIGs across the Federal Government. The following NASA OIG teams and individuals were honored at the ceremony.

AWARD FOR EXCELLENCE, AUDIT

Members of the Office of Audits received an Award for Excellence in recognition of exceptional achievement and outstanding teamwork for a review of NASA's plans for human exploration beyond low Earth orbit. The team included Ridge Bowman, Kevin Fagedes, Susan Bachle, Robert Proudfoot, Dave Balajthy, Michael Beims, Frank Martin, Sarah McGrath, and Cedric Campbell.

AWARD FOR EXCELLENCE, INVESTIGATION

Michelle Batignani of the Office of Investigations received an Award for Excellence in recognition of her contributions to the Department of Justice's investigations into the Educational Advancement Alliance, which led to nearly \$2 million in audit findings and the subsequent criminal convictions of five individuals, including a U.S. Congressman.

AWARD FOR EXCELLENCE, INVESTIGATION

Erik Saracino of the Office of Investigations received an Award for Excellence in recognition of his contributions to the National Science Foundation's successful investigation of Jin Zhao and Agiltron, Inc.

APPENDIX C. DEBT COLLECTION

The Senate Report accompanying the supplemental Appropriations and Rescissions Act of 1980 (Pub. L. No. 96-304) requires Inspectors General to report amounts due to the Agency as well as amounts that are overdue and written off as uncollectible. NASA's Financial Management Division provides this data each November for the

previous fiscal year. For the period ending September 30, 2017, the receivables due from the public totaled \$1,622,561, of which \$1,150,718 is delinquent. The amount written off as uncollectible for the period October 1, 2016, through September 30, 2017, was \$2,322,174.

APPENDIX D. PEER REVIEWS

The Dodd-Frank Wall Street Reform and Consumer Protection Act requires the OIG to include in its semiannual reports any peer review results provided or received during the relevant reporting period. Peer reviews are required every three years. In compliance with the Act, we provide the following information.

OFFICE OF AUDITS

No external peer reviews were conducted of our Office of Audits during this semiannual period. The date of the last external peer review of the NASA OIG was September 1, 2015, and it was conducted by the Department of State OIG. NASA OIG received a peer review rating of “pass,” and there are no outstanding recommendations from the review. The Office of Audits is scheduled to undergo an external peer review during the upcoming semiannual reporting period.

During this semiannual reporting period, we performed a peer review examining the system of quality control of the Department of Commerce Office of Inspector General in effect for the period October 1, 2016, through September 30, 2017. We assigned a rating of “pass” for the period reviewed. We also communicated additional findings and recommendations that required attention by Commerce OIG managers but were not considered of sufficient significance to affect the opinion expressed in our report. Commerce OIG has informed us that it has implemented or will implement the recommendations we made in our review. We have no outstanding recommendations related to this or past peer reviews that we have conducted.

OFFICE OF INVESTIGATIONS

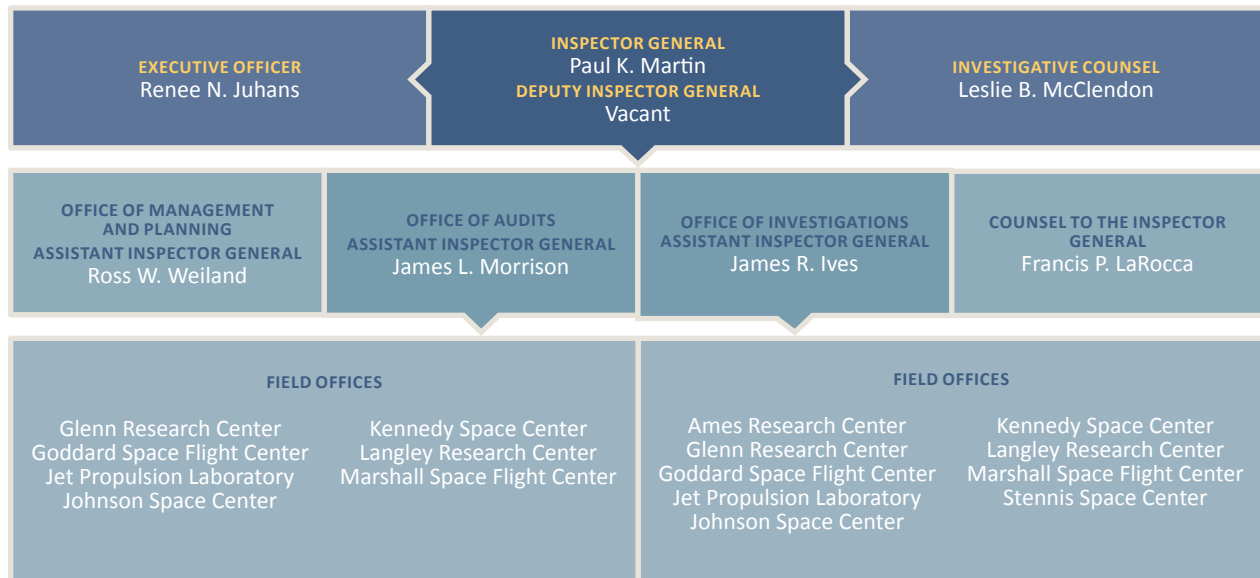
No external peer reviews were performed by the Office of Investigations during this semiannual period. In October 2017, the Office of the Special Inspector General for the Troubled Asset Relief Program reviewed NASA OIG’s Office of Investigations and found the office to be in compliance with all relevant guidelines. There are no unaddressed recommendations outstanding from this review.

APPENDIX E. ACRONYMS

CASIS	Center for the Advancement of Science in Space	ISS	International Space Station
CIGIE	Council of the Inspectors General on Integrity and Efficiency	IT	Information Technology
CLA	CliftonLarsonAllen, LLP	JPL	Jet Propulsion Laboratory
CRS	Commercial Resupply Services contracts	NPR	NASA Procedural Requirement
DATA Act	Digital Accountability and Transparency Act of 2014	NSBRI	National Space Biomedical Research Institute
DCAA	Defense Contract Audit Agency	OCIO	Office of the Chief Information Officer
DCIS	Defense Criminal Investigative Service	OI	Office of Investigations
FBI	Federal Bureau of Investigation	OIG	Office of Inspector General
FISMA	Federal Information Security Modernization Act of 2014	SBA	Small Business Administration
GIDEP	Government-Industry Data Exchange Program	SLS	Space Launch System
GISS	Goddard Institute for Space Studies	SOC	Security Operations Center
		SWOT	Surface Water and Ocean Topography mission

APPENDIX F. OFFICE OF INSPECTOR GENERAL ORGANIZATIONAL CHART

The OIG's fiscal year 2018 appropriation of \$39 million funds approximately 185 employees in audit, investigative, and administrative roles at NASA Headquarters and the Centers.



THE NASA OFFICE OF INSPECTOR GENERAL conducts audits, reviews, and investigations of NASA programs and operations to prevent and detect fraud, waste, abuse, and mismanagement and to assist NASA management in promoting economy, efficiency, and effectiveness.

THE INSPECTOR GENERAL provides policy direction and leadership for the NASA OIG and serves as an independent voice to the NASA Administrator and Congress by identifying opportunities for improving the Agency's performance. The Deputy Inspector General assists the Inspector General in managing the full range of the OIG's programs and activities and provides supervision to the Assistant Inspectors General and Counsel in the development and implementation of the OIG's diverse audit, investigative, legal, and support operations. The Executive Officer serves as the OIG liaison to Congress and other Government entities, conducts OIG outreach both within and outside NASA, and manages special projects. The Investigative Counsel serves as a senior advisor for OIG investigative activities and conducts special reviews of NASA programs and personnel.

THE OFFICE OF AUDITS conducts independent and objective audits and reviews of NASA programs, projects, operations, and contractor activities. In addition, the Office of Audits oversees the work of an independent public accounting firm in its annual audit of NASA's financial statements.

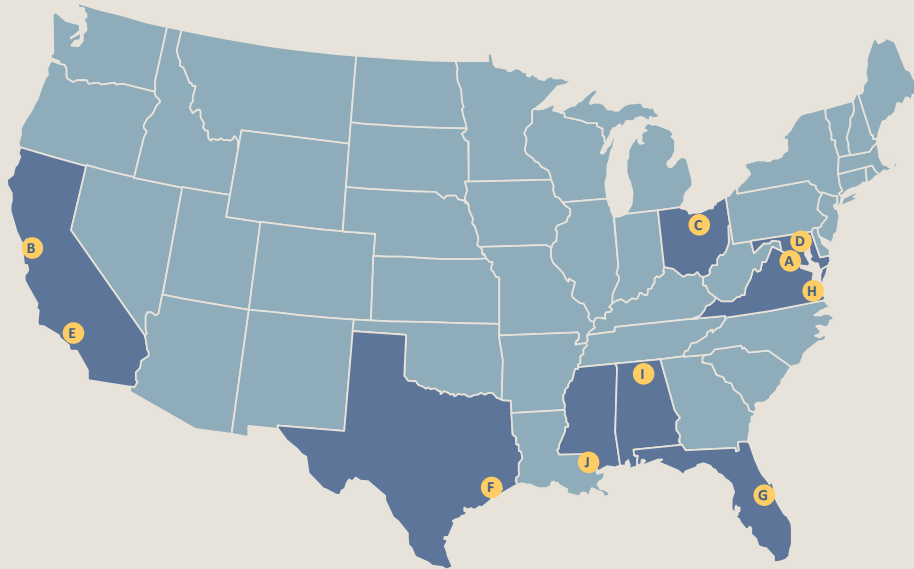
THE OFFICE OF COUNSEL TO THE INSPECTOR GENERAL provides legal advice and assistance to OIG managers, auditors, and investigators. The Office serves as OIG counsel in administrative litigation and assists the Department of Justice when the OIG participates as part of the prosecution team or when the OIG is a witness or defendant in legal proceedings. In addition, the Inspector General has designated the Counsel as Whistleblower Protection Ombudsman, who is responsible for educating Agency employees about prohibitions on retaliation for protected disclosures and about rights and remedies for protected whistleblower disclosures.

THE OFFICE OF INVESTIGATIONS investigates allegations of cybercrime, fraud, waste, abuse, and misconduct that may affect NASA programs, projects, operations, and resources. The Office refers its findings either to the Department of Justice for criminal prosecution and civil litigation or to NASA management for administrative action. Through its investigations, the Office develops recommendations for NASA management to reduce the Agency's vulnerability to criminal activity and misconduct.

THE OFFICE OF MANAGEMENT AND PLANNING provides financial, procurement, human resources, administrative, and information technology services and support to OIG staff.

APPENDIX G. MAP OF FIELD OFFICES

NASA OIG OFFICES OF AUDITS AND INVESTIGATIONS



A NASA OIG HEADQUARTERS

300 E Street SW, Suite 8U71
Washington, DC 20546-0001
Tel: 202-358-1220

B AMES RESEARCH CENTER

NASA Office of Inspector General
Ames Research Center
Mail Stop 11, Building N207
Moffett Field, CA 94035-1000
Tel: 650-604-3682 (Investigations)

C GLENN RESEARCH CENTER

NASA Office of Inspector General
Mail Stop 14-9
Glenn Research Center at Lewis Field
Cleveland, OH 44135-3191
Tel: 216-433-9714 (Audits)
Tel: 216-433-5414 (Investigations)

D GODDARD SPACE FLIGHT CENTER

NASA Office of Inspector General
Code 190
Goddard Space Flight Center
Greenbelt, MD 20771-0001
Tel: 301-286-6443 (Audits)
Tel: 301-286-9316 (Investigations)

NASA Office of Inspector General
Office of Investigations
402 East State Street
Room 3036
Trenton, NJ 08608
Tel: 609-656-2543 or
609-656-2545

E JET PROPULSION LABORATORY

NASA Office of Inspector General
Jet Propulsion Laboratory
4800 Oak Grove Drive
Pasadena, CA 91109-8099

Office of Audits
Mail Stop 180-202
Tel: 818-354-3451

Office of Investigations
Mail Stop 180-203
Tel: 818-354-6630

NASA Office of Inspector General
Office of Investigations
Glenn Anderson Federal Building
501 West Ocean Boulevard
Suite 5120
Long Beach, CA 90802-4222
Tel: 562-951-5485

F JOHNSON SPACE CENTER

NASA Office of Inspector General
Lyndon B. Johnson Space Center
2101 NASA Parkway
Houston, TX 77058-3696

Office of Audits
Mail Stop W-JS
Building 1, Room 161
Tel: 281-483-9572

Office of Investigations
Mail Stop W-JS2
Building 45, Room 514
Tel: 281-483-8427

G KENNEDY SPACE CENTER

NASA Office of Inspector General
Mail Stop W/KSC-OIG
Post Office Box 21066
Kennedy Space Center, FL 32815
Tel: 321-867-3153 (Audits)
Tel: 321-867-4093 (Investigations)

H LANGLEY RESEARCH CENTER

NASA Office of Inspector General
Langley Research Center
9 East Durand Street
Mail Stop 375
Hampton, VA 23681
Tel: 757-864-8562 (Audits)
Tel: 757-864-3263 (Investigations)

I MARSHALL SPACE FLIGHT CENTER

NASA Office of Inspector General
Mail Stop M-DI
Marshall Space Flight Center, AL
35812-0001
Tel: 256-544-0501 (Audits)
Tel: 256-544-9188 (Investigations)

J STENNIS SPACE CENTER

NASA Office of Inspector General
Office of Investigations
Building 3101, Room 119
Stennis Space Center, MS 39529-6000
Tel: 228-688-1493





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If you fear reprisal, contact the
OIG Whistleblower Ombudsman to learn more about your rights:

<https://oig.nasa.gov/whistleblower.html>

<https://oig.nasa.gov>

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