NASA Procedural Requirements

NPR 2200.2C
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COMPLIANCE IS MANDATORY

Requirements for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information (Updated w/change 2, 12/9/14)

Responsible Office: Office of the Chief Information Officer

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Change History

NPR 2200.2C Requirements for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information

Change Number	Date	Change Description
1	2/13/2014	Updated Appendix E contact information due to the move of STI services from CASI to LaRC.
2	12/9/2014	Update service name and contact information from CASI to STI Support Services.

Preface

P.1. Purpose

a. In accordance with the National Aeronautics and Space Act of 1958, as amended, NASA shall 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 shall be prohibited or restricted, NASA information is made available to the public.

b. This NASA Procedural Requirements (NPR) identifies requirements for approving, publishing, and disseminating NASA scientific and technical information (STI) under the policy set forth in NASA Policy Directive (NPD) 2200.1.

P.2. Applicability

a. This NPR shall apply to NASA Headquarters and NASA Centers, including Component Facilities and Technical and Service Support Centers, and to the Jet Propulsion Laboratory (a Federally Funded Research and Development Center), other contractors, grant recipients, or parties to agreements only to the extent specified in their contracts, grants, or agreements.

b. Treatment of NASA STI produced under NASA contracts, grants, and cooperative agreements shall be in accordance with Federal and NASA regulations, including the Federal Acquisitions Regulation (FAR), the NASA FAR Supplement, and NPR 5800.1, except in the case of approved waivers and exemptions.

c. All NASA STI and NASA-funded STI, if it is released by or on behalf of NASA, shall be electronically reviewed and approved by the NASA Form (NF) 1676 or NF-1676A (for those Centers that use the Agency E-DAA system), including NASA STI produced by NASA contractor, grantee, and cooperative agreement authors if the NASA STI is released by or for NASA.

d. NASA contractors, grantees, and cooperative agreement participants whose contract, grant, and cooperative agreement contains a pre-review requirement shall have all NASA STI reviewed and approved by NASA regardless of whether the contractor, grantee, or cooperative agreement participant releases the STI for or on behalf of NASA or for or on behalf of their own company or institution.

P.3. Authorities

a. The National Aeronautics and Space Act, 51 U.S.C. § 20113(a)

b. NPD 2200.1, Management of NASA Scientific and Technical Information (STI)

P.4. Applicable Documents and Forms

a. Copyrights United States Government Works 17 U.S.C. § 105

b. The Rehabilitation Act of 1973, Section 508, as amended, 29 U.S.C § 794d.

c. 48 C.F.R. Chapter 18.

d. OMB Circular A-102, Grants and Cooperative Agreements with State and Local Governments (10/07/1994) (further amended 08/29/1997)

e. OMB Circular A-110, Uniform Administrative Requirements for Grants and Agreements With Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations (11/19/1993) (further amended 09/30/1999)

f. OMB Circular A-130, Management of Federal Information Resources (11/28/2000)

g. NPD 1490.1, NASA Printing, Duplicating, and Copy Management

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j. NPD 2200.1, Management of NASA Scientific and Technical Information (STI)

k. NPD 2210.1, External Release of NASA Software

l. NPD 5100.4, Federal Acquisitions Regulation Supplement (NASA/FAR Supplement) [48 C.F.R 1800-1899]

m. NPD 7120.4, NASA Engineering and Program/Project Management Policy

n. NPD 8070.6, Technical Standards

o. NPR 1441.1, NASA Records Retention Schedules

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r. NPR 2190.1, NASA Export Control Program

s. NPR 2210.1, External Release of NASA Software

t. NPR 2810.1, Security of Information Technology

u. NPR 5800.1, Grant and Cooperative Agreement Handbook, 14 C.F.R 1260, Parts 1260, 1273, and 1274

v. NPR 7120.7, NASA Information Technology and Institutional Infrastructure Program and Project Management Requirements

w. NPR 8621.1, NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping

x. NASA Graphics Standards, http://www.hq.nasa.gov/office/pao/insignia/

y. American National Standards Institute (ANSI)/National Information Standards Organization (NISO) Z39.18, Scientific and Technical Reports--Preparation, Presentation and Preservation

z. ANSI/NISO Z39.23, Standard Technical Report Number (STRN) Format and Creation

aa. NASA/SP--2005-7602, NASA Publications Guide for Authors and Updated Versions

bb. NASA/SP--2006-6114, NASA STI Standards

cc. NASA STD 2820, Encryption and Digital Signature Standards

P.5. Measurement/Verification

a. In assessing whether NASA is achieving the STI policies set forth in NPD 2200.1 (based on Government Performance and Results Act reporting requirements), the Agency shall measure, on an annual basis, the following performance trends to determine the value of the STI Program. These include:

(1) Capture NASA STI--NASA shall collect NASA STI from a variety of sources to expand the amount and scope of technical information acquired by the program.

(a) This activity shall be measured by the number of STI items that are collected and input into the STI database on an annual basis (tracked monthly).

(b) This measurement shall be tracked and analyzed by the Scientific and Technical Information Program Office (STIPO) and validated by a non-STIPO entity.

(2) Access STI--NASA shall increase the number of STI documents that it makes available in electronic format.

(a) This activity shall be measured by the STIPO by the number of electronic documents scanned or received electronically by STI Support Services on an annual basis (tracked monthly).

(b) This measurement shall be tracked and analyzed by the STIPO and validated by a non-STIPO entity.

(3) Disseminate STI--NASA shall track the number of primary distributions or accesses of STI including electronic searches (Web page hits) to determine the usage of its products and services.

(a) This activity shall be measured annually (tracked monthly) by the number of Web page accesses in addition to the number of usages of STI products and services.

(b) This measurement shall be tracked and analyzed by the STIPO and validated by a non-STIPO entity.

(4) Measure customer satisfaction--NASA (by the STIPO based on inquiries to the NASA STI Support Services Help Desk) shall analyze comments and suggestions received from internal users and user groups (especially NASA, NASA contractors, and NASA grantees) and external users (when received on a voluntary basis) to improve its STI services and products.

(a) This information shall be tracked by the NASA STI Support Services on an annual basis.

(b) This information shall be validated by the STIPO and a non-STIPO entity, where possible.

(5) Measure effectiveness of the STI review process--NASA shall measure the effectiveness of the STI review process through the results of the annual compliance review and associated reports to the Center Directors.

(6) Ensure information assurance protection for STI--NASA shall be assessed based on the accreditation designations of systems that support acquiring, processing, storing, transmitting, and maintaining its information.

(7) Evaluate effectiveness of STI information protection--NASA information protection shall be evaluated based on the number and degree of security incidents reported and adjudicated by the NASA Security Operations Center.

P.6. Cancellation

a. NPR 2200.2B, Requirements for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information, dated March 25, 2005

/S/
Linda Cureton
Chief Information Officer

Chapter 1. Publication and Dissemination of NASA Scientific and Technical Information (STI)

1.1 Purpose of and Caveats for this NASA Procedural Requirement (NPR)

1.1.1 This NPR applies to all scientific and technical information (STI) published, disseminated, and presented by or on behalf of NASA that contains NASA-sponsored or -funded STI except as excluded in Section 1.2.4.

1.1.2 This chapter defines STI, delineates responsibilities associated with the publication and dissemination of STI, and provides an overview of NASA's process for approving, publishing, and disseminating the results of NASA's STI activities. The associated requirements are detailed in the following chapters. See Appendix A for Definitions and Appendix B for Acronyms used in this NPR.

1.1.3 Any restrictions or limitations placed on NASA contractors, grantees, and cooperative agreement participants regarding the publication, dissemination, or presentation of STI produced under a contract or grant shall be consistent with the Federal Acquisition Regulations (FARs), NPR 5100.4 for contracts, and NPR 5800.1 for grants and cooperative agreements.

1.1.4 Information protected for national security reasons under appropriate security classification shall be treated in accordance with NPR 1600.1and NPR 2810.1. NASA Centers are responsible for handling and storing classified NASA STI.

1.1.5 Once NASA STI publications have been declassified and are marked accordingly, a copy shall be sent to the NASA STI Support Services with a properly completed and signed NASA Form (NF) 1676, NASA Scientific and Technical Information (STI) Document Availability Authorization (DAA) (see also Section 4.4.2.4). (For information on NASA STI Support Services, see http://www.sti.nasa.gov.)

1.1.6 For additional procedures that relate to technology commercialization materials and computer programs, see NASA Policy Directive (NPD) 2110.1, NPD 2210.1, and NPR 2210.1.

1.1.7 For additional procedures that relate to export-controlled information and for STI that is to be disseminated to foreign persons, see NPD 2190.1 and NPR 2190.1.

1.1.8 Throughout this NPR references to NASA Centers includes NASA Headquarters, Component Facilities and Technical and Service Support Centers, and to the Jet Propulsion Laboratory.

1.1.9 References to Center positions, offices, and job titles include the equivalent position at NASA Headquarters, Component Facilities and Technical and Service Support Centers, and to the Jet Propulsion Laboratory.

1.1.10 JPL, a Federally Funded Research and Development Center, shall follow NASA directives and the requirements of its prime contract in all matters relating to NASA STI.

1.1.11 Terminology across Centers varies for offices, job titles, and position titles. This NPR uses terminology developed by the STI Program Office but does not preclude Centers from using their

own equivalent terms and titles.

1.2 NASA Scientific and Technical Information (STI) Defined

1.2.1 STI is defined as the results (the analyses of data and facts and resulting conclusions) of basic and applied scientific, technical, and related engineering research and development.

1.2.2 NASA STI is STI derived from NASA activities, including those generated by NASA-sponsored or -funded research and development and related efforts, where NASA has the right to publish or otherwise disseminate the STI. NASA STI may be produced directly by NASA or under NASA contracts, grants, and agreements. 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 a NASA contractor or grantee employee in which NASA has the right to publish or otherwise disseminate the STI.

1.2.3 NASA STI is published or disseminated using mechanisms that include the NASA STI Report Series, NASA Web sites, and non-NASA scientific and technical channels such as professional society journals, books and/or book chapters, conference presentations, or conference proceedings. NASA STI may include, but is not limited to, technical publications and reports; journal articles; meeting, workshop, and conference publications and presentations; conference proceedings; and preliminary or nonpublished STI, including any of these examples that will be loaded to a public Web site or are in multimedia formats.

1.2.4 The following information is excluded from this NPR:

1.2.4.1 Information published in policy documents such as NASA directives and NASA technical, engineering, or safety standards (NPD 8070.6).

1.2.4.2 Information published as a result of mishap investigations (NPR 8621.1).

1.2.4.3 Proposal information marked with confidentiality notices furnished to NASA by contractors or grantees and cooperative agreement participants.

1.2.4.4 New Technology Reports (NTR)/Invention Disclosures. Note that although NTRs are not defined as STI, STI may include information that discloses an invention, so it shall be handled appropriately.

1.2.4.5 Raw and processed scientific and technical data and data sets independent of the analysis of the data and resulting conclusions. However, STI publications or presentations that include such data are subject to this directive.

1.2.4.6 All software, including research, technical, development, operational, and off-the shelf software.

1.2.4.7 Tech Briefs and Technical Support Packages (TSPs).

1.2.4.8 STI derived from NASA-funded contracts, grants, and cooperative agreements when published or released by the contractors, grantees, or cooperative agreement recipients on their own behalf without direction from NASA.

1.2.4.9 Scientific and technical documents exchanged with NASA international partners under established international agreements with foreign governmental entities. (Individual documents may require review by the Center Export Administrator prior to release. NASA employees transferring export-controlled technical data under a NASA international agreement shall reference the international agreement clause "Transfer of Goods and Technical Data" requirements and consult

with the Center Export Administrator for specific guidance.)

1.3 Responsibilities for NASA Scientific and Technical Information (STI)

1.3.1 NASA Mission Directorate Associate Administrators (MDAAs), Chief Engineer, Chief Scientist, Chief Technologist, Chief Technology Officer, Center Directors, and Mission Support Office Associate Administrators (MSOAAs).

1.3.1.1 NASA MDAAs, Chief Engineer, Chief Scientist, Chief Technologist, Chief Technology Officer, Center Directors, and MSOAAs shall be responsible for activities under their cognizance, ensuring that they comply with NPD 2200.1 and this NPR, applicable laws and regulations, and other referenced direction.

1.3.1.2 NASA MDAAs, Chief Engineer, Chief Scientist, Chief Technologist, Chief Technology Officer, Center Directors, and MSOAAs shall be responsible for STI under their purview, ensuring that it is reviewed technically, as required by this NPR, and, if applicable, the NASA Guidelines for Quality of Information (http://www.sti.nasa.gov/nasaonly/qualinfo.html).

1.3.2 NASA Chief Information Officer (CIO)

1.3.2.1 The NASA CIO shall plan, manage the implementation, and assess the effectiveness of the Agency STI Program, designate the NASA CIO STI Program Executive and an STI Program Office (STIPO), and review and approve a STIPO program plan.

1.3.2.2 The NASA CIO shall update or have updated NPD 2200.1 and this NPR, according to scheduled revisions.

1.3.2.3 The NASA CIO shall, to the extent practicable, acquire (collect), manage, disseminate (or provide access to), safeguard, and have archived NASA STI from NASA-authored and/or NASA-funded research for use by NASA and NASA contractors and grantees and, where appropriate, the public.

1.3.2.4 The NASA CIO shall, to the extent practicable, collect or provide access to domestic and international non-NASA STI pertinent to NASA's mission and programs for use by NASA and NASA contractors and grantees through exchange agreements with non-commercial domestic and international entities.

1.3.2.5 The NASA CIO shall "provide for the widest practicable and appropriate dissemination" of STI resulting from NASA's research effort, unless restricted by U.S. statute, regulation, or Agency policy, while precluding the inappropriate dissemination of NASA sensitive and Sensitive But Unclassified (SBU) information, in keeping with the National Aeronautics and Space Act of 1958, as amended.

1.3.2.6 The NASA CIO shall establish policies and procedures 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.

1.3.2.7 The NASA CIO shall, as appropriate, publish and make available its NASA STI as promptly as possible to maximize the benefit of the research.

1.3.2.8 The NASA CIO, through the STI Program Office, shall ensure that producers of NASA STI (including contractors, grantees, and cooperative agreement participants in accordance with the

requirements of their funding agreements) are aware of Agency requirements and procedures prescribed by this NPR and the references given herein. Review of technical accuracy is currently accomplished outside the NF-1676 process.

1.3.2.9 The NASA CIO shall ensure that NASA-funded STI received from contractors, grantees, and cooperative agreement participants, 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 NPR, the NASA Form 1676 approval, and in accordance with specific requirements in the contract, grant, or agreement.

1.3.3 Agency Office of the Chief Information Officer (OCIO) STI Program Executive

1.3.3.1 The Agency OCIO STI Program Executive shall determine the strategic direction and approve the program plan for the STI program.

1.3.3.2 The Agency OCIO STI Program Executive shall allocate funds for the STIPO.

1.3.3.3 The Agency OCIO STI Program Executive shall coordinate the Agency's STI-strategy with the NASA CIO, MDAAs, Chief Engineer, Chief Scientist, Chief Technologist, Center Directors, and MSOAAs.

1.3.3.4 The Agency OCIO STI Program Executive shall ensure that the information system for the electronic collection of NASA STI by the NASA STI Support Services has a security assessment and an authorization to operate in accordance with NPR 2810.1 at a security category for SBU information in accordance with NPR 1600.1.

1.3.3.5 The Agency OCIO STI Program Executive shall ensure that the activities listed in 1.3.4 (a) through (g) are carried out.

1.3.4 STI Program Office (STIPO)

1.3.4.1 The STIPO shall coordinate with the NASA CIO STI Program Executive to recommend STI policy and procedures via NPD 2200.1 and this NPR and implement the approved policy and procedures.

1.3.4.2 The STIPO shall ensure that NASA STI that is received at the NASA STI Support Services is shared (as appropriate) with entities required by U.S. statute, such as, but not limited to, the National Archives and Records Administration, Government Printing Office, National Technical Information Service, and other national and international partners.

1.3.4.3 The STIPO shall operate and manage an Agency-level STI Program in accordance with NPR 7120.7, and an annual Program Commitment Agreement (PCA) initiated by the Agency CIO and agreed to by the STIPO's Center CIO.

1.3.4.4 The STIPO shall coordinate the development, operation, and maintenance of a virtual electronic collection of NASA STI by overseeing the operation and maintenance of STI Support Services, and/or any successor facilities, systems, partnerships, or institutes.

1.3.4.5 The STIPO shall appoint personnel to serve on Agency-level and external teams pertinent to STI.

1.3.4.6 The STIPO shall negotiate and implement STI data-sharing agreements to facilitate the collection, purchase, and dissemination of STI. This does not include data-sharing agreements that are the responsibility of missions, projects, and programs.

1.3.4.7 The STIPO shall conduct an annual review to ensure that all Centers are in compliance with NPD 2200.1.

a) The annual review shall include evaluating implementation at the Centers of the DAA or NF-1676 review process described in NPD 2200.1 and this NPR.

b) STIPO shall report the findings of this review to each Center Director and the Center STI Manager to facilitate improvements when warranted.

1.3.5 Center Directors

1.3.5.1 Center Directors shall ensure that all STI activities under their cognizance are performed in accordance with NPD 2200.1, this NPR, pertinent laws and regulations, and referenced documents.

1.3.5.2 Center Directors shall designate individuals to serve as the Center STI Manager and as the Center DAA representative.

1.3.5.3 Center Directors, in coordination with the Center STI Managers, shall establish and implement a plan to ensure awareness of the STI review requirements contained in this NPR.

1.3.5.4 Center Directors shall ensure that corrective actions associated with improvement areas cited in the yearly compliance review are implemented at their Center.

1.3.6 Center STI Managers

1.3.6.1 Center STI Managers shall ensure that the Center is aware of policies and procedures indicated in NPD 2200.1 and this NPR. This awareness includes appropriate training in STI (including SATERN training) and information security protection for STI.

1.3.6.2 Center STI Managers shall ensure that the Center documents the number, type, title, author(s), and availability of STI that is published or released external to the Agency by, or at the direction of the Center.

1.3.6.3 Center STI Managers shall ensure that the STI, as well as the approved NF-1676, is submitted to the NASA STI Support Services.

1.3.6.4 If the STI originated from a NASA contract or grant, Center STI Managers shall also ensure that the appropriate Contracting Officer (CO), Contracting Officer's Technical Representative (COTR), Grant Officer (GO), and/or the Grant Technical Officer (GTO) are notified of the submittal.

1.3.6.5 Center STI Managers shall be responsible for instituting a process to ensure that timely (prior to needed release date) notification is given to authors, initiators, and approvers of STI including, as a minimum, the disposition of the STI, either approved or disapproved, to help ensure that only appropriately approved STI is released.

1.3.6.6 Center STI Managers shall ensure that their Center maintains a list of all non-approved STI and that this list is provided to the STIPO annually to help support STIPO's compliance review of appropriately released STI.

1.3.6.7 Center STI Managers, in coordination with Center Directors, shall establish and implement a plan to ensure awareness of the STI review requirements contained in this NPR.

1.3.6.8 Center STI Managers shall ensure that NASA STI Support Services has NF-1676s and STI from the Center before documents that have reached the end of their retention period are discarded.

1.3.7 Center DAA Representatives

1.3.7.1 Center DAA Representatives shall coordinate with the Center's authors, STI Manager, COs, COTRs, GOs, GTOs, and managers who approve STI in order to track, file, and transfer the NF-1676 and its associated STI, after approval, to NASA STI Support Services.

1.3.8 Managers Who Approve STI at Centers

1.3.8.1 Managers who approve STI at Centers shall ensure that STI in their areas of responsibility receives appropriate technical review and management review (through the NF-1676) prior to the STI being published, released external to the Agency, or made available to foreign persons by, or under the direction of, NASA.

1.3.8.2 Managers shall also ensure that STI is reviewed to determine its information quality as cited in this NPR.

1.3.8.3 Managers shall consult with the Center's DAA representative, COs, COTRs, GOs, GTOs, and STI Manager, as applicable.

1.3.8.4 Managers shall be responsible to coordinate the quality of their publications with this NPR and to refer documents to the CIO's NASA Information Quality Officer (http://www.sti.nasa.gov/nasaonly/qualinfo.html) if these publications meet the definition of "Influential" or "Highly Influential" as cited in Section 515, "OMB Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Dissemination by Federal Agencies."

1.3.8.5 Managers who approve STI shall track STI documents that are disapproved for release and provide the list to the Center STI Program Manager on a regular basis (at least annually) or as requested by the Center STI Manager for STIPO compliance reviews.

1.3.9 Contracting Officers (COs)

1.3.9.1 COs shall receive the final STI reports (and additional STI reports required by the contract) from contractors and submit the reports to the COTR for review and acceptance.

1.3.9.2 COs shall ensure that STI requirements and information security protection consistent with this NPR and NPR 2810.1 are placed in NASA contracts.

1.3.10 Contracting Officer's Technical Representatives (COTRs).

1.3.10.1 COTRs shall coordinate with the CO regarding contract issues and with the Center STI Manager regarding publication issues.

1.3.10.2 COTRs shall ensure that contractor-produced STI receives a DAA review if the Center elects to publish or release the STI external to the Agency or will make the STI available to foreign persons by, or under the direction of, NASA.

1.3.10.3 COTRs shall send a copy of the DAA-approved STI and the associated NF-1676 to the STI Manager and/or DAA representative.

1.3.10.4 COTRs shall comply with Center procedures for notifying the contractor if and when the STI is approved for publication by NASA.

1.3.11 Grant Officers (GOs)

1.3.11.1 The GO shall receive reports from the grantee or cooperative agreement participants (or via the NASA Shared Services Center) and shall send the final reports to the Center Grant Technical Officer or other appropriate person to initiate the NF-1676 process if the Center elects to publish or

otherwise release the STI external to the Agency or will make the STI available to foreign persons by, or under the direction of, NASA.

1.3.11.2 The GO shall ensure that STI grant requirements consistent with Agency needs and this NPR are placed in NASA grants and agreements.

1.3.12 Center Grant Technical Officers (GTOs).

1.3.12.1 Center GTO shall receive final reports from the GO.

1.3.12.2 The GTO shall review and accept final reports.

1.3.12.3 The GTO shall ensure NF-1676 is initiated if NASA elects to publish any report.

1.3.13 Authors of STI (see also Section P.2).

1.3.13.1 NASA authors shall coordinate with appropriate managers, the Center STI Manager, and their Center Technical Publication Office (TPO) to select the appropriate channel for release of STI.

1.3.13.2 Authors shall be notified of approval or disapproval in a timely fashion per Section 1.3.6.1.3.6.5

1.3.13.3 NASA authors of STI shall publish or otherwise release external to NASA (including via the Internet) only STI that has been reviewed at the appropriate organizational level for technical accuracy, conformance with applicable law, policy, and publication standards, and approved for release as prescribed by this NPR and references cited herein.

1.3.13.4 If STI is believed to be SBU, NASA authors and on-Center non-NASA authors if they are releasing the STI for or on behalf of NASA, shall notify the applicable NASA designating official in accordance with NPR 1600.1, Section 5.24 (NM 1600-55), so that a determination as to SBU status can be made prior to the DAA review.

1.3.13.5 Non-NASA authors shall coordinate with their COTR or GTO, who shall initiate the NF 1676 when NASA plans to release the document or if the contractor, grantee, or cooperative agreement author shall release it for or on behalf of NASA. [See Section 1.3.10.]

1.3.13.6 NASA and non-NASA authors shall release NASA STI only as approved by the DAA review (for non-NASA authors when they release NASA STI for or on behalf of NASA (see Section P2).

1.3.13.7 For NASA contractors, grantees, and cooperative agreement participants, the DAA review requirement shall not apply when material is not published by or for NASA unless their contract, grant, or cooperative agreement contains a prereview requirement.

1.3.14 NASA STI Support Services

1.3.14.1 STI Support Services, which is NASA's contractor-operated facility, shall acquire (collect), organize, disseminate, and archive (through the National Archives and Records Administration (NARA)) approved STI.

1.3.14.2 STI Support Services shall disseminate NASA STI to the Government Printing Office, Federal Depository Libraries, and the National Technical Information Service, as appropriate.

1.3.14.3 STI Support Services shall provide products and services for NASA related to STI content management of research and development information.

1.3.14.4 STI Support Services shall use only information systems that have a NASA-approved

security assessment and Authorization To Operate (ATO) in accordance with NPR 2810.1 to process, store, or transmit NASA information.

1.4 Review and Approval of NASA Scientific and Technical Information (STI)

1.4.1 NASA shall publish and disseminate NASA STI through a variety of channels. These channels include journals, presentations at meetings or workshops, and the NASA STI Report Series. NASA STI shall also be electronically disseminated through these channels.

1.4.2 All NASA STI, regardless of channel or media, that is intended for an audience external to NASA (or STI presented at internal conferences or meetings at which foreign persons may be present) shall be subject to review and approval prior to its publication, dissemination, or presentation by or for NASA (see Chapter 4).

1.4.3 The technical review and management approval requirements vary depending upon the information content and publication channel. However, all NASA STI subject to review shall be required to be approved via the DAA review process (using NF-1676) prior to being published, disseminated, or presented external to NASA (or presented at internal meetings or conferences at which foreign persons may be present).

1.4.4 NASA STI that will be published shall undergo, at a minimum, a technical review, which is accomplished outside of (typically before an approver signs) the NF-1676 dissemination review.

1.4.5 This STI shall also undergo a dissemination review via NF-1676.

1.4.6 STI submitted to STI Support Services without a completed NF-1676 shall be released to NASA personnel only.

1.4.7 If the STI is intended for the NASA STI Report Series, it shall include in electronic format, a standard front cover, title page, and Standard Form (SF) 298 (Report Documentation Page (RDP)). (See Appendix C). Authors who are at NASA Centers that use the STI electronic document availability authorization (E-DAA) system do not have to include the SF-298, because this system also collects the data elements required by SF-298 in its basic NF-1676 review.

1.5 Selection of Publication Channels

1.5.1 NASA and NASA-funded authors shall publish, as appropriate, in the NASA STI Report Series as well as in non-NASA channels such as society journals, trade journals, oral presentations to professional societies, and proceedings of scientific and technical conferences and workshops.

1.5.2 Initial selection of the appropriate channel (see Appendix D) shall be made by authors in consultation with their technical management or the COTR or GTO (if applicable) and the Center technical publications office.

1.5.3 Selection shall be based on the content of the document and intended readership.

1.5.4 The selection shall be subject to review and approval as part of the Center review process. See Section 3.5.2 for guidance concerning duplicate publication.

1.5.5 The NASA STI Report Series comprises six types of publications, which are described in detail in Appendix D.1:

1.5.5.1 Technical Publication (TP)

1.5.5.2 Technical Memorandum (TM)

1.5.5.3 Contractor Report (CR)

1.5.5.4 Conference Publication (CP)

1.5.5.5 Special Publication (SP)

1.5.5.6 Technical Translation (TT)

1.5.6 If specified in the contract, grant, or cooperative agreement, NASA contractors, grantees, or cooperative agreement participants shall submit a final report of their work as a deliverable.

1.5.7 The final report shall provide appropriate acknowledgment of NASA support and identify the contract(s), grants(s), or agreement(s) involved. See NASA FAR Supplement (NFS), Sections 1804, 1827, 1835, 1852; and NPR 5800.1.

1.5.8 NASA may elect to publish the final versions of the final reports in the NASA CR series. NASA may also decide to select a report authored by a contractor, grantee, or cooperative agreement participant for publication in another series. Such reports shall meet all criteria for the selected series.

1.5.9 The final reports shall be reviewed and approved at the level(s) required for that series. Chapter 4 details review and approval processes for these reports.

1.5.10 NASA and NASA-sponsored authors who conduct oral presentations of scientific and technical findings at conferences and workshops may distribute copies of their NF-1676-reviewed and approved presentation to attendees. Optionally, they shall also publish their presentations in the NASA STI Report Series to ensure that their work is captured in the STI Database (internal and public interfaces, as appropriate). Chapter 3 includes detailed requirements pertaining to symposium presentations and external publications.

1.6 Storage, Retention, and Archiving of NASA Scientific and Technical Information (STI)

1.6.1 All NASA and NASA-funded personnel shall ensure that their work is documented and archived for future use.

1.6.2 Following approval via the NF-1676 (DAA) process, an electronic copy of NASA and NASA-funded STI shall be sent to NASA STI Support Services via the Center's STI Manager or designated organization. [For alternative media, as identified in Section D.4.8, two copies are required.] These requirements apply to the NASA STI Report Series, articles submitted to professional journals, papers presented at technical meetings, visuals-only presentations, and meeting papers that have not been included in NASA CPs.

1.6.3 NASA personnel who retire from or leave the Agency for other reasons shall forward their documented STI and the NF-1676 to be approved and sent to NASA STI Support Services through the Center's STI Manager who will forward them to NASA STI Support Services.

1.6.4 If an author chooses to place NASA STI on a NASA Web site that is accessible to the public, it shall be approved via the DAA review and Web site content reviews specified in NPR 2810.1 prior

to being added to the Web site.

1.6.5 The information shall also be duplicated via computer backup storage by the author or Web site owner and, when removed from the Web site, submitted to NASA STI Support Services for archiving.

1.6.6 NASA contractors and grantees shall submit STI that stems from NASA-funded contracts, grants, and cooperative agreements, pursuant to the requirements of the NFS or NPR 5800.1 and their contracts or grants.

1.6.7 NASA STI Support Services automatically archives the STI that it receives in appropriate formats, as identified in Sections 2.7 and D.3.13. If alternative formats are used that NASA STI Support Services cannot archive, authors shall provide additional copies or other formats that can be archived for long-term retention. NASA STI Support Services provides onsite and offsite storage for its database and full-text versions of STI in addition to sending appropriate (unclassified/unlimited) archive information to NARA, Government Printing Office (GPO) (hence the Superintendent of Documents and the Federal Depository Libraries), the NASA libraries, and the National Technical Information Service (NTIS).

1.6.8 Authors shall also contact their Center's Technical Publications and Records Managers to determine if additional archiving requirements exist for their Center.

1.6.9 NASA Centers are required by NARA to keep copies of their NF-1676s on file for a minimum of five years unless required for an alternative or longer period because of the nature of the information or the cognizant Center's records retention schedules.

1.6.10 If a Center decides to destroy these forms after this time, the original or a copy of the NF 1676 shall first be sent to NASA STI Support Services to ensure long-term retention.

1.6.11 Each Center DAA representative shall coordinate with the Center's authors, STI Manager, COs, COTRs, GOs, GTOs, and managers who approve STI for the following:

a. Track STI while it is being approved.

b. Keep STI and the NF-1676 on file (in accordance with NPR 1441.1).

c. Transfer copies of the NF-1676 and its associated STI, after approval, to NASA STI Support Services so that a permanent record is maintained.

1.6.11.1 Center DAA representatives are responsible for sending the original or a copy of all NF 1676s to NASA STI Support Services after the Center has fulfilled its records retention requirements for these forms. This enables NASA STI Support Services to maintain a permanent record of the STI approval process and distribution requirements in the document's case file (i.e., archive of document).

1.6.11.2 Center DAA representatives shall coordinate with Center records managers before they dispose of temporary records that are STI at their Centers, to ensure that NASA STI Support Services has a copy of their NASA STI and the associated NF-1676.

1.7 Reproduction, Duplication, and Printing of NASA Scientific and Technical Information (STI)

1.7.1 NASA authors of STI shall coordinate with NASA Headquarters and Center technical publications offices to use NASA duplicating or copying facilities or regional GPOs in accordance

with NPD 1490.1.

1.7.2 Authors shall use electronic formats. See Section 5.3.1.

1.8 Dissemination of NASA Scientific and Technical Information (STI)

1.8.1 NASA STI Report Series documents; conference, meeting, and symposia presentations; and external publications receive the widest practicable and appropriate dissemination by NASA. NASA STI Support Services has primary responsibility to distribute NASA STI. Authors shall contact their Center technical publications office for information on additional author-initiated distribution because some restrictions and approvals apply, especially on restricted or limited information.

1.8.2 Unless restricted for reasons explained in Sections 4.2.4 and 4.4.2.4, NASA STI shall be distributed by STI Support Services to NASA Center libraries; to domestic and international organizations, corporations, and universities that are registered to receive NASA STI publications; to NASA Center-identified authors, conference registrants, and interested members of organizations or groups; and, where appropriate, to the general public, NTIS, and GPO (who in turn disseminates to the Superintendent of Documents and Federal Depository Libraries).

1.8.3 NASA STI Support Services shall announce the availability of NASA STI publications in a variety of national and international channels and media.

1.8.4 Bibliographic citations describing NASA STI publications shall be added to the STI Database (internal and public interfaces, as appropriate).

1.8.5 NASA STI Support Services shall also serve as the historical repository for NASA-funded publications that it receives. For additional information, see Section 1.6.

1.8.6 Authors who wish to publish STI through non-U.S. channels shall follow the requirements for NF-1676 in addition to getting approval by the Headquarters Office of International and Interagency Relations (OIIR) if the document involves a designated area (see NPR 1450.10).

1.8.7 The Headquarters OIIR shall review and clear the correspondence package that is intended for a designated area.

1.8.8 Additional requirements are currently in place for STI that is published and disseminated outside NASA via the Web (see NPR 2810.1).

Chapter 2. NASA Scientific and Technical Information (STI) Report Series

2.1 Purpose

2.1.1 All scientific and technical findings derived from NASA activities shall be distributed or disseminated either as one of the NASA Scientific and Technical Information (STI) Report Series defined in this chapter or through suitable non-NASA scientific and technical channels. This chapter references the standards for publication of NASA STI in the NASA STI Report Series. See Chapter 3 for a discussion of publication of NASA STI through professional journals and similar periodicals or via the proceedings of conferences, symposia, and workshops.

2.1.2 NASA shall index and catalogue NASA STI Report Series publications into the STI Database (internal and public interfaces, as appropriate) and ensure, through NASA STI Support Services, that these publications are archived at NARA.

2.1.3 NASA STI Report Series publications shall also receive wide dissemination, as appropriate.

2.1.4 All NASA-funded STI shall be reviewed via NASA Form (NF) 1676, Scientific and Technical Information (STI) Document Availability Authorization (DAA), prior to it being published, disseminated, or presented external to NASA (or presented at internal meetings or conferences at which foreign persons may be present).

2.1.5 NASA STI Report Series publications that are sent to NASA STI Support Services without notification of a DAA review shall be held until appropriate release notification is received.

2.1.6 After several attempts to obtain a DAA, NASA STI Support Services shall limit STI to NASA personnel only until a DAA is received. See Chapter 4 for more information on the review and approval process for STI.

2.2 Assigning Publications to the NASA Scientific and Technical Information (STI) Report Series

2.2.1 The NASA STI Report Series comprises six types of publications. These are described in detail in Appendix D:

2.2.1.1 Technical Publication (TP)

2.2.1.2 Technical Memorandum (TM)

2.2.1.3 Contractor Report (CR)

2.2.1.4 Conference Publication (CP)

2.2.1.5 Special Publication (SP)

2.2.1.6 Technical Translation (TT)

2.2.2 Selection of the correct series in which a document is published shall be based on its content. See Section 1.5 and Appendix D for guidelines on series selection.

2.2.3 The author shall make the preliminary determination in conjunction with technical management or the COTR or GTO, if applicable, and the Center's Technical Publications Office.

2.2.4 Selection shall be subject to review and approval as part of the Center review process.

2.2.5 When the series is selected and approved, the publication shall be assigned a NASA report number. [Authors contact their Center's Technical Publications Office to obtain a number from NASA STI Support Services, which is NASA's repository for STI. The report number is prefixed by the Agency acronym and the two-letter abbreviation that indicates the series (e.g., NASA/CP--2010-123456 and NASA/TM--2010-123456).].

2.2.6 For documents that are published in English and another language, authors shall use the same NASA number but add the language in parentheses (e.g., NASA/TP--2010-123456 (in English) and NASA/TP--2010-123456 (in Russian)).

2.3 Scientific and Technical Information (STI) Work Undertaken for Another Government Agency, Company, or University

2.3.1 When a NASA employee or person performing under a NASA contract or grant works with or undertakes work for another Government agency, they shall report their scientific and technical findings in the NASA STI Report Series.

2.3.2 Appropriate indication of the joint project or sponsorship shall be given on the cover, title page, and SF-298 (RDP).

2.3.3 Such publication shall not preclude the other Government agency from publishing the work in its own series.

2.3.4 In situations in which a NASA employee or person performing under a NASA contract or grant works with or undertakes work with a company or university and the company or university publishes the results, authors shall indicate NASA's support on the title page or first page of the work.

2.4 Scientific and Technical Information (STI)-Related Work Funded by One Center and Performed by Another

2.4.1 When NASA work is sponsored or funded by one NASA Center and performed by another NASA Center, the scientific and technical findings shall be reported in the NASA STI Report Series.

2.4.2 The Center performing the work shall be responsible for approval, production, and issuance of the document.

2.4.3 Appropriate indication of sponsorship shall be given on the cover, title page, and SF-298 (RDP). (See Appendix C.)

2.5 Responsibility for the NASA Scientific and Technical Information (STI) Report Series

2.5.1 Responsibility for production and dissemination of all NASA STI publications is set forth in NPD 2200.1.

2.5.2 The Scientific and Technical Information Program Office (STIPO) shall be responsible for the management of the Agency's STI program.

2.5.3 The STIPO shall maintain control of the production and distribution of the six types of NASA STI Report Series publications described in Appendix D.

2.5.4 This responsibility shall be carried out through the Agency OCIO STI Program Executive, the NASA Center STI Managers, and Technical Publications Managers.

2.5.5 The author, technical management, and the Center Technical Publications Manager shall ensure that the necessary funds are available from the originating NASA Center or Headquarters office to cover the cost of production and of printing the report, if applicable. [For reports that are to be printed, contact the Agency or Center Printing Officer and the Technical Publications Manager.]

2.5.6 All NASA STI published by or for NASA, regardless of publication type or media used, shall meet the reviews and approvals set forth in Chapter 4 before the STI is published, disseminated, or presented external to NASA (or presented at internal conferences or meetings at which foreign persons may be present).

2.5.7 The author and his or her management shall ensure that the required reviews are completed and approved, and signatures are obtained in cooperation with the COTR or GTO, if applicable (e.g., for Contractor Reports (CRs)). (See Section 2.5.8 for special procedures for CRs.)

2.5.8 Special Procedures for CRs

2.5.8.1 NASA CRs (reports prepared by contractor, grantee, or cooperative agreement participants) shall be processed into the formal CR series only after the cognizant NASA CO or COTR or GO or GTO, and NASA manager approve the report as an acceptable deliverable under the terms of the contract, grant, or cooperative agreement.

2.5.8.2 When specified in the contract, grant, or cooperative agreement, contractors, grantees, and cooperative agreement participants shall submit final reports to the NASA CO or COTR or GO or GTO of record. For specifics, see the NASA Federal Acquisition Regulations (FAR) Supplement (NFS, updated Dec. 1, 2008, http://www.hq.nasa.gov/office/procurement/regs/nfstoc.htm), Sections 1835.010, 1835.011, 1835.070, 1852.235-70, 1852.235-73, 1852.235-74 and their referenced Sections, and NPR 5800.1. See also Procurement Information Circular (PIC) 03-03 and Grant Information Circular (GIC) 07-02. Electronic formats shall be submitted.

2.5.8.3 Contractors, grantees, and cooperative agreement participants shall provide NASA notification that they have transmitted their final report to the NASA CO or COTR or GO or GTO at the NASA Center that sponsors their work by sending notification to eft_fpt@sti.nasa.gov, "Attention acquisitions unit." (For help, send an e-mail to help@sti.nasa.gov.)

2.5.8.4 Contractors, grantees, and cooperative agreement participants shall electronically submit an SF-298 for NASA STI Report Series documents. (See Appendix C. The SF-298 is not required when the STI E-DAA system is used, since that system contains the elements captured on the SF-298.)

2.5.8.5 Covers and title pages of submitted reports shall include the standard cataloging elements specified in Appendix D.3.5.1.

2.5.9 Translations of STI performed by and for NASA represent a resource investment; therefore, NASA STI Support Services shall collect technical translations for inclusion in the STI Database.

2.5.9.1 NASA activities arranging for translation services (e.g., through the award of a contract for translation services) shall incorporate the requirement to submit one copy of each technical translation to NASA STI Support Services in those arrangements (e.g., a contract clause), thereby relieving the requester of the responsibility to ensure that copies of translations are forwarded for input into the STI Database.

2.5.9.2 If the producer of a translation is not required to submit one copy of each technical translation to NASA STI Support Services, the requester shall ensure that a copy of the translation is forwarded to NASA STI Support Services for inclusion in the Technical Translation series.

2.5.9.3 To assist NASA STI Support Services in determining distribution limitations and to expedite future dissemination of a technical translation, the requester shall ensure that information concerning copyright of the original source document accompanies the translation submitted to NASA STI Support Services.

2.5.9.4 Copyright information for TTs shall also be entered on NF-1676 (DAA).

2.5.9.5 Such information shall include, but is not limited to, the title of the book or article, the name of the book or journal in which the copyrighted information was originally published, the publisher's name and address, the publication date, and any copyright notice appearing on the document, book, or journal in which the copyrighted information was originally published.

2.6 Standards for NASA Scientific and Technical Information (STI) Report Series Publications

2.6.1 Authors shall adhere to the standards cited for STI Report Series documents. These standards are listed in Appendix D.

2.6.2 Authors shall use an errata if the errors are minimal but of sufficient importance to warrant correction.

2.6.3 Minor typographical errors usually shall not require correction. A typical setup for an erratum is shown in Appendix H.

2.6.4 The distribution of an erratum shall be made in accordance with the original distribution.

2.6.5 A corrected copy shall be issued if there are numerous errors that cannot be made clear in an erratum.

2.6.6 The standard report number format for a corrected copy shall be the year and number of the original report followed by Corrected Copy in parentheses.

2.6.7 The report date shall be the same as the original report. Distribution is made in accordance with the original distribution.

2.6.8 Because style and format standards for NASA STI publications are provided in several sources, if conflicting guidance is encountered, the sequence of the following list shall govern selection of the appropriate standard.

2.6.8.1 NPR 2200.2, Requirements for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information (STI)

2.6.8.2 NPR 2810.1, Security of Information Technology

2.6.8.3 NASA/SP--2005-7602, NASA Publications Guide for Authors and updated versions

2.6.8.4 NASA/SP--2006-6114, NASA STI Standards

2.6.8.5 Public Law (PL) 105-220, Title IV, Subsection 408(b), as amended--Section 508 of the Rehabilitation Act (29 United States Code (U.S.C.) 794d)

2.6.8.6 Instructions issued by NASA Centers that implement the requirements of this NPR

2.6.8.7 Government Printing Office Style Manual, latest edition

2.6.8.8 Industry-standard style manuals or specifications

2.6.9 Authors and approvers shall refer to the following instructions when re-marking and handling documents that were previously export-controlled and/or contain restricted-access information that has been downgraded.

2.6.9.1 When STI is no longer subject to restriction, NASA Center program officials, Export Control Administrators, and/or Patent or Intellectual Property Counsel, as appropriate, shall re mark (downgrading the restriction or limitation of) the STI and notify NASA STI Support Services of the subsequent availability by sending the re-marked document and a copy of the new or modified DAA through the Center Technical Publications Office or STI Manager. Because NASA STI Support Services is a contractor facility, it is not approved to change or alter dissemination information. See also Section 4.4.2.4 and NPR 1600.1.

2.6.9.2 The original marking shall be electronically lined through.

2.6.9.3 The new marking shall be indicated next to or above the original marking by stating "restriction changed to ...[insert new dissemination access], on date...[insert month, day, and year], by authority of ...[insert originating office that is responsible for and has the authority to change the distribution notice]."

2.6.9.4 This new information shall be indicated on the cover, the title page, and block 12, DISTRIBUTION/AVAILABILITY STATEMENT, of the SF-298.

2.6.9.5 Authors and approvers shall not simply change the access limitation and insert a new cover, title page, and SF-298 so that there is no record of the change.

2.7 Submittal of Publications to the NASA Scientific and Technical Information (STI) Support Services

2.7.1 Authors shall submit their approved STI to NASA STI Support Services along with a copy of the NF-1676. For submittal information, see Appendix D, Section D.4.

2.7.1.1 Authors shall submit in encrypted format (by the Agency standard encryption). STI that contains restricted-access information. See NPR 2810.1 and NASA Technical Standard (NASA STD) 2820.

2.7.1.2 If such mechanisms and infrastructure are not available, an electronic file loaded to a CD or DVD shall be accepted.

2.7.1.3 CDs (including their internal electronic files) and DVDs shall be marked with the applicable restriction and mailed in an envelope that does not indicate the restricted nature of the content. For additional information, see also NPR 1600.1.

2.7.1.4 Export-controlled information, as defined as ITAR (22 Code of Federal Regulations (C.F.R) 120-130, International Traffic in Arms Regulations) and EAR (15 C.F.R 730-744, Export Administration Regulations), shall be encrypted.

2.8 Standards for Protection of Intellectual Property

2.8.1 Authors and approvers shall ensure that standards for authorship, references, inclusion of copyrighted material, trademarks and trade names, copyright status, and publishers' agreements are handled in accordance with NASA's standards for protection of intellectual property, as indicated in Appendix D, Section D.6.

2.9 Disclaimers

2.9.1 Authors and approvers shall ensure that the use of disclaimers is in accordance with NASA's standards, as shown in Appendix D.7.

2.10 Distribution Notices

2.10.1 Authors and approvers shall ensure that distribution notices are included on STI documents, when required.

2.10.2 Distribution notices shall include limitations and restrictions, such as ITAR, EAR, SBIR, proprietary information, and copyrighted information, as discussed in Chapter 4.

2.10.3 These designations shall be determined for STI via the NF-1676.

2.11 Level of Review

2.11.1 Authors shall indicate on the back of the title page (or, in nontraditional media, in the introductory information that would equate to the back of a title page) the level of technical or professional review the STI has received. See Section 4.3 for specifics. Examples include:

2.11.1.1 This material has been technically reviewed by (insert as appropriate: a committee of peers, expert single reviewer, technical management).

2.11.2 An example for SPs follows:

2.11.2.1 This material has been professionally reviewed by (insert as appropriate: the HQ program office or NASA Center).

2.12 Use of International System of Units (SI)

2.12.1 NPD 7120.4, in part, that it is NASA policy to adopt SI measurement, defined by American National Standards Institute (ANSI)/Institute of Electrical and Electronics Engineers (IEEE) Standard 268, as the preferred system of weights and measures for NASA. Therefore, the use of SI shall be required in all NASA scientific and technical publications when the activities being

documented or reported are performed using SI units.

2.12.2 Scientific and technical activities performed using U.S. Customary Measures may be documented or reported using U.S. Customary Measures.

2.12.2.1 The report shall clearly state which form of measurements was used. Appendix J contains references that provide guidelines for the use of SI and for the conversion of SI to inch-pound measures or inch-pound measures to SI.

Chapter 3. Symposium Presentations and External Publications

3.1 Purpose

3.1.1 This chapter gives the requirements that apply when NASA employees prepare papers for or participate in scientific and technical symposia and when they prepare and submit information (e.g., monographs or journal articles) for external (non-NASA) publication. Criteria for the payment of page charges for Government-sponsored research results published in professional journals are also given. Requirements presented in this chapter shall apply to contractors and grantees only if these policies and standards are provided under the terms of their contracts or grants.

3.2 General Requirements

3.2.1 Papers and articles shall be prepared according to formats and standards set by individual societies and journals.

3.2.2 Dissemination of information in symposium presentations or in external publications shall be approved in accordance with procedures included in Chapter 4.

3.2.3 NASA support shall be indicated.

3.2.3.1 Contractor, grantee, and cooperative agreement participants shall ensure that all symposium presentations and external publications that are derived from NASA research and development and related efforts clearly display an indication of NASA's support, preferably as a first-page footnote, unless the required style requires acknowledgement in another manner.

3.2.3.2 Works authored by NASA employees as part of their official duties and submitted for external (non-NASA) publication in scientific and technical journals, symposia proceedings, or similar works shall include the notice of copyrighted information provided in Appendix I, Exhibit I.6, as appropriate, on the cover, title page, and Standard Form (SF) 298, Report Documentation Page (RDP). (See Section 3.5.8.2 and Appendix D.6.6.2.)

3.2.4 Copies shall be provided for the STI Database.

3.2.4.1 NASA authors presenting papers not prepared as preprints in the Technical Memorandum (TM) series and authors of articles submitted to journals shall provide an electronic copy of each paper or article or the electronic file to the NASA STI Support Services for inclusion in the STI Database along with a copy of the approved NASA Form (NF) 1676, NASA Scientific and Technical Information (STI) Document Availability Authorization (DAA).

a. Authors shall also coordinate this activity through their Center's STI Manager or Technical Publications Office.

3.2.4.2 Citations and a copy of these papers, as submitted, shall be added to the STI Database with information concerning the expected publication.

3.3 Projected Visuals and Journal Articles

3.3.1 Projected visuals and journal articles that are not made part of the NASA numbered series shall be reviewed via the NF-1676 (DAA) process.

3.3.2 These documents with their approved NF-1676 and an abstract shall be sent to STI Support Services for archiving by the Center DAA representative.

3.4 Requirements for Symposium Presentations

3.4.1 Papers presented by NASA employees at symposia shall contain substantive content in the discipline concerned, make a positive contribution to the state of knowledge, and reflect the high-professional standards under which NASA operates.

3.4.2 Papers proposed for presentation at symposia shall be reviewed in accordance with the cognizant NASA Headquarters or Center review requirements and the procedures included in Chapter 4.

3.4.3 Technical accuracy, appropriateness to the subject matter of the meeting, compatibility with NASA's interest and responsibilities, avoidance of classified or restricted-access information, and quality of the data and information shall be considered in the review.

3.4.3.1 Because many presentations of papers are followed by their incorporation in proceedings or other professional publications, the technical quality and value of such presentations shall be of paramount consideration in the review.

3.4.3.2 NASA Headquarters or Center reviewers shall ensure in their reviews that papers that describe NASA program activities are properly presented at symposia by personnel well acquainted with the activities.

3.4.4 Presentation of Unclassified Information

3.4.4.1 To promote NASA's ability to meet its statutory requirement of ensuring the widest practicable and appropriate dissemination of STI, all NASA unclassified presentations or papers shall be delivered in unclassified sessions (those that are not labeled classified and/or have attendance restricted to persons having prescribed security clearances).

3.4.4.2 NASA unclassified presentations or papers shall be included in unclassified documents whenever feasible.

3.4.5 Presentation of Protected Information

3.4.6 Restricted-access information is information whose publication or distribution is restricted by law, regulation, or policy such as described in Section 4.2.4. Restricted-access information shall not be presented at unrestricted meetings. Authors may do the following.

3.4.6.1 Omit such information from symposium presentations so that meetings can be open when possible and so that publications resulting from these meetings can be made available to the public.

3.4.6.2 Restrict this information to special sessions at which attendees have been appropriately cleared.

3.4.7 When NASA sponsors an unclassified meeting or workshop in which restricted-access information may be presented (e.g., information covering technology that needs to be protected from public disclosure), the NASA organizers shall produce the following:

3.4.7.1 A limited-distribution document that shall contain the entire meeting results.

3.4.7.2 Or preferably, an unclassified/unlimited distribution document that shall contain as much information as possible, and an appropriately marked companion document containing only the information that needs to be restricted.

a. The distribution of the companion document shall be appropriately limited.

3.4.7.3 Restricted-access information that shall be clearly marked as such on each page containing the restricted information.

3.4.8 Presentation of Classified Information

3.4.8.1 Classified information shall be identified, marked, and handled in accordance with NPR 1600.1.

3.4.8.2 Classified information shall be included in symposium presentations, presented at classified sessions, and/or included in classified proceedings or other publications only when it is essential to the presentation.

3.4.9 A paper presented by a NASA employee shall be prepared and published in the TM series as a preprint for distribution if needed for a conference.

3.4.10 Block 13, SUPPLEMENTARY NOTES, of the SF-298 (RDP) for the preprint shall state the name and date of the meeting. The name and date of the meeting may also be placed on the title page.

3.4.11 No commitments, such as producing and distributing a NASA Conference Publication (CP), shall be made that will result in NASA becoming the principal resource for a symposium unless NASA sponsorship is approved as an official function.

3.5 Requirements for External Publications

3.5.1 Payment of charges imposed by publishers for including articles or papers in their publications shall be the responsibility of the originating Center. Guidelines for the use of private publishers are given in Section 5.7.

3.5.2 The publication of STI through non-NASA channels shall not preclude the publication of equivalent information by NASA.

3.5.3 For example, significant findings shall be reported initially in a prominent journal (in which space limitations might constrain complete presentation of text and figures).

3.5.4 A more detailed documentation of these findings shall then be published in an appropriate NASA STI Report Series publication.

3.5.5 To avoid duplication, authors shall not publish identical NASA material through different channels with the following exception:

3.5.6 Preprints of journal articles (e.g., journal articles as submitted to the journal) or presentations made at professional meetings that may or may not appear in subsequently published proceedings may be published as a Technical Memorandum (TM) or Contractor Report (CR).

3.5.6.1 Authors shall note on the SF-298 (RDP) and NF-1676 (DAA) that the journal article is a preprint.

3.5.7 Copyrights and Government Use

3.5.8 Publications authored solely by U.S. Government employees as part of their official duties are not protected by copyright in the United States. Because there is no copyright to assign to a publisher if NASA-authored STI is published through a non-NASA publication, NASA may use and distribute the preprint: that is, the work as submitted to the publisher (original manuscripts, charts, photographs, etc.). Moreover, if the publisher does not add original, copyright-protected content (e.g., publisher prepared abstracts or peer review comments), NASA may reproduce and disseminate an exact copy of the published work either in NASA reports or on a NASA public Web site. If the publisher adds original content, the publisher may assert copyright in the paper as published (but the copyright applies only to the original material added by the publisher). If the publisher has added original material, NASA shall not distribute the published version of the article unless permission is obtained from the publisher.

3.5.8.1 When an article produced under a NASA-funded contract, grant, or cooperative agreement is published in a professional journal, the non-Government author often assigns copyright to the publisher. Under the contract or grant, NASA has a license to use and distribute information resulting from the contract or grant. Thus, NASA may use and distribute the preprint (i.e., the work as submitted to the publisher). However, permission from the publisher shall be obtained to reuse or republish the article as published in the journal.

3.5.8.2 An acknowledgment of Government rights shall be included on all NASA STI published through a non-NASA publication.

3.5.8.3 NASA civil-servant-authored papers shall include one of the copyright statements provided in Appendix I, Exhibit I.6, as appropriate (see Section 3.2.3.2 and Appendix D.6.6.2).

3.5.8.4 Contractors, grantees, and cooperative agreement participants shall include a statement acknowledging NASA sponsorship (including the contract or grant number) when articles containing data produced under a NASA contract or grant are published. Notice for Copyright Information (Contractor-Prepared Work), found in Appendix I, provides a statement for use with STI developed under a NASA funding agreement.

Chapter 4. Reviews and Approvals

4.1 Purpose

4.1.1 This chapter gives the review and approval requirements through which NASA ensures the quality and integrity of its scientific and technical information (STI), provides for its widest practicable and appropriate dissemination, and protects information (based on statute, regulation, or policy) which shall not be disseminated to various audiences.

4.2 Policy and Legal Requirements

4.2.1 The NASA STI program provides distribution of information produced by and for NASA to NASA, its contractors, grantees, partners, and the public. This function fulfills the mandate of Section 203(a) of the National Aeronautics and Space Act of 1958, which requires NASA to provide for the widest practicable and appropriate dissemination of information concerning its activities and the results thereof. Reinforcing this Space Act requirement, the Office of Management and Budget (OMB), in Circular A-130, Management of Federal Information Resources, establishes the clear policy that the Agency shall be responsible and is expected to disclose information to the public consistent with the Agency's mission.

4.2.2 All NASA STI not meeting any of the criteria for distribution limitations described herein shall be considered to be approved for public release.

4.2.3 Information approved for public release shall be made available by the NASA STI Support Services to any and all pertinent distribution channels, in keeping with the policy set forth in OMB Circular A-130.

4.2.4 Protection of Certain STI

4.2.4.1 Pursuant to law, certain types of information shall be protected from public disclosure. The Freedom of Information Act (FOIA) provides guidance regarding categories of information that are exempt from mandatory release under FOIA. Dissemination of information may also be restricted under other laws, regulations, or policy. NPR 1600.1 provides additional information.

4.2.4.2 As used in this NPR, restricted-access information means information whose publication or distribution is restricted by law, regulation, or policy. Restricted-access information includes national-security-classified information, export-controlled information, personal information subject to the Privacy Act, and proprietary information of the Government or others--such as Limited Rights Data and SBIR Data received under a contract, trade secret/confidential commercial information other than Limited Rights Data or SBIR Data, information developed under agreements and subject to Section 303(b) of the National Aeronautics and Space Act of 1958, as amended, copyrighted information, and documents disclosing inventions. Public access to restricted-access information shall be prohibited or restricted.

4.2.4.3 Unless a determination is made that public release of information shall be prohibited or restricted, NASA STI is made available to the public. In addition, certain types of information are further restricted from dissemination via NASA public Web sites (see NPR 2810.1 and Appendix I).

4.2.4.4 Any questions regarding whether or not certain types of information must be protected from public disclosure shall be referred to the NASA Headquarters or Center Patent or Intellectual Property Counsel, Export Control Administrator, Information Technology Security Officer, and

Physical Security Officer. For information on handling documents that contain export-controlled or restricted-access information but which have subsequently been downgraded, see Section 2.6.9).

4.2.5 NASA STI shall be reviewed

4.2.5.1 Before NASA STI (including STI that has been received from NASA-funded contractors and grantees) may be published or otherwise disseminated external to NASA (or presented at internal meetings or conferences at which foreign persons may be present), it shall be reviewed to determine whether it contains information that has prohibited or restricted access. The NASA process, referred to as the Document Availability Authorization (DAA) review, is implemented via NASA Form (NF) 1676, NASA Scientific and Technical Information (STI) Document Availability Authorization (DAA).

4.2.5.2 The DAA review is intended to ensure that NASA does not inappropriately release information to which public access shall be prohibited or limited.

4.2.5.3 The DAA review is required whether publication is accomplished through printing, submission to external channels for publication through any media, or published electronically on systems accessible by persons or institutions outside of NASA. This review is also applicable to presentations that are to be made before professional audiences, whether or not the presentation is accompanied by written material.

4.2.5.4 Although NASA STI may be produced either directly by NASA or under NASA contracts, grants, and agreements, the DAA review process shall apply only to the publication and dissemination of NASA STI by NASA or for NASA.

4.2.5.5 This mandatory review shall also apply to such STI uploaded to public Web sites.

4.2.5.6 Unless otherwise specified in NASA contracts or grants, NASA shall not restrict its contractors and grantees from publishing NASA-funded information themselves.

4.2.5.7 In situations in which the contractor or grantee independently publishes STI, NASA is not considered to have published, disseminated, or presented the information, so the DAA review by NASA shall not be required.

4.2.5.8 Contractors or grantees, as required by U.S. laws and regulations, shall review their information and ensure that it fulfills the following requirements:

a. Conforms with laws and regulations governing its distribution, including intellectual property rights, export control, national security, and other requirements.

b. To the extent that the contractor or grantee is given access to data necessary for the performance of the contract or grant which contains restrictive markings, complies with such restrictive markings.

c. NASA shall, on a voluntary basis if requested by the contractor or grantee, perform a DAA review of STI published or disseminated by contractors or grantees.

4.2.5.9 When a document is sent to STI Support Services without a DAA, it shall be restricted to NASA personnel only and not made publicly available.

4.3 Professional and Technical Reviews

4.3.1 Review Definitions

4.3.1.1 Professional reviews (also called editorial and content reviews) shall be performed by individuals or groups with technical knowledge or background tempered by interdisciplinary expertise in history, education, and program management.

a. Such reviews shall 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.

b. Professional reviews shall be handled outside of the DAA process.

c. When managers approve the DAA, they shall also certify that an appropriate professional review has been completed.

d. Managers shall certify that the information is appropriate for the type of publication that is indicated on the DAA.

4.3.1.2 Technical reviews shall be performed by peers having expertise within the technical discipline of the activity or research being documented.

a. Technical reviews shall 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.

b. Technical reviews shall be handled outside the DAA process.

c. When managers approve the DAA, they shall certify that an appropriate technical review has been conducted and that the material is technically correct and appropriate for the dissemination ascertained by the DAA process.

4.3.2 Review Responsibilities

4.3.2.1 Professional and technical reviews shall be required to ensure that NASA STI conforms to NASA Headquarters and Center standards for professional reports and technical accuracy and meets data quality standards.

4.3.2.2 The NASA Officials-in-Charge (OICs) of Headquarters Offices and Directors of Centers shall ensure the appropriate review and approval of the content of NASA-sponsored STI resulting from work conducted under their authority for presentation or publication through any channels and in any media, including electronic dissemination.

4.3.2.3 The author, working in collaboration with his or her technical supervisor, the COTR, or GTO (for NASA STI originating from a NASA contract or grant), shall initially recommend the subject division and category for the STI Database for a NASA STI document or contractor or grantee report (see Appendix K).

4.3.3 NASA STI Report Series documents shall be reviewed according to the criteria in Section 4.3.3.1.

4.3.3.1 The officials mentioned in Section 4.3.2 shall ensure that the appropriate minimum review of NASA STI Report Series documents is completed, as indicated by the following levels of NASA STI Report Series professional and technical review requirements:

a. Technical Publication (TP)--Technical review by committee of peers or expert single reviewer.

b. Technical Memorandum (TM)--Review by technical management.

c. Contractor Report (CR)--Review by NASA technical management or expert reviewer(s).

d. Conference Publication (CP)--Review by technical management.

e. Special Publication (SP)--Professional review controlled by originating Headquarters office or NASA Center.

f. Technical Translation (TT)--No technical review; some printing authorization; permission to use copyrighted information shall be obtained.

4.3.3.2 Level of review shall be indicated on the back of the title page (see Section 2.11).

4.3.4 Peer Review

4.3.4.1 NASA complies with Public Law (PL) 106-554, Section 515. As such, NASA shall accept and encourage technical review by qualified external reviewers or committees of external reviewers.

4.3.4.2 The Agency shall also accept technical review by qualified internal reviewers or committees of internal reviewers who are selected on the basis of technical expertise and who do not have (or have disclosed) prior situations or personal or funding issues that would affect their technical review.

4.3.4.3 Peer reviews shall be conducted in an open and rigorous manner.

4.3.4.4 Peer reviews shall ensure that the data are reliable, unbiased, accurate, complete, and have full documentation.

4.3.4.5 Peer reviews shall ensure that circumstances that could affect data quality are identified and disclosed.

4.4 Influential and Highly Influential Documents

4.4.1 If the document falls within the definitions of influential or highly influential information as specified by the OMB Section 515 Data Quality Guidelines, the requester shall follow the Agency established procedures for data quality re-reviews as specified by the Agency data quality manager (see http://www.sti.nasa.gov/qualinfo.html).

4.4.2 Appeal Process for NASA STI Documents

4.4.2.1 If a person does not agree with the decision regarding dissemination of a document, as established by the original DAA process at a Center, he or she shall appeal the decision by requesting a re-review of the document by Center management within 30 days of notification and notify the STI Program Office (via help@sti.nasa.gov).

4.4.2.2 This appeal process decision, if a person does not agree, shall be subsequently raised to the Agency Chief Information Officer.

4.4.2.3 The Agency Chief Information Officer shall involve the pertinent Center Program Manager, Center Director or designee, and Mission Directorate within 30 days of notification.

4.4.2.4 The Agency Chief Information Officer shall respond to the non-agreeing person within 30 days of involving the pertinent Center Program Manager, Center Director or designee, and Mission Directorate.

4.5 Document Availability Authorization (DAA)

4.5.1 The DAA process is based on statutory requirements for NASA and is coordinated with the Headquarters Offices of General Counsel, Office of International and Interagency Relations, Office of the Chief Information Officer, and Security and Program Protection. The responsibility held by the OICs of Headquarters offices is delegated to NASA Center Directors (with the exception of policy and standards information requiring review by the OIIR).

4.5.2 The DAA review is NASA's compliance review for the publication, dissemination, and presentation of NASA STI by or for NASA through any channel or media. The DAA review determines if STI needs to have restricted access, such as for export-controlled information, proprietary STI, and documents disclosing an invention. NASA STI may be subject to one or more of the restrictions described below. Documents containing restricted-access STI shall include notices applicable to all valid restrictions (see the exhibits in Appendix I) as well as one of the document distribution limitations listed in Section 4.5.17, along with any appropriate expiration date, if appropriate.

4.5.3 Copying and disseminating of such documents shall be done in conformance with applicable notices.

4.5.4 A minimal DAA is defined as a NF-1676 that states there are no export control or intellectual property restrictions. A minimal DAA shall be signed by the NASA Export Control Administrator and the intellectual property attorney, at a minimum.

4.5.4.1 A minimal DAA shall be used for STI that is dated 1985 or older and is being sent to STI Support Services for the first time.

a. STI dated 1986 or newer shall use a full NF-1676.

b. A minimal DAA shall contain information as specified in Appendix E.1.11.

4.5.5 This NPR does not set policy for National Security Review (NSR) information. The DAA review process is not used to review classified information. NASA Headquarters and Center originating offices are responsible for classified STI. Final security classification rests with NASA Headquarters' Office of Protective Services, and documents containing information subject to security classification are addressed in NPR 1600.1 and NPR 2810.1. NASA Headquarters and Center originating offices, in conjunction with Headquarters and Center Export Administrators, are also specifically responsible for the review and approval of policy and plans for the intended release of NASA technical and programmatic information to a NASA international partner. The NASA Headquarters and Center originating offices also are responsible for ensuring appropriate review and approval of all material intended for publication, dissemination, and presentation when such material contains information pertaining to the Department of Defense (DOD) (e.g., aeronautics programs, space launches, or space operations) regardless of the source of the materials. The DOD Office of Security Review shall be contacted for review of NASA documents that have DOD equities, and the Headquarters OIIR can facilitate this review.

4.5.6 Export Control Reviews

4.5.6.1 Export control limitations are applied to information subject to:

a. 22 United States Code (U.S.C.) 2778 et seq., Arms Export Control Act.

b. Public Law (PL) 96-72 Stat. 503, 50 U.S.C. app. 2401 et seq., Export Administration Act of 1979.

c. 22 Code of Federal Regulations (C.F.R) Parts 120-130, International Traffic in Arms Regulations (ITAR).

d. 15 C.F.R Parts 730-774, Export Administration Regulations (EAR).

4.5.6.2 These regulations establish lists or categories of technical data subject to export control that may not be exported or disclosed to foreign persons without proper authority. The term exported includes providing information or making information available to a foreign person (including a U.S. citizen representing a foreign person if that individual intends to provide the information to a foreign person) either within the United States or abroad. STI information shall not be placed on the open Internet without export-control review.

4.5.6.3 The export control review shall be required to ensure that NASA STI Report Series documents; conference, meeting, and symposia presentations; abstracts; and external publications containing information subject to control under pertinent U.S. export laws or regulations are suitably protected.

4.5.6.4 Each such report, presentation, abstract, or publication shall be reviewed and approved by or in conjunction with the Headquarters or Center Export Administrator prior to the dissemination, in any media, to audiences that may include foreign persons. Examples follow:

a. Presentations at internal meetings at which foreign persons are likely to attend.

b. Presentation at open meetings in the United States that may include foreign persons.

c. Presentations at meetings held in foreign countries.

d. Publications intended for public dissemination or distribution.

e. Unrestricted electronic releases over the Internet.

4.5.6.5 The abstract, complete report, and presentation shall be approved prior to release.

4.5.6.6 Under certain conditions, officials overseeing specific contracts or projects shall, on a case-by-case basis, be granted limited delegations of authority to approve publications when the contracts or projects are restricted to topics exempt from export controls. These limited delegations are coordinated through the NASA OIIR and the cognizant NASA Headquarters mission directorate.

4.5.7 Sensitive But Unclassified (SBU) Information

4.5.7.1 Guidelines for determining and marking administratively controlled information (sometimes referred to as For Official Use Only (FOUO) information, Administratively Controlled Information (ACI) or Controlled Unclassified Information (CUI)) are given in chapter 5 of NPR 1600.1 and via NF-1686. For more information about this category of information, contact the NASA Headquarters Office of Chief Information Officer. NASA STI restricted under ITAR, EAR, SBIR, trade secret/commercial confidential or subject to Section 303(b) of the National Aeronautics and Space Act is considered to be SBU and shall be marked with the appropriate notice (ITAR, EAR, SBIR, etc.) on the cover, title page, and Standard Form (SF) 298, RDP, and the appropriate restriction on each inside page on which the SBU information is displayed.

4.5.7.2 NASA STI that is marked as export controlled under the ITAR or EAR is not automatically SBU.

4.5.7.3 The cognizant designating official makes the SBU determination. See NASA Interim Directive NM-1600-55 for the definition of designating official.

4.5.7.4 NASA STI restricted from public Web sites is not considered to be SBU unless it also falls under another restriction.

4.5.8 ITAR documents follow 22 C.F.R Parts 120-130.

4.5.8.1 The ITAR implements the Arms Export Control Act and contains the United States Munitions List (USML). The USML identifies articles, services, and related Technical Data that are designated as "Defense Articles" and "Defense Services," pursuant to Sections 38 and 47(7) of the Arms Export Control Act. The ITAR is administered by the U.S. Department of State. Technical Data, as defined in the ITAR, do not include information concerning general scientific, mathematical, or engineering principles commonly taught in schools, colleges, and universities or information in the public domain (as that term is defined in 22 C.F.R 120.11). It also does not include basic marketing information on function and purpose or general system descriptions. For purposes of the ITAR, the following definitions apply:

a. A "Defense Article" (as defined in 22 C.F.R 120.6) is any item or Technical Data on the USML (22 C.F.R 121.1). The term includes Technical Data recorded or stored in any physical form, models, mockups, or other items that reveal Technical Data directly relating to items designated in the USML. Examples of Defense Articles included on the USML are:

(1) Launch vehicles, including their specifically designed or modified components, parts, accessories, attachments, and associated equipment.

(2) Remote-sensing satellite systems, including ground control stations for telemetry, tracking, and control of such satellites, as well as passive ground stations if such stations employ any cryptographic items controlled on the USML or if they employ any uplink command capability, all components, parts, accessories, attachments, and associated equipment (including ground support equipment) that is specifically designed, modified, or configured for such systems. (See 22 C.F.R 121.1 for the complete listing.).

(3) Technical Data (as defined in 22 C.F.R 120.10) is information that is required for the design, development, production, manufacture, assembly, operation, repair, testing, maintenance, or modification of Defense Articles. This includes information in the form of blueprints, drawings, photographs, plans, instructions, and documentation.

(4) Classified information relating to Defense Articles and Defense Services.

(5) Information covered by an invention secrecy order (35 U.S.C. 181 et seq., Patent Rights in Inventions Made With Federal Assistance; 35 C.F.R Part 5).

(6) Software directly related to Defense Articles, including, but not limited to, system functional design, logic flow algorithms, application programs, operating systems, and support software for design, implementation, test, operations, diagnosis, and repair.

4.5.8.2 If NASA STI contains Technical Data concerning Defense Articles as defined above, it is restricted by ITAR, and all copies shall bear the ITAR Notice shown in Exhibit I.1 in Appendix I. Release or distribution of the same information by NASA contractors is subject to the same notice.

4.5.8.3 The restriction notice shall appear on the cover, title page, and SF-298 (RDP).

4.5.8.4 Each page that contains ITAR information shall be marked ITAR at the top and bottom.

4.5.9 Export Administration Regulations (EAR; 15 C.F.R Parts 730-774):

4.5.9.1 The EAR implements the Export Administration Act and contains the Commerce Control List (CCL). The CCL lists dual-use commodities, technology, and software subject to the export control authority of the U.S. Department of Commerce. The items on this list are export controlled for reasons of national security, foreign policy, proliferation, and/or short supply. These regulations are administered by the U.S. Department of Commerce. Dual use is used to distinguish EAR-controlled items that can be used both in military and other strategic uses and in civil

applications from items covered by the ITAR, the Department of Energy, or the Nuclear Regulatory Commission. Information subject to EAR export restrictions includes specific technology identified in the CCL (15 C.F.R 774). CCL definitions follow:

a. Technology (Supplement 2 to 15 C.F.R 774) is specific information necessary for the development, production, or use of a product on the CCL. The information may be in the form of Technical Data or technical assistance.

b. Technical Data may take forms such as blueprints, plans, diagrams, models, formulas, tables, engineering designs and specifications, manuals, and instructions written or recorded on other media or devices such as disk, tape, or read-only memories.

c. Software is a collection of one or more computer or microcomputer programs fixed in any tangible medium of expression.

d. Development information is specific information necessary for any stages prior to serial production--such as design, design research, design analyses, design concepts, assembly and testing of prototypes, pilot production schemes, design data, process of transforming design data into a product, configuration design, integration design, and integration design layouts.

e. Production Information is specific information necessary on any production stages--such as product engineering, manufacture, integration, assembly (mounting), inspection, testing, and quality assurance.

f. Use Information is specific information necessary for operation, installation (including onsite installation), maintenance (checking), repair, overhaul, and refurbishment.

g. Examples of information not subject to export control under the EAR include the following:

(1) Information that is publicly available via literature, library, patent, or seminar.

(2) Fundamental, basic, and applied research in which the resulting information is ordinarily published and shared broadly within the scientific community, as well as university-based, corporate, or Federally Funded Research and Development Center (FFRDC)-based research that has no restrictions on publication of the resulting information.

(3) Educational information taught in a college catalog course.

(4) Information contained in patent applications that are not subject to 37 C.F.R Part 5 secrecy orders.

(5) Basic marketing information on function or purpose or general system descriptions that the producer would make available to its closest competitors at no more than the cost of reproduction.

4.5.9.2 If NASA STI contains "Technology" controlled by EAR, all copies of the cover, title page, and SF-298 (RDP) shall bear the EAR Notice shown in Exhibit I.2 in Appendix I.

4.5.9.3 Each page that contains EAR information shall be marked EAR at the top and bottom. Release or distribution of the same information by NASA contractors is subject to the same notice.

4.5.10 Programs and projects that are determined by the Center or Agency export control administrators to be wholly fundamental research can be expedited via NF-1676 using the Blanket Availability Authorization. Additional information for determining fundamental research will be found in NASA Fundamental Research Designation Guidelines (NPR 2190.2, Appendix D, which is under way) by the NASA Export Control Administrator. A copy of the documentation that designates a program or project as fundamental research shall be forwarded to the Center's STI

program (STI Manager).

4.5.10.1 In addition, NASA STI from these programs or projects designated as fundamental research shall be sent through the Center's STI process via the NF-1676, with the blanket authorization checked, and with signature approval by the master original blanket authorization's approver, prior to release or providing access to it to foreign persons.

4.5.10.2 STI not designated as fundamental research shall be handled in accordance with NPR 2200.2 and requires full DAA review, including an export control review by the appropriate NASA Export Control Official before such information is released.

4.5.11 Proprietary and sensitive STI shall be protected.

4.5.11.1 Proprietary information refers to information that is owned by someone. The owner has proprietary rights (i.e., a legal property right) in the information that allows the owner to exclude others from using, selling, reproducing, displaying, or distributing the information. As defined in NPR 1600.1, sensitive information is information determined to have special protection requirements to preclude unauthorized disclosure, to avoid compromises, risks to facilities, projects or programs, threat to the security and/or safety of the source of information, or to meet access restrictions established by laws, directives, or regulations.

4.5.11.2 For the purposes of the DAA review and this NPR, proprietary STI is STI that contains Limited Rights Data received under a contract, SBIR Data received under a SBIR contract, trade secret/confidential commercial information other than Limited Rights Data or SBIR Data, data subject to Section 303(b) of the Space Act (as amended), copyrighted information, and information disclosing inventions. In addition, STI may include sensitive information that is unclassified but must be restricted from the Web on the basis of NPR 2810.1. It shall include the notice shown in Exhibit I.3 in Appendix I.

4.5.12 Limited Rights Data

4.5.12.1 Limited Rights Data are data developed at private expense that are delivered to the Government under a Government contract and that embodies trade secrets or are commercial or financial and confidential or privileged or that pertain to items, components, or processes developed at private expense. Information that constitutes Limited Rights Data shall be marked with a Limited Rights Notice in accordance with Federal Acquisition Regulations (FAR) clause 52.227-14 when delivered to the Government. If such data are not marked with the Limited Rights Notice, the Government has no obligation to withhold the data from public release.

4.5.12.2 Any questions regarding what constitutes Limited Rights Data, or regarding its marking, use, or dissemination, shall be referred to the NASA Headquarters' or the Center Patent or Intellectual Property Counsel.

4.5.12.3 Documents containing Limited Rights Data shall bear the Limited Rights Notice shown in Exhibit I.4 in Appendix I and one of the document distribution limitations listed in Section 4.5.17.

4.5.12.4 Copying and disseminating of such documents shall be done in conformance with this notice.

4.5.12.5 Any questions regarding appropriate markings or legends and applicable document distribution limitations shall be referred to the NASA Headquarters or Center's Patent or Intellectual Property Counsel.

4.5.13 SBIR data shall be protected.

4.5.13.1 SBIR data are data first produced by an SBIR contractor which are not generally known,

have not, without obligation as to their confidentiality, been made available to others by the contractor, or are not already available to the Government. Data developed under an SBIR contract, if marked with the SBIR rights notice specified in the contract, shall be withheld from public release in accordance with the SBIR contract, usually for four years. If such data are not marked with the SBIR rights notice, the Government has no obligation to withhold the data from public release.

4.5.13.2 Any questions regarding what constitutes SBIR data, or regarding their marking, use, or dissemination, shall be referred to the NASA Headquarters' or the Center Patent or Intellectual Property Counsel.

4.5.13.3 To provide a commercialization incentive to SBIR contractors, it is NASA's policy to restrict all SBIR program reports from public disclosure for the period specified in the contract for SBIR Data unless the contractor has granted permission to publicly release the report sooner. If a letter of permission from the contractor is on file, SBIR program reports may be made publicly available immediately.

4.5.13.4 Restricted SBIR program documents shall bear the SBIR Rights Notice shown in Exhibit I.5 in Appendix I and one of the document distribution limitations listed in Section 4.5.17.1, along with the appropriate expiration date.

4.5.13.5 Copying and disseminating of such documents shall be done in conformance with this notice.

4.5.13.6 Any questions regarding appropriate markings or legends and applicable document distribution limitations shall be referred to the NASA Headquarters' or the Center's Patent or Intellectual Property Counsel.

4.5.14 Trade Secret/Confidential Commercial Information

4.5.14.1 Under certain limited circumstances, NASA employees may be provided access to third-party trade secret or confidential commercial information other than Limited Rights Data or SBIR Data for inclusion in NASA STI. A "trade secret" is information that is used in a business, is secret, or gives a competitive advantage to the person with knowledge of it. The party delivering such information shall include a proprietary notice that indicates the restricted nature of the information when delivered to the Government. If such information is properly marked by the originator, NASA agrees to handle the information in accordance with the markings. When NASA STI containing trade secret or confidential commercial information is published or otherwise disseminated by or for NASA, the cognizant program or project office is responsible for ensuring that such data are properly identified and marked to indicate restricted dissemination.

4.5.14.2 Any questions regarding what constitutes trade secret or confidential commercial information, or regarding its marking, use, or dissemination, shall be referred to the NASA Headquarters' or the Center Patent or Intellectual Property Counsel.

4.5.14.3 If NASA STI is restricted because of trade secret or confidential commercial information other than Limited Rights Data or SBIR Data, all distributed copies shall contain the marking or legend supplied by the originator of the information and, if applicable, one of the document distribution limitations listed in Section 4.5.17.

4.5.14.4 In accordance with NPR 5800.1, Section D (see Rights in data clause at 14 C.F.R 1274.905), in limited circumstances, information first produced by a recipient under a cooperative agreement with a commercial firm may be marked as trade secret/commercial confidential information and its use limited for up to five years. In such cases, an appropriate expiration date of the limitation shall be included.

4.5.14.5 Copying and dissemination of marked information shall be consistent with its markings or legends and any applicable document distribution limitations.

4.5.14.6 Any questions regarding appropriate markings or legends and applicable document distribution limitations shall be referred to the NASA Headquarters' or the Center's Patent or Intellectual Property Counsel.

4.5.15 Information Subject to Section 303(b) of the Space Act

4.5.15.1 Under certain limited circumstances, NASA employees may produce technical information that may be treated as trade secret information. Section 303(b) of the Space Act, as amended, provides that information or data produced by NASA employees in carrying out NASA's participation in an agreement entered into under the Space Act may be protected for a period of up to five years if such information would constitute a trade secret or confidential commercial information if it had been produced by the non-Government party. This provision is generally applicable to agreements that have the objective of developing commercial products or processes. Such data shall be properly marked by the cognizant NASA project office. NASA agrees to protect the data for the period of time established in the agreement between NASA and the other party, up to five years.

4.5.15.2 If NASA STI is restricted because of information subject to Section 303(b) of the Space Act, all distributed copies shall contain one of the document distribution limitations listed in Section 4.5.17 and Appendix I along with the appropriate expiration date of the limitation.

4.5.15.3 Copying and dissemination of marked information shall be consistent with its markings or legends and any applicable document distribution limitations.

4.5.15.4 Any questions regarding appropriate markings or legends and applicable document distribution limitations shall be referred to the NASA Headquarters' or the Center's Patent or Intellectual Property Counsel.

4.5.16 Copyright

4.5.16.1 A copyright owner is the owner of the exclusive rights comprised in a copyright. A copyright provides the copyright owner the exclusive right to--or authorize others to--reproduce the copyrighted work, prepare derivative works based on the copyrighted work, distribute copies of the copyrighted work to the public, perform the copyrighted work publicly, and display the copyrighted work publicly. Others are restricted from exercising the exclusive rights reserved to the copyright owner without the copyright owner's permission. (See also Appendix D.6.)

4.5.16.2 Contracts, grants, and agreements often permit the contractor, grantee, or recipient to assert copyright in reports and other publications first produced in the performance of the specified activity (e.g., works containing or based on data first produced under a NASA contract, grant, or agreement) and published in academic, technical or professional journals, symposia proceedings, or similar works. In order for a contractor to assert copyright in a document, the contract, grant, or agreement shall contain specific language that grants copyright permission to the contractor.

4.5.16.3 When copyright is asserted, the contractor or grantee shall include a copyright notice and acknowledgment of Government sponsorship (including contract or grant number) of the work when it is published. Ordinarily, the Government receives a government purpose license (also called Federal purpose license) in the copyrighted work. The cognizant program or project office provides written notification to the responsible Center Technical Publications Office of instances in which documents containing a copyright notice are provided without a license authorizing public distribution.

4.5.16.4 Under most contracts, grants, and agreements, a Government purpose license includes the

right to use, modify, reproduce, release copies to the public, perform publicly, and display publicly a copyrighted work or authorize others to do so for governmental purpose. Under a Government purpose license, the Government may use the work within the Government without restriction and may release or disclose the work outside the Government for Government purposes. Under Section 203 of the Space Act, it is a governmental purpose to provide for the widest practicable and appropriate dissemination of information concerning NASA's activities and their results. Thus, public distribution of the results of work funded by NASA is a governmental purpose. However, although NASA may publicly release copyrighted works in which it has a Government purpose license, these works are still protected by copyright, and recipients of the works shall comply with the copyright law: for example, they may not further copy or distribute the copyrighted work without permission of the copyright owner.

4.5.16.5 Documents produced by Government employees in the performance of official duties are not subject to copyright protection in the United States. However, the U.S. Government may obtain copyright protection in other countries depending on the treatment of government works by the national copyright law of the particular country. For additional information, contact the NASA Headquarters' or the Center's Patent or Intellectual Property Counsel. (See also CENDI, the Federal STI Managers Group, at http://www.cendi.gov, especially their "Frequently Asked Questions About Copyright," at http://www.cendi.gov/publications/04-8copyright.html.)

4.5.16.6 If NASA STI is restricted because of copyrighted content, all distributed copies shall bear the appropriate notice for copyrighted information shown in Appendix I. Release or distribution of the same information by NASA contractors is subject to the same notice.

4.5.17 Document Distribution Limitations

4.5.17.1 Document distribution limitations determined during the DAA review and indicated on the NF-1676 follow:

a. U.S. Government Agencies and U.S. Government Agency Contractors Only

b. NASA Contractors and U.S. Government Agencies Only

c. U.S. Government Agencies Only

d. NASA Personnel and NASA Contractors Only

e. NASA Personnel Only

f. Available Only With Approval of Issuing Office (Program Office or NASA Center)

4.5.17.2 When STI is no longer subject to restriction (or following the date cited in Limited until...), the cognizant NASA Center (program officials and Export Control Administrators or Patent or Intellectual Property Counsel, as appropriate) shall re-mark the STI and provide NASA STI Support Services with a copy of the new or modified DAA through the Center's Technical Publications Office or STI Manager. Because NASA STI Support Services is a contractor facility, it is not approved to change or alter authorization categories.

4.5.18 Prior to loading a NASA document to a public Web site, refer to NPR 2810.1. If restrictions apply according to this document, authors and approvers shall use the Exhibit I.3 restriction in Appendix I.

4.5.19 Documents Disclosing Inventions

4.5.19.1 Information that is otherwise approved for public release may be withheld if it discloses an invention. The publication of information disclosing an invention by any party before the filing of a

patent application may create a bar to a valid patent. Accordingly, under 35 U.S.C. 205 and implementing regulations, agencies are to withhold from release to the public documents that contain information about an invention in which the Government owns or may own a right, title, or interest (including a nonexclusive license). This applies to inventions made and reported by NASA employees, contractors, and grantees. Release is delayed in order for a patent application to be filed or, if a decision not to file is made, until release is approved by the NASA Headquarters' or the Center's Patent or Intellectual Property Counsel.

4.5.19.2 When NASA STI discloses an invention, the invention shall also be formally disclosed to NASA via the NASA Electronic New Technology Reporting Web site, eNTRe, at http://invention.nasa.gov, or on NF-1679, Disclosure of Invention and New Technology, also available at the eNTRe Web site.

4.5.19.3 The party making and disclosing or reporting the invention shall be responsible for notifying the Agency as to the nature of the information and the invention to which it relates.

4.5.19.4 In the case of reports submitted under contract or grant, notification shall be made to the Contracting Officer or Grant Officer, the designated Patent Representative, and the STI Manager.

4.5.19.5 In the case of NASA-prepared documents, notification shall be made to the Project Officer, the Center Patent or Intellectual Property Counsel, and the STI Manager.

4.5.19.6 Regardless of the availability category and any blanket availability authorization that may have been granted, all documents that disclose an invention (except security-classified documents that disclose an invention) for which notification has been made shall be withheld by the originating office, with notice to the Center Technical Publications Manager, until the patent applications process is complete (that is, an application is filed with the U.S. Patent and Trademark Office or a decision not to file an application is made and release is approved by the Center Patent or Intellectual Property Counsel).

4.5.19.7 Such withholding does not require NASA Program Office approval. Security-classified documents that disclose an invention shall be withheld until approved for release under applicable security guidelines.

4.5.20 Use of restrictions other than those specified in this chapter shall receive prior approval by the Headquarters Office of General Counsel.

4.5.21 Requests for use of nonstandard restrictions shall include the following information:

4.5.21.1 Clear statement of who can and cannot receive the document

4.5.21.2 Time limit for the restriction

4.5.21.3 Reason for the restriction

4.5.21.4 Copy of the legal citation on which the proposed restriction is based

4.5.22 Documentation of DAA Review and Approval

4.5.22.1 Approvals shall be documented on NF-1676 or the Center-specific implementation of this form.

4.5.22.2 The DAA also documents which restrictions, if any, shall be applied to the distribution of the publication or presentation. Individuals originating STI in any form may consult with the NASA Headquarters' or the Center's DAA representative and, as appropriate, the Headquarters' or Center's Export Administrator--who can explain the availability categories and authorization

requirements--and with their NASA Program or Project Manager, COTR, and Contract Technical Monitor, as applicable.

4.5.22.3 Copies of NF-1676 are available from the Center or Headquarters Forms Manager and are also accessible via the NASA Forms Web site (http://nef.nasa.gov/) and from the NASA STI program home page (http://www.sti.nasa.gov/) by selecting For Authors, Publish STI, Get Reviews and Approvals, DAA (Document Availability Authorization). Use of the form in other media and in other formats is permitted as long as the data elements contained on NF-1676 are retained.

4.5.23 The Agency has developed and is instituting a new Agency electronic NF-1676 (E-NF-1676), which is being rolled out Center by Center as resources allow. No Centers shall develop or institute their own automated system other than those previously in existence as of the date of this NPR (i.e., Langley, Stennis, and Johnson). After all other Centers have been converted to this Agency system, these three Centers will be phased to the E-NF-1676.

4.6 Special Concerns

4.6.1 Grants and Cooperative Agreements

4.6.1.1 In accordance with NPR 5800.1, the widest practicable dissemination shall be made of results of a NASA grant or cooperative agreement, subject to the restrictions in Section 4.4.2.4.

4.6.1.2 If the results of a NASA grant or cooperative agreement are published as a CR, they shall meet the requirements for CRs specified in Section 4.6.

4.6.1.3 The DAA review of grant reports published in the NASA STI Report Series shall be initiated by the Grant Technical Officer (GTO) or by the applicable Headquarters program office. For grants that are subject to restrictions, see also Sections 4.2.5, 4.5.16, 4.5.20, and 5.2.

4.6.1.4 Grant reports that NASA elects to publish or release require a DAA review and approval prior to release by NASA:

a. Grant reports that the grantee releases or publishes on behalf of NASA require a DAA review.

b. Grant reports that a grantee publishes or releases on their own behalf, even if it is sponsored by NASA, do not need a DAA review and approval, unless their grant specifically requires NASA review and approval prior to release.

Chapter 5. Dissemination of Scientific and Technical Information (STI)

5.1 Purpose

5.1.1 To ensure the widest practicable and appropriate dissemination of the results of NASA STI activities, NASA maintains an electronic and alternative media duplication capability, adheres to printing regulations that direct printing and reproduction procedures, and maintains a variety of distribution mechanisms that ensure easy access to the NASA STI Report Series as well as to other STI-related products and services.

5.2 Responsibilities

5.2.1 General distribution requirements for the NASA STI program shall be determined by the NASA STI Program Director. Other responsibilities follow:

5.2.1.1 Distribution and dissemination requirements for individual publications shall be determined by the author and his or her management in coordination with the general requirements of the NASA STI Program Director.

5.2.1.2 All duplicating or printing, if applicable, of NASA STI shall be performed in accordance with NPD 1490.1.

5.2.1.3 NASA STI Support Services shall be responsible for the primary dissemination of NASA STI, which is done electronically. NASA Centers may elect to also disseminate unclassified and unlimited STI by placing it on their Center Technical Report Server (TRS) after it has undergone a DAA review.

5.2.1.4 Documents on a public Web site shall also meet requirements in NPR 2810.1.

5.2.2 Section 5.6 provides a more-detailed discussion of distribution procedures.

5.3 Duplication and Printing

5.3.1 NASA disseminates STI electronically. On occasion, a Center may also require hard-copy duplication or printing. The duplication or printing of publications in the NASA STI Report Series, if a Center elects to do so, shall be accomplished through Center Technical Publications Offices using NASA Headquarters or Center duplicating or copying facilities and/or the GPO, in accordance with NPD 1490.1. Special handling is required for limited or restricted STI.

5.3.2 The dissemination of STI in electronic or alternative media, which may or may not be issued jointly with a print version, in the NASA STI Report Series shall be made in accordance with the standards in Section 2.7.

5.4 Archiving of NASA Scientific and Technical Information (STI)

5.4.1 NASA STI that is unlimited and does not have a copyright shall be sent to the NARA in electronic format in accordance with NPR 1441.1.

5.5 Duplication for Secondary Distribution

5.5.1 NASA STI Support Services shall be responsible for subsequent requests for NASA STI. This is called secondary distribution.

5.5.2 NASA STI Support Services shall fulfill requests for STI in electronic formats.

5.6 Dissemination/Distribution of NASA Scientific and Technical Information (STI) Report Series

5.6.1 Information on dissemination and distribution of NASA STI is given in Appendix E.

5.6.2 Authors and approvers shall ensure that a copy of their STI is sent to NASA STI Support Services so that it is included in the NASA dissemination process. Any additional dissemination shall be in accordance with NASA's release requirements, as cited in the references to this NPR.

5.7 FOIA Requests

5.7.1 For FOIA requests, requesters shall follow the Agency FOIA procedure, as specified at http://www.nasa.gov.

5.8 Use of Commercial or Nonprofit Publishers

5.8.1 The decision to use commercial or nonprofit publishers (e.g., society and nonprofit publishers) for printing NASA STI shall involve the considerations below.

5.8.1.1 When appropriated funds have been used to create information to be published, printing services shall be provided by GPO.

5.8.1.2 When appropriated funds have been used to create information to be published, the information shall not be made available to a private publisher for initial publication.

5.8.1.3 If appropriated funds have not been used, other factors (e.g., type and content of the publication, audience, statutory requirements, past practice, and distribution to depository libraries) shall be taken into consideration.

5.8.1.4 Both the Office of the General Counsel and the office responsible for the preparation of the work shall be consulted.

5.8.1 5 The contractual arrangement with the publisher would not be a procurement or assistance transaction but rather a Space Act Agreement. (See NPD 1050.1).

Appendix A. Definitions

Accession, accessioning. The process by which documents are added to the STI Database.

Authorized requester. Individual or organizational user properly registered with the NASA STI Support Services to receive STI services and products (Also see "user registration.").

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

Conference paper full-text document. Can contain text (e.g. Introduction, Background, Apparatus, Procedure, Analysis, Conclusions) with tables, figures, equations, and references included.

Conference presentation. Projected visuals of details, figures, and tables from a full-text conference publication. Presented at a physical or virtual gathering.

Copyrighted document. A document for which the exclusive legal rights under the Copyright Law (right to reproduce, modify, distribute, perform publicly, and display publicly) have been asserted by the author of the work.

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. For the purposes of 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 5 U.S.C. 552, Freedom of Information Act (FOIA), or the Privacy Act.

Document. An information package that may consist of printed hard copy, alternative media, DVDs, CDs, or electronic versions.

Document Availability Authorization (DAA) Representative. Coordinate with Center authors, STI Manager, Technical Publications Manager, COs, COTRs, Grants Officers, Grant Technical Officers, and managers who approve STI in order to track, file, and transfer the NF-1676 and its associated STI, after approval, to NASA STI Support Services. Accountable to the STI Manager.

Document Availability Authorization (DAA) review. The process by which NASA determines which restrictions, if any, need to be placed on the availability of a document. The form used in this process is NASA Form (NF) 1676, NASA Scientific and Technical Information (STI) Document Availability Authorization (DAA), available at http://nef.nasa.gov.

Duplicating or copying facility. Any location having at least one employee operating duplicating or copying equipment on a full-time basis, excluding authorized printing plants.

Export Administration Regulations (EAR). U.S. export control regulations (15 C.F.R 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.

Electronic dissemination or distribution. The delivery of information through the use of electronic

communications or machine-readable representations of documents or release via the Internet.

Foreign person. For the purpose of general security protection, considerations of national security, and access accountability, a foreign person is any person who is not a citizen of the United States. 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, Chapter 10.)

Informal STI. Scientific and technical information not intended for initial publication in the NASA STI Report Series or as a professional journal article or presentation for which the NASA STI program maintains responsibility for dissemination and preservation.

International Traffic in Arms Regulations (ITAR). U. S. export control regulations (22 C.F.R 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.

STI Database. This is the official database of NASA-held STI. It is accessible only from nasa.gov domain computers. Restricted material is available only to registered users who are authorized to receive restricted material.

NASA Center for STI Support Services. NASA STI program's contract facility that maintains the STI Database and processes information into it. NASA STI Support Services currently serves as the historical repository of all NASA STI Report Series publications and as the physical full-text distribution Center for these reports.

NASA Internal Distribution. Distribution to NASA personnel, contractors, 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, a DAA 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 a NASA contractor or grantee employee 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).

STI Database Public Interface. Electronic repository of publicly available NASA-authored STI accessible from the public Internet.

Oral/visual presentation. Material originally transmitted verbally. Can be subsequently transcribed into paper or electronic form.

Paper Copy. Full sized reporduction of a document on paper.

Printing. The processes of composition, platemaking, presswork, duplicating, silk-screen processes, binding, microform, and the end items of such processes.

Professional journals. Scientific, technical, and trade publications produced by professional, technical, and/or academic organizations.

Projected visual. Single image projected for viewing by a group.

Publication. The 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).

Report series. See "NASA STI Report Series."

Review paper. A comprehensive review of literature or other research that includes extensive analysis and comparison of the literature or research.

Scientific and technical information. NASA STI is defined as the results (facts, analyses, and conclusions) of the Agency's basic and applied scientific, technical, and related engineering research and development. STI also includes management, industrial, and economic information relevant to this research. Examples include, but are not limited to, technical publications and reports, journal articles, meeting, workshop, and conference publications and presentations, conference proceedings, books and book chapters, and preliminary or nonpublished STI, including any of these examples that will be posted to a public Web site.

Secondary dissemination/distribution. Dissemination/distribution by NASA STI Support Services when an approved user or customer requests a document (dissemination on demand).

Security classified. Documents containing classified information as defined in NPR 1600.1, similar regulations, or directives of other Government agencies (e.g., the Department of Defense). Security classified documents are not handled by the STI program.

Sensitive But Unclassified (SBU). Unclassified information or material determined to have special protection requirements to preclude unauthorized disclosure. See NPR 1600.1, Chapter 10.

Sponsored research report. A report that is sponsored by NASA but performed by another agency (CRSX) or sponsored by another agency but performed by NASA (TMSX).

STI DAA system. The electronic implementation of NF-1676, used for export review and approval.

STI Manager. Responsible for the overall Center STI program in coordination with the Center Technical Publications Manager and Center DAA Representative.

Subject division. Specific subject areas used to categorize documents that are used in NASA announcement journals (e.g., aeronautics, astronautics, chemistry, and materials). A complete listing of the subject divisions and the subject categories included in each division covered by the STI Database is provided in Appendix I.

Symposia. Technical conferences, seminars, and similar meetings held by Government agencies, professional societies, universities, or industrial organizations.

Technical Publications Manager. Coordinates with the Center STI Manager and DAA Representative to ensure that STI activities assigned to the Center are handled as specified in NPD 2200.1 and NPR 2200.2. Accountable to the STI Manager.

Technical Reports Server (TRS). NASA Headquarters or Center file server that serves as a repository for technical reports.

Trademark. A word or symbol that is used to identify a particular product or service in a way that distinguishes it from other similar products or services. A trademark may be registered.

Trade name. A trade name or commercial name that identifies a specific business, product, or

vocation.

Technical Monitor. The NASA employee appointed to monitor or manage technical progress, referred to in grant instructions as the Technical Officer. In contract instructions, this employee may be identified as the Project Manager, Contracting Officer's Technical Representative (COTR), or Grant Technical Officer (GTO).

User registration. The process by which eligible organizations and individuals become authorized to receive STI services and products from the NASA STI Support Services.

Appendix B. Acronyms

ACI	Administratively Controlled Information
ANSI	American National Standards Institute
ASCII	American Standard Code for Information Interchange
CCL	Commerce Control List
CD	compact disk
C.F.R	Code of Federal Regulations
CIO	Chief Information Officer
CO	Contracting Officer
COTR	Contracting Officer's Technical Representative
CP	Conference Publication
CR	Contractor Report
DAA	Document Availability Authorization (NASA Form 1676)
DVD	digital video disk
EAR	Export Administration Regulations
E-DAA	electronic document availability authorization
FAR	Federal Acquisition Regulations
FFRDC	Federally Funded Research and Development Center
FOIA	Freedom of Information Act
FOUO	For Official Use Only
GIC	Grant Information Circular
GO	Grant Officer
GPO	Government Printing Office
GTO	Grants Technical Officer
HTML	Hyper Text Markup Language
IEEE	Institute of Electrical and Electronics Engineers
ISBN	International Standard Book Number
ISO	International Organization for Standardization
ISSN	International Standard Serial Number
ITAR	International Traffic in Arms Regulations
LCCN	Library of Congress Control Number
NARA	National Archives and Records Administration

NASA-STD	NASA Technical Standard
NASA-STI	NASA Scientific and Technical Information Support Services
NF	NASA Form
NFS	NASA FAR Supplement
NISO	National Information Standards Organization
NPD	NASA Policy Directive
NPR	NASA Procedural Requirements
NSR	National Security Review
NTIS	National Technical Information Service
OCIO	Office of the Chief Information Officer
OIC	Official-in-Charge
OIIR	Office of International and Interagency Relations
OMB	Office of Management and Budget
PDF	Portable Document Format
PIC	Procurement Information Circular
PL	Public Law
PS	Postscript
RDP	Report Documentation Page (SF-298)
SBIR	Small Business Innovation Research
SBU	Sensitive But Unclassified
SF	Standard Form
SFTP	Secure File Transfer Protocol
SP	Special Publication
SSL	secure socket layer
STI	Scientific and Technical Information
STIPO	Scientific and Technical Information Program Office
STRN	Standard Technical Report Number
TM	Technical Memorandum
TP	Technical Publication
TPO	Technical Publications Office
TRS	Technical Reports Server
TT	Technical Translation
UPN	Unique Project Number
URL	Uniform Resource Locator, or Web address

U.S.C.	United States Code
USMA	U.S. Metric Association
WBS	Work Breakdown Structure number
WU	Work Unit number
XML	Extensible Markup Language

Appendix C. Sample Forms Used to Publish STI

C.1 NASA Form (NF) 1676, NASA Scientific and Technical (STI) Document Availability Authorization (DAA) and Instructions

C.1.1 See the latest version and instructions at http://server-mpo.arc.nasa.gov/Services/NEFS/ and at http://www.sti.nasa.gov Publish STI, Required Approvals

C.1.2 NASA requires this form for all STI to be published and disseminated external to NASA or presented at internal meetings at which foreign persons are likely or invited to be present.

C.2 NF-1676 and Instructions: Note: At the time this NPR was approved, some Centers are converting to the Agency E-DAA system, which uses the NF-1676A. Other Centers continue to use the electronic version of the NF-1676.

National Aeronautics and Space Administration

NASA Scientific and Technical Information (STI) Document Availability Authorization (DAA)

(Instructions for completing this form are on page 4)

☐ NEW DAA
☐ REVISION TO EXISTING DAA *(Attach Copy)*

POTENTIAL LESSONS LEARNED? ☐ NO ☐ YES ▶ *(Also submit to Review Committee at http://lls.nasa.gov)*

1a. DOCUMENT IDENTIFICATION

TITLE		AUTHOR(S)	
POINT OF CONTACT *(If different from author)*	E-MAIL	ADDRESS	
COTR OR CENTER-DESIGNATED OFFICIAL	E-MAIL	ADDRESS	
ORIGINATING NASA CENTER AND ORGANIZATION		PERFORMING NASA CENTER AND ORGANIZATION *(If different)*	
CONTRACT NUMBER	GRANT NUMBER	INTERAGENCY NUMBER	OTHER DOCUMENT NUMBER(S)

1b. TYPE OF STI

☐ ABSTRACT
☐ BOOK
NAME OF PUBLISHER:

☐ CONFERENCE PAPER
☐ CONFERENCE PRESENTATION
CONFERENCE NAME/SPONSOR:

CONFERENCE LOCATION:

DATES: _____ TO: _____

☐ ORAL/VISUAL PRESENTATION
ADDITIONAL INFORMATION:

☐ NASA STI SERIES REPORT *(See NPR 2200.2)*
- ☐ TECHNICAL PUBLICATION (TP)
- ☐ TECHNICAL MEMORANDUM (TM)
- ☐ CONTRACTOR REPORT (CR)
- ☐ CONFERENCE PUBLICATION (CP)
- ☐ SPECIAL PUBLICATION (SP)
- ☐ TECHNICAL TRANSLATION (TT)

☐ DOCUMENT FOR PUBLIC WEB SITE *(Must meet requirements in NPR 2810.1, chapter 11, for publishing on the Internet)*
☐ DOCUMENT FOR INTERNAL NASA WEB SITE
URL:

PERSISTENT URL *(If applicable)*:

☐ OTHER *(Periodical, format, etc.)*
☐ JOURNAL ARTICLE
JOURNAL NAME/PUBLISHER

☐ IF A PREPRINT *(draft or revision being sent to journal)*, DO YOU WANT IT DISSEMINATED TO:
- ☐ ONLY THE PUBLISHER
- ☐ NASA AND ITS CONTRACTORS
- ☐ US GOVERNMENT AGENCIES AND THEIR CONTRACTORS
- ☐ PUBLIC

☐ IF A REPRINT *(article published by journal)* BEING SENT TO NASA CENTER FOR AEROSPACE INFORMATION TO ADD TO STI DATABASE, DID YOU GET PERMISSION FROM THE PUBLISHER TO DISTRIBUTE TO PUBLIC?
- ☐ YES *(Attach copy of permission)*
- ☐ NO

NASA FORM 1676 MAY 10 PREVIOUS EDITIONS ARE OBSOLETE PAGE 1 OF 4

2. NATIONAL SECURITY CLASSIFICATION *(Check one)*

☐ NONE *(Unclassified)* ☐ CONFIDENTIAL ☐ SECRET ☐ TOP SECRET

IF CLASSIFIED, CENTER SECURITY OFFICER (CSO) MUST APPROVE

CSO APPROVAL *(Name)*

3. AVAILABILITY CATEGORY

3a. PUBLICLY AVAILABLE STI *(See instructions)*

☐ YES ☐ NO *(See 3 (b, c, and/or d) and 4)*

3b. EXPORT-CONTROLLED INFORMATION *(Contact your Export Control Administrator for help)*

☐ INTERNATIONAL TRAFFIC IN ARMS REGULATIONS (ITAR)

GIVE THE US MUNITIONS LIST (USML) CATEGORY: _____

☐ EXPORT ADMINISTRATION REGULATIONS (EAR)

GIVE THE EXPORT CONTROL CLASSIFICATION NUMBER (ECCN) : _____

OF THE COMMERCE CONTROL LIST (CCL)

3c. PROPRIETARY/SENSITIVE INFORMATION *(See NPR 2200.2, Chapter 4)*

☐ LIMITED RIGHTS DATA

☐ SMALL BUSINESS INNOVATION RESEARCH (SBIR/STTR)

- ☐ LIMITED UNTIL DATE *(mm/dd/yyyy)*: _____
- ☐ IMMEDIATE RELEASE APPROVED TO CATEGORIES INDICATED IN 3d

☐ TRADE SECRET/COMMERCIAL CONFIDENTIAL OTHER THAN LIMITED RIGHTS OR SBIR DATA

- ☐ LIMITED UNTIL DATE *(mm/dd/yyyy)*: _____
- ☐ IMMEDIATE RELEASE APPROVED TO CATEGORIES INDICATED IN 3d

☐ PRODUCED UNDER SPACE ACT AGREEMENT & SUBJECT TO § 303(b) OF THE SPACE ACT

- ☐ LIMITED UNTIL DATE *(mm/dd/yyyy)*: _____
- ☐ IMMEDIATE RELEASE APPROVED TO CATEGORIES INDICATED IN 3d

☐ COPYRIGHTED *(If copyrighted, check with Center Patent or Intellectual Property Counsel)*

- ☐ CAN BE RELEASED TO PUBLIC *(Attach approval)*
- ☐ MUST BE RESTRICTED TO CATEGORIES INDICATED IN 3d

☐ CONTAINS PUBLIC-WEB-SENSITIVE INFORMATION PER NPR 2810.1

☐ DOCUMENT DISCLOSING AN INVENTION *(Complete Section 4)*

NAME OF APPROVING OFFICIAL

TITLE OF APPROVING OFFICIAL

3d. DISTRIBUTION LIMITATIONS *(See instructions)*

☐ US GOVERNMENT AGENCIES AND US GOVERNMENT AGENCY CONTRACTORS ONLY

☐ US GOVERNMENT AGENCIES ONLY

☐ NASA PERSONNEL AND NASA CONTRACTORS ONLY

☐ NASA CONTRACTORS AND US GOVERNMENT ONLY

☐ NASA PERSONNEL ONLY

☐ DISTRIBUTION LIMITED TO US PERSONS

☐ AVAILABLE ONLY WITH APPROVAL OF THE FOLLOWING ISSUING OFFICE: _____

☐ LIMITED UNTIL DATE *(mm/dd/yyyy)*: _____

4. DOCUMENT DISCLOSING AN INVENTION

☐ CHECK IF THIS DOCUMENT/PRESENTATION DISCLOSES AN INVENTION AND ROUTE TO HQ OR CENTER PATENT OR INTELLECTUAL PROPERTY COUNSEL *(See instructions)*

I CERTIFY THAT THIS DOCUMENT MAY BE RELEASED ON *(mm/dd/yyyy)*: _____

PATENT COUNSEL NAME

DATE

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5. BLANKET AVAILABILITY AUTHORIZATION *(Optional) (See Instructions)*

☐ I APPROVE ALL DOCUMENTS ISSUED UNDER THE FOLLOWING CONTRACT, GRANT, OR PROJECT NUMBER TO BE PROCESSED AS CHECKED IN SECTIONS 2 AND 3(a-d)

I GRANT THIS AVAILABILITY AUTHORIZATION ON *(mm/dd/yyyy)*: _____

☐ CONTRACT NUMBER ☐ GRANT NUMBER ☐ PROJECT NUMBER ☐ TASK NUMBER

APPROVING OFFICIAL	ORG CODE	E-MAIL	DATE

I HEREBY CHANGE THE BLANKET AVAILABILITY AUTHORIZATION DATED *(mm/dd/yyyy)*: _____

☐ RESCINDED - FUTURE DOCUMENTS MUST HAVE INDIVIDUAL DOCUMENT AVAILABILITY AUTHORIZATIONS

☐ MODIFIED - LIMITATIONS ON ALL DOCUMENTS SHOULD BE CHANGED TO CONFORM TO BLOCKS AS CHECKED IN SECTIONS 2 AND 3

NAME	ORG CODE	E-MAIL	DATE

6. AUTHOR/ORIGINATOR VERIFICATION

I BELIEVE THAT THIS PUBLICATION:

☐ **DOES** CONTAIN ITAR/EAR/EXPORT-CONTROLLED, PROPRIETARY/SENSITIVE INFORMATION, AND/OR DISCLOSES AN INVENTION AND THE APPROPRIATE LIMITATION IS CHECKED IN SECTIONS 3 AND/OR 4

☐ DOES **NOT** CONTAIN ITAR/EAR/EXPORT-CONTROLLED, PROPRIETARY/SENSITIVE INFORMATION, NOR DOES IT DISCLOSE AN INVENTION AND MAY BE RELEASED AS INDICATED ABOVE

NAME	ORG CODE	E-MAIL	DATE

7. NASA PROJECT OFFICIAL *(COTR/designated official, or Technical Monitor)* **/ DIVISION CHIEF REVIEW OF 1 THROUGH 6**

☐ APPROVED FOR DISTRIBUTION AS MARKED

☐ NOT APPROVED *(Give reason)* ▶

REASON:

NAME	TITLE	E-MAIL	DATE

8. EXPORT CONTROL ADMINISTRATOR CONFIRMATION

☐ PUBLIC RELEASE IS APPROVED *(Information is not export controlled.)*

☐ EXPORT-CONTROLLED LIMITATIONS IN BLOCKS 3b, 3d, AND 6 ARE APPROVED AND ASSIGNED TO THIS DOCUMENT

☐ EXPORT-CONTROLLED LIMITATION(S) INDICATED IN SECTIONS 3b AND 3d HAVE BEEN CHANGED TO:

ITAR USML CATEGORY NUMBER: _____

EAR CCL ECCN NUMBER: _____

CENTER/HQ EXPORT CONTROL ADMINISTRATOR NAME	E-MAIL	DATE

9. FINAL APPROVAL BY PROGRAM MANAGER

☐ APPROVED FOR DISTRIBUTION AS MARKED

☐ NOT APPROVED *(Give reason)* ▶

REASON:

DATE DOCUMENT PUBLISHED/RELEASED: _____

NAME	E-MAIL	DATE

10. DISPOSITION

ADDITIONAL APPROVALS BY CENTER, IF APPLICABLE *(OPTIONAL)*:

NAME/TITLE: _____ E-MAIL: _____ DATE: _____

NAME/TITLE: _____ E-MAIL: _____ DATE: _____

SEND TO CENTER DAA REPRESENTATIVE *(SEE INSTRUCTIONS)*

☐ SEND TO CENTER TECHNICAL PUBLICATIONS OFFICE

☐ SEND TO NASA CENTER FOR AEROSPACE INFORMATION *(e-mail: help@sti.nasa.gov)*

NAME OF DAA REPRESENTATIVE	DATE

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INSTRUCTIONS FOR COMPLETING NF 1676

When to Use. Use for STI to be published, released, or presented external to NASA or presented at internal meetings or conferences at which foreign nationals may be present. NPD 2200.1 gives authority and defines STI. See also NPR 2200.2. Encrypt electronic STI that is limited/restricted or export-controlled (NPD 2910.1). Do not enter classified information on this form (use unclassified information about the document). See also <http://www.sti.nasa.gov/nasa-only/publish/publish.html>.

Approvals. NASA centers have different workflows to accommodate this form. A typical approval cycle is given below; however, check with your center Document Availability Authorization (DAA) representative or STI Manager to see if your center has an alternative workflow and information on electronic routing. Steps include:

1. Author, contracting officer's technical representative (COTR), or NASA official completes blocks 1 and 2.
2. If STI is classified, Center Security Officer (CSO) approves block 2.
3. Author, COTR, or NASA official recommends information in blocks 3, 4, and 6, as appropriate.
4. If the document or presentation contains information that discloses an invention, the HQ or Center Patent or Intellectual Property Counsel must approve the release in block 4. Patent Counsel approval may be required for all STI; check with your DAA representative or STI Manager.
5. Block 5 is OPTIONAL. This block can be used when all STI under a specific contract, grant, project, or task number is approved to have the same distribution. One approved NF 1676 must be on file that cites the specific number. All subsequent STI must contain the cited number. You must provide a copy of the approved NF 1676 on file with each STI item.
6. NASA Project Official, COTR, or technical monitor (for STI from contractor that NASA elects to publish) and Division Chief (for NASA-authored STI) approves in block 7. Supervisor should review prior to having Division Chief approve.
7. Center Export Control Administrator (CEA) certifies in block 8 that the information in blocks 3b, 3d and 6 is correct or corrects the information.
8. Approving official for the center (program manager) approves in block 9.
9. If center requires additional approvals, use block 10.
10. Send STI to DAA representative and technical publications office. DAA representative sends an electronic copy of STI and NF 1676 to the NASA Center for AeroSpace Information (CASI) for inclusion in the NASA Aeronautics and Space Database (http://www.sti.nasa.gov).

Validation of Signature. The following are acceptable methods to provide the official signatures of personnel who approve blocks 2 through 10. The approver may sign digitally (preferred if digital signature is available at the center); or may type his/her name directly into the electronic form; or the author/originator may print the form, have approvers sign it, and scan it to PDF for electronic retention.

Items to Know (Instructions for completing blocks 1-10 of NF 1676)

1. Check "new" or "revision" blocks.
1a. List authors' names in same order and with exact names as on document. For contractor or grantee STI that NASA elects to publish, COTR initiates NF 1676.
1b. Journal article. Decide who you wish to receive your preprint. NASA has the right to release preprints to the public, but not all authors approve this. Unless the publisher has added copyrighted information (e.g., peer review comments, or publisher-prepared summary or abstract) to the published version of a journal article (reprint), NASA has the right to release the reprint for governmental purposes, which includes release to U.S. Government personnel, contractors, and the public. If copyrighted materials are added by the publisher, NASA does not have the right to release reprints without the publisher's permission. See Chapter 4 of NPR 2200.2 and NPR 2810.1.
2. See Chapter 5 of NPR 1600.1.
3. See NPR 2200.2, Chapter 4. If you do not mark Publicly Available in 3a, you must indicate a distribution limitation in 3c. See NPR 1600.1 for Sensitive But Unclassified (SBU) information. For SBU categories that are not listed on this form, indicate a distribution limitation in 3d and attach the SBU cover sheet, NF 1686.
3a. Publicly Available means the STI is unclassified, does not contain export-controlled information (3b) or proprietary information (3c), has no distribution limitations (3d), and if it contains information disclosing an invention (4), it has been cleared by the HQ or Center Patent or Intellectual Property Counsel.
3b. See NPR 2190.1.
3c. Information marked in this section must be re-reviewed by the originating organization following the "limited until (date)" and a modified DAA must be done before release indicated in 3d can be changed. For information on copyrights, see NPR 2200.2 and contact your center attorney. SBIR is Small Business Innovation Research. STTR is Small Business Technology Transfer. See NPR 2200.2, Chapter 4.
3d. If you do not mark Publicly Available in 3a, indicate who can see and receive your document in 3d. Restriction statements must appear on cover, title page, and SF 298 (if applicable). Documents marked "Available Only with Approval of Issuing Office" will have citations (but not the full text) entered into the NASA Aeronautics and Space Database; the issuing office is responsible for handling document requests. NASA personnel & U.S. Government agencies means civil servant personnel.
4. For contractor or grantee-authored work, report invention to NASA according to contract/grant requirements. If NASA-authored work, report inventions in accordance with NPD 2091.1 via eNTRe (the electronic New Technology Reporting web site) at http://invention.nasa.gov or using NF 1679.
5. Use this option when you approve or rescind all STI produced under a specific contract, grant, project, or task number to have the same distribution. See Approvals above.
6. As the author, indicate whether or not the information contains export-controlled or proprietary/sensitive information or discloses an invention. Your CEA will verify in block 8 whether information contains export-controlled information.
7. If the distribution is not approved, indicate the reason. As a reminder, the author's supervisor should always review the document prior to having it approved by the approving official (Division Chief) in this block.
8. CEA certifies information in 3b, 3d and 6.
9. Center approving official indicates final approval to publish under the conditions cited on this form.
10. For contractor-generated STI that NASA elects to publish, the NASA responsible official or technical publications office notifies the COTR (or center-designated official) when the document is approved for publication. COTR/center official notifies the contractor.

Additional Help:

- o Classified and Sensitive But Unclassified - NPR 1600.1
- o Export-controlled information - NPD and NPR 2190.1
- o Disclosing an invention - NPD 2091.1

Following Forms are Related to Approval Process:

- o SF 298, "Report Documentation Page," required for NASA STI-Series reports
- o NF 1686, "Sensitive But Unclassified (SBU)"
- o NF 1679, "Disclosure of Invention and New Technology (Including Software)"

NASA FORM 1676 MAY 10 PREVIOUS EDITIONS ARE OBSOLETE. PAGE 4 OF 4

C.3 Office of Management and Budget (OMB) Standard Form (SF) 298, Report Documentation Page (RDP)

REPORT DOCUMENTATION PAGE	Form Approved OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.

1. REPORT DATE *(DD-MM-YYYY)*	2. REPORT TYPE	3. DATES COVERED *(From - To)*
4. TITLE AND SUBTITLE		5a. CONTRACT NUMBER
		5b. GRANT NUMBER
		5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)		5d. PROJECT NUMBER
		5e. TASK NUMBER
		5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)		8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSOR/MONITOR'S ACRONYM(S)
		11. SPONSOR/MONITOR'S REPORT NUMBER
12. DISTRIBUTION/AVAILABILITY STATEMENT		
13. SUPPLEMENTARY NOTES		
14. ABSTRACT		
15. SUBJECT TERMS		

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			19b. TELEPHONE NUMBER *(Include area code)*

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std. Z39-18

INSTRUCTIONS FOR COMPLETING SF 298

1. REPORT DATE. Full publication date, including day, month, if available. Must cite at least the year and be Year 2000 compliant, e.g. 30-06-1998; xx-06-1998; xx-xx-1998.

2. REPORT TYPE. State the type of report, such as final, technical, interim, memorandum, master's thesis, progress, quarterly, research, special, group study, etc.

3. DATES COVERED. Indicate the time during which the work was performed and the report was written, e.g., Jun 1997 - Jun 1998; 1-10 Jun 1996; May - Nov 1998; Nov 1998.

4. TITLE. Enter title and subtitle with volume number and part number, if applicable. On classified documents, enter the title classification in parentheses.

5a. CONTRACT NUMBER. Enter all contract numbers as they appear in the report, e.g. F33615-86-C-5169.

5b. GRANT NUMBER. Enter all grant numbers as they appear in the report, e.g. AFOSR-82-1 234.

5c. PROGRAM ELEMENT NUMBER. Enter all program element numbers as they appear in the report, e.g. 61101 A.

5d. PROJECT NUMBER. Enter all project numbers as they appear in the report, e.g. 1F665702D1 257; ILIR.

5e. TASK NUMBER. Enter all task numbers as they appear in the report, e.g. 05; RF0330201; T4112.

5f. WORK UNIT NUMBER. Enter all work unit numbers as they appear in the report, e.g. 001; AFAPL30480105.

6. AUTHOR(S). Enter name(s) of person(s) responsible for writing the report, performing the research, or credited with the content of the report. The form of entry is the last name, first name, middle initial, and additional qualifiers separated by commas, e.g. Smith, Richard, J, Jr.

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES). Self-explanatory.

8. PERFORMING ORGANIZATION REPORT NUMBER. Enter all unique alphanumeric report numbers assigned by the performing organization, e.g. BRL- 1234; AFWL-TR-85-4017-Vol-21 -PT-2.

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES). Enter the name and address of the organization(s) financially responsible for and monitoring the work.

10. SPONSOR/MONITOR'S ACRONYMS). Enter, if available, e.g. BRL, ARDEC, NADC.

11. SPONSOR/MONITOR'S REPORT NUMBER(S). Enter report number as assigned by the sponsoring/monitoring agency, if available, e.g. BRL-TR-829; -215.

12. DISTRIBUTION/AVAILABILITY STATEMENT. Use agency-mandated availability statements to indicate the public availability or distribution limitations of the report. If additional limitations/ restrictions or special markings are indicated, follow agency authorization procedures, e.g. RD/FRD, PROPIN, ITAR, etc. Include copyright information.

13. SUPPLEMENTARY NOTES. Enter information not included elsewhere such as: prepared in cooperation with; translation of; report supersedes; old edition number, etc.

14. ABSTRACT. A brief (approximately 200 words) factual summary of the most significant information.

15. SUBJECT TERMS. Key words or phrases identifying major concepts in the report.

16. SECURITY CLASSIFICATION. Enter security classification in accordance with security classification regulations, e.g. U, C, S, etc. If this form contains classified information, stamp classification level on the top and bottom of this page.

17. LIMITATION OF ABSTRACT. This block must be completed to assign a distribution limitation to the abstract. Enter UU (Unclassified Unlimited) or SAR (Same as Report). An entry in this block is necessary if the abstract is to be limited.

Standard Form 298 Back (Rev. 8/98)

OMB Standard Form 298, Report Documentation Page (Concluded)

C.4 NASA Supplementary Instructions To Complete Standard Form (SF) 298, Report Documentation Page (RDP) (Rev. 8-98 Version)

NASA uses this intergovernmental form that does not allow customization. Look for special notes (NOTE) if NASA's procedures differ slightly from other agencies.

Block 1:	NOTE: NASA uses month and year (February 2010) on the covers and title pages of its documents. However, this OMB form is coded for block 1 to accept data in the following format: day, month, and year (ex.: day (23), month (02), year (2010) or 23-02-2010, which means February 23, 2010). For this block, use the actual date of publication (on the cover and title page) and add 01 for the day. Example is March 2010 on the cover and title page and 01-03-10 for block 1.

Block 2:	Technical Publication, Technical Memorandum, etc.
Block 3:	Optional for NASA
Block 4:	Insert title and subtitle (if applicable)
Block 5a:	Complete if have the information
Block 5b:	Complete if have the information
Block 5c:	Optional for NASA
Block 5d:	Optional for NASA; if you have a cooperative agreement number, insert it here
Block 5e:	Optional for NASA
Block 5f:	Required. Use funding number (work unit (WU) number, unique project number (UPN), work breakdown structure (WBS) number, etc.)
Block 6:	Complete (ex.: Smith, John J. and Brown, William R.)
Block 7:	NASA Center, City, State, Zip Code ex.: National Aeronautics and Space Administration Langley Research Center Hampton, Virginia 23681-2199 You can also enter contractor's or grantee's organization name here, below your NASA Center, if they are the performing organization for your Center
Block 8:	Center tracking number (ex.: L-17689)
Block 9:	National Aeronautics and Space Administration Washington, DC 20546-0001
Block 10:	NASA (and other organization, if applicable)
Block 11:	ex.: NASA/TM--2010-123456

Block 12:	ex.: Unclassified-Unlimited Subject Category: ex.: 71 (see http://www.sti.nasa.gov/subjcat.pdf) If unclassified, unlimited, and Web compliant, "Available electronically at Center TRS uniform resource locator (URL, or Web address). This publication is available from the NASA Center for Aerospace Information, 757-864-9658" If restricted or limited, also put restriction or limitation on cover and title page.
Block 13:	(ex.: Smith and Brown, Langley Research Center. An electronic version can be found at http://_____, etc.)
Block 14:	Self-explanatory
Block 15:	Use terms from the NASA Thesaurus http://www.sti.nasa.gov/thesfrm1.htm Subject Division and Categories Fact Sheet http://www.sti.nasa.gov/subjcat.pdf or Machine-Aided Indexing tool http://www.sti.nasa.gov/nasaonly/webmai/
Block 16a,b,c:	Complete all three
Block 17:	UU (unclassified/unlimited) or SAR (same as report)
Block 18:	Self-explanatory
Block 19a:	STI Help Desk (e-mail: help@sti.nasa.gov)
Block 19b:	STI Help Desk at: 757-864-9658

NOTE: For covers and title pages, NASA uses the month and year of actual publication. Block 1 should also include the actual date of publication (not when you first fill out the RDP). Since the RDP is an i intergovernmental form that does not allow Agency customization, input your data as follows: day (always insert the first day of the month as 01), month (ex. 03 for March), and year in 4 digits (ex. 2003).

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.

1. REPORT DATE *(DD-MM-YYYY)*
31-01-2003

2. REPORT TYPE
Technical Memorandum, Contractor Report, etc.

3. DATES COVERED *(From - To)*

4. TITLE AND SUBTITLE
Insert title and subtitle (if applicable)

SAMPLE

5a. CONTRACT NUMBER
NAS1-12345 *(CR Report type --- contract)*

5b. GRANT NUMBER
NAG1-1234 *(CR Report type --- grant)*

5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S)
Smith, John J.; Brown, William R.; and Jones, Thomas R.

5d. PROJECT NUMBER
NCC1-123 *(CR Report type --- cooperative agreement)*

5e. TASK NUMBER
Task 6 *(CR Report type, if applicable)*

5f. WORK UNIT NUMBER
323-10-05-01

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
[Insert NASA center here, ex. NASA Langley Research Center]
[Insert city, state, and zip code here, ex. Hampton, VA 23681-2199]
[Insert contract or grant organizational name, as applicable]

8. PERFORMING ORGANIZATION REPORT NUMBER
Ex. L-12345 *(For TP, TM, CP, SP) or appropriate number for CR*

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)
National Aeronautics and Space Administration
Washington, DC 20546-0001

10. SPONSORING/MONITOR'S ACRONYM(S)
NASA

11. SPONSORING/MONITORING REPORT NUMBER
NASA/TM-2003-000000

12. DISTRIBUTION/AVAILABILITY STATEMENT
Unclassified -- Unlimited
Subject Category 00
Availability: NASA CASI 443-757-5802

13. SUPPLEMENTARY NOTES
Smith, Brown, and Jones, Langley Research Center *(If CR report type add: COTR or Technical Monitor: First, MI, Last Name)*
An electronic version can be found at http://techreports.larc.nasa.gov/ltrs or http://techreports.larc.nasa.gov/cgi-bin/NTRS

14. ABSTRACT
Insert a brief abstract (not to exceed 200 words)

15. SUBJECT TERMS
Insert 4 or 5 subject terms

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			STI Help Desk (email:help@sti.nasa.gov)
U	U	U	UU	25	19b. TELEPHONE NUMBER *(Include area code)* 443-757-5802

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std. Z39-18

Appendix D. Types of NASA Scientific and Technical Information (STI) Publications and Related Procedural and Standards Information

D.1 Description of the NASA Scientific and Technical Information (STI) Report Series

D.1.1 For additional information regarding the selection of a report series, see the following table. This table lists the types of documents that may be published and disseminated in the NASA Scientific and Technical Information (STI) Report Series.

Manuscript contents	Appropriate series
Article for a professional journal	None required; Technical Publication (TP) for expanded treatment and Technical Memorandum (TM) for preprint
Article for a technical magazine	None required; TP for expanded treatment and TM for preprint
Atlas of scientific imagery	TP or SP
Bibliography Continuing Extensive annotation	 SP TP
Minimal annotation	TM
Contractor or grantee results and findings	Contractor Report (CR), TP, or SP
Critical review of the literature	TP
Critical tables	TP
Data compilation Extensive use Limited use	 TP TM
Design standards	TP
Dissertation or thesis by employee, relating to work	TM
Dissertation or thesis by NASA contractor or grantee (if funded by NASA)	CR
Engineering report	TP
Handbook	TP
History	SP

Letter (e.g., for a professional journal)	None required
Limited distribution report	TP, TM, CR
Literature survey, review	TP
Management report	SP (6000 series)
Manual	TP or TM
Monograph	TP
Preliminary results report	TM
Preprint of paper for a professional meeting	TM
Proceedings of a workshop, conference, seminar, etc.	Conference Publication (CP)
Program description or summary	SP
Report to another agency	TM
Research report	TP
Review paper	TP
Security-classified report	TP, TM, CR
Sponsored research report NASA sponsor Non-NASA sponsor	 CR TM
State-of-the-art review	TP
Technical report--complete, comprehensive	TP
Textbook, scientific or technical	TP
Translation	Technical Translation (TT)
Working paper (external circulation)	TM

D.1.2 The TP series comprises 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 the NASA counterpart to peer-reviewed formal professional papers but have less stringent limitations on manuscript length and extent of graphic presentations. In addition to reports documenting research, the types of documents assigned to this series include the following:

D.1.2.1 Bibliographies of STI literature in defined subject areas with abstracts and/or extensive annotation

D.1.2.2 Technical handbooks, critical tables, and extensive data compilations

D.1.2.3 Design standards. Authors document their design standards in the NASA Technical Standards Program, in accordance with NPD 8070.6

D.1.2.4 Scientific and technical textbooks and manuals

D.1.2.5 State-of-the-art summaries, including critical reviews or surveys of a body of scientific or technical literature

D.1.2.6 Technical reports or monographs that provide complete and comprehensive treatment of significant contributions to scientific and technical knowledge or a critical evaluation of selected, previously published research

D.1.3 The TM series records scientific and technical findings that are preliminary or of specialized interest (e.g., quick-release reports, working papers, and bibliographies) that contain minimal annotation. TMs do not contain extensive analysis. The types of documents assigned to this series include:

D.1.3.1 Preliminary data (quick-release reports)

D.1.3.2 Working papers for professional peers beyond the basic work unit or for external circulation

D.1.3.3 Individual papers prepared for presentation at or preprints for professional meetings or symposia which may or may not be published in proceedings or journals

D.1.3.4 Preliminary proceedings of professional meetings or symposia sponsored or cosponsored by NASA. When the proceedings are not complete, the extent of the content (e.g., abstracts only or primarily projected visuals) is indicated in block 13, SUPPLEMENTARY NOTES, of Standard Form (SF) 298, Report Documentation Page (RDP)

D.1.3.5 Theses or dissertations that relate to Agency work, written by NASA employees only

D.1.3.6 Bibliographies that are written by NASA employees, contractors, and grantees that present listings of STI literature with minimal annotations

D.1.3.7 Computer program application documentation in an STI report or item (actual computer programs fall outside the STI Program)

D.1.3.8 Limited-use data compilations

D.1.3.9 Reports to other agencies or non-NASA-sponsored research results

D.1.4 The CR series comprises reports of scientific and technical findings by NASA-sponsored contractors, grantees, and cooperative agreement participants and dissertations or theses by NASA contractors or grantees (if funded by NASA).

D.1.4.1 CRs may contain findings of completed or significant scientific and technical work or findings of preliminary or specialized interest. All CRs are subject to the minimum review requirements listed in Section 4.2.4. See also Appendix E.

D.1.4.2 A final report or nonrequired report authored by a contractor, grantee, or cooperative agreement participant may be selected by the NASA COTR or technical management for publication as a NASA SP, TP, or as part of a CP in lieu of publication as a CR (see Appendix D.1.5.2 for CP requirements.) A given report may be published in one series only. (See Appendix D.1.5.2 for CP exception.) Such reports meet all criteria for the selected series and are reviewed and approved at the level(s) required for that series.

D.1.5 The CP series contains collected papers from scientific and technical conferences, symposia, seminars, or other meetings sponsored or cosponsored by NASA.

D.1.5.1 Conference proceedings may be preprinted as a TM and distributed to attendees at conferences even though distribution as a CP is planned.

D.1.5.2 It is sometimes practical to publish a conference proceedings in both series. For example, if a significant amount of time will elapse between presenting the abstracts and illustrations as a TM and the full proceedings as a CP, or if handouts of the abstracts are needed for the conference and the papers have not yet been collected, publication in both series would be appropriate. When abstracts have been published as a TM and the proceedings are subsequently published as a CP, an entry in block 13, SUPPLEMENTARY NOTES, of SF-298 (RDP) for the CP indicates that the CP supersedes the TM.

D.1.6 The SP series--which records scientific, technical, or historical information from NASA programs, projects, and missions--is most often concerned with subjects having substantial public interest. Examples of topics covered by this series and the ranges of numbers assigned to the various topics include the following:

D.1.6.1 General series (numbered below 3000, e.g., NASA/SP--2010-2999)

D.1.6.2 Handbooks and data compilations (numbered in 3000 series, e.g., NASA/SP--2010-3000)

D.1.6.3 The history and chronology series (numbered in 4000 series, e.g., NASA/SP--2010-4000) follows:

D.1.6.4 4000: Reference works

D.1.6.5 4100: Management histories

D.1.6.6 4200: Project histories

D.1.6.7 4300: Center histories

D.1.6.8 4400: General histories

D.1.6.9 4500: Monographs in Aerospace History

D.1.6.10 4600: Electronic media (compact disks (CDs) and digital video disks (DVDs))

D.1.6.11 4700: Historical conference proceedings

D.1.6.12 4800: Societal impact

D.1.6.13 Numbers in the 5000 range were originally assigned to technology utilization information, but this type of information is now published outside the NASA STI Report Series

D.1.6.14 The management publications series (numbered from 6000 to 6999, e.g., NASA/SP--2010-6000) documents requirements, plans, theories, or techniques for management or administration of NASA-sponsored scientific and technical work. It includes NASA projects or programs that have application to more than one Center, to other Government agencies, or to partnerships with industrial or international organizations. Although reports discussing methods of scheduling, funding, or staffing may be included, reports containing specific costs or labor figures are not appropriate. When the primary content of a report is scientific findings or technical development, another series, such as TM or TP, is to be used.

D.1.6.15 The bibliographic series (numbered from 7000 to 7999, e.g., NASA/SP--2010-7000)

includes regularly published abstracts, continuing bibliographies, indexes, publication guides, and announcement journals.

D.1.7 The TT series consists of English-language translations of non-English scientific and technical material pertinent to NASA's mission. A translation of material protected by copyright is a derivative work, the distribution of which is constrained by international copyright law. However, TTs are retained at NASA STI Support Services for U.S. Government use subsequent to the initial request for the translation. See Appendix D.6.6.4 for more information on translations.

D.2 NASA STI Report Series Procedural Information

D.2.1 Authors use the STI Report Series for all documents in this series.

D.2.2 The STI program uses a standard numbering system based on American National Standards Institute (ANSI)/National Information Standards Organization (NISO) Z39.23, "Standard Technical Report Number (STRN) Format and Creation," to ensure the assignment of unique report numbers to the NASA STI Report Series. The report numbers are composed essentially of the Agency acronym (NASA), a series acronym (e.g., TM), a publication year (e.g., 2010), and the report number. The report number appears on the front cover, title page, and SF-298 (RDP) of all NASA STI Report Series in the standard STI report number format (e.g., NASA/TM--2010-123456). Report numbers for revised reports, reports comprising more than one volume, or reports with supplements include the appropriate suffix(es) (e.g., NASA/TM--2010-123456/REV2, NASA/TM--2005-123456/VOL2, or NASA/TM--2010-123456/SUPPL2). If more than one suffix is used, it is connected to the other suffix(es) with a hyphen (e.g., NASA/TM--2010-123456/REV2-VOL2).

D.2.3 For documents that are published in English and another language, use the same NASA number but add the language in parentheses (e.g., NASA/TP--2010-123456 (in English) and NASA/TP--2010-123456 (in Russian)).

D.2.4 Report numbers are requested during the development of a NASA STI Report Series document. Report numbers are obtained by sending a request for the report number to the Center STI Manager, who requests the number from the NASA STI Support Services Help Desk via mail, fax, or e-mail (http://www.sti.nasa.gov).

D.2.4.1 The request is made by a Center Publications Office representative.

D.2.4.2 The request includes the requester's name, phone number, fax number, mail stop, e-mail address, and the type of report number requested. The report number is issued to the recipient within one working day of the request receipt.

D.3 Standards for NASA Scientific and Technical Information (STI) Report Series Publications

D.3.1 These standards apply to the NASA STI Report Series regardless of the medium chosen (e.g., electronic, audio, CD, DVD, Web site, etc.). Although the data elements detailed here are required, the formatting of the STI may be adapted as necessary to fit the media.

D.3.2 Publication of NASA STI in any media conforms to NASA's information technology standards and guidelines as specified in NPR 2810.1. See Section 1.4.4 for minimum standards for cases in which there is limited funding for producing the documents or media. Page mechanics for the NASA STI Report Series standard front and back covers and title pages are depicted in Appendix F of this document. Appendix F also illustrates the use of the standard elements (report number, title, etc.) described in Appendix D.3.5.1. The covers and title pages in Appendix F are

available on the NASA STI program home page (http://www.sti.nasa.gov, Publish STI). The use of the standard covers and title pages depicted in Appendix F is required for printed STI.

D.3.3 For electronic or alternative media, layouts may be adapted as needed; however, the standard data elements are to be included regardless of media.

D.3.4 Use of Color

D.3.4.1 The use of color in printed publications increases printing costs; therefore, color printing is used in printed versions of NASA STI Report Series publications only when it is necessary to convey scientific and technical material in a clear and unambiguous fashion rather than when it is desired to use decorative elements. The added design and production costs for the portrayal of information in color are justified and authorized by the NASA Headquarters' or Center Printing Officer. The use of color in duplicating or printing is in accordance with NPD 1490.1.

D.3.4.2 Color printing and duplicating is approved by the Agency or Center Printing Officer for legality and necessity. Contact your Center technical publications office or Graphics Coordinator to determine alternative methods to portray content (such as in charts and graphs) so that they do not require the use of color. See Appendix D.3.4.3 and D.3.5.3.

D.3.4.3 If color enhances the content of NASA STI Report Series publications in electronic format, its use is appropriate. However, authors must not use color alone to indicate scientific data in charts and graphs.

D.3.4.4 In situations in which color is used, additional symbols (such as dots, crosshatch, etc.) are used to indicate the meaning of the color.

D.3.4.5 Alternatively, the actual color name may be indicated on the key and data to accommodate Web presentation and Public Law (PL) 105-220, Title IV of the Rehabilitation Act, Subsection 508, compliance requirements. See Appendix D.3.13.4 for additional considerations of Section 508 compliance for documents to be posted on Web sites.

D.3.5 The design and content of the front and back covers and title pages of NASA STI Report Series Publications, except for SPs, are standardized in accordance with industry standards, such as American National Standards Institute (ANSI)/National Information Standards Organization (NISO) Z39.18, Scientific and Technical Reports--Preparation, Presentation and Preservation, and Agency standards, such as those detailed in NPD 1490.1. This standardization provides a recognizable NASA image, speed and economy of production and reproduction, consistency of cataloging information, and lowest recycling cost. Therefore, the front and back covers and title pages of NASA STI reports, except for SPs, contain the standard elements listed in Appendix D.3.5.1 to D.3.5.6. See Appendix F for samples.

D.3.5.1 Standard elements for front covers follow:

a. Report number(s). (If another agency's, Center's, or contractor's report or document number is added to the NASA report number, it is positioned to the right or below the NASA report number).

b. NASA insignia; other logos as appropriate (see Appendix D.3.8)

c. Title of report

d. Author name(s), affiliation(s), and location(s)

e. Optional one-color line art or black-and-white photo or image

f. Distribution notices if applicable, See Chapter 4, including limitations and restrictions such as

International Traffic in Arms Regulations (ITAR), Export Administration Regulations (EAR), Sensitive But Unclassified (SBU), Small Business Innovation Research (SBIR), proprietary information, or copyright notices are placed on the cover, title page, SF-298 (RDP), and the appropriate restriction on each inside page on which the SBU information is displayed. Note that other Federal agencies might use the term Controlled Unclassified Information (CUI).

g. Authors may choose to add conference information, such as conference name, location, dates, and sponsor.

h. Joint project or sponsorship information, if appropriate

i. Rule (graphic straight line)

j. Month and year

D.3.5.2 The standard element for the back of front covers follows:

a. NASA STI program profile

D.3.5.3 Standard elements for title pages include all cover elements (except artwork) plus the following:

a. Editor name and affiliation, if applicable (for edited CPs, TPs, or TMs when the editor has contributed scientific and technical expertise and judgment)

b. Agency name and address (corporate source)

c. Contract statement and number, if applicable

d. Joint project or sponsorship information, if appropriate

e. Conference information (name of conference, location, dates, sponsors, etc.), if applicable

f. Distribution notices, if applicable (see Chapter 4)

D.3.5.4 Standard elements for the backs of title pages follow:

a. Acknowledgment, if applicable

b. Disclaimers, if applicable

c. A statement is included announcing that the document is available from NASA STI Support Services. In some cases, the document may also be available from NTIS.

d. Documents that are marked to be available from NTIS are to be unlimited, unclassified (no restricted-access data). See the sample back of the title page in Appendix F.5.

e. International Standard Serial Number (ISSN), International Standard Book Number (ISBN), and/or Library of Congress Control Number (LCCN), if applicable (see Appendix G).

f. Level of technical or professional review

D.3.5.5 The back cover is blank except for a rule (e.g., graphic straight line) at the bottom of the cover. If documents are printed, a mailing label that includes the addressee, the return address, and appropriate postage may be affixed to the Center of the back cover. No text or images other than the rule may be placed below the last line of the address on the mailing label.

D.3.5.6 Standard elements for spines follow (see Appendix F for a sample):

a. Report number

b. Title

D.3.6 NASA recommends the use of one-color line art and black-and-white photography on the front cover of NASA STI Report Series publications only in the image area, as illustrated in Appendix F. Such line art and photographs are required to meet the graphics standards of the originating Center. Line art on a cover is required to be approved by the Center's Graphics Coordinator.

D.3.7 The figure used on the cover is from the report that it is used on to ensure that it has received export review.

D.3.8 When NASA partners with or jointly funds work with another agency, noncommercial organization, or a university, the logo or seal of the cosponsor may appear on the cover to the right or below the NASA insignia and is in accordance with the NASA guidelines for the use of logos and insignia at http://www.hq.nasa.gov/office/pao/insignia.

D.3.8.1 The NASA insignia does not appear with the logos of private companies on publications. In rare exceptions, such as certain partnership situations, the Office of Communications, Public Service Division at Headquarters, may approve a proposed use.

D.3.8.2 NASA program organizational logos are not used on covers.

D.3.9 Sometimes a nonstandard design is needed for the front cover and title page of a NASA STI Report Series publication of particular note. Such designs contain the standard elements indicated in Appendix D.3.5.6. The use of a nonstandard design and the associated additional design labor cost are justified and authorized on a case-by-case basis using Center-specific procedures. The nonstandard design is in accordance with NASA Graphics Standards (http://www.hq.nasa.gov/office/pao/insignia).

D.3.9.1 The nonstandard design needs to be approved by the Headquarters' or Center's Graphics Coordinator. For duplicated or printed publications, the requirements are set forth in NPD 1490.1 and approved by the Headquarters or Center Printing Officer for legality and necessity.

D.3.10 An SF-298 (RDP) is required for all documents published in the NASA STI Report Series unless the automated STI DAA system is used to record approvals. It provides the information necessary to index and correctly categorize the report. This information is included in the automated STI DAA system NF-1676. Directions for preparation of the SF-298 (RDP) are given on the back of the form. A sample RDP is included in Appendix C. Except for NASA SPs, the completed RDP is positioned as the last page of the report.

D.3.10.1 For documents that are to be printed, the RDP is printed so that it faces the back cover.

D.3.10.2 For SPs, the RDP is forwarded to NASA STI Support Services with, but not printed and bound in, the SP.

D.3.10.3 For SPs in electronic formats, the RDP is in a separate file. See also http://www.sti.nasa.gov/publish/SF298instr.pdf for instructions on completing the SF-298 (RDP).

D.3.10.4 Prior to dissemination, the information that is entered on SF-298 (RDP) is verified against the information that is on the approved NF-1676.

D.3.10.5 For a classified report, the title and the abstract are followed by the classification of each in parentheses. Unclassified titles and abstracts are followed by a (U). Whenever possible, the title and

abstract of a classified report are unclassified. Classified reports are handled by the NASA Centers and are not sent to NASA STI Support Services.

D.3.10.6 For information regarding how to indicate that a previously export-controlled or restricted-access document has subsequently been downgraded and has a new distribution requirement, see Section 2.6.9.

D.3.10.7 For information retrieval purposes, include the work unit (WU) number, work breakdown structure (WBS) number, or the unique project number (UPN) on the SF-298 (RDP) in block 5f, WORK UNIT NUMBER.

D.3.10.8 For a symposium presentation preprinted as a TM or published as a CP, the meeting or symposium is identified in block 13, SUPPLEMENTARY NOTES.

D.3.10.9 The abstract included on the SF-298 (RDP) is informative rather than descriptive.

D.3.10.10 The abstract states the objectives of the investigation, the methods employed (e.g., simulation, experiment, or remote sensing), the results obtained, and the conclusions reached.

D.3.10.11 The abstract is limited to a maximum of 200 words.

D.3.11 Revised Reports, Errata, and Corrected Copies.

D.3.11.1 A revised report is issued in situations in which the technical data have been substantially changed or updated. The standard report number format is the year and number of the original report followed by the revision extension as (e.g., NASA/TM--2005-123456/REV1).

D.3.11.2 The current month and year are included on the report cover and title page.

D.3.11.3 Block 13, SUPPLEMENTARY NOTES, of the SF-298 (RDP) indicates whether or not the revised report supersedes the original report.

D.3.11.4 The standards that apply to paper copy revisions also apply to electronic media. For example, a file on a Web site (such as on the public interface to the STI Database) is not replaced with a revised file without indicating the appropriate revision elements and date of revision. Indicate on the cover that an erratum, a corrected copy, or a revision has been added along with the date of this action. In addition, on page iii insert a listing of the information that is being corrected. Distribution of revised electronic media is in accordance with the original distribution.

D.3.11.5 Other requests for correction are made to the Center's STI Manager or by e-mail to NASA STI Support Services at help@sti.nasa.gov.

D.3.12 Special Factors for Document Legibility.

D.3.12.1 Handwritten elements of any kind are not used in NASA STI Report Series documents.

D.3.12.2 Publications are required to be professional in appearance (i.e., completed using word-processing or computer equipment).

D.3.12.3 Publications must be capable of electronic transmission.

D.3.12.4 It is important to produce publications that are legible in a variety of media.

D.3.12.5 For documents that may be printed, oversized image areas and foldouts to present oversized charts cannot be adequately reproduced in subsequent electronic formats.

D.3.12.6 Typefaces smaller than 10 points (or hard-to-read fonts online) on the original text affect quality and usefulness and are not to be used.

D.3.12.7 Typefaces smaller than 8 points are not used on figure captions or the SF-298 (RDP).

D.3.13 Standards for Electronic and Alternative Media (Including Multimedia).

D.3.13.1 NASA requires that an electronic copy or Uniform Resource Locator (URL, or Web address) of all NASA STI Reports Series publications be submitted to NASA STI Support Services through the Center STI Manager or delegated Center organization.

D.3.13.2 Publications using multimedia components are acceptable; however, contact the Center Technical Publications Office and/or NASA STI Support Services to find out if the specific multimedia format can be reproduced and archived by NASA STI Support Services. If NASA STI Support Services cannot reproduce or archive the multimedia format, authors may be required to send additional copies.

D.3.13.3 In considering electronic and alternative media forms of disseminating of STI, authors are required to meet the content requirements of Appendix D.1, the data elements of Section 2.6, and the required reviews in Chapter 4, as well as the requirements of submittal to NASA STI Support Services. Although content and data elements are required, actual formatting and presentation of the STI may be adapted, as necessary, to fit the specific media.

D.3.13.4 Information that is presented on the Web also is required to comply with Section 508 requirements (PL 105-220, Subsection 508(a), as amended). Authors are advised that documents that extensively use a two-column format, that contain complex tables with table headers that span the column tables, or that use color (without supporting graphic symbols or indications in the text of what the color indicates) are difficult for visually impaired or other disabled persons to view or access with current assistive technology. In these situations, use of either a Hyper Text Markup Language (HTML) or Extensible Markup Language (XML) version in addition to the Portable Document Format (PDF) file may be useful.

D.4 Submittal of Publications to the NASA Scientific and Technical Information (STI) Support Services

D.4.1 NASA requires that an electronic copy of STI be sent to NASA STI Support Services. Secure File Transfer Protocol (SFTP) to STI Support Services is the preferred method of transfer. As an alternative, NASA STI Support Services can be notified of the location of the STI if it resides on a Web site or in an existing document repository to which NASA STI Support Services may gain access. Submission of STI includes the transfer of both the electronic document and a copy of the approved NF-1676 (DAA) through the Center's STI Manager or Technical Publications Office to NASA STI Support Services. Electronic files and alternative media (CD-ROM or DVD) submitted to NASA STI Support Services are required to conform to the medium-specific standards described in Sections 2.5.2 to 2.5.6. Also see Section 4.4.2.4 and Appendix C.2. For information regarding submitting electronic copies of export-controlled or limited access information, see Appendix D.4.3.

D.4.2 Contact your Center's STI Manager to electronically submit reports to NASA STI Support Services. STI Support Services Help Desk will provide the Center STI Manager with procedures. NASA Centers transfer unlimited and unclassified electronic files to STI Support Services after the DAA review is completed via the NF-1676. Restricted STI is encrypted (by the Agency standard encryption). Transfer of files to NASA STI Support Services may occur via the following:

D.4.2.1 SFTP

D.4.2.2 Your Center's Technical Reports Server (TRS), if applicable

D.4.2.3 Electronic media

D.4.2.4 CDs formatted to International Standards Organization (ISO) 9660 standards (for more information, see http://www.y-adagio.com/public/standards/iso_cdromr/tocont.htm)

D.4.2.5 DVDs

D.4.2.6 E-mail attachment (up to 20 megabytes)

D.4.2.7 XML

D.4.3 Documents that are export-controlled, restricted, or limited are encrypted prior to sending to NASA STI Support Services. NASA STI Support Services does not accept classified STI, which is handled by the cognizant Center's security office.

D.4.4 NASA STI Support Services will accept the following electronic file formats, which are listed in order of preference:

D.4.4.1 Searchable PDF

D.4.4.2 Postscript (PS), levels 1 and 2

D.4.4.3 American Standard Code for Information Interchange (ASCII), Microsoft (MS) Word, MS PowerPoint, and Corel WordPerfect

D.4.4.4 HTML--self-contained files only (files with links to external sources cannot be processed)

D.4.5 Submission requirements for electronic formats follow:

D.4.5.1 Store a single document in one file.

D.4.5.2 Store conference proceedings or other compilations of chapters, works, or papers in multiple files: one containing the complete document cover to cover and one file for each of the individual papers.

D.4.5.3 Include the completed SF-298 (RDP) as the last page of the document file. (For SPs, include the RDP as a separate file.) Note that if the RDP is not the last page of the document file but is stored in a separate file, it will not become part of the document when printed or part of the full-text files available through the STI Database.

D.4.5.4 Send a copy of the NF-1676 (DAA) as a separate file. Do not include it in the document. The DAA provides NASA STI Support Services evidence of the DAA approval process and enables NASA STI Support Services to appropriately add the document to the STI Database and subsequently disseminate it.

a.In order for NASA STI Support Services to further distribute your document, provide the file in "publication format." This means that the file includes all pages required to output as a print product (i.e., covers, front matter, SF-298 (RDP), and blank pages). This will ensure proper page positioning throughout the document if it is printed.

(1) b.Special formatting features such as thumbnails and bookmarks are not required, but PDFs containing them will be accepted by STI Support Services.

(2) c.Do not apply a restriction or permission password to the PDF. These can cause problems for STI Support Services and end users.

D.4.6 Notify NASA STI Support Services via e-mail whenever files are transferred or loaded to your Center's Technical Reports Server. Identify the file names of the reports and the full path or URL.

NASA STI Support Services requires the full path in order to locate the correct file. Address the e-mail to eft_ftp@sti.nasa.gov.

D.4.7 NASA STI Support Services has established aliases for this e-mail address to ensure that it alerts appropriate staff that files are waiting to be processed.

D.4.8 NASA STI Support Services requires two copies of alternative media (CD-ROM or DVD) containing the electronic files:

D.4.8.1 NASA STI Support Services will accept CDs formatted to ISO 9660 standards (http://www.y-adagio.com/public/standards/iso_cdromr/tocont.htm) , and DVDs.

D.4.8.2 Two copies of the CD-ROM or DVD are submitted and accompanied by a copy of the NF 1676 (DAA) in electronic format (a separate file from the alternative media).

D.4.9 NASA STI Support Services can accept the following compression format: Zip.

D.4.10 File-Naming Conventions

D.4.10.1 Name the file to clearly identify the contents using the report number or other identifying text, followed by the standard three- or four-character extension that represents the application:

D.4.10.2 NASATM-2005-123456.pdf

D.4.10.3 Rocketsandpeople.docx

D.4.10.4 A NASA CP submitted as one PDF file and each paper submitted as a separate file

D.4.10.5 NASACP-209555.pdf (the cover-to-cover CP)

D.4.10.6 NASACP-209555.pdf-01 (the first paper in the CP, where -02 would be the second paper in the CP, etc.)

D.4.10.7 Symbols are not used in file names with the exception of underscores and hyphens.

D.4.10.8 An underscore is used for the DAA file (e.g., Filename_DAA.pdf)

D.4.10.9 Do not use virgules (either forward (/) or backward(\)) since they have different meanings in the Windows and UNIX systems.

D.4.11 The following procedures for restricted-access information (information whose publication or distribution is restricted by law, regulation, or policy as defined in Section 4.2.4) are in addition to procedures cited for unclassified/unlimited STI and procedures cited in Chapter 4.

D.4.12 For information regarding the handling of documents that were previously export-controlled or restricted-access but have subsequently been downgraded, see Section 2.6.9.

D.5 Availability of Electronic and Alternative Media Publications From the NASA Scientific and Technical Information (STI) Support Services

D.5.1 NASA STI Support Services normally makes STI available as a searchable PDF. For information on other formats, contact the STI Program Office.

D.6 Standards for Protection of Intellectual Property

D.6.1 Authorship

D.6.1.1 With the exception of NASA histories, the authorship of NASA publications is reserved for persons who participate in the performance of the work from which the STI results and who can

effectively defend the main technical content of the publication to a peer group. Because of the complexity of scientific and technical work, many publications have multiple authors. The authors' names appear in a sequence that indicates their respective responsibility for the reported results; that is, the first author is the chief contributor and writer, and other authors follow in the order of their responsibility for the work.

D.6.1.2 NASA employees are not listed as coauthors of CRs.

D.6.1.3 When NASA employees contribute to rather than monitor contract or grant work, such work is published in another series such as TM, TP, or SP.

D.6.1.4 Recognition of editorship is justified when the editor has contributed scientific and technical expertise and judgment.

D.6.1.5 It is appropriate to acknowledge significant contributions directly related to the substantive content or preparation of a NASA STI Report Series publication by individuals other than the authors.

D.6.1.6 When an acknowledgment of contribution is warranted, it is included in a paragraph on the back of the title page.

D.6.2 References

D.6.2.1 Reference to work by others is acknowledged in all NASA STI Report Series. Proper citation of references is the author's responsibility. The style and format of the reference list may follow accepted practice in the discipline of the report. When there is no preferred style, the name/date style of citation in text (e.g., Anders, 1971, 1972; Smith, 1974) with a corresponding reference list, alphabetized by name, is preferred.

D.6.2.2 Reference to unpublished work or information acquired through personal communication is clearly identified as such, and is not to be represented as published information, even if publication is pending.

D.6.2.3 Internal reports that have not been approved for publication outside the originating Center are considered to be unpublished. This identification is included in a parenthetical note in the text and in the reference list with an appropriate notation such as unpublished, to be published, personal communication, or internal report.

D.6.2.4 Under no circumstances should an author represent another's work as his or her own.

D.6.3 Inclusion of Copyrighted Material

D.6.3.1 Credit must be given for material taken from non-NASA publications and included in a NASA STI Report Series publication.

a. In the case of copyrighted source material, authors secure permission from the copyright holder to use, reproduce, and distribute the copyrighted material as part of a NASA STI Report Series publication. In addition, authors are responsible for ensuring that an appropriate copyright notice or acknowledgment (as directed by the copyright holder) is included within the text of the NASA STI Report Series publication.

b. The author or initiator of the DAA review enters the copyright status on the NF-1676.

c. The author provides information regarding NASA's permission to use copyrighted material (on NF-1676, check Copyrighted in Section 3c, include a distribution limitation (if appropriate) in Section 3d, and attach a copy of the permission obtained).

d. Copyright status is entered on SF-298 (RDP, block 12a).

D.6.3.2 Any questions regarding obtaining such permissions or for acknowledging a copyright is referred to the NASA Headquarters' or the Center's Patent or Intellectual Property Counsel (see Section 4.5.16 and Appendix D.6.5).

D.6.3.3 When NASA is granted permission by the copyright holder to use copyrighted material in connection with a NASA-sponsored meeting or conference, the following copyright notice is used:

a. Copyright (c) (year of first publication) (name of copyright owner). NASA has been granted permission to publish and disseminate this work as part of (name of CP). All other rights retained by the copyright owner.

D.6.3.4 For notices of copyrighted information applicable to other situations or other rights granted (e.g., assignment or license for Government purposes only), contact the Center Patent or Intellectual Property Counsel.

D.6.4 The use of trademarks and trade names is discouraged because NASA considers it improper to advertise, endorse, or criticize commercial products or services in its publications. Use generic names whenever possible. Trademarks may be included if their use is the only way to specify material or equipment that is necessary to reproduce the results. However, in such cases, a trademark is used as a proper adjective (i.e., capitalized and modifying the generic term) and on its first appearance in the text is accompanied by the name of its registered owner. When trade names and trademarks are used in a publication, a disclaimer such as the following is added to the publication on the back of the title page:

D.6.4.1 Trade names and trademarks are used in this report for identification only. Their usage does not constitute an official endorsement, either expressed or implied, by the National Aeronautics and Space Administration.

D.6.5 Copyright Status

D.6.5.1 No U.S. copyright protection is available for a work of the U.S. Government: that is, a work produced by an employee of the U.S. Government as part of his or her official duties (see 17 U.S.C., Section 105). For works produced by a NASA employee that are published outside the United States, NASA--as the employer--is the owner of any foreign copyright that can be asserted on the work. A publisher of a professional journal can republish a U.S. Government work, but the publisher cannot legally assert copyright in U.S. Government work as published unless the publisher has added original, copyright-protected material. In such a case, the publisher's copyright protection extends only to the original material that has been added by the publisher. If a publisher publishes a U.S. Government work and does not add original, copyright-protected content, NASA may reproduce and disseminate an exact copy of the published work either in paper copies or on a NASA public Web site. If the publisher adds original materials such as a publisher-prepared abstract or peer review comments, the NASA author and/or Center gets permission to reuse or republish the article that was published in the journal. However, NASA may use the U.S. Government work as originally submitted to the publisher for any purpose.

D.6.5.2 Unlike works of the U.S. Government, works produced under a Government contract or grant are protected under U.S. Copyright Law. The author or initiator of the DAA review enters a contractor or grantee's ownership of copyright on the NF-1676 (on NF-1676, check Copyrighted in Section 3c and include a distribution limitation, if appropriate, in Section 3d). The appropriate Notice for Copyrighted Information is placed on the cover, title page, and RDP with any additional information shown on the back of the title page (see Chapter 4 and Appendix I, Exhibit I.6).

D.6.5.3 Unless provided otherwise in the contract (grantee), a contractor (grantee) may assert, without prior approval of the CO (GO), copyright in scientific and technical articles based on or containing data first produced in the performance of the contract and published in academic, technical, or professional journals; symposia proceedings; or similar works. The contractor (grantee) does not assert copyright in any other data produced under a Government contract (e.g., final reports or other deliverables) unless permission is granted in writing by the CO (GO) or by the terms of the contract (grant). When copyright is asserted, the contractor (grantee) includes a copyright notice and acknowledgment of Government sponsorship (including contract number) on any published reports; and the Government, and others acting on its behalf, receive a license to reproduce, publish, or otherwise use the copyrighted work for governmental purposes. If copyright has not been asserted, the Government has unlimited rights in data first produced under the contract. Consult the NASA Headquarters' or the Center's Patent or Intellectual Property Counsel with questions regarding permissible use of works copyrighted by NASA contractors and grantees.

D.6.5.4 Whether or not a contractor has asserted copyright, the contractor may publish data produced or specifically used by the contractor in the performance of the Government contract in compliance with the data rights clause in the contract. Under the standard data rights clause (see FAR 52.227-14), contractors may use, release to others, reproduce, distribute, or publish such unless the information is subject to export-control or national security laws or regulations or includes restrictive markings as described in Section 4.2.5.6. Contact the Center's Patent or Intellectual Property Counsel for additional information.

D.6.5.5 Terms in grants are flexible but generally allow the grantee to assert copyright. All Federal agencies adhere to Office of Management and Budget (OMB) Circular A-110, Uniform Administrative Requirements for Grants and Agreements With Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations, for works created under grants with colleges, universities, hospitals, and nonprofit organizations and to OMB Circular A-102, Grants and Cooperative Agreements With State and Local Governments, when the grantee is a state or local agency such as a state university. Circular A-110 provides that a grantee may assert copyright in any work that was developed under the grant. The Government obtains a license to reproduce, publish, or otherwise use the work for federal purposes and to authorize others to do so. For cooperative agreements with commercial firms, see NPR 5800.1, Sections 1274.208 and 1274.905. The terms of the particular cooperative agreement specify respective rights of the parties. Contact the Center's Patent or Intellectual Property Counsel or the NASA Shared Services Center to determine copyright terms in the cooperative agreement.

D.6.5.6 When an article produced under a NASA-funded contract or grant is published in a professional journal, the non-Government author often assigns copyright to the publisher. Under the contract or grant, NASA has a license to use and distribute such articles as submitted to the publisher; however, permission from the publisher is obtained to reuse or republish the article as published in the journal. In addition, other non-Government works in a journal may be copyrighted by their authors or assigned to the publisher, and the publisher may copyright the layout of the entire journal, i.e., the selection, coordination, or arrangement of articles in the journal.

a. NASA does not reuse or republish entire publications such as conference proceedings or technical journals unless permission is obtained from all copyright owners involved.

D.6.6 Publishers' Agreements

D.6.6.1 If a NASA-authored work is to be published by a commercial publisher, authors consult the NASA Headquarters' or the Center's Patent or Intellectual Property Counsel concerning any agreements with publishers.

a. Questions regarding whether a work was prepared as part of an employee's official duties are referred to the NASA Headquarters' or the Center's Patent or Intellectual Property Counsel.

D.6.6.2 Generally, commercial publishers seek an assignment of copyright in works that they publish. If requested to sign a publisher's agreement, NASA employees inform the publisher of their employment status and do not sign any document purporting to transfer a U.S. copyright as a prerequisite to publication.

a. For papers authored only by Government employees, NASA authors inform publishers that the paper is a U.S. Government work and is not protected in the United States under the U.S. Copyright laws and, therefore, there is no U.S. Copyright to be transferred. In addition, a U.S. Government work may be protected under foreign copyright laws. If NASA approves transfer of a foreign copyright, an agreement to transfer the foreign copyright is executed by the NASA General Counsel and reserves a Government license in the work.

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c. NASA authors may sign such signature blocks. If this signature block is missing, the following statement is included either on the agreement or in a cover letter:

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D.6.6.3 If the work is a joint effort with a person whose contribution was not made as part of official duties as a U.S. Government employee, the statement informs the publisher that the employee prepared the work as part of official duties as a U.S. Government employee in coauthorship with another person; identify the coauthor(s); and request the publisher to note that the U.S. Government contributed to the published work.

D.6.6.4 For works protected by copyright (i.e., not in the public domain) permission of the copyright holder is required before a work may be translated from one language to another. Such a translation is considered to be a derivative work under copyright law. Permission to translate a work and to make and distribute copies of the translation is obtained from the copyright holder. Any questions regarding obtaining such permission are referred to the NASA Headquarters' or the Center's Patent or Intellectual Property Counsel.

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D.7.2.3 Is a preprint of a paper to be presented at a professional meeting

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D.7.2.5 Gives acknowledgments

D.7.2.6 Gives availability of the document (from NASA STI Support Services or NTIS)

D.7.2.7 Indicates the ISSN

D.7.2.8 Indicates the level of technical or professional review (see Section 2.11)

D.7.3 For preprints, include the following disclaimer, or a similar disclaimer, if applicable, on the cover and back of the title page:

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Appendix E. Documentation, Approval, and Dissemination Procedures

E.1 General Procedures

E.1.1 When planning a publication, it is recommended that authors contact the NASA Center Technical Publications Office or Scientific and Technical Information (STI) Manager to discuss the publication's outline and format, production, authorization, review and approval, printing or reproduction (if applicable), distribution, and deadline requirements.

E.1.2 The NASA Center Technical Publications Office or STI Manager assesses, with the author and his or her technical management, the following:

E.1.2.1 Series in which the STI Report Series is published, based on the content and intended audience and the applicable subject categories (see Appendix D and Appendix K):

E.1.2.2 Review and approval requirements

E.1.2.3 Level of edit and production effort

E.1.2.4 Artwork and functional color requirements

E.1.2.5 Estimated length and number of copies (if applicable)

E.1.2.6 Electronic file requirements

E.1.3 The NASA Center Technical Publications Office or STI Manager coordinates with the Center Printing Officer to estimate the required production and printing costs (if applicable) and provides the resulting cost information to the author.

E.1.4 The Center Technical Publications Office or STI Manager helps to determine the existing policy for funding of the publication, if applicable.

E.1.5 The NASA Center Technical Publications Office or STI Manager obtains a report number in the appropriate series from NASA STI Support Services, if applicable (see Appendix D.2.4).

E.1.6 The author, COTR, or GTO ensures that the required reviews are completed and that approvals are obtained (see Chapter 4.)

E.1.7 The author delivers the manuscript to the NASA Center Publications Office in draft, final, or camera-ready form (if the report is to be printed or reproduced in hard copy) accompanied by the following:

E.1.7.1 A completed Standard Form (SF) 298, Report Documentation Page (RDP), which is included as the last page of the report for all NASA STI reports other than Special Publications (SPs) (see Appendix C). For SPs, a completed RDP is included but submitted as a separate file.

E.1.7.2 A NASA Form (NF) 1676, NASA Scientific and Technical Information (STI) Document Availability Authorization (DAA). Production of the report may continue prior to the submittal and approval of the DAA. The report is not released without an approved DAA (see Chapter 4.)

E.1.7.3 Additional approvals include any other approvals and/or authorizations required by the NASA Headquarters office or Center authorizations including, but not limited to, publishing and release authorizations, funding authorization, professional and technical review approvals, security

officer approvals, and printing and duplicating authorizations.

E.1.8 The NASA Center Technical Publications Office or STI Manager ensures that the manuscript is reviewed for conformance to the standards in Section 2.6 and NASA Headquarters or Center standards and recommends and/or incorporates final changes to produce the final copy.

E.1.9 The author and the Center Technical Publications Office or STI Manager review and approve the final copy.

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E.1.11 A minimal DAA may be submitted in an e-mail and contains the following information:

E.1.11.1 Title of document

E.1.11.2 Report number of document (if applicable)

E.1.11.3 Publication date of document (if available)

E.1.11.4 Person and Center sending the e-mail

E.1.11.5 Confirmation that the document has been reviewed for export control and intellectual property restrictions

E.1.11.6 Confirmation that the document has been reviewed by a technical reviewer or program/project manager or branch head

E.1.11.7 Date reviewed

E.1.11.8 Required dissemination instructions

E.1.12 NASA has four types of dissemination/distributions of its STI:

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E.1.12.2 Center

E.1.12.3 Author

E.1.12.4 Secondary (i.e., requests on demand)

E.1.13 Initial or primary dissemination or distribution is made at the time the report is first produced.

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E.1.17.3 Documents provided to NASA STI Support Services are processed into the STI database and announced in a variety of published bibliographies and other external resources.

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E-mail: help@sti.nasa.gov

Postal Mail: NASA STI Information Desk
Mail Stop 148
NASA Langley Research Center
Hampton, VA 23681-2199, USA

Appendix F. Front and Back Covers, Title Pages, and Spines

F.1 Scientific and Technical Information (STI) Report Series Covers and Title Pages

F.1.1 The following samples illustrate the standard elements (e.g., report number and title) described in Appendix D.3.5 of this NPR. Templates are available on the NASA STI program home page (http://www.sti.nasa.gov/, Publish STI, Draft STI, NASA STI Report templates) which indicate font types, sizes, and spacing. Use these templates for electronic and hard-copy NASA STI Report Series documents. If you use other media, you need to include the standard elements but you may adapt the format.

F.1.2 The following samples are presented:

F.1.2.1 Front cover
F.1.2.2 Back of front cover
F.1.2.3 Title page
F.1.2.4 Back of title page
F.1.2.5 Back cover
F.1.2.6 Front cover with sponsorship
F.1.2.7 Title page with sponsorship
F.1.2.8 Front covers with black-and-white halftone photograph and line art
F.1.2.9 Front cover with limited distribution notice
F.1.2.10 Spine

F.2 Front Cover

NASA/TM—Year-000000

First Line Title
Second Line Title
Third Line Title

Author(s) name(s)
Name of Center, City, State

Month Year

F.3 Back of Front Cover

NASA STI Program . . . in Profile

Since its founding, NASA has been dedicated to the advancement of aeronautics and space science. The NASA Scientific and Technical Information (STI) program plays a key part in helping NASA maintain this important role.

The NASA STI Program operates under the auspices of the Agency Chief Information Officer. It collects, organizes, provides for archiving, and disseminates NASA's STI. The NASA STI program provides access to the NASA Aeronautics and Space Database and its public interface, the NASA Technical Reports Server, thus providing one of the largest collections of aeronautical and space science STI in the world. Results are published in both non-NASA channels and by NASA in the NASA STI Report Series, which includes the following report types:

- TECHNICAL PUBLICATION. Reports of completed research or a major significant phase of research that present the results of NASA programs and include extensive data or theoretical analysis. Includes compilations of significant scientific and technical data and information deemed to be of continuing reference value. NASA counterpart of peer-reviewed formal professional papers but has less stringent limitations on manuscript length and extent of graphic presentations.
- TECHNICAL MEMORANDUM. Scientific and technical findings that are preliminary or of specialized interest, e.g., quick release reports, working papers, and bibliographies that contain minimal annotation. Does not contain extensive analysis.
- CONTRACTOR REPORT. Scientific and technical findings by NASA-sponsored contractors and grantees.
- CONFERENCE PUBLICATION. Collected papers from scientific and technical conferences, symposia, seminars, or other meetings sponsored or cosponsored by NASA.
- SPECIAL PUBLICATION. Scientific, technical, or historical information from NASA programs, projects, and missions, often concerned with subjects having substantial public interest.
- TECHNICAL TRANSLATION. English-language translations of foreign scientific and technical material pertinent to NASA's mission.

Specialized services also include creating custom thesauri, building customized databases, organizing and publishing research results.

For more information about the NASA STI program, see the following:

- Access the NASA STI program home page at *http://www.sti.nasa.gov*
- E-mail your question via the Internet to *help@sti.nasa.gov*
- Fax your question to the NASA STI Help Desk at 443–757–5803
- Telephone the NASA STI Help Desk at 443–757–5802
- Write to:
  NASA Center for AeroSpace Information (CASI)
  7115 Standard Drive
  Hanover, MD 21076–1320

F.4 Title Page

NASA/TM—Year-000000

First Line Title
Second Line Title
Third Line Title

Author(s) name(s)
Name of Center, City, State

National Aeronautics and
Space Administration

Name of Center
City, State Zip

Month Year

F.5 Back of Title Page

Acknowledgments

Insert acknowledgments here. Insert acknowledgments here. Insert acknowledgments here. Insert acknowledgments here. Insert acknowledgments here.

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This report is a formal draft or working paper, intended to solicit comments and ideas from a technical peer group.

This report contains preliminary findings, subject to revision as analysis proceeds.

This report is a preprint of a paper intended for presentation at a conference. Because changes may be made before formal publication, this preprint is made available with the understanding that it will not be cited or reproduced without the permission of the author.

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National Technical Information Service
5301 Shawnee Road
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Available in electronic form at http://

F.6 Back Cover

F.7 Front Cover With Sponsorship

NASA/TM—Year-000000

AIAA–Year–0000

First Line Title
Second Line Title
Third Line Title

Author(s) name(s)
Name of Center, City, State

Month Year

F.8 Title Page With Sponsorship

NASA/TM—Year-000000

AIAA–Year–0000

First Line Title
Second Line Title
Third Line Title

Author(s) name(s)
Name of Center, City, State

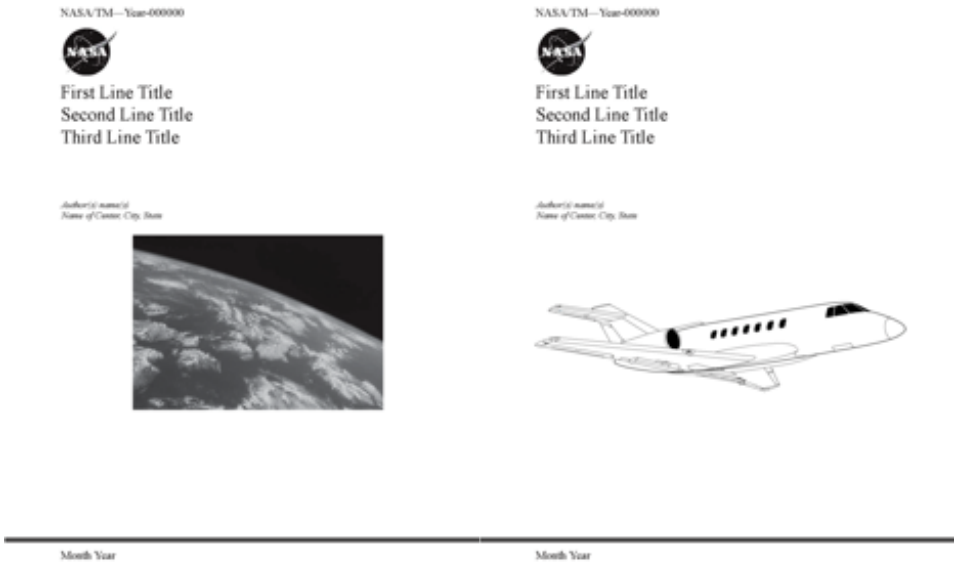
Prepared for the
Meeting name
sponsored by the
City, State, Month 0–0, Year

National Aeronautics and
Space Administration

Name of Center
City, State Zip

Month Year

F.9 Front Covers With Black-and-White Halftone Photograph and Line Art



F.10 Front Cover With Limited Distribution Notice

Sensitive But Unclassified (SBU)/ITAR*

NASA/TM—Year-000000

First Line Title
Second Line Title
Third Line Title

Author(s) name(s)
Name of Center, City, State

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Available Only With Approval of Issuing Office, [insert Program Office or NASA Center here]
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***If the ITAR is determined to be SBU**

Month Year

Sensitive But Unclassified (SBU)/ITAR*

F.11 Spine

Sample Spine for Conference Publication

NASA/CP—Year-000000

First Line Title
Second Line Title

Appendix G. Reference List for Book Numbers

G.1 NASA STI Report Series Numbering (Required)

G.1.1 Authorized NASA Headquarters or Center personnel may obtain NASA STI Report Series numbers by:

G.1.1.1 Telephone the NASA STI Help Desk at 757-864-9658

G.1.1.2 Fax the NASA STI Help Desk at 757-864-6500

G.1.1.3 E-mail the NASA STI Help Desk help@sti.nasa.gov

G.1.1.4 Write the NASA STI Help Desk, NASA STI Support Services, Mail Stop 184 Langley Research Center, Hampton, VA, 23681-2199

G.2 Optional Items

G.2.1 The International Standard Serial Number (ISSN) is:

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G.2.1.2 Available from the Library of Congress, National Serials Data Program, Washington, DC 20540

G.2.2 The International Standard Book Number (ISBN) is:

G.2.2.1 Used by libraries and bookstores as an aid in book publishing

G.2.2.2 Available from the U.S. ISBN Agency, 630 Central Ave., New Providence, NJ 07974; http://www.http://www.isbn.org/standards/home/isbn/us/isbnus.asp

G.2.2.3 NASA maintains a block of ISBNs; for additional information on how to assign an ISBN for an STI document, contact the STI Program Office or the STI Help Desk at help@sti.nasa.gov

G.2.3 The Library of Congress Card Control Number (LCCN) is:

G.2.3.1 Used for monographic publications selected and cataloged by the Library of Congress

G.2.3.2 Available from the Library of Congress, Cataloging in Publication Division, Washington, DC 20540; http://www.copyright.gov/faq.html#q51 or http://cip.loc.gov/cip/cipfaq.html#control

Appendix H. Sample Errata for Cover Page, Back of Title Page, and RDP Page

Cover page
Add the following statement:

An errata was added to this document, Month Year

Back of the Title page (or insert as page iii)

Errata
Issued Month Year for

NASA/TM—Year-000000
Document Title
Author Name

Month Year

(List a summary of the changes)

RDP page (SF-298)
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An errata was added to this document, Month Year.

NPR 2200.2C, Section 2.8.20

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NASA Personnel Only

Available Only With Approval of Issuing Office, [insert Program Office or NASA Center here], Name of Center, City, State Zip

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Exhibit I.1a-Distribution limitation statements

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Exhibit I.1b--International Traffic in Arms Regulations (ITAR) notice

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Exhibit I.2--Export Administration Regulations (EAR) notice

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Exhibit I.3--Notice for NASA Web guidelines

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Exhibit I.8--SBU notice.

Appendix J. Reference List for International System of Units (SI)

J.1 IEEE/ASTM-S1 10 "Standard for Use of the International System of Units (SI)--The Modern Metric System."

J.2 Reference List for SI Measurements: Artusa, Elisa A.: SI (Metric) Handbook. NASA TM-109197, 1994. Provides information for an understanding of SI units, symbols, and prefixes, and of style and usage in documentation in both the U.S. and in the international business community; conversion techniques; limits, fits, and tolerance data; and drawing and technical writing guidelines. Also provides information on SI usage for specialized applications like data processing and computer programming, science, engineering, and construction. Related information in the appendixes includes legislative documents, historical and biographical data, a list of SI documentation, rules for determining significant digits and rounding, conversion factors, shorthand notation, and a unit index.

J.3 U.S. Metric Association (USMA): Conversion Factors. Northridge, CA: Order from USMA Web site: http://lamar.colostate.edu/~hillger/. A comprehensive one-page table that provides conversion factors from both inch-pound units to SI and from SI to inch-pound units. Shows the conversion factors for length, area, volume, torque, mass, energy/work, power, pressure/stress, force, speed, and temperature.

J.4 Institute of Electrical and Electronics Engineers: American National Standard Illustrations for Publication and Projection. ANSI Y15.1M, ANSI, New York, 1979 (1986).

J.5 American National Metric Council: Metric Editorial Guide, Fifth Edition, Bethesda, MD, 1993. Explains and illustrates proper use of International System of Units (SI), terms, and symbols. Provides standard spelling, punctuation, and usage for SI terms, abbreviations, and symbols.

J.6 Pedde, Lawrence D., et al.: Metric Manual. U.S. Bureau of Reclamation, GPO S/N024-0003-00129-5. Washington, DC, 1978. Presents the basics of International System of Units (SI), conversion techniques, and examples of engineering problems associated with SI conversion.

J.7 USMA's Guide to the Use of the Metric System (SI Version). 15th ed., 2000.

J.8 STI Metric Style Manual for Written and Computer Usage, http://lamar.colostate.edu/~hillger/supplies.htm.

Appendix K. Database Subject Divisions and Categories

K.1 Divisions and Categories

K.1.1 The subject divisions and categories used to catalog NASA STI reports before they are processed and entered in the STI Database internal interface are referenced in Appendix K.2.

K.1.2 For additional information concerning these subject divisions and categories, refer to http://www.sti.nasa.gov/subjcat.pdf.

K.2 STI Database Subject Divisions and Categories

AERONAUTICS
01 Aeronautics (General)
02 Aerodynamics
03 Air Transportation and Safety
04 Aircraft Communications and Navigation
05 Aircraft Design, Testing and Performance
06 Avionics and Aircraft Instrumentation
07 Aircraft Propulsion and Power
08 Aircraft Stability and Control
09 Research and Support Facilities (Air)

ASTRONAUTICS
12 Astronautics (General)
13 Astrodynamics
14 Ground Support Systems and Facilities (Space)
15 Launch Vehicles and Launch Operations
16 Space Transportation and Safety
17 Space Communications, Spacecraft Communications, Command and Tracking
18 Spacecraft Design, Testing and Performance
19 Spacecraft Instrumentation and Astrionics
20 Spacecraft Propulsion and Power

CHEMISTRY AND MATERIALS
23 Chemistry and Materials (General)
24 Composite Materials
25 Inorganic and Physical Chemistry
26 Metals and Metallic Materials
27 Nonmetallic Materials
28 Propellants and Fuels
29 Space Processing

ENGINEERING
31 Engineering (General)
32 Communications and Radar
33 Electronics and Electrical Engineering
34 Fluid Mechanics and Thermodynamics
35 Instrumentation and Photography

36 Lasers and Masers
37 Mechanical Engineering
38 Quality Assurance and Reliability
39 Structural Mechanics

GEOSCIENCES
42 Geosciences (General)
43 Earth Resources and Remote Sensing
44 Energy Production and Conversion
45 Environment Pollution
46 Geophysics
47 Meteorology and Climatology
48 Oceanography

LIFE SCIENCES
51 Life Sciences (General)
52 Aerospace Medicine
53 Behavioral Sciences
54 Man/System Technology and Life Support
55 Exobiology

MATHEMATICAL AND COMPUTER SCIENCES
59 Mathematical and Computer Sciences (General)
60 Computer Operations and Hardware
61 Computer Programming and Software
62 Computer Systems
63 Cybernetics, Artificial Intelligence and Robotics
64 Numerical Analysis
65 Statistics and Probability
66 Systems Analysis and Operations Research
67 Theoretical Mathematics

PHYSICS
70 Physics (General)
71 Acoustics
72 Atomic and Molecular Physics
73 Nuclear Physics
74 Optics
75 Plasma Physics
76 Solid-State Physics
77 Physics of Elementary Particles and Fields

SOCIAL SCIENCES
80 Social and Information Sciences (General)
81 Administration and Management
82 Documentation and Information Science
83 Economics and Cost Analysis
84 Law, Political Science and Space Policy
85 Technology Utilization and Surface Transportation

SPACE SCIENCES
88 Space Sciences (General)
89 Astronomy

90 Astrophysics
91 Lunar and Planetary Science and Exploration
92 Solar Physics
93 Space Radiation

GENERAL
99 General