



NASA
Procedural
Requirements

COMPLIANCE IS MANDATORY FOR NASA EMPLOYEES

NPR 2200.2E

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Requirements for Documentation, Approval and Dissemination of Scientific and Technical Information (Revalidated with Change 2)

Responsible Office: Office of the Chief Information Officer

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CHANGE HISTORY

Chg#	Date	Description
1	04/12/2024	Revalidated for another five years. Administrative changes made to reflect a name change to STI and to include organizational changes that were approved through OCIO Transformation/MAP process.
2	08/27/2024	Updated with Change 2, to reflect organizational changes from MAP/Transformation, moving some responsibilities from the Center level to the Enterprise/OCIO organization.

Preface

P.1 Purpose

- a. This directive establishes the obligations for publishing, disseminating, and safeguarding NASA scientific and technical information (STI) under the policy set forth in NASA Policy Directive (NPD) 2200.1, Management of NASA Scientific and Technical Information (STI).
- b. In accordance with the National Aeronautics and Space Act, 51 United States Code (U.S.C.) § 20112(a)(3), NASA will "provide for the widest practicable and appropriate dissemination of information concerning its activities and the results thereof." Unless a determination is made that public dissemination of information will be prohibited or restricted pursuant to U.S. statute, regulation, or Agency policy, NASA information is made broadly available to the public. NASA's responsibilities include safeguarding sensitive and restricted research and development results and preserving STI to ensure future accessibility.
- c. Under the Agency's Office of Chief Information Officer, STI Compliance and Distribution Services hereby referred to as STI Services, manages, disseminates, safeguards, and preserves NASA STI for use by NASA, NASA contractors, NASA grantees, other U.S. Government agencies and their contractors, and the public. In doing so, STI Services supports efforts to advance the Agency's goals in science, exploration, technology development, and aeronautics.

P.2 Applicability

- a. This NPR is applicable to NASA Headquarters and all NASA Centers, including Component Facilities, and Technical and Service Support Centers.
- b. This language applies to the Jet Propulsion Laboratory (JPL), a Federally Funded Research and Development Center, other contractors, recipients of grants, cooperative agreements, or other agreements only to the extent specified or referenced in the applicable contracts, grants, or agreements.
- c. This NPR applies to all STI published, disseminated, and presented, that contain NASA-sponsored or NASA-funded STI except as excluded in this directive. This NPR also applies to STI presented internally when foreign persons are present.
- d. In this directive, all mandatory actions (i.e., requirements) are denoted by statements containing the term "shall." The terms: "may" or "can" denote discretionary privilege or permission, "should" denotes a good practice and is recommended, but not required, "will" denotes expected outcome, and "are/is" denotes descriptive material.
- e. In this directive all document citations are assumed to be the latest version unless otherwise noted.

P.3 Authority

- a. National Aeronautics and Space Act, 51 U.S.C. § 20101 et seq.
- b. NPD 2200.1, Management of NASA Scientific and Technical Information (STI).

P.4 Applicable Documents and Forms

- a. Export Control Reform Act of 2018, 50 U.S.C. §§ 4801-4852.
- b. Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, 2 CFR 200.
- c. Grants and Cooperative Agreements, 2 CFR 1800.
- d. Controlled Unclassified Information, 32 CFR pt. 2002.
- e. NASA Federal Acquisition Regulation Supplement, 48 CFR pt. 18.
- f. NPD 1490.1, NASA Printing, Duplicating, and Copying Management.
- g. NPR 1441.1, NASA Records Management Program Requirements.
- h. NPR 1600.2, NASA Classified National Security Information.
- i. NPR 2190.1, NASA Export Control Program.
- j. NPR 2810.1, Security of Information Technology.
- k. NPR 7120.7, NASA Information Technology and Institutional Infrastructure Program and Project Management Requirements.
- l. NASA Interim Directive (NID) 1600.55, Sensitive But Unclassified (SBU) Controlled Information.
- m. NID 2810.135, Controlled Unclassified Information.
- n. NAII 2190.1, NASA Export Control Program Operations Manual.
- o. NF-1676, NASA Scientific and Technical Information Document Availability Authorization, Electronic Form.
- p. NF-1679, Disclosure of Invention and New Technology (see also <http://invention.nasa.gov>).

P.5 Measurement/Verification

a. To assess compliance with the STI requirements set forth in this NPR, STI Services reviews trends periodically. Key measurements include:

(1) Repository curation:

(a) Quantifies the annual transfer of STI to the National Archives for preservation in accordance with NPR 1441.1, NASA Records Management Program Requirements.

(b) Maintains an active authorization to operate in accordance with NPR 2810.1, Security of Information Technology.

(2) Compliance:

Tracks Agency conformity with the requirements of this NPR.

(3) Mission support:

(a) Assess STI services to NASA organizations, other Federal agencies and the public in support of mission goals.

(b) Evaluates the STI Service's capability to provide excellence in customer service.

P.6 Cancellation

NPR 2200.2D, Requirements for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information, dated September 7, 2016.

Chapter 1: Introduction

1.1 General

1.1.1 This NPR provides the high-level, basic procedures and requirements for meeting NASA's obligation to manage, disseminate, safeguard, and preserve NASA STI in accordance with established governance.

1.1.2 It is the responsibility of every NASA employee, contractor, grantee, or other award/agreement recipient to comply with applicable Federal laws, regulations, executive orders, agreement/award instruments, and Agency policies associated with publishing research performed by or for NASA.

1.1.3 STI Compliance and Distribution Services, in the Office of Chief Information Officer, manages the requisite practices and services to obtain release and dissemination approval.

1.1.4 The basic procedures necessary to fulfill the requirements of this NPR are contained in the STI Handbook. Internal NASA users may access these instructions on the STI Compliance and Distribution Services's internal knowledge base on SharePoint: [STI Procedural Instructions](#).

a. The STI Procedural Instructions includes details and resources previously contained in earlier versions of this NPR. Resources including, but not limited to, distribution notifications, useful checklists, and STI Report Series templates can be found in the knowledge base.

b. Users external to NASA may access selections from the STI Handbook <https://sti.nasa.gov>, or for additional clarification, they may coordinate with technical/grant/cooperative agreement officers and/or Enterprise STI Representatives.

1.1.5 STI Services provides NASA Form (NF) 1676, NASA Scientific and Technical Information Discovery System (STRIVES), the required process for NASA authors or any NASA employee seeking to disseminate "NASA STI" (see Section 2.1).

a. Authors ensure all issues are resolved and that requisite export control and legal approvals, data protection measures, and professional and technical reviews are applied prior to information being disseminated or released by completing the NF-1676.

b. Contractors, grantees, and other award/agreement recipients will adhere to the clauses in their agreements.

1.1.6 Each Enterprise STI Manager or other supporting personnel are available to assist authors in preparing research for approval and dissemination. Additional details and resources are available at <https://nasa.sharepoint.com/sites/NASASTIProgram>.

Chapter 2. Dissemination of NASA Scientific and Technical Information

2.1 Scientific and Technical Information

2.1.1 STI is the analyses of data and facts and resulting conclusions of basic and applied scientific, technical, and related engineering research and development.

2.1.2 NASA STI is derived from NASA activities.

a. NASA STI includes information authored by a NASA employee as part of the employee's official duties, or STI coauthored by a NASA employee and a non-NASA employee.

b. Contractors, grantees or cooperative agreement holders shall adhere to data and publishing rights requirements specified in their respective agreements.

c. Contracting and grant officers preparing agreements shall ensure any restrictions or limitations placed on NASA contractors and grantees regarding the publication, dissemination, or presentation of STI produced under a contract, grant or any other agreement are consistent with NASA Federal Acquisition Regulation Supplement, 48 CFR pt. 18; 2 CFR 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards; and Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, 2 CFR 1800.

d. Types of NASA STI may include technical publications and reports; abstracts; journal articles, including preprints and accepted manuscripts; meeting, workshop, and conference publications and presentations; conference proceedings; and preliminary STI, including any of these examples that will be uploaded to a public website or that exist in visual documentation formats.

2.1.3 NASA disseminates STI pursuant to public access policies consistent with NPD 2230.1, Research Data and Publication Access, and in keeping with Federal laws, regulations, and Agency policy that require safeguarding restricted or sensitive information.

2.2 Obtaining STI Release Authorization

2.2.1 Authors, meaning NASA employee authors or any NASA employee seeking to disseminate NASA STI as defined herein, shall not release NASA STI through any public channel or media without submitting and obtaining an approved NF-1676.

a. Authors shall complete the NF-1676 review process prior to internal or external release of STI where foreign persons may be present.

b. Authors who complete the NF-1676 review process shall ensure that information is properly reviewed, marked, disseminated, and archived by NASA.

2.2.2 Completion of the NF-1676 review process ensures NASA does not release information to which public access may be prohibited, restricted, or limited in accordance with Controlled Unclassified Information (CUI), 32 CFR pt. 2002. Refer to NID 2810.135, Controlled Unclassified

Information, for more information on CUI.

2.2.3 All authors who intend to publish and disseminate NASA STI under the direction of NASA, meaning deliverable obligations required under the terms of a contract, grant, or other cooperative agreement requirements, shall do so via the NF-1676.

a. All contractor, grantee and cooperative agreement recipients shall coordinate with technical management or the CO/COR/GO/GTO and Enterprise STI Representatives to select a suitable publishing channel for releasing the STI.

2.2.4 All NASA employees producing or authoring STI shall uphold the responsibility to review data for compliance with the laws and regulations governing STI distribution restrictions. See NID 2810.135 and NPR 2190.1, NASA Export Control Program.

2.3 Exclusions from NPR 2200.2

Not all information released by NASA falls under the purview of STI. Exclusions to NPR 2200.2 requirements are:

a. Software releases, see NPR 2210.1, Release of NASA Software. Go to <https://software.nasa.gov> for more information and to access a list of center software points of contact.

b. Freedom of Information Act requests, see Freedom of Information Act, 5 U.S.C. § 552.

c. Data sets independent of published/publishing NASA STI, see NPR 2190.1, as these data do require an export control review.

d. Mishap investigations, see NPR 8621.1, NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping.

e. Policy/procedural or operational documentation, see NPR 1400.1, NASA Directives and Charters Procedural Requirements.

f. Safety standards, reference Agency-level safety and mission assurance standards.

g. Education and public outreach, see NPD 2521.1, Communications and Material Review.

h. New technology/invention disclosure, see NPR 2091.1, Inventions Made by Government Employees.

i. Technology transfer, see NPR 7500.2, NASA Technology Transfer Requirements.

j. STI specifically covered under a Space Act Agreement (SAA), see NPD 1050.7, Authority to Enter into Partnership Agreements.

k. STI released or published by NASA civil servants when the STI is produced on their own behalf, using information (NASA or otherwise) already available to the public, and not part of their official Government duties (such as in the case of graduate coursework, theses, or dissertations). To confirm this status, consult with Enterprise STI Representatives.

2.4 Declassified STI

2.4.1 Enterprise personnel responsible for declassified STI shall send those publications to the NASA STI Services with a properly completed and signed NF-1676.

2.4.2 Enterprise personnel responsible for declassified STI shall properly mark those publications as unclassified (revised cover, title page, and page markings) and include documentation authorizing the declassification as outlined in NPR 1600.2, NASA Classified National Security Information.

2.4.3 Enterprise personnel responsible for declassified STI shall ensure compliance with NID 2810.135 should CUI requirements apply to the unclassified document.

Chapter 3. Requirements

3.1 NASA Mission Directorate Associate Administrators (MDAAs), Chief Information Officers (CIOs), Chief Engineer, Chief Scientist, Center Directors, and Mission Support Directorate Associate Administrators (MSDAAs) are responsible for:

- a. Ensuring compliance with this NPD and NPR 2200.2 and with applicable laws and regulations.
- b. Ensuring STI is reviewed technically, as required by NPR 2200.2, and, if applicable, meets the NASA Guidelines for Quality of Information.
- c. Serving or delegating participation on the Agency STI Working Group to provide feedback to STI Services' current and future initiatives and coordination with the research and development producers/users within NASA.

3.2 The Information, Data & Analytics Services (IDAS) Director under the CIO is responsible for:

- a. Approving the strategic direction and plan for STI Services and ensuring the STI Services Strategic Plan aligns with IDAS strategy and the NASA IT Strategic Plan.
- b. Approving STI Services policies.
- c. Allocating funds for STI Services.
- d. Coordinating and approving the Agency's STI policies with the NASA CIO, NASA Headquarters Export Administrator (HEA), MDAAs, Chief Engineer, Center Directors, and MSDAAs.
- e. Assessing the effectiveness of STI Services.

3.3 The STI Services Office, under the IDAS Service Line, is responsible for:

- a. Delivering and implementing an STI Services Strategic Plan aligned with the Agency CIO and IDAS strategy.
- b. Providing for the most cost-effective, prompt, and widest practicable and appropriate dissemination of STI resulting from NASA's research effort, unless restricted by U.S. statute, regulation, or Agency policy, in keeping with 51 U.S.C. § 20101 et seq.
- c. Coordinating with the NASA Office of the Chief Information Officer IDAS to recommend STI policy and procedures via this NPD and NPR 2200.2 and implementing the approved policy and procedures.
- d. Ensuring awareness and compliance to protect and disseminate NASA STI in a manner consistent with U.S. laws and regulations, Federal information policy, National Institute of Standards and Technology Security Standards, intellectual property rights, technology transfer protections requirements, and budgetary and technological limitations via the NF-1676 review and approval process.
- e. Ensuring that NASA STI is shared (as appropriate) with entities required by U.S. statutes listed in section 3 of this document including, but not limited to, the National Archives and Records Administration, Government Printing Office, National Technical Information Service, and other agreed-upon partnerships.

- f. Ensuring that NASA-funded STI received from contractors, grantees, and cooperative agreement personnel, if published, released external to the Agency, or made available to foreign persons by, or under the direction of NASA (versus release by the contractor or grantee independent of direction by NASA), is released in accordance with this NPD and the NF-1676 approval process.
- g. Ensuring that the Centers are aware of policies and procedures indicated in this NPD and NPR 2200.2. This awareness includes appropriate development of training in STI processes and information security protection to all Agency personnel.
- h. Operating and managing an Agency-level STI Services, in accordance with NPR 7120.7, NASA Information Technology and Institutional Infrastructure Program and Project Management Requirements and approved by the NASA CIO.
- i. Operating and maintaining a digital repository (database, user interface, and access) of NASA STI and NASA-funded contractor and grantee STI that complies with Government electronic media regulations.
- j. Ensuring that the information system for collection of NASA STI by STI Services maintains a current authorization to operate in accordance with NPR 2810.1, Security of Information Technology, at the security categorization level determined by the system's Federal Information Processing Standards (FIPS) assessment in accordance with FIPS-199.
- k. Contributing to the community of scientific and technical information researchers/practitioners, both within NASA and without, by maintaining relationships with other STI programs, professional societies, and individuals involved in aerospace.
- l. Negotiating and implementing STI data-sharing agreements in connection with the STI Repository NTRS to facilitate the collection and dissemination of STI. Excluded are data-sharing agreements that are the responsibility of missions, projects, and programs.
- m. Measuring, monitoring, reporting on compliance and maintaining records of Centers STI released without proper review and approve via a NF 1676.
- n. Establishing and implementing a plan to ensure awareness of the STI review requirements contained in NPR 2200.2.
- o. Coordinating with the Centers authors, Center Export Administrators (CEAs), Contracting Officers (COs), Grants Officers (GOs), and managers who approve STI, including approvers for export control and legal status, to track NF-1676 submissions to final approval or other disposition.
- p. Reviewing the NF-1676 for completeness, distribution availability category, restrictions, and accuracy.
- q. Ensuring that the STI submission processing is complete and includes required notices (if applicable).

3.4 Center Directors are responsible for:

- a. Ensuring STI activities are performed in accordance with this NPD, NPR 2200.2, pertinent laws and regulations, and referenced documents.
- b. In coordination with the Information Services implementing an Agency-based plan to ensure compliance of the STI review requirements contained in NPR 2200.2.

c. Ensuring that actions associated with improvement areas cited in the Agency's compliance review are implemented at their Center.

3.5 Managers designated as STI/NF-1676 approvers within Center Organizations are responsible for:

a. Ensuring that STI, in their areas of responsibility, receives appropriate technical review and management review prior to the STI being published, released external to the Agency, or made available to foreign persons by, or under the direction of, NASA.

b. Coordinating efforts with STI Services, CEAs, and applicable COs and GOs.

c. Coordinating the quality of all STI publications with NPR 2200.2 and the NASA Guidelines for Quality of Information in accordance with Government Appropriations Act of 2001, Pub. L. 106-554 § 515, and Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies, 67 FR 8451.

d. Referring any STI qualifying as either "Influential" or "Highly Influential" as defined in the NASA Guidelines for Quality of Information to the CIO's information quality point of contact at the following e-mail address: hq-infoquality@nasa.gov.

3.6 Center export control reviewers of assigned STI release requests are responsible for:

a. Assessing and ensuring compliance of STI outputs, in accordance with NPR 2190.1.

b. Assisting any program and Agency personnel involved in the production and management of STI seeking guidance in determining the export controls for publishing and disseminating

3.7 STI.Center legal personnel reviewing STI release requests shall, upon requests for counsel:

a. Provide consultation services on conformity of information with laws and regulations governing distribution and intellectual property rights (copyrights and intellectual property such as trademarks or patents).

b. Assist any program and agency personnel involved in the production and management of STI seeking guidance in determining the restrictions or limitations for publishing and disseminating STI.

3.8 Contracting Officers (COs) are responsible for:

a. Ensuring that STI requirements and information security protection consistent with NPRs 2190.1, 2200.2, and 2810.1 are placed in NASA contracts.

b. Ensuring contract reports (final and additional reports required by the contract), pursuant to contractual agreement, are submitted and processed in accordance with this NPD and NPR 2200.2.

c. Coordinating contract issues with STI Services regarding publishing or releasing STI.

e. Ensuring that contractor-produced STI receives an NF-1676 review if the Center elects to publish or release the STI external to the Agency or available to foreign persons by, or under the direction of, NASA.

f. Delegating responsibilities, when appropriate, to support personnel.

3.9 Grants Officers (GOs) and Cooperative Agreement Officers are responsible for:

- a. Ensuring grant and cooperative agreement award requirements are consistent with Agency policies, NPR 2200.2, and applicable STI terms and conditions are incorporated in NASA grants and agreements.
- b. Ensuring grant and cooperative agreement reports (final and additional reports required by the grant or cooperative agreement), pursuant to terms and conditions of the award, are submitted and processed in accordance with this NPD and NPR 2200.2.
- c. Delegating responsibilities, when appropriate, to support personnel.

3.10 Authors of STI are responsible for:

- a. Coordinating with technical/functional managers, STI Services, Office of Chief Counsel (OCC), CEAs, COs, GOs, and/or the Technical Publication Office to select the appropriate channel for release of STI.
- b. Ensuring STI complies with responsibilities and requirements set forth in this NPD and NPR 2200.2. NPR 2200.2 details required actions supporting author responsibilities.
- c. Ensuring STI is not published, released external to the Agency, or made available internally to foreign persons by, or under the direction of, NASA before the NF-1676 process is complete.
- d. When a civil servant author, using the NF-1676 process when publishing or releasing external to the Agency, or when making available internally to foreign persons.
- e. When a contractor, grantee, or cooperative agreement author, releasing STI in coordination with OCC, CEAs, GOs and COs, and pursuant to their contracts and agreements, and may be required to use the NF-1676 process.

Chapter 4. General Procedures: Documentation, Approval, and Dissemination

4.1 General Procedures Introduction

4.1.1 NASA STI shall be made available to the public unless the information should be restricted by law (see section 4.4).

4.1.2 NASA's documentation, approval, and dissemination procedures are based on statutory requirements borne out of federal law and government regulations (see P.3 Authority and P.4 Applicable Documents and Forms).

4.1.3 To ensure compliance, the Agency's STI Services shall provide the requisite means through which all STI approval and release requests are processed, the NF-1676.

4.1.4 The NF-1676 is the approval workflow that routes author requests to disseminate and publish NASA STI. Authorized approvers in the NF-1676 workflow routing may include managers, legal, and export control. The specific list of approvers may vary depending on the details of the STI.

4.1.5 Prior to NASA releasing or disseminating STI, all authors shall obtain a completed, approved NF-1676 (see figure 4.1), NASA Scientific and Technical Information Discovery System, STRIVES. As part of completing the NF-1676, authors shall coordinate with technical management and/or the Contract/Grant Officer and/or STI personnel to assess STI under development to:

- a. Select a publication channel, or venue through which the STI is planned to be released. See section 4.2.
- b. Complete requisite technical/management/editorial reviews and any other applicable programmatic approvals or authorizations. See section 4.3.
- c. Confirm data rights in contract or grant clauses regarding release of STI by contractors and grantees. See section 1.1.4.b.
- d. Initiate and follow through on the NF-1676 process requirements for obtaining approval to release or disseminate. The author is authorized to release STI when the NF-1676 is approved by all authorized approvers and the STI personnel quality control and verification reviewer.
- e. Determine any potentially applicable distribution or printing needs.

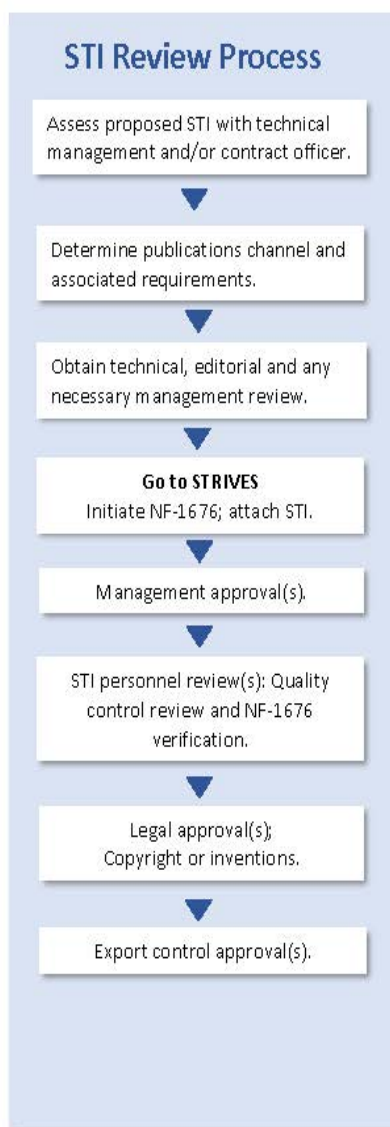


Figure 4-1. NASA STI passes through a series of gates prior to being released. Enterprise STI Representatives are available to assist with understanding the above outlined actions and processes.

4.1.6 STI Services contact information: E-mail:

<https://sti.nasa.gov/sti-contact-form/?RequestType=General>

4.2 Selecting a Publishing Channel

4.2.1 NASA and NASA-funded authors may publish in either the NASA STI Report Series or through non-NASA channels, such as periodicals, oral presentations with written or visual documentation, or proceedings of scientific and technical conferences and workshops.

- a. Authors shall initially select the publishing channel, including evaluating open access publications, in consultation with technical management or the COR or GTO (if applicable) and/or Enterprise STI Representatives.
- b. Authors select a publishing channel based on the content of the document and the intended readership and is subject to approval by technical management within their organizations or the COR or GTO.
- c. Authors shall clearly indicate NASA's support in all externally published STI featuring NASA research, development, and related efforts, preferably as a first-page footnote unless a style requirement specifies indicating acknowledgments in another manner.
- d. When including NASA and any other government, industry, or academic logos, authors shall conform to existing NASA guidance on use of logos. See NASA's Office of Communications Policies and Guidance page to access the NASA Graphics Standards Manual or seek guidance from Enterprise STI Representatives.
- e. Because style and format standards for NASA STI publications vary due to media output or discipline, authors shall consult with Center STI personnel for guidance. Format requirements specific to the STI Report Series publication channel are detailed in the STI Handbook [STI Procedural Instructions](#).

4.2.2 Authors who choose to publish through the NASA Report Series shall select, in consultation with technical management or the COR or GTO, a document type from the NASA STI Report Series listed subsequently and further detailed in the STI Handbook . The following are brief descriptions of the document types available:

- a. The Technical Publication (TP) series includes reports of completed research or of a significant phase of research that present the results of NASA programs. TPs usually include extensive data or theoretical analysis, but they may also be compilations of significant scientific and technical data or information deemed to be of continuing reference value. TPs are akin to professional or technical publications that are peer-reviewed; however, TPs have less stringent limitations on manuscript length and extent of graphic presentations often imposed by professional and society publishers.
- b. The Technical Memorandum (TM) series records scientific and technical findings that are preliminary or of specialized interest (e.g., quick-release reports, working or white papers, and bibliographies) that contain minimal annotation. TMs do not contain extensive analysis.
- c. The Contractor Report (CR) series includes reports of scientific and technical findings by NASA-sponsored contractors and grantees as well as dissertations or theses.

(1) When funded by NASA, applicable interim and final contract, grant, or cooperative agreement

reports shall be published by as a CR.

(2) Contractors or grantees shall submit STI such as final reports, when specified in the contract, grant, or cooperative agreement, in accordance with their respective contractual requirements, to the NASA CO, COR, GO, or GTO of record.

(3) Reports authored by contractors or grantees shall be processed through the NF=1676 process by the cognizant NASA manager and CO, COR, GO, or GTO if further dissemination is determined to be in the interest of the Agency.

d. The Conference Publication (CP) series contains collected papers from scientific and technical conferences, symposia, seminars, or other meetings sponsored or cosponsored by NASA.

e. Meeting organizers of NASA-sponsored conferences shall collect permissions from non-NASA authors to allow NASA to publish and distribute content contributed to the proceedings that will be released and disseminated in any manner.

f. The Special Publication (SP) series records scientific, technical, or historical information from NASA programs, projects, and missions and is most often concerned with subjects having substantial public interest.

g. The Technical Translation (TT) series consists of English-language translations of non-English scientific and technical material pertinent to NASA's mission.

4.2.3 Authors shall submit NASA preprint STI manuscripts, intended for journal publication acceptance, for approval via NF-1676 prior to submission to the periodical (contractors and grantees adhere to the requirements/terms of their agreements).

a. STI, once accepted for publication, includes changes requested by the publisher and is referred to as an "accepted manuscript." Additional policy relative to NASA's expectations regarding access requirements and accepted manuscript handling can be found in NPD 2230.1.

b. Upon acceptance for publication in a periodical, authors of journal articles shall fulfill public access requirements by providing the author's accepted manuscript version via NF-1676. (See the STI Handbook for guidance on an abbreviated submission when a preprint NF-1676 has already been submitted for the same work.)

c. Authors shall seek out consultation of legal counsel for any necessary questions regarding copyright of STI in materials being published in a periodical. Based on Subject Matter of Copyright: United States Government Works, 17 U.S.C. § 105, NASA may use and distribute preprints, and they may be released to STI repositories, whether authored by a government employee or by a contractor, grantee, or other agreement recipient.

d. Authors who choose to publish in a periodical may discover charges imposed by publishers. When NASA STI, authors shall coordinate payment through the NASA organization sponsoring the research, with whom payment responsibility lies, at the earliest stage possible.

4.2.4 When NASA STI, authors using STI in an oral presentation that is to be delivered publicly shall submit the materials for approval prior to the presentation via the NF-1676 process.

a. When NASA STI, authors planning to deliver internal presentations in the presence of a foreign person shall submit the materials for approval prior to the presentation via the NF-1676 process.

b. When NASA STI, authors engaging in planned, scheduled topic discussions that do not include written or visual documentation shall submit an abstract for approval prior to the presentation via the NF-1676 process.

4.2.5 When NASA STI, authors shall submit an NF-1676 for any materials prepared for release or presentation at any symposia, virtual or in person, including supporting or embedded visual documentation, video, audio, or other interactive components.

a. When NASA STI, authors shall include in symposia presentations or papers the copyright notice when applicable (e.g., joint works, NASA employee/government works, or those prepared under contract, grant or cooperative agreement). See the STI Handbook for examples.

b. Authors shall present sensitive information only during symposia whose venues have been secured for presentation of restricted information. If there is any concern that some attendees are not known or authorized to receive restricted technical data or technology, meeting discussions and presentation material should be limited to that which is in the public domain.

4.3 Organizational Review and Approval

4.3.1 The sponsoring organization or program shall provide professional or technical review and management approval of STI. Requirements may vary depending on the STI's content and publishing channel (see section 4.2).

4.3.2 Authors shall obtain professional, technical, or any necessary management reviews and approvals per Agency Enterprise guidance prior to submission of an NF-1676 and its associated STI. See definitions of these review types for more information and seek guidance from Enterprise STI Representatives.

a. For assistance in determining need for and obtaining professional or technical reviews, authors shall consult with organizational management.

b. Authors shall ensure STI Report Series documents receive the review treatment specified for each report type in the STI Handbook.

4.3.3 Authors shall safeguard restricted or sensitive information in accordance NPR 2190.1 and NID 2810.135, NASA IT security requirements, and this NPR, while obtaining pre-NF-1676 reviews and approvals.

4.3.4 Authors and reviewers/management approvers shall adhere to the standards of authorship provided below.

a. Author order. Because of the complexity of scientific and technical work, the majority of STI planned for release has multiple authors. Authors' names typically appear in a sequence that indicates their respective responsibilities for the reported results; that is, the first author is the chief contributor and writer, and other authors follow in the order of their responsibilities/contributions. This is the preferred method for NASA STI Report Series. For NF-1676 submissions of third-party publisher content, the publisher's preference is acceptable.

b. Authors. Authorship of NASA STI will be reserved for persons participating directly in performance of the work from which research results are derived and who can effectively defend the main technical content to a peer group. Authors are those who make significant intellectual or

theoretical contributions to overall research and development activities, including system or experimental design, prototype development, and analysis and interpretation of data. Other significant authorship contributions may involve drafting the publication or reviewing and revising for intellectual content, as well as approving a final version as accepted for publication, including validating references.

c. Contributors. Recognizing technical or professional areas of support by individuals other than authors, when significant, is to be done in an acknowledgment section. Acknowledging technical editorship is justified when an editor has contributed scientific and technical expertise and judgment. It is also important to recognize significant contributions directly related to substantive professional editorial support or publication preparation.

d. References: References to works by others are to be cited in a list of references/bibliography.

4.4 NF-1676 Review and Approval

4.4.1 The NF-1676 is NASA's compliance review for the publication, dissemination, and presentation of NASA STI by or for NASA through any channel or media.

4.4.2 The NF-1676 process protects authors and the Agency by ensuring STI is disseminated in a manner consistent with U.S. laws and regulations, federal information policy and publication standards, intellectual property rights, and technology transfer protection requirements.

4.4.3 The NF-1676 review determines if STI is subject to one or more of the following restrictions, and therefore requires restricted access.

4.4.3.1 Export control regulations specify categories of technical data that may not be exported or disclosed to foreign persons, in the United States or abroad, without proper authority (see NPR 2190.1, NASA Export Control Program). Export control limitations are applied to information subject to:

- a. Export Control Reform Act of 2018, 50 U.S.C. §§ 4801-4852.
- b. Export Administration Act of 1979, 50 U.S.C. app. 2401 et seq.
- c. International Traffic in Arms Regulations 22 CFR pts. 120 - 130, ITAR.
- d. Export Administration Regulations, 15 CFR pts. 730 - 774, EAR.

4.4.3.2 CUI is information required to be protected by statute or in accordance with an agreement (Controlled Unclassified Information, 32 CFR pt. 2002). NASA requirements for handling CUI data are provided in NID 2810.135. More details on CUI marking can be found from the OCIO here: <https://www.nasa.gov/content/controlled-unclassified-information>.

a. NASA STI restricted under ITAR and EAR will be handled and curated as CUI by default unless a designated NASA official instructs otherwise.

b. Personally identifiable information (PII) is information which can be used to distinguish or trace an individual's identity. Privacy Act- NASA Regulations, 14 CFR pt.1212, sets forth requirements for the management of personal information contained in federal records. See NPR 1382.1, NASA Privacy Procedural Requirements, for details on PII.

c. Proprietary information refers to legal property rights that are owned by an individual that exclude others from using, selling, reproducing, displaying, or distributing the information. For the purposes of the NF-1676 review process and this NPR, proprietary STI contains:

- (1) limited rights data received as a deliverable under a Government contract,
- (2) Small Business Innovation Research (SBIR) data,
- (3) trade secret/confidential commercial information,
- (4) copyrighted information,
- (5) information disclosing inventions, and
- (6) any other information subject to laws governing public access to information as set forth in 51 U.S.C. § 20131(b).

4.4.4 Authors shall include notices on documents containing sensitive or restricted-access STI that are applicable to all valid restrictions along with any associated expiration date. Consult with STI personnel or see the STI Handbooks for details and information on accessing templates.

- a. Document marking notices for SBU/CUI information will be in accordance with requirements set forth in NID 1600.5 and NID 2810.135, respectively.
- b. Information regarding document marking notices for export control information are provided by NAII 2190.1, NASA Export Control Program Handbook.
- c. Document marking notices for SBIR/STTR, trade secret, and copyright can also be found in the STI Handbook.

4.4.5 Document distribution limitations.

4.4.5.1 STI is released to the public unless restrictions are identified during the NF-1676 review. STI is released to the widest audience public audience possible; however, STI containing sensitive content is protected and is therefore distributed to limited audiences. STI released after October 1, 2021 will follow the categories set forth by CUI policy. STI releases predating October 1, 2021, will retain the legacy distribution categories. The legacy categories for release of STI are:

- a. Publicly releasable (no distribution limitation).
- b. Limited:
 - (1) U.S. Persons.
 - (2) U.S. Government Agencies and U.S. Government Agency Contractors Only.
 - (3) U.S. Government Agencies Only.
 - (4) NASA Contractors and U.S. Government Agencies Only.
 - (5) NASA Personnel and NASA Contractors Only.
 - (6) NASA Personnel Only.
 - (7) Available Only With Approval of Issuing Office (Mission Directorate or NASA Center).

4.4.5.2 Authors required to use restrictions other than those specified herein shall coordinate requests with the Enterprise STI Manager to receive prior approval from export control and legal counsel.

4.4.5.3 Authors with appeals for revising dissemination determinations shall submit via the NF-1676 process.

4.4.5.4. Authors shall coordinate dissemination appeals through the Enterprise STI Manager.

4.4.5.5 The process to submit invention disclosures, NF-1679, Disclosure of Invention and New Technology, and point(s) of contact at each NASA Center are available at the eNTR website: <http://invention.nasa.gov>.

4.5 Distribution, Archiving, and Printing

4.5.1 NASA disseminates STI electronically on the NASA Technical Reports Server located at <https://ntrs.nasa.gov/>.

4.5.2 STI Services archives its holdings per requirements set forth in NPR 1441.1.

4.5. 3 Hard copy printing or distribution of STI is the responsibility of the Center of origin. Publications are distributed and printed through Center duplicating or copying facilities or the GPO, in accordance with NPD 1490.1, NASA Printing, Duplicating, and Copying Management.

Appendix A. Definitions

Abstract. An abstract summarizes, usually in one paragraph of 300 words or less, the major aspects of an entire paper in a prescribed sequence that includes: 1) the overall purpose of the study and the research problem(s) investigated; 2) the basic design of the study; 3) major findings or trends found as a result of the analysis; and, 4) a brief summary of interpretations and conclusions.

Agency. Unless otherwise qualified, the term Agency refers to NASA.

Accepted manuscript. Version of the journal article that has been accepted for publication by a journal publisher and includes changes requested by the publisher and made by the author during the peer-review process. It typically includes the same content as the published article in the journal but does not include the publisher's form or format.

Availability. Degree of authorized access to a given document based on approved distribution limitations.

Center. This generic reference is all encompassing to mean ALL NASA centers and facilities, including JPL. Classified National Security Information (CNSI). Information that is protected against unauthorized disclosure IAW Executive Order 13526, "Classified National Security Information," and is marked to indicate its classified status when in documentary form.

Conference paper full-text document. Complete papers (not just abstracts) that contain text (e.g., Introduction, Background, Apparatus, Procedure, Analysis, and Conclusions) as well as tables, figures, equations, references, and appendixes, if they are part of the complete document.

Conference presentation. Projected visuals of details, figures, and tables from a conference publication that are prepared/formatted for and presented at a physical or virtual gathering.

Copyrighted document. Document for which the exclusive legal rights under the Copyright Law have arisen (right to reproduce, modify, distribute, perform publicly, and display publicly). Copyrights are protected by the U.S. Constitution and granted by law for original works of authorship fixed in a tangible medium of expression. Copyright arises in both published and unpublished works.

Dissemination/distribution. Dissemination is normally referred to as the process by which STI is transmitted to the user community. Distribution is normally referred to as the transmittal of STI electronically or by hard copy and/or alternative media to authorized users. In this NPR, these two terms are used interchangeably. Government distribution or dissemination means, in accordance with OMB Circular A-130, Management of Federal Information Resources, the Government-initiated distribution of information to the public. Dissemination within the meaning of the Circular does not include distribution limited to Government employees or agency contractors or grantees, intra-agency or interagency use or sharing of Government information, and responses to requests for agency records under Freedom of Information Act (FOIA), 5 U.S.C. 552.

Enterprise STI Manager. Person responsible for the overall STI Services in coordination with the Technical Publications Manager.

Export Administration Regulations (EAR). U.S. Export Control Regulations, 15 CFR pts.730-774, administered by the U.S. Department of Commerce that require limited availability for technical data

pertaining to commodities, technology, and software listed on the Commerce Control List. NASA STI reports subject to restriction under this regulation often are referred to as EAR documents.

External NASA user. Any individual who has not been provisioned via IdMAX for NASA services, including firewall access.

Foreign person. Also known as foreign national, and for the purpose of general security protection, considerations of national security, and access accountability, foreign person means any natural person who is not a lawful permanent resident as defined by 8 U.S.C. 1101(a)(20) or who is not a protected individual as defined by 8 U.S.C. 1324b(a)(3). It also means any foreign corporation, business association, partnership, trust, society or any other entity or group that is not incorporated or organized to do business in the United States, as well as international organizations, foreign governments, and any agency or subdivision of foreign governments (e.g., diplomatic missions).

Grantee. The organization that receives funding from NASA under a grant or cooperative agreement.

International Traffic in Arms Regulations (ITAR). U. S. International Traffic in Arms Regulations, 22 CFR pts. 120-130, that require limited availability for technical data that pertain to commodities, technology, and software listed on the United States Munitions List (USML). NASA STI reports subject to restriction under this regulation are often referred to as ITAR documents.

Internal NASA user. Refers to an individual who has been provisioned via IdMAX for NASA services, including firewall access.

Invention. Information on any way of doing or making things, new technology, machine, manufacture, design, or composition of matter, or any new and useful improvement thereof, or any variety of plant, which is or may be patentable under the patent laws of the United States.

Management approver. Person who understands the technical content of the STI and who can approve its publication or release; this can be a branch head, division chief, directorate manager, or other designations familiar with the content.

Management review. A management review consists of, but is not limited to, determining and instructing the need for either a professional review or a technical review, or both, ensuring submissions meet with Agency quality standards.

Misrelease. Document that has been released, published, or shared internally with foreign persons prior to the STI being approved via the NF-1676 process. A misrelease can occur in two ways: the STI is released to the public without review, or the STI was reviewed but disseminated beyond the approval parameters indicated on the final NF-1676.

NASA internal distribution. Distribution to NASA personnel, contractors and grantees, or partners who are not foreign persons and with the understanding that the STI is not permitted to be redistributed. If foreign persons will have access to the information, even if the distribution is limited, an NF-1676 review of the STI is required.

NASA STI. STI produced by NASA or under NASA funding agreements where NASA has the right to publish or otherwise disseminate the STI. For example, NASA STI includes STI authored by a NASA employee as part of the employee's official duties, STI coauthored by a NASA employee and a non-NASA employee, and STI authored by an employee of a contractor or grantee funded by NASA where NASA has the right to publish or otherwise disseminate the STI.

NASA STI Report Series. Discrete report designations that characterize NASA and NASA contractor STI reports. The NASA STI Report Series comprises six types of publications: Technical Publication (TP), Technical Memorandum (TM), Contractor Report (CR), Conference Publication (CP), Special Publication (SP), and Technical Translation (TT).

NASA Technical Reports Server. Now known as STI Repository; contains STI approved for public release.

Open access. A set of principles and practices through which research outputs are distributed free of access charges or other barriers.

Public access. Publications that are made freely available to the public worldwide, with no charges imposed for access.

Personally identifiable information (PII). Information that can be used to distinguish or trace an individual's identity¹⁴ CFR pt.1212, sets forth requirements for the management of personal information contained in federal records. See NPR 1382.1, NASA Privacy Procedural Requirements, for details on PII.

Preprint. Journal article version that is submitted to the journal publisher to request acceptance and publication. **Professional review.** Review that may also be called editorial and content review; these are performed by individuals or groups with technical knowledge or background tempered by interdisciplinary expertise in history, education, and program management. Such reviews will assess the quality of the document content in terms of its readability, communication of information, and suitability for a particular audience without particular focus on content. **Projected visual.** Single image projected for viewing by a group.

Proprietary information. This term refers to legal property rights that are owned by an individual that exclude others from using, selling, reproducing, displaying, or distributing the information. For the purposes of the NF-1676 review and this NPR, proprietary STI is that containing: (1) limited rights data received as a deliverable under a Government contract, (2) Small Business Innovation Research (SBIR) data, (3) trade secret/confidential commercial information, (4) copyrighted information, (5) information disclosing inventions, and (6) any other information subject to laws governing public access to information as set forth in 51 U.S.C. § 20131(b).

Publication, verb. Process of officially releasing a NASA document for public or restricted access through print, electronic, or alternative media. Also, the resultant document.

Publicly available. Availability assigned to STI information for which distribution and use are unrestricted (i.e., unclassified/unlimited).

Scientific and Technical Information. NASA STI is defined as the result (the analyses of data and facts and resulting conclusions) of basic and applied scientific, technical, and related engineering research and development.

Sensitive. Unclassified information or material determined to have special protection requirements to restrict access and preclude unauthorized disclosure.

STI Manager. Person responsible for the overall Center STI Compliance and Distribution Services in coordination with the Technical Publications Manager and Center STRIVES Representative.

STI Repository. Previously known as NTRS; houses NASA STI that is publicly available

STI Services. STI Services helps NASA avoid duplication of research by sharing information and ensures that the U.S. maintains its preeminence in aerospace-related industries and education. STI Services protects authors of STI by determining appropriate copyright for their STI documents and ensuring that all export control and legal review requirements are met prior to publication, dissemination, or presentation. This process is enforced through STRIVES, the Scientific, Technical and Research Information discoVery System.

STRIVES Review. Dissemination or release approval process by which NASA also determines which restrictions, if any, need to be placed on a document. The requisite form is NASA Form (NF)1676, NASA Scientific and Technical Information (STI) Discovery System (STRIVES), available at <https://nef.nasa.gov> (internal to NASA).

Technical Publications and Reports. Abstracts; journal articles, including preprints and accepted manuscripts; meeting, workshop, and conference publications and presentations; conference proceedings; and preliminary STI, including any of these examples that will be loaded to a public website or that exist in visual documentation formats.

Technical Review. Review that typically is performed by peers having expertise within the technical discipline of the activity or research being documented. These reviews assess the technical integrity and merit of the activity or research being performed and the results being documented without regard to the effectiveness of the document at communicating the information.

Third-party content. Content that does not originate from Federal Government employees or via Federal Government-funded work.

U.S. person. Person who is a lawful permanent resident as defined by 8 U.S.C. 1101(a)(20) or who is a protected individual as defined by 8 U.S.C. 1324b(a)(3). This includes lawful permanent residents (i.e., holders of green cards) or persons admitted with refugee status to the United States (see NPR 1600.1, Ch. 10). It also means any corporation, business association, partnership, society, trust, or any other entity, organization, or group that is incorporated to do business in the United States. It also includes any governmental (Federal, state, or local) entity.

Version of Record (Reprint). Version of journal article that is published in the journal by the publisher. It will typically have the date of publication and volume number. Some Federal agencies and publishers also call these the Version of Record manuscript.

Appendix B. Acronyms

CFR	Code of Federal Regulations
CIO	Chief Information Officer
CNSI	Classified National Security Information
CO	Contracting Officer
COR	Contracting Officer's Representative
CP	Conference Publication
CR	Contractor Report
CUI	Controlled Unclassified Information
EAR	Export Administration Regulations
FOIA	Freedom of Information Act
GO	Grant Officer
GPO	Government Publishing Office
GTO	Grants Technical Officer
ITAR	International Traffic in Arms Regulations
JPL	Jet Propulsion Laboratory
MDAA	Mission Directorate Associate Administrator
MSDAA	Mission Support Directorate Associate Administrator
NAII	NASA Advisory Implementing Instructions
NARA	National Archives and Records Administration
NF	NASA Form
NID	NASA Interim Directive
NPD	NASA Policy Directive
NPR	NASA Procedural Requirements
NTIS	National Technical Information Service
NTRS	NASA Technical Reports Server
OCIO	Office of the Chief Information Officer
OMB	Office of Management and Budget
PII	Personally Identifiable Information
PO	Program Office
SBIR	Small Business Innovation Research

SBU	Sensitive But Unclassified
STI	Scientific and Technical Information
STRIVES	Scientific and Technical Information Discovery System
TM	Technical Memorandum
TP	Technical Publication
TT	Technical Translation

Appendix C. References

- C.1 Freedom of Information Act, 5 U.S.C. § 552.
- C.2 Aliens and Nationality - Definitions, 8 U.S.C. § 1101(a)(20).
- C.3 Aliens and Nationality - Unfair Immigration-Related Employment Practices, 8 U.S.C. § 1324b(a)(3).
- C.4 Subject Matter of Copyright: United States Government Works, 17 U.S.C. § 105.
- C.5 Privacy Act- NASA Regulations, 14 CFR § 1212.
- C.6 Export Administration Regulations (EAR), 15 CFR pts. 730-774.
- C.7 International Traffic in Arms Regulations (ITAR), 22 CFR pts. 120-130.
- C.8 Controlled Unclassified Information, 32 CFR pt. 2002.
- C.9 NPD 1050.7, Authority to Enter into Partnership Agreements.
- C.10 NPD 2230.1, Research Data and Publication Access.
- C.11 NPD 2521.1, Communications and Material Review.
- C.12 NPR 1382.1, NASA Privacy Procedural Requirements.
- C.13 NPR 1400.1, NASA Directives and Charters Procedural Requirements.
- C.14 NPR 2210.1, Release of NASA Software.
- C.15 NPR 7500.2, NASA Technology Transfer Requirements.
- C.16 NPR 8621.1, NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping.
- C.17 NASA STI Handbook (SharePoint knowledge base; internal to NASA).
- C.18 NASA Guidelines for Quality of Information
(<https://www.nasa.gov/offices/ocio/qualityinfo/index.html>).