



NATIONAL AERONAUTICS

AND

SPACE ADMINISTRATION

GUIDEBOOK FOR PROPOSERS
RESPONDING TO A
NASA FUNDING ANNOUNCEMENT

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1. PREFACE

This Guidebook describes the policies and process for submitting responses to a Broad Agency Announcement known as a National Aeronautics and Space Administration (NASA) Research Announcement (NRA) or a Cooperative Agreement Notice (CAN). The NRA is used by the program offices to request proposals for basic and applied science and technology research and for science, technology, engineering, and mathematics (STEM) education. For the purposes of this Guidebook, the NRAs and CANs are all referred to as Funding Announcements (FA). All proposers who plan to respond to a NASA FA should adhere to the guidelines contained in this document, unless otherwise noted in the FA, including any appendices to that FA, itself.

NASA funding opportunities for grants and cooperative agreements are found at: NASA Solicitation and Proposal Integrated Review and Evaluation System (NSPIRES): <http://nspires.nasaprs.com/external/> and Grants.gov: <http://www.grants.gov/>

NASA solicitations for contracts are found at the Federal Business Opportunities (FBO) site: <https://www.fbo.gov>. If applying for a contract under a FA, proposers must follow the instruction as set forth in NASA Federal Acquisition Regulation Supplement (NFS) 48 CFR §1852.235-72 Instructions for Responding to NASA Research Announcements.

[Appendix A](#) describes the General Policies under which NASA operates, including requirement Export Control, Environmental Impact and Flight Activities. Please refer to that section to determine if any special considerations, certifications or requirements may affect the proposed activities.

A NASA award, obligating the Federal funds, is signed only by a NASA Grant or Contracting Officer (also called an "Award Officer" as applicable).

Unless otherwise stated proposers should use the current Guidebook found at <http://www.hq.nasa.gov/office/procurement/nraguidebook/>.

In case of any conflict, the order of precedence to be followed is:

1. Provisions of law;
2. 2 CFR 1800 and the Grant and Cooperative Agreement Manual (for non-contract funding opportunities) or the NASA Federal Acquisition Regulation (FAR) Supplement (NFS) (for contract solicitations);
3. The specific requirements noted in the FA itself; and
4. The directions provided in this Guidebook.

NASA does not issue awards to individuals but only to organizations, as described in [Appendix B](#).

NASA recognizes and supports the benefits of having diverse and inclusive scientific, engineering, and technology communities and fully expects that such values will be reflected in the composition of all panels and teams, including peer review panels, proposal teams, science definition teams and mission and instrumental teams. In accordance with Federal statutes and NASA policy, no eligible applicant shall be excluded from participation in, be denied the

benefits of, or be subjected to discrimination under any program or activity receiving financial assistance from NASA on the grounds of their race, color, creed, age, sex, national origin, or disability. NASA welcomes proposals in response to its research FAs from all qualified and eligible sources, and especially encourages proposals from Historically Black Colleges and Universities (HBCUs), Other Minority Universities (OMUs), small disadvantaged businesses (SDBs), veteran-owned small businesses, service disabled veteran-owned small businesses (SDVOSB), HUBZone small businesses, and women-owned small businesses (WOSBs), as eligibility requirements apply.

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2. INTRODUCTION TO NASA'S PROGRAMS

NASA is an independent Federal agency of the United States (U.S.) created by the National Aeronautics and Space Act of 1958, NASA has four Mission Directorates, each assigned responsibility for implementing NASA's Vision, Mission, and Values as outlined in the 2014 NASA Strategic Plan. The Mission Directorates are listed below:

- Science
- Human Exploration and Operations
- Aeronautics Research
- Space Technology

These Mission Directorates pursue NASA's goals using a wide variety of ground-, aeronautical-, and space-based programs, and any of these may issue FAs that will incorporate this Guidebook by formal reference.

NASA's Office of Education, in collaboration with the Mission Directorates and Offices, also issues FAs that solicit evidence-based projects that:

- 1) Foster formal and/or informal STEM education; and/or
- 2) Contribute to participation by underrepresented or underserved students and education organizations that predominantly (or historically) serve individuals traditionally underrepresented in STEM careers or underserved in STEM higher education including but not limited minorities, women and persons with disabilities. Visit the NASA Education pages for the most up to date information about the Office of Education performance and priorities at:
<https://www.nasa.gov/offices/education/about/index.html>.

Complete material about all of NASA's many interests and programs is found through links starting at the NASA homepage at <http://www.nasa.gov/>.

3. PROPOSAL PREPARATION AND ORGANIZATION

Proposers responding to a NASA FA are responsible for submitting proposals relevant to the 2014 NASA Strategic Plan or the most current Strategic Plan. Find NASA's 2014 Strategic Plan by visiting http://www.nasa.gov/sites/default/files/files/2014_NASA_Strategic_Plan.pdf Because Strategic Plans are updated regularly and often at the same time a new budget is released, verify that the 2014 document is current by visiting <http://www.nasa.gov/news/budget/index.html>.

If proposed activities are described or understood to be a type of education, proposers are also responsible for submitting proposals relevant to the Federal STEM Education Five-Year Strategic Plan, a report from the Committee on STEM (Co-STEM) Education National Science and Technology Council, May 2013.

The requirements of this Guidebook shall be applicable unless the FA provides other instructions, such as changes to the page limits. NASA may reject without review proposals that are not consistent with the FA instructions.

3.1 Submission Guidance

NASA's experience in the review of proposals submitted in response to a wide variety of FAs has shown that the following directions are valuable in helping to ensure the submission of a valid, complete proposal:

- Carefully read the entire FA before preparing the proposals. The FA includes, but is not limited to, key dates, eligibility, program goals and objectives, funding restrictions, evaluation criteria and submission information. The FA also provides contact information, including that for the help desk(s), of persons who may answer questions regarding the FA and submission process.
- Follow the instructions in the specific FA as NASA is legally obligated to review and select proposals in accordance with the published FA.
- Clearly address the objectives as listed in the FA, with an implementation plan that not only describes what is to be done but how it will be accomplished. The proposal should demonstrate a recognition of proceeding accomplishments, knowledge of key publications in the field and show how the proposed activities will extend or build on those accomplishments. If proposing innovative work in a new or emerging field the proposers should strive to balance the provision of tutorial material and the description of new activities.
- Proofread the proposal carefully before submission, strive for a quality and clarity of text.
- When designing graphics, remember that reviewers may not be able to differentiate colors or hues therefore, choose non-color-dependent ways of conveying critical information.
- Propose fresh, new ideas rather than slight modifications of previously submitted proposals. Simply revising a proposal to meet deficiencies identified in a previous review(s) does not necessarily guarantee a higher rating or selection of that proposal, since all proposals are reviewed on their own merit and previous scores and comments are not part of the review criteria.

- Proposed costs must be reasonable, allowable and allocable to the proposed work. Budgets must provide all the details necessary to justify and facilitate understanding of the proposed costs. During the non-technical review process the proposer may be asked to provide additional information to justify specific items of costs.
- Familiarize yourself with the proposal submission process and NSPIRES website well before the deadline. If possible submit proposals well in advance of the proposal submission deadline to minimize the effect of technical difficulties that may arise. Some systems, such as System for Award Management (SAM), may require longer periods of time (over 10 working days) to receive the necessary credentials for submitting a proposal.

3.2 Submission Requirements and Restrictions

- Proposals that are not submitted by the required deadlines, and do not meet the eligibility, page length, line spacing, font size and other administrative requirements as listed in the FA may be returned without review. Electronic submission of only the proposal cover page or Research and Research-Related SF 424 (R&R) does not satisfy the deadline for proposal submission.
- Reprints and/or preprints are not permitted to be appended to a proposal unless they are accommodated within the proposal page limit.
- Proposals containing unsolicited appendices/attachments may be declared noncompliant.
- Proposers are solely responsible for ensuring their proposals are received by NASA before the deadline

NASA's policy welcomes the opportunity to conduct research with non-U.S. organizations on a cooperative, no-exchange-of-funds basis. Although Co-Investigator (Co-Is) or collaborators employed by non-U.S. organizations may be identified as part of a proposal submitted by a U.S. organization, NASA funding may not support research efforts by non-U.S. organizations, collaborators or subcontracts at any level, including travel by investigators at non-U.S. organizations. The direct purchase of supplies and/or services, which do not constitute research, from non-U.S. sources with NASA-awarded funds is permitted.

3.3 Notice of Intent (NOI) to Propose

Material in a NOI is confidential and will be used for NASA planning purposes only, unless otherwise stated in the FA. NOIs must be submitted via NSPIRES even when the plan is to submit the proposal via Grants.gov. An NOI is submitted by logging into NSPIRES at <http://nspires.nasaprs.com>. Once logged in proposers will access the "Proposals/NOIs" module and select "Create an NOI", choosing the FA to which the NOI will be submitted.

Space is provided for the applicant to provide, at a minimum, the following information, although additional special requests may also be indicated:

- A Short Title of the anticipated proposal (50 characters or less);

- A Full Title of the anticipated proposal (which should not exceed 254 characters and is of a nature that is understandable by a scientifically trained person);
- A brief description of the primary research area(s) and objective(s) of the anticipated work (the information in this item does not constrain in any way the proposal summary that must be submitted with the final proposal); and
- The names of any Co-Is and/or Collaborators as known at the time the NOI is submitted. In order to enter these names those team members must have previously accessed and registered in NSPIRES themselves; a Principle Investigator (PI) cannot do this for them. After completing the indicated fields, the NOI is then submitted electronically.

In some cases, NASA requires the NOI be submitted and approved before a proposer may submit a complete proposal. In this case failure to submit the NOI by the specified time may result in non-acceptance of the NOI and any subsequent proposal.

3.4 Step Approach

Some FAs require that proposals be submitted using a two-step process. The Step-1 proposal is an abbreviated presentation of the intended research and is submitted by the Authorized Organizational Representative (AOR) by the Step-1 proposal due date. The required contents for the Step-1 proposal will be specified in the FA, including whether or not the Step-1 proposal is reviewed to determine if a proposer will be invited to submit a Step-2 proposal. Though the Step-1 proposal is a prerequisite for submission of a full Step-2 proposal, it does not obligate the proposer to submit a Step-2 (full) proposal.

For Step-2 proposals, the FA will specify:

- The process for submitting a Step-2 proposal,
- Whether or not changes to Step-1 proposals can be incorporated into the Step-2 proposal, and
- If additional documents or explanation are required to evaluate the Step-2 proposal.

3.5 Successor Proposals

Holders of existing research awards are permitted to submit follow-on or "successor proposals" to successive FAs that are issued for the same NASA program objectives in order to extend an ongoing research activity to its next logical step. In order to ensure equitable treatment of all submitted proposals, NASA does not extend any special consideration to such successor proposals in terms of preferential handling, review, or priority for selection. Therefore, all proposals in response to an FA are considered new, in that they will be reviewed on an equal basis with all other proposals submitted to the FA.

Successor proposals are welcomed and encouraged, and must describe relevant achievements made during the course of the previous award(s) in their Scientific/Technical/Management plan. In addition, for proposers using the NSPIRES electronic submission system, the proposal cover page provides a space for entering the NASA Financial Assistance Identification Number (award number) of any existing award that is the predecessor to the successor proposal that is submitted.

If a successor proposal is selected, NASA may fund the proposal as a new award, or by issuing a supplement/modification to the existing award. In either case, the starting date of a successor award will follow the expiration date of the preceding award (i.e., a successor award may not overlap the predecessor award). All successor proposals need a different title from the previous award. A change as simple as adding "Phase 2" is sufficient.

3.6 Standard Proposal Style Formats

Unless otherwise stated in the FA, NASA requires electronic submission of proposals and will not accept a hard-copy proposal. If an FA requires only electronic submission of proposals, then the submission of a proposal by the AOR serves as the required original signature by an authorized official of the proposing organization.

If the FA allows or requires both an electronic submission and a paper copy submission, consisting of an original and a specific number of copies, the original and all required copies must be received at the designated address, time and date specified in the FA. If a paper copy submission is required, all proposal documents submitted shall be appropriately signed.

Unless otherwise specified in the FA, the standard formats for all types of proposals submitted in response to FAs are as listed below:

- Required paper size is 8.5x11. Pages must have at least 1-inch (2.5 cm) margins on all sides. Proposals must adhere to the page limits listed in the FA.
- Proposal must be single-spaced, typewritten in an easily read 12-point font, in English-language text, and formatted using one column. The font size for symbols in equations must be consistent with this guideline. Proposers may not adjust or otherwise condense a font or line from its default appearance.
- While text within figures and tables may use a smaller font, it must, in the judgment of reviewers, be legible without magnification. Figure and table captions must follow the same font requirements and restrictions as the main proposal text. Expository text necessary for the proposal may not be located solely in figures or tables, or in their captions.
- Units must be reported in the common standard for the relevant discipline.
- Fold-out pages, illustrations, and/or photographs are allowed, for the display of unique and critically important proposal data. Fold-out pages will count as multiple pages, dependent on number of fold out sections, against the required page limit. For example, a three-section fold-out would be equal to three pages on the page limitation.
- Only non-proposal material, e.g., page numbers, section titles, disclaimers, etc., is permitted in headers and footers.
- Proposals may not include references to materials outside the proposal (e.g. published articles and sites on the internet) for information or material needed to either complete or understand the proposal.

In addition to the above formatting requirement, for any required hard copies of the proposal, the proposer must submit an easily disassembled, one-sided original copy, any additional required copies may be done in double-sided printing. The copies must be on white 8.5 x 11-inch paper with at least 1-inch (2.5 cm) margins on all sides. Only metal staples may be used to bind copies; loose leaf binders, plastic, or permanent covers may not be submitted.

3.7 Overview of Proposal

Unless otherwise specified in the FA, a proposal should be assembled with the parts given in the following table in the given order shown and within the listed page limits. Proposals that omit required parts or that exceed the page limits may be rejected without review. In some cases, an FA may specify exceptions to these page limits, especially to that allowed for the Scientific/Technical/Management plan. This table is followed by a discussion of each individual part.

REQUIRED PARTS OF A PROPOSAL (in order of assembly)	PAGE LIMIT
Proposal Cover Page	
Proposal Summary – limit to 4000 characters (including spaces)	
Data Management Plan – limit to 4000 characters (including spaces)	
Table of Contents	As needed
Scientific/Technical/Management plan	15*
References and Citations	As needed
Biographical Sketches for: See Section 3.15	
the Principal Investigator(s)	2 (per PI)
each Co-Investigator	1
Current and Pending Support (only required for grant/cooperative agreement proposals)	As needed
Statements of Commitment and Letters of Support	As needed
¹ Proposal Budget (budget) – both the budget narrative and budget details	As needed
Facilities and Equipment	As needed
Special Notifications and/or Certifications	As needed

¹ FAs may require more information in a separate section

* includes all illustrations, tables, and figures, where each "n-page" fold-out counts as n-pages and each side of a sheet containing text or an illustration counts as a page. This page limit may be superseded by instructions in the FA.

3.8 Required Proposal Elements

For all proposals, proposers must complete the required NASA-specific forms: NASA Other Project Information, NASA PI and Authorized Representative Supplemental Data Sheet, NASA Senior/Key Person Supplemental Data Sheet (this form is required only if there are Senior/Key Persons other than the PI).

Instructions for any NASA specific forms and NASA program-specific forms are listed in the specific FA. Proposals omitting the required NASA- and program-specific forms, may be rejected for noncompliance.

Proposers submitting through NSPIRES will use the NSPIRES proposal cover page that is available at <http://nspires.nasaprs.com/>. Once completed by the PI, the proposal cover page must be accessed in the NSPIRES system and submitted electronically by the AOR.

Proposers submitting through Grants.gov must complete the required Grants.gov forms including the SF 424 (R&R) Application for Federal Assistance, R&R Other Project Information, R&R Senior/Key Person Profile, and R&R Budget. Instructions for completing these forms are on the Grants.gov Web site.

3.9 Certifications, Assurances, Representations and Sample Agreements.

As authorized by 2 CFR 200.208, NASA has a number of certifications, assurances and agreements that must be completed as part of the proposal submission. Go to NSPIRES for the updated list. Certifications, assurances, and representations, must be less than one year old at time of award. Procurement personnel will obtain updates at time of award if needed.

3.10 Proposal Summary/Abstract

The proposal summary (or abstract) must provide an overview of the proposed investigation that is suitable for release through a publicly accessible archive should the proposal be funded. The proposal summary should be concise, and should not contain any special characters or formatting. Grants.gov users must use a writeable pdf form (downloadable from Grants.gov) named "proposalsummary.pdf" to submit this document. The proposal summary document is limited to 4000 characters (including spaces).

3.11 Data Management Plan

In keeping with the [NASA Plan for Increasing Access to Results of Federally Funded Research](#), proposals must include a data management plan (DMP). Proposals for work that will not generate any data or qualify for an exemption, as defined in the NASA Plan, must demonstrate this in the DPM. Unless otherwise instructed in the FA, the DMP is part of the NSPIRES cover page. Proposals submitted through Grants.gov include a DMP in the uploaded documents. Proposers should refer to the FA for any FA-specific DPM requirements and for information on how the plan will be evaluated.

NASA's Open Data portal at data.nasa.gov is a registry of NASA dataset metadata which enables machine-readable dataset discovery. Making information resources accessible, discoverable, and usable by the public can help fuel entrepreneurship, innovation, and scientific discovery. This portal is a collection of descriptions of datasets; each description is a metadata record. The intention of a data catalog is to facilitate data access by users who are searching for particular types of data. The portal hosts both metadata records and/or original datasets. See [Appendix J](#).

3.12 Table of Contents

Proposers should include a table of contents that provides a guide to the organization and contents of the proposal.

3.13 Scientific/Technical/Management Plan

As the main body of the proposal, this plan must cover the following topics all within the specified page limit. Additional and/or more-specific requirements may be stipulated in the FA. This plan must address:

- The goals and expected significance of the proposed research, especially as related to the objectives given in the FA;
- The perceived impact of the proposed work to the state of knowledge in the field. If the proposal is offered as a successor to an existing NASA award, this includes how the proposed work is expected to build on and otherwise extend previous accomplishments supported by NASA;
- The relevance of the proposed work to the specific objectives given in the FA, and/or to present and/or future NASA programs and interests, such as described in current versions of the [NASA Strategic Plan](#) and/or documents from the soliciting directorate, office, or program (e.g., the [Science Plan](#), the [Strategic Space Technology Investment Plan](#), the [Aeronautics Strategic Vision](#), [Voyages: Charting the Course for Sustainable Human Space Exploration](#));
- The technical approach and methodology to be employed in conducting the proposed research, including:
 - Proposed experimental designs, methods, techniques, and approaches for achieving the proposed goals and objectives of the FA,
 - A description of any hardware or software development, construction or fabrication required in order to carry out the research,
 - Sources of error and uncertainties and what effect they may have on the robustness of potential results or conclusions,
 - The resilience of the approach and methodology, e.g., complimentary measurements, confirming tests, and approaches likely pitfalls,
 - Any special capabilities and advantages of facilities and equipment (a basic listing of these are described in the facilities and equipment section),

- Technical approach and methodology impact on budget, and ²
- The flow of the different tasks and how they feed into one another
- A general implementation plan, including:
 - A project schedule that identifies anticipated key milestones for accomplishments and dependencies between tasks;
 - The management structure for the proposal personnel;
 - Any substantial collaboration(s);
 - Any proposed use of consultant(s); and
 - A description of the expected contribution to the proposed effort, by task and sub-task, by the PI and each person s identified in one of the additional categories found in [Appendix B](#), regardless of whether or not they derive support from the proposed budget, but not including the information required in the table of personnel and work effort.

The Scientific/Technical/Management plan may contain illustrations and figures that amplify and demonstrate key points of the proposal (including milestone schedules, as appropriate).

However, they must be of an easily viewed size and resolution and have self-contained captions that do not contain critical information not provided elsewhere in the proposal.

3.14 References and Citations

All references and citations given in the Scientific/Technical/Management plan must be provided using easily understood, standard abbreviations for journals and complete names for books. It is highly preferred but not required that these references include the full title of the cited paper or report.

3.15 Biographical Sketch (es)

The proposal should demonstrate that the participants who will have critical management or technical roles have the appropriate qualifications, capabilities, and experience to provide confidence that the proposed objectives will be achieved.

- PIs, Co-PIs, and any Co-I also serving in one of the three special Co-I categories defined in Appendix B must include a biographical sketch (not to exceed two pages) that includes their professional experiences and positions and a bibliography of publications, especially those relevant to the proposed investigation, as well as, a description of scientific, technical and management performance on relevant prior research efforts.
- Co-Is proposing to spend 10% or more of their time to the effort are limited to a one-page sketch.

² See the proposal budget section for further discussion of costing details needed for proposals involving significant hardware, software, and/or ground systems development, and, as may be allowed by an FA, proposals for flight instruments);

3.16 Current and Pending Support (not required for contract proposals)

PIs and Co-PIs must provide all ongoing and pending projects and proposals (regardless of salary support) in which they are performing or will perform any part of the work. Co-Is proposing to spend 10% or more of their time to the proposed effort must provide ongoing and pending project and proposals (regardless of salary support) that require a significant share (more than 10%) of their time. Proposals need not include the current proposal on the list of pending proposals unless it was also submitted to another FA or funding opportunity (whether at NASA or another sponsor).

For those investigators for whom it is required (see above), the proposal shall provide following information for each current and pending project:

- Title of funded project or proposal title;
- Name of PI on award or proposal;
- Program name (if appropriate) and sponsoring agency or organization, including a point of contact with their telephone number and email address;
- Performance period;
- Total amount received by that investigator (including indirect costs) or the amount per year if uniform (e.g., \$50 k/year); and
- Time commitment by the investigator for each year of the period of performance.

The proposing PI must notify the NASA Program Officer identified for the FA immediately of any successful proposals that are awarded for substantially the same research as proposed to NASA, any time after the proposal due date and until the time that NASA's selections are announced.

Current and pending support is not required for students or Co-Is at non-U.S. institutions.

3.17 Statements of Commitment and Letters of Resource Support

Every Co-PI, Co-I, and Collaborator identified as a participant on the proposal's cover page and/or in the proposal's Scientific/Technical/Management plan must acknowledge their intended participation in the proposed effort. This acknowledgement of commitment is done through NSPIRES.

Proposers should include the participant statements in the body of the proposal only if:

- Team members are unable to confirm participation through NSPIRES,
- Directed to do so by the FA, or
- Are submitting through Grants.gov.

Each written statement must be addressed to the PI, may be a facsimile of an original statement or the copy of an email (the latter must have sufficient information to unambiguously identify the sender), and is required even if the Co-PI, Co-I, or Collaborator is from the proposing organization.

An example of such a statement follows:

"I (we) acknowledge that I (we) am (are) identified by name as Co-Principal Investigator(s), Co-Investigator(s) [and/or Collaborator(s)] to the investigation, entitled <name of proposal>, that is submitted by <name of Principal Investigator> to the NASA funding announcement<alpha-numeric identifier>, and that I (we) intend to carry out all responsibilities identified for me (us) in this proposal. I (we) understand that the extent and justification of my (our) participation as stated in this proposal will be considered during peer review in determining in part the merits of this proposal. I (we) have read the entire proposal, including the management plan and budget, and I (we) agree that the proposal correctly describes my (our) commitment to the proposed investigation." For the purposes of conducting work for this investigation, my participating organization is <<insert name of organization>>."

Letters of resource support are only required if there is a facility or resource essential to the proposal not under the control of a Proposal Team member. Submitting the statement of commitment, the team member confirms that any facilities or resources needed for the proposal are readily available for the proposal team members(s) requiring its use.

If the proposal involves the conduct of research by a non-U.S. organization, signed letter(s) of certification must be included that verifies that funding for their research will be provided by a responsible organization(s) or government agency (ies) should the proposal be selected by NASA. Letters must be signed by an official at the organization or agency authorized to make such a commitment.

Statements of commitment and letters of resource support do not include "letters of affirmation" (i.e., letters that endorse the Intrinsic Merit, including significance or impact, of a proposal). NASA neither solicits nor evaluates such endorsements for proposals. Whether a proposal fully meets the evaluation criteria is determined by NASA with input from peer review. If letters of affirmation are submitted, they may not be submitted as an appendix; they must be included as part of the Scientific/Technical/Management plan and are counted within the required page limitations.

3.18 Proposal Budget with Budget Narrative and Budget Details (see [Appendix C for details](#))

Proposal Budget:

The proposal budget is made up of two parts: 1. the budget narrative and 2. the budget details. Each proposal shall provide a proposal budget for each year of the proposed effort that is supported by appropriate budget narrative and details. There must be direct parallel between the items described in the budget narrative (written description of purchase), those given in the budget details (actual estimates of costs, in whole dollars, for the purchase) and the figures entered in the proposal cover page/Grants.gov forms.

- All proposers are required to submit a thoroughly detailed cost breakdown.
- All proposed costs must be directly related to the approved project and scope of work.

- All proposed costs must be allowable, allocable and reasonable.

The availability or limitations on funds for a proposer's potential NASA partner (e.g., civil servants or contractor personnel salaries, travel, facilities) are described in the specific FA. However, if the FA does not provide guidance on how to request a budget for a NASA partner, including the Jet Propulsion Laboratory (JPL), list NASA key personnel by name on the NSPIRES cover sheet as team members and any non-key-personnel costs under other direct costs as consultant services, subawards, equipment, etc., as appropriate.

Include in the proposed budget, itemized list detailing expenses within major budget categories, detailed subawards and summary of personnel ([Appendix C](#)).

- For contract proposals, a table of personnel and work effort and small business subcontracting plan is also required as part of the budget.
- For grants/cooperative agreements the table of personnel and work effort should immediately follow the proposal budget and is not included in the budget.

Budget Narrative

The budget narrative must not include any information that belongs in the Scientific/Technical/Management plan. It must:

- Cite the basis of estimate and rationale for each proposed component of cost, including direct labor, subcontracts/subawards, consultants, other direct costs (including travel), and facilities and equipment;
- Present the rationale for planned work commitments given in the table of personnel and work effort based upon the assigned tasks;
- Provide the source of cost estimates (e.g., based on quote, previous purchases for same or similar item(s), cost data obtained from internet research) including the company name and/or URL and date, if known, but need not include the actual price quote or screen captures from the web;
- Describe the need to acquire items costing more the \$5,000 and include the source of the cost estimates as described above; and
- Explain the purpose of any proposed travel in relation to the award and provide the basis of estimate, including: Destination (if destination is not known, the narrative should provide reasonable assumptions about the potential destination and use historical cost data based on previous trips taken or conferences attended),
 - Number of travelers,
 - Number of days,
 - Conference fees,
 - Air fare,
 - Per diem, and
 - Miscellaneous travel expenses (e.g., car rental, airport parking)

Facilities and Equipment (technical narrative)

This section is to describe any special facilities and equipment needed to complete the project and is not where the “Facilities and Administration (F&A)” cost pool is provided. This section must:

- Describe any existing facilities and equipment that are required for the proposed investigation and whether or not the team already has access to them in good working order or if they need to be repaired, upgraded or acquired (see letters of resource support for facilities and equipment not controlled by a member of the proposal team);
- Not include any text that belongs in the page-limited Scientific/Technical/Management plan (e.g., description of the work plan, arguments of perceived impact of the work, descriptions of proposal team roles and responsibilities)

Proposals submitted via Grants.gov should include a single facilities and equipment section as a separate PDF document, it should be uploaded to the Grants.gov application as the "Facilities and Other Resources" document. A separate "Equipment" document should not be uploaded to Grants.gov.

Budget Details

The budget details are the actual or estimated costs, in whole dollars, that correspond with the budget narrative. In this section, the proposer must break out the costs, as needed, for the items listed in the general budget found on the proposal cover page.

Joint Proposals Involving a Mix of U.S. Government and Non-Government or U.S. organizations and Non-U.S. Organizations

- (a) Unless otherwise specified in the FA, if a PI from any type of private or public organization proposes to team with a Co-I from and/or use a facility at a U.S. Government organization (including NASA Centers and JPL), the budget for the proposal must include all funding requested from NASA for the proposed investigation, including any and all costs of government personnel or facilities to be paid by NASA, and this must be reflected in the budget totals that appear in the budget forms (e.g., proposal cover page, Grants.gov forms, budget details). The budget narrative and the budget details – other applicable costs must include any required budget for that Government Co-I and/or facility. If selected, NASA will execute an inter- or intra-Agency transfer of funds, as appropriate, to cover the applicable costs at that Government organization.
- (b) If a PI from a U.S. Government organization (including NASA Centers and JPL) proposes to team with a Co-I from a non-Government organization, then the proposing Government organization must sub award/subcontract those Co-I costs. Such non-Government Co-I costs should be entered as a "Subcontract/Subaward" on the budget.

- (c) If a PI from a non-U.S. organization proposes to team with a Co-I from a U.S. organization, the proposer must submit a budget for the U.S. Co-I and identify which Co-I institution is to receive the funding.

Responsibility of the Proposing Organization to Place Subawards for Co-Is at Other Organizations.

Other than the special cases discussed above, and unless specifically noted otherwise in the FA, the proposing PI organization must subaward, through contract or other approved funding mechanism, the funding of all proposed Co-Is who reside at other non-Government organizations, even though this may result in a higher proposal cost because of subcontracting fees.

Full-Cost Accounting at NASA Centers.

Regardless of whether functioning as a team lead or as a team member, personnel from NASA Centers must propose budgets based on full-cost accounting. Proposal budgets from NASA Centers must include all costs that will be paid out of the resulting award. Costs which will not be paid out of the resulting award, but are paid from a separate NASA budget (e.g., Center Management and Operations, (CM&O)) and are not based on the success of this specific award, should not be included in the proposal budget. For example, CM&O should not be included in the proposal budget while direct civil service labor, travel, service pools, and other charges to the proposed research task should be included. Proposal budgets having JPL participation should include all costs except the JPL fixed-fee award (formerly JPL award fee).

3.19 The Table of Personnel and Work Effort

The table of personnel and work effort summarizes the proposed work effort, whether at the proposing or other organization, and whether or not the work is funded by NASA. This part of the proposal may not describe what work each member will be doing nor include any other technical details that belong in the Scientific/Technical/Management plan.

Proposals for contracts:

- Proposals must include this table of personnel and work effort in the budget narrative section, before the section on facility costs.
- The table must have the names and/or titles of all personnel proposed to perform the proposed effort, regardless of whether those individuals require NASA funding. For each individual, list the planned work to be funded by NASA, per period in fractions of a work year. In addition, include planned work not funded by NASA, if applicable. Where names are not known, include the position, such as postdoc or technician.

Proposals for grants and cooperative agreements:

- Proposals for grants or cooperative agreements should not include this table of work effort in the budget narrative section. This table should immediately follow the budget narrative section.
- The table of personnel and work effort:
 - Should include only those resources that are directly applicable to the proposed research effort and may not include technical information that belongs in the Scientific/Technical/Management plan.
 - Must include the names and/or titles of all personnel necessary to perform the proposed effort and list the planned work to be funded by NASA and the planned work not funded by NASA.
 - Where names are not known, include the position, such as postdoc or technician.
- Planned work not funded by NASA that is listed on this table is not considered cost sharing as defined in 2 CFR § 200.29.

3.20 Small Business Subcontracting plans (contract proposals only)

Any proposal from a large business concern that may result in the award of a contract, that exceeds \$5,000,000 and has subcontracting possibilities, must include a small business subcontracting plan in accordance with the clause at FAR 52.219-9, Small Business Subcontracting Plan. Subcontract plans for contract awards below \$5,000,000 will be negotiated after selection.

3.21 Special Notifications and/or Certifications

Some FAs may require proposals to include special notifications or certifications regarding the impact of research with respect to environment, human, or animal care provisions; conflicts of interest; or other topics as may be required by statute, Executive Order, or Government policies. These required certifications may differ between grants and contracts. Compliance with such requirements is important to ensure submission of a complete proposal, and such items must be included in the special notifications and/or certifications section of the proposal.

Environmental Impact

All awards must comply with the [National Environmental Policy Act \(NEPA\)](#). NASA has an obligation under the National Environmental Policy Act (NEPA) to consider potential environmental effects of proposed projects. This includes projects that NASA funds which are implemented by grantees. The majority of grant related activities are categorically excluded as research and development projects that do not pose any adverse environmental impact. These are covered by a NASA Grants Record of Environmental Consideration (REC). The following questions enable NASA to identify grant proposals that do not fall within this blanket REC. Proposals that could result in a potential adverse environmental effect may require additional NEPA analysis if awarded (e.g., preparation of an Environmental Assessment). "Yes" responses are not grant selection criteria.

		Yes*	No
1	Would the proposal involve any activity that includes: a. Construction of new facilities or modification to the footprint of an existing-facility, or b. Ground disturbance (e.g., excavation, clearing of trees, installation of equipment, etc.), or c. Outdoor discharges of water (e.g., waste water runoff), air emissions (e.g., ozone-depleting substances) or generation of noise exceeding 115 dBA (excluding those associated with aircraft operations)?		
2	Would the proposal involve any field activity that would: a. Release equipment (e.g., dropsondes, sensors, etc.) or chemicals (e.g., dyes, tracers, etc.) into the air, bodies of water or on the ground, or b. Release a parachute or use equipment that would not be recovered, or c. Involve equipment or a payload that contains hazardous (e.g., petroleum, hypergols, oxidizers, solid propellants, etc.) or radioactive materials?		
3	Would the proposal involve the launch of a payload, equipment, or instrument (e.g., via launch vehicle, sounding rocket, balloon, etc.)?		
4	Would the proposal involve any activity to be conducted outside the United States or its territories?		

Proposers should plan and budget accordingly if environmental impacts are anticipated. Anticipated environmental impacts should be documented in Section VIII – Other Project Information of the proposal cover page submitted to NASA. Questions concerning environmental compliance requirements may be addressed to Tina Norwood, NASA NEPA Manager, at tina.norwood-1@nasa.gov.

Flight Activities

Proposals that include flight activities (not normal passenger travel) such as aircraft or helicopter flight services, including Unmanned Aircraft Systems (UAS)/Drones operations or the acquisition or construction of such flight vehicles, must comply with [NASA Policy Directive 7900.4](#). Questions concerning flight compliance requirements may be addressed to Norman Schweizer at norman.s.schweizer@nasa.gov.

3.22 Assembly of Electronic Proposals

For proposals submitted electronically, the required parts of the proposal are submitted as one or more unlocked, searchable PDF files. Proposal parts and forms will not be accepted in any other format. Required and permitted appendices may be included either in the PDF file containing the Scientific/Technical/Management plan or as separate PDF files attached to the electronic submission, but not both.

Sections of proposals transferred from Grants.gov to NSPIRES may appear in a slightly different order.

3.23 NASA Requirements for Uploaded PDF Files

It is essential that all PDF files submitted meet NASA requirements. This will ensure that the submitted files can be ingested by NSPIRES regardless of whether the proposal is submitted via NSPIRES or Grants.gov. PDF files that do not meet NASA requirements cannot be ingested by the NSPIRES system; such files may be declared noncompliant and not submitted to peer review for evaluation.

The file size limit for proposals submitted electronically to NASA through either NSPIRES or Grants.gov is 20 MB. In order to facilitate the review of the proposal, any embedded photos and graphic files should be compressed and cropped to an appropriate size and resolution.

In addition, any proposer who creates files using TeX or LaTeX is required to first create a DVI file and then convert the DVI file to Postscript and then to PDF.

Go to http://nspires.nasaprs.com/tutorials/PDF_Guidelines.pdf for more information on creating PDF documents compliant with NSPIRES.

It is the responsibility of each proposer to verify:

- That all PDF files are unlocked and that edit permission is enabled;
- That all fonts are embedded in the PDF file; and
- The accuracy and completeness of the proposal, including all text, figures, tables, and required forms.

NSPIRES provides the "Generate" function (found on the "View Proposal" page within NSPIRES) to allow applicants to verify before submission that all information contained in proposal PDF file(s) being provided to NSPIRES is complete and accurate. The proposer should immediately call the NSPIRES Help Desk for assistance with any proposal that is not complete and correct. Tutorials, registration assistance, and other NSPIRES help topics may be accessed through the NSPIRES on-line help site at <http://nspires.nasaprs.com/external/help.do>. For any questions that cannot be resolved with the available on-line help menus, requests for assistance may be directed by email to nspires-help@nasaprs.com or by telephone to (202) 479-9376, Monday through Friday, 8:00 a.m. – 6:00 p.m. (Eastern)

4. PROPOSAL SUBMISSION

Unless otherwise stated in the FA, all proposals are to be submitted electronically, either through NSPIRES or Grants.gov. If the FA requires other submission options, such as through email, follow the requirements in that FA for which forms or cover page information to submit.

Proposals are submitted by the AOR. It is the responsibility of the proposing PI to coordinate changes and updates to the proposal with the AOR. In instances where an individual acts as both the PI and the AOR, the individual must take separate action for both roles to ensure that proposals are properly submitted.

4.1 NSPIRES Registration Requirements and Instructions

All organizations and individuals, named in the proposal must be registered in NSPIRES, Because NASA requires that an organization (to include sole proprietorships) submit proposals, rather than a PI, proposers should use the NSPIRES registration module to affiliate with an organization. Affiliation is a two-way relationship that requires the approval of the targeted organization. Organizations may take some time to respond to requests for affiliations. This may introduce extra time into the proposal preparation and submission cycle. NASA will not evaluate proposals submitted via Grants.gov if the submitting organization is not registered in NSPIRES.

Every individual named on the proposal's electronic proposal cover page form or in the Grants.gov forms as a proposing team member in any role, including Co-Is and collaborators, must be registered in NSPIRES. Such individuals must perform this registration themselves; no one may register a second party, even the PI of a proposal in which that person is committed to participate. This data site is secure and all information entered is strictly for NASA's use only.

To register for NSPIRES, organizations are required to have a:

- Data Universal Numbering System (DUNS) number (<http://fedgov.dnb.com/webform>); and
- Valid registration with the SAM (<https://www.sam.gov/portal/public/SAM/>). SAM registration must be performed by an organization's electronic business point-of-contact.

4.2 Submitting Proposals through NSPIRES

Proposals may be submitted electronically via NSPIRES. NSPIRES is accessed at <http://nspires.nasaprs.com>. Potential proposers are urged to access this site well in advance of the proposal due date(s) to familiarize themselves with its structure and enter the requested identifier information.

NSPIRES automatically assigns a unique proposal number after the proposal is successfully submitted. NASA uses this NSPIRES number throughout the proposal review and selection process to identify the proposal and its associated electronic data. If an NSPIRES number does not appear on the proposal cover page, then the proposal was not properly submitted through the NSPIRES system.

All proposals submitted via NSPIRES include a required electronic proposal cover page form. The form consists of:

- General Information about the proposal, submitting organization, team members that contains the identifier information for the proposing institution and personnel;
- Certification and Authorization;
- A proposal summary that provides an overview of the proposed investigation that is suitable for release through a publicly accessible archive should the proposal be selected;

- Other project information including international collaboration environmental impact, and historic site impact; and
- The budget of the proposed research effort.

The cover page is available for access and submission to both the AOR and the PI notifying them of successful submission of the proposal within minutes of that action.

All electronic proposals are due, unless otherwise stated in the FA, prior to 11:59 pm (Eastern) on the due date listed in the FA. The NSPIRES help desk closes at 6 pm (Eastern).

4.3 Submission of Proposals through Grants.gov

Proposers have the option to use Grants.gov to prepare and submit proposals. Grants.gov allows organizations to electronically find and apply for competitive grant/cooperative agreement offered by the 26 Federal grant-making agencies. Proposers are reminded that in order to submit applications on Grants.gov, the AOR must complete a one-time registration process. The registration process can take over 10 working days depending on the organization. Registration checklists are also provided at the Grants.gov website.

Potential applicants are urged to access the Grants.gov site well in advance (registration may take longer than 10 working days) of the proposal due date(s) to familiarize themselves with its structure and download the appropriate application packages and tools.

All proposals submitted through Grants.gov will be transferred to the NSPIRES system for evaluation by NASA. To allow this transfer, all individuals and organizations named in the proposal must be registered in NSPIRES. If multiple proposals with the same title and PI are submitted via Grants.gov, NASA will attempt to review and accept the version with the latest time and date stamp. However, it is the responsibility of the proposer to withdraw old versions of their proposal.

Instructions for the use of Grants.gov may be found at <http://www.grants.gov/>. Instructions for NASA specific forms and NASA program-specific forms may be found in the “Instructions” that accompany the application package. For any questions that cannot be resolved with the available on-line help, requests for assistance may be directed by email to support@grants.gov or by telephone to (800) 518-4726. The Contact Center is available 24 hours a day, 7 days a week, except for Federal holidays.

In order to submit a proposal via Grants.gov, the PI must download an application package from Grants.gov. Identifying the appropriate application package requires using the “Search Grant Opportunities” function within Grants.gov and/or using the funding opportunity number for that program. The funding opportunity number may be found in the FA. For omnibus FAs, such as Research Opportunities in Space and Earth Science (ROSES) or Research Opportunities in Aeronautics (ROA), each program element will have a separate funding opportunity number.

Submitting a proposal via Grants.gov requires the additional following steps:

- Proposers must register in NSPIRES even if they submit their proposal through Grants.gov (otherwise proposals cannot be transferred to NSPIRES for review). Grant researchers (PIs) do NOT need to register with Grants.gov.
- To find FAs, ref. "Search Grant Opportunities" at <https://www.grants.gov/web/grants/search-grants.html>. Using a Basic Search, enter the Funding Opportunity Number to retrieve the application package.
- Download and install any required Grants.gov software applications or tools.
- Download the application package from Grants.gov at <http://www.grants.gov>.
- Complete the required Grants.gov forms including the SF 424 (R&R) Application for Federal Assistance, R&R Other Project Information, R&R Senior/Key Person Profile, and R&R Budget.
- Complete the required NASA-specific forms: NASA Other Project Information, NASA PI and Authorized Representative Supplemental Data Sheet, NASA Senior/Key Person Supplemental Data Sheet (this form is only required if there are Senior/Key Persons other than the PI), and proposal summary form. Instructions for NASA program-specific forms can be found in the "Application Instructions" that accompany the application package.
- Complete any NASA program-specific form that is required for the specific program element. This form, which is required by many FAs including all ROSES program element submissions, is included as a PDF form within the proposal package downloaded from Grants.gov. The form, once completed, is attached to the NASA Other Project Information form.
- Create a proposal in PDF including the Science/Technical/Management plan and all other required sections. Attach the proposal and any allowed appendices/attachments (also in PDF) to the appropriate Grants.gov form(s).
- Submit the proposal via the AOR; the PI may not submit the proposal to Grants.gov unless they are an AOR.

It is the proposer's responsibility to ensure the successful submission of a proposal and to ensure that all required parts of the proposal, as described in the FA, are incorporated.

4.4 Other Submission Options

If a hard copy submittal is also required, proposers must print out the NSPIRES cover page or SF 424 (R&R), as appropriate, have it signed by the AOR. As directed in the FA, the signed copy must be submitted with the original copy of the proposal on or before the proposal due date. In addition, reproductions of the signed proposal cover page to be used to preface the required printed copies of the proposal.

When hard-copy submission is required, the requisite number of copies of the proposal (as specified in the FA), including an original signed by the AOR, must be received (not postmarked) by 4:30 pm (Eastern) of the submission due date. The address for the delivery of hard-copy proposals including a telephone number and point-of-contact for commercial delivery, is given in the summary of solicitation of each FA.

If both electronic and hard copy submission are required, the proposer must submit the required number of copies of the proposal (as specified in the FA), along with the original signature of the AOR on the printed proposal cover page, to the address specified in the FA by 4:30 pm (Eastern) of the submission due date.

4.5 Proposal Receipt

The PI and AOR will both receive an email from the NSPIRES system indicating that a proposal has been successfully submitted. This email is sent shortly after the submission activity. Proposers not receiving such an email should contact the NSPIRES Help Desk. Proposers can also verify that their proposals were submitted by logging into NSPIRES, and verifying that the proposal record appears in the "Submitted Proposals" (versus "Active Proposals") part of their accounts.

5. PROPOSAL REVIEW AND SELECTION

All proposals submitted in response to an FA are evaluated in accordance with the same peer review process regardless of the submitting organization, including NASA Centers. All proposals will have an administrative, technical and financial review.

5.1 Administrative Review

Proposals that are submitted late or fail to meet the minimum administrative requirements may be returned without further review.

Proposals submitted through NSPIRES may only be submitted by the AOR. NSPIRES automatically identifies any late proposals.

Proposals are reviewed to determine if they meet the minimum administrative requirements listed in the FA. These requirements usually include but are not limited to these factors:

- Proposal was submitted by due date(s);
- Proposer and proposing organization were eligible to submit a proposal;
- Proposal met the page, font and spacing limits; and
- Proposer or key personnel are not suspended or debarred from receiving Federal funding.

5.2 Technical and Programmatic Review

At a minimum, the evaluation criteria against which the proposals will be judged will be those listed [Appendix D](#), although these may be supplemented and/or modified by specific criteria given in the FA itself. NASA always seeks the best possible evaluations by appropriately qualified peers of the proposer who are knowledgeable, though not necessarily specialists, in the objective(s) solicited by the FA. Experience has consistently shown that the characteristics of successful proposals are that they are technically meritorious, logical, complete, convincing, easily read, affordable, and responsive to the advertised NASA program. Only those proposals

that the reviewers identify as fully meeting the evaluation criteria will be considered for funding. NASA peer review members may also participate in determining the relevance of a proposal to the FA and the reasonableness of proposed costs.

Following peer evaluation, the cognizant Program Officer will evaluate the competitively rated proposals in the context of the programmatic objectives and financial limitations stated in the FA. The Program Officer will present a recommendation for selection based on the entirety of these factors to the NASA Selection Official identified in the FA. The Selection Official will select proposals as judged against the evaluation criteria, the objectives of the FA, programmatic considerations, and the available financial resources.

5.3 Selection Based on Technical Merit

Selections are typically announced between 150 days and 220 days after the proposal due date. NASA does not usually announce new selections until the funds needed for those awards are approved through the Federal budget process. Therefore, a delay in the budget process may result in a delay of the announcing the selection.

After the selection process is completed, each proposer is notified of the disposition of the proposal.

If selected for funding, the responsible NASA Procurement Office will work with the appropriate personnel to initiate negotiations for potential award. Only the Grant/Awarding Officer may obligate the Federal funds and make an award. Until an award is made, there is no guarantee that the recommended financial resources will be available.

Awards are made to the proposing organization and not directly to the PI.

5.4 Budget, Cost Analysis and Financial Capability Reviews

Following the technical review and selection process, documents are submitted to the Grant/Award Officer for a review to determine if proposed costs are allowable, allocable and reasonable for the proposed work. Additionally, for grants and cooperative agreements, the Grant/Award Officer will review the risk posed by applicants as required in 2 CFR 200.205. In order to complete the required reviews applicants may be requested to submit additional documentation.

5.5 Withdrawal of Proposal

A proposal may be withdrawn at any time for any reason, such as if another organization has agreed to fund the proposal. Proposals submitted using NSPIRES may be withdrawn electronically by the AOR or the proposer may send a signed written request to withdraw a proposal to the NASA technical contact as listed in the FA.

5.6 Proposal Rejected by NASA without Review

NASA reserves the right to reject a proposal without review for the following reasons:

- The proposal is clearly nonresponsive to the objectives and/or provisions of the FA;
- The proposal does not meet the requirements for proposal format, content, and organization as specified in this Guidebook and/or the FA itself;
- The proposal is not submitted by the submission due date;
- The hard copy proposal is not delivered to the specified delivery address by the proposal due date/time;
- The proposal consists of PDF files that do not meet NASA requirements or otherwise cannot be ingested by the NSPIRES system; or
- The proposal is submitted through Grants.gov but the proposer fails to register in NSPIRES.

6. AWARD NOTIFICATION

NASA is committed to the goal of issuing award notices as soon as possible after the selections are announced to the proposers. However, delays may be caused by:

- The need for additional materials from the proposer (e.g., revised budgets and/or budget details) before NASA may legally obligate Federal money; and
- A delay in approving NASA's appropriation for the year.

7. AWARD MANAGEMENT

For management of non-contract research awards, the recipients largely manage their own research projects with minimal oversight by the Agency. Throughout the entire process—starting with the identification of program objectives, the preparation and peer review of submitted proposals, the conduct of the research itself, and, finally, the exposition of new knowledge through publications, public outreach, and education—NASA sees itself as a partner with the scientific, engineering, and educational communities in making its programs relevant and productive. See [Grants and Cooperative Agreement Manual](#), as well as [2 CFR 1800](#) or [14 CFR 1274](#) for post award activities.

For award management of contract research awards see the NFS and FAR for post-award activities.

Appendix A

Statements of General Policy

Awards to NASA Centers

A selected proposal submitted from a NASA Center, is funded directly by NASA Headquarters through the Agency's funding mechanism called a Research and Technology Operating Plan (RTOP). Awards made to the JPL are funded through the contract between NASA and the California Institute of Technology.

Awards to Non-NASA Organizations

A NASA award is signed only by a NASA Grant or Contracting Officer and is addressed to the proposing organization. Only an appointed NASA Award Officer can make commitments, obligations, or awards on behalf of the Agency and authorize the expenditure of funds. It is important to note that no commitment on the part of NASA or the Government is legally binding, even if in writing by way of a letter of selection, from anyone other than a NASA Award Officer.

NASA chooses the funding vehicle best suited for the project and the proposing organization, which can be a grant, a contract, or a cooperative agreement as defined further below.

- **Grant** – A funding instrument used by the Government to accomplish a public purpose of support or stimulation authorized by Federal statute. The objective of a grant is the general enhancement of the field of scientific and technical programs of interest to NASA. The recipient of the grant is an organization, and not the PI, although the PI is responsible for conduct of the project. No substantial technical involvement is expected between NASA and the recipient, nor does the Government direct the research by the PI. Fee and/or profit is not allowed.
- **Cooperative Agreement** – An agreement is defined the same as a grant with the exception that NASA and the recipient are each expected to have substantial technical interaction for the performance of the project.
- **Contract** – A mutually binding legal commitment between the Government and a contractor whose principal purpose is the acquisition by purchase, lease, or barter of property or services from the contractor for the direct benefit of or use by the Government. The PI is responsible for scientific conduct of the project. In general, contracts are negotiated and have deliverable products, i.e., the Government "purchases" a product that, in the case of an FA, is a study in a specified area of basic research. Normally, for proposals selected through an FA, no fee or profit is paid under cost contracts with educational organizations or nonprofit organizations, as well as cost-sharing contracts with any type of entity. Non cost-sharing contracts with commercial organizations are fee bearing.

Award Governance:

Grant and Cooperative Agreement awards will be governed by the following:

2 C.F.R. 200 Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance) found at http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title02/2cfr200_main_02.tpl

2 C.F.R. 1800 NASA supplement to 2 C.F.R. 200 found at <http://www.ecfr.gov/cgi-bin/text-idx?SID=a742969f637a69b85ae9174705ae9d4a&mc=true&tpl=/ecfrbrowse/Title02/2chapterXVIII.tpl>

Grants and Cooperative Agreement Manual found at https://prod.nais.nasa.gov/pub/pub_library/srba/index.html

14 CFR 1274: Grants and Cooperative Agreements to Commercial Firms with Cost-share required found at <http://www.ecfr.gov/cgi-bin/text-idx?SID=92803e6b57c22138fbc6cc8c55a39989&mc=true&node=pt14.5.1274&rgn=div5>

Contract Awards will be governed by the following:

Title 48 Chapter 1: Federal Acquisition Regulations (FAR) found at <https://www.acquisition.gov/?q=browsefar>

Title 48 Chapter 18: NASA FAR Supplement (NFS) found at <https://www.hq.nasa.gov/office/procurement/regs/nfstoc.htm>

Contracting Key parts of particular relevance to this Guidebook are:

"Broad Agency Announcements"	NFS 1835.016
"NASA Research Announcements"	NFS 1835.016-71
"Instructions for Responding to NASA Research Announcements"	NFS 1852.235-72

Contact with NASA personnel: While NASA program personnel may be contacted to discuss general program objectives with prospective proposers, they are forbidden from providing specific advice on budgetary or technical issues beyond those published in the FA that would give an unfair competitive advantage unless this same information is openly available to all interested proposers.

Restriction on the Use of Classified Material

It is NASA policy that proposals should not contain security-classified material. However, should the project proposed approach require access to classified information, or should the result of the project generate such material, the proposer shall comply with all Government security regulations.

Pre-Award Costs

For a grants or cooperative agreements, expenses incurred within the 90-day period preceding the effective date of the award may be authorized, but such expenses are made at the recipient's risk. NASA will not pay any pre-award costs incurred for unfunded proposals.

Limited Release of Proposers Confidential Business Information

For proposal evaluation and other administrative processing NASA may find it necessary to release information submitted by the proposer to individuals not employed by NASA. Business information that would ordinarily be entitled to confidential treatment may be included in the information released to these individuals. Accordingly, by submission of this proposal the proposer hereby consents to a limited release of its confidential business information (CBI).

Proposals Involving Non-U.S. Organizations

Except as set forth in the certification regarding restriction on doing business with China, NASA welcomes proposals from non-U.S. organizations and proposals that include the participation of non-U.S. organizations. Proposals that propose research to be performed by a non-U.S. organization or with a non-U.S. organization as part of a proposal submitted by a U.S. organization are normally supported through a non-exchange of funds agreement. This policy pertains to the nature of the proposing organization, and not the nationality or citizenship of the individuals listed in the proposal. If a proposal with a non-U.S. partner is selected, NASA will determine whether such participation should be covered by and implemented through an international agreement between NASA and the sponsoring foreign agency or funding/sponsoring institution under which the parties agree to each bear the cost of discharging their respective responsibilities.

Export Control: Information regarding U.S. export regulations is available at <http://www.pmdtc.state.gov/> and at <http://www.bis.doc.gov>.

The following important provision may apply to proposals that involve the participation of non-U.S. organizations, as well as proposals that involve personnel who are not U.S. citizens and do not have status as legally permanent U.S. residents.

Export-Control Guidelines Applicable to Foreign Proposals and Proposals Including Foreign Participation

"Foreign proposals and proposals including foreign participation must include a section discussing compliance with U.S. export laws and regulations, e.g., 22 CFR Parts 120-130 and 15

CFR Parts 730-774, as applicable to the circumstances surrounding the particular foreign participation. The discussion must describe in detail the proposed foreign participation and is to include, but not be limited to, whether or not the foreign participation may require the prospective proposer to obtain the prior approval of the Department of State or the Department of Commerce via a technical assistance agreement or an export license, or whether a license exemption/exception may apply. If prior approvals via licenses are necessary, discuss whether the license has been applied for or if not, the projected timing of the application and any implications for the schedule. Information regarding U.S. export regulations is available at the U.S. Department of State Web site http://www.pmddtc.state.gov/regulations_laws/itar.html and through the U.S. Department of Commerce's Bureau of Industry and Security Web site at <http://www.bis.doc.gov>. Proposers are advised that under U.S. law and regulations, spacecraft and their specifically designed, modified, or configured systems, components, and parts are generally considered "Defense Articles" on the United States Munitions List and subject to the provisions of the International Traffic in Arms Regulations (ITAR), 22 CFR Parts 120-130."

Because of these legal provisions and requirements, proposers and institutions whose proposals involve non-U.S. participants should be aware that such participation can add to management complexity and risk, and, therefore, proposers should limit such cooperative arrangements to those offering significant benefits while maintaining the clearest and simplest possible technical and management interfaces.

Export-Controlled Material in Proposals

While explicit inclusion of export-controlled material in proposals is not prohibited, NASA advises proposers that, under U.S. law and regulations, spacecraft and their specifically designed, modified, or configured systems, components, and parts may be considered "Defense Articles" on the United States Munitions List and subject to the provisions of the International Traffic in Arms Regulations (ITAR), 22 CFR Parts 120-130. Other items or information may be subject to the Export Administration Regulations (EAR), 15 CFR Parts 730 – 774. This may, in some circumstances, complicate NASA's ability to evaluate the proposal, since occasionally NASA may use the services of foreign nationals who are neither U.S. citizens nor lawful permanent residents of the U.S. to review proposals submitted in response to this FA.

Proposers to FAs are strongly encouraged not to include export-controlled material in their proposals, although the effort being proposed may itself be export controlled (ref. Web sites noted above in 1.6.2(a)). If it is essential to include any export-controlled information in a proposal, a notice to that effect must be prominently displayed on the first pages of the proposal and shall state:

“The information (data) contained in [insert page numbers or other identification] of this proposal is (are) subject to U.S. export control laws and regulations. It is furnished to the Government with the understanding that it will not be exported without the prior approval of the Proposer under the terms of an applicable export license or technical assistance agreement.”

Reference the following URL for guidance on NASA's Export Control Program and NASA Center Points of Contact:

<http://www.hq.nasa.gov/office/oer/nasaecp/contacts.html>

For the purposes of proposals submitted via NSPIRES or Grants.gov these first pages listing export-controlled information should precede the table of contents, do not count against the page limits, and may also be used to provide the proprietary notification, if applicable. It is the responsibility of the proposer to determine whether any proposal information is subject to export-control regulations.

Appendix B – General Information Regarding Organization and Personnel

Categories of Proposal Organizations

NASA accepts proposals submitted in response to its FAs by most types of U.S. organizations acting on behalf of the PI(s). The designation of one of the following organizational categories is required on the proposal cover page.

The NSPIRES cover page does not offer subcategory organization types, such as museum or public K-12 school. Some FAs may request subcategory organization type using a program specific data form. Some FAs may specifically disallow some or all of the following broad categories and/or may add sub-categories not cited below.

The proposing organization type, must be identical to that listed in SAM and tied to the DUNS number. Regardless of what proposing organization type is designated, any resulting award and its reporting requirements will be consistent with applicable NASA and Federal regulations.

Institutions of Higher Education (IHE) – A two- or four-year university or college (including U.S. community colleges) accredited to confer degrees beyond that of the K-12 grade levels.

Educational Institutions - Non-higher-education entities, such as K-12 education groups or institutions of informal education, are classified as Education Organizations. Since NSPIRES does not have a listing for Education Organizations, institutions falling under this category should propose as non-profit or commercial organizations or as agencies of state, local, or Federally-recognized tribal governments as described below.

Non-profit Organization – A non-profit organization is generally defined as any private corporation, trust, association, cooperative, or other organization which:

- Is operated primarily for scientific, engineering, educational, research, or similar purposes in the public interest;
- Is not organized primarily for profit; and
- Is an entity incorporated or unincorporated as a non-profit organization under Federal, state or local law.

Non-profit organization generally excludes (i) colleges and universities; (ii) hospitals; and (iii) state, local and Federally recognized Indian tribal governments.

Commercial Organization – An organization of any size that is organized primarily for profit.

NASA Center – Any NASA Center, e.g., Johnson Space Center (JSC).

Other Federal Agency – Any non-NASA, U.S. Federal executive agency.

Federally Funded Research and Development Center (FFRDC) – FFRDCs are under a broad charter by a Government agency for performing, analyzing or research for the United States Government. NASA sponsors the JPL as an FFRDC.

Non-U.S. Organizations – Organizations outside the U.S. that propose on the basis of a policy of no-exchange-of-funds. Some FAs may be issued jointly with a non-U.S. organization (e.g., those concerning guest observing programs for jointly sponsored space science programs) that will contain additional special guidelines for non-U.S. participants.

State, Local, or Federally-Recognized Tribal Government Agency. –

State government means any of the several States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, any territory or possession of the United States, or any agency or instrumentality of a State exclusive of local governments.

Local government means a county, municipality, city, town, township, local public authority, school district, special district, intrastate district, council of governments (whether or not incorporated as a non-profit corporation under State law), any other regional or interstate government entity, or any agency or instrumentality of a local government.

Federally-recognized Indian tribal government means the governing body or a governmental agency of any Indian tribe, band, nation, or other organized group or community (including any native village as defined in Section 3 of the Alaska Native Claims Settlement Act, 85 Stat. 688) certified by the Secretary of the Interior as eligible for the special programs and services provided through the Bureau of Indian Affairs.

Categories of Proposal Personnel

Every person who is expected to have significant role (i.e. assigned responsibilities appropriate to a defined category of personnel) in the execution of the proposed effort must be identified on the proposal cover page, using one of the following seven categories of personnel. Each individual proposed must also identify the organization through which they are participating in the investigation, which may differ from their primary employer or preferred mailing address, in order to facilitate organizational conflict of interest checks that must be considered in the evaluation process. Any organization requesting NASA funds through participation in the proposed project must list each team member on the proposal cover page. Other than the category of Principal Investigator, some FAs may specifically disallow some or all of the below categories and/or may add other categories.

Principal Investigator (PI) – The PI is the individual a research organization designates as having an appropriate level of authority and responsibility for the proper conduct of the research, including the appropriate use of funds and administrative requirements such as the submission of scientific progress reports to the agency. Every proposal shall identify a PI who is responsible for the quality and direction of the proposed research and for the proper use of awarded funds regardless of whether or not they receive support through the award. The proposing organization

has the authority to designate the PI and to designate a replacement, if that becomes necessary. NASA approval is required for replacement of a PI after proposal selection.

Contact PI - To facilitate communication with NASA when proposing multiple PIs, the submitting organization must designate a "Contact PI" at the time of proposal. The Contact PI will be referred to as the "PI." Any other PIs will be referred to as "Co-PIs." The NASA Award Officer and Program Officer will communicate with the Contact PI, and the Contact PI will be responsible for relaying communications between the Co-PIs and NASA.

Co-Principal Investigator (Co-PI) - When multiple PIs are proposed, the Co-PI(s) share the responsibilities of the PI.

NASA strongly encourages PIs to specify only the most critically important personnel to aid in the execution of their proposals. Such personnel must be designated as being in one of the following categories:

Co-Investigator (Co-I) – A Co-I is a member of the team who may hold either a full-time or limited-term appointment and who is a critical "partner" for the conduct of the investigation through the contribution of expertise and/or capabilities. A Co-I will serve under the direction of the PI and must have a continuing role in the proposed investigation. The Co-I may or may not receive funding through the award. Each Co-I, even if not funded, must demonstrate their commitment to participate in the proposed investigation by way of a brief signed statement, which may be the electronic confirmation through NSPIRES, even if they are from the proposing organization. The PI may also designate in NSPIRES one of the following roles for a Co-I who will carry additional responsibilities, as appropriate for the following unique circumstances:

- One Co-I may be designated as the "Science PI" for those cases where the proposing organization does not permit that individual to formally serve as a PI as defined above (e.g., non-tenured faculty, postdoctoral personnel). In such a case, that Co-I/Science PI will be understood by NASA to be in charge of the scientific direction of the proposed work, although the formally designated PI will still be held responsible for the overall direction of the effort and use of funds.
- A Co-I at an organization other than that of the PI institution who is making a major contribution to the proposal (e.g., providing a significant piece of hardware) and who serves as the point of contact at that Co-I's organization, may also be designated as the "Institutional PI" for that Co-I's organization. If specifically stated in the FA, NASA may elect to provide a separate award directly to the organization of the Co-I. In this case, the Co-I will serve as the "PI" for this separate award for their organization.
- A Co-I from a non-U.S. organization may also be designated as a "Co-Principal Investigator" (Co-PI) should such a designation be required to fulfill administrative requirements of that Co-I's organization and/or to enable the acceptance of funding by that Co-I from their sponsoring funding authority.

Postdoctoral Associate – A Postdoctoral Associate holds a Ph.D. or equivalent terminal degree, is identified as a major participant (but not explicitly as a Co-I) for the execution of the proposed research, and receives funding through the proposal’s budget. Such a Postdoctoral Associate should be identified by name, if known, but may be identified only by designated function in those cases where recruitment depends on the successful selection of the proposal. Postdoctoral Associates might not be named on the proposal cover page, but their effort must be included in the technical description of work assignments and the proposal budget.

Other Professional – This category is appropriate for personnel who support a proposal in a critical manner, e.g., a key Project Engineer and/or Manager, but who is not identified as a Co-I or Postdoctoral Associate. This individual’s role on the proposal must be described in the budget narrative budget narrative.

Graduate and/or Undergraduate Students – A proposal may incorporate students working for graduate or undergraduate degrees who will be paid through the proposal’s budget to help carry out the proposed research under direction of the PI or one of the designated Co-Is. Such students should be identified by name, if known, but may be identified only by function in those cases where their recruitment depends on the successful selection of the proposal. These students might not be named on the proposal cover page, but their effort their effort must be included in the technical description of work assignments and the proposal budget. Direct support for undergraduate students’ tuition is allowed only if so stated in the FA.

Consultant – A Consultant is an individual who possesses a special skill, receives a fee for their services which may include travel in order to consult with the PI, and is not an officer or employee of the proposing organization. A consultant provides services that support the proposed activities, but unlike a Co-I, is not responsible for project oversight and completion. As opposed to a Co-I who is actively engaged in the proposed activities, a consultant provides information, advice, engages in discussions, and serves as a resource—a person with whom the PI and Co-Is confer. The requirements for the proposal budget includes the identification, justification, and complete breakdown of all costs proposed for all consultants.

Collaborator – A Collaborator is an individual who is not critical to the proposal but who is committed to provide a focused but unfunded contribution for a specific task. If funding support, including travel costs, is requested in the proposal, such a person must be identified in one of the other categories above. For a proposal that is submitted via [Grants.gov](https://www.grants.gov), collaborators should be listed on the Project Role “Other” line of the Senior/Key Person portion of the SF 424 (R&R) form.

If selected, proposers must comply with the policy of the Office of Management and Budget set out in 2 CFR § 200.466, Scholarships and student aid costs. To ensure compliance with this policy, proposers must affirm in their proposals the following:

- a. The individual is conducting activities necessary to the Federal award;
- b. Tuition remission and other support are provided in accordance with established policy of the IHE and consistently provided in a like manner to students in return for similar activities conducted under Federal awards as well as other activities; and

- c. During the academic period, the student is enrolled in an advanced degree program at a non-Federal entity or affiliated institution and the activities of the student in relation to the Federal award are related to the degree program;
- d. The tuition or other payments are reasonable compensation for the work performed and are conditioned explicitly upon the performance of necessary work; and
- e. It is the IHE's practice to similarly compensate students under Federal awards as well as other activities.

APPENDIX C

Required Budget Details

Subpart E, Cost Principles, 2 CFR §200.400, et seq., and the Federal Acquisition Regulation (FAR) at 48 CFR Part 31 <https://acquisition.gov/far/current/html/FARTOCP31.html>), identify and describe certain costs that may not be included in a proposed budget (unallowable costs). The use of appropriated funds for such purposes is unallowable and may lead to cancellation of the award and possible criminal charges. Grants and Cooperative Agreements shall not provide for the payment of fee or profit to the recipient.

In addition to the budget narrative, proposers are required to include detailed budgets, including detailed subcontract/subaward budgets, in a format of their own choosing that is clear and understandable. Regardless of format chosen, the following information must be included in the budget details.

Direct Labor (salaries, wages, and fringe benefits): A list of the names (if known) and titles of personnel, level of effort for each position, and rates of pay. The annual salary should be clearly noted for each position. Labor should be clearly broken out from fringe benefits. The fringe benefit rate/percent should be clearly noted on the budget for each labor category for ease of review. If person is unknown proposer may identify only by designated function along with level of effort and estimated rate of pay.

Fringe rates: In accordance with 2 CFR § 200.414, NASA is required to apply the applicable negotiated rate for all grants and cooperative agreements awarded to the recipient. If fringe benefits comprise part of that negotiated rate, NASA will use this rate for all grants and cooperative agreements awarded to the recipient. If the proposing organization does not have negotiated rate for fringe benefits, recipients should use their rates for fringe benefits that is applied to funds from all funding sources.

Subcontracts/Subawards: Attachments shall describe the work to be subcontracted/subawarded, estimated amount, recipient (if known), and the reason for subcontracting (e.g., uniquely qualified Co-I is located at another institution from the proposing institution). Itemized budgets are required for all subcontracts/subawards, regardless of dollar value.

Consultants: Identify consultants to be used and provide the amount of time they will spend on the project and rates of pay to include annual salary, overhead, etc.

Equipment: List all equipment items separately. General-purpose equipment (i.e., personal computers and/or commercial software) valued below \$5,000 must be purchased from the organizational overhead (indirect or F&A) and is not allowable as a direct cost unless it can be demonstrated that such items are to be used uniquely and only for the proposed research and is approved by the NASA Grant Officer. Any general-purpose equipment purchase valued at or above \$5,000 to be made as a direct charge must include the equipment description, an explanation of how it will be used in the conduct of the research proposed, and a written

certification that the equipment will be used exclusively for the proposed research activities and not for general business or administrative purposes.

Supplies: Provide general categories of needed supplies, the method of acquisition, and the estimated cost.

Travel: Provide a detailed breakout of costs for any proposed travel. Detailed budget data shall include the following:

- Destination (if destination is not known, the narrative should provide reasonable assumptions about the potential destination and, use historical cost data based on previous trips taken or conferences attended);
- Number of travelers;
- Number of days;
- Conference fees;
- Air fare;
- Per diem; and
- Miscellaneous travel expenses, (car rental, airport parking, etc.).

Every effort should be made to accurately estimate and detail travel costs. Under Federal procurement regulations, missing or minimum data is not acceptable for budget evaluation and award purposes. If destinations are not known at time of proposal preparation, use reasonable assumptions and historical data for destinations and length of stay, however, use current pricing for the applicable categories listed above.

Other: List and enter the total of direct costs not covered by in the above sections.

Facilities and Administrative (F&A)/Indirect Costs: Identify F&A cost rate(s) and base(s) as approved by the cognizant Federal agency, including the effective period of the rate. Provide the name, address, and telephone number of the Federal agency official having cognizance. If approved audited rates are not available, provide the computational basis for the indirect expense pool and the corresponding allocation base for each proposed rate. All budgets shall be prepared using the most current “approved” indirect rates for estimating and award purposes. Proposers shall not use unapproved “future” rates.

For grants and cooperative agreements: Any non-Federal entity that has never received a negotiated indirect cost rate, except for these non-Federal entities described in Appendix VII to Part 200—paragraph D.1.b, may elect to charge a de minimis rate of 10% of modified total direct costs (MTDC) which may be used indefinitely. For all types of institutions other than institution of higher education, if the negotiated rates change throughout the period of performance that grantee is required to apply that changed rate to any direct funds expended during that time frame stated on the changed agreement.

F&A costs are not permitted for fellowship and scholarship awards.

Other Applicable Costs: Enter total explaining the need for each item and itemized lists detailing expenses within major budget categories. Also enter here the required funding for any Co-Is who cannot be funded as a subaward or subcontract (e.g. because the PI is at a non-Government organization and a Co-I is at a U.S. Government organization)

Subtotal-Estimated Costs: Enter the sum of all items.

Cost Sharing (if any): Neither NSPIRES nor Grants.gov allows for notating cost sharing on the standardized budget form. However, if cost sharing is proposed, it should be discussed in detail in the budget narrative. Further, if cost sharing is based on specific cost items, identify each item and amount in the budget detail with a full explanation provided in the Budget Narrative.

Under a grant or cooperative agreement, cost share is only required if so stated in the FA. NASA may accept cost sharing from any type of organization if it is voluntarily offered (reference 2 CFR §200.306). If a commercial organization is awarded a cooperative agreement, cost sharing is usually required unless the commercial organization can demonstrate that it does not expect to receive substantial compensating benefits for performance of the work. If this demonstration is made, cost sharing is not required but may be offered voluntarily. Reference 2 CFR §1800.922 and 14 CFR §1274.204, (Costs and Payments), paragraph (b), Cost Sharing.

Total Estimated Costs: Enter the total amount of funding requested from the Government.

APPENDIX D

Proposal Processing, Review, and Selection

Overview: As a matter of both policy and practice, proposals submitted to NASA are principally reviewed by panels composed of the proposer's professional peers who have been screened for conflicts of interest. In addition, panel reviews may be augmented by one or more individual reviews solicited by the NASA Program Officer that are made available to the panel reviewers once they convene. As a general rule, and as based on its deliberations, a peer panel is authorized to wholly or partially accept or reject any such individual reviews. There are generally at least three readers of each proposal. In all cases, however, copies of every proposal are available for inspection by the members of the panel while it is in session. The final proposal evaluation determined by the panel is reviewed and approved for completeness and clarity by the attending NASA Program Officer and, if appropriate, the chair of the panel.

The evaluation forms that are provided to reviewers, will list (perhaps in abbreviated form) all criteria for which their opinion is requested. Reviewers are instructed to judge each proposal against the stated evaluation criteria and not to compare proposals to which they have access, even if they propose similar objectives. Only the NASA Program Officer may make binding comparisons of proposals during the process of developing the recommendation for selection.

Conflicts of Interest and Confidentiality: The issue of conflicts of interest and confidentiality are of critical importance to the peer review process. All reviewers are directed to avoid not only actual but also any apparent conflicts of interest and to maintain confidentiality about all activities involved in the review process. Reviewers are personally responsible for identifying and calling to the attention of the cognizant NASA Program Officer any conflicts of interest situations. The presiding NASA Program Officer addresses and adjudicates conflicts of interest based on the following general guidelines:

Every reviewer agrees to avoid conflicts of interest and to maintain the confidentiality of their participation in and the results of the review process. Non-federal reviewers are required to sign a Nondisclosure Agreement in advance of being sent any proposals. U.S. Government employees are governed by the Ethics in Government Act. Should an unanticipated conflict arise or otherwise become known during the course of reviewing the proposal, the reviewer is obligated to inform the cognizant NASA Program Officer and cease participation pending a NASA decision on the issue.

- Disclosure by a reviewer of either the proposals themselves and their evaluation materials and discussions is never condoned by NASA under any circumstances at any time even after the selections are announced. Since the review process is not complete until the selections are announced, a breach of confidentiality of the review process could result in the entire selection process for an FA being declared invalid.
- In certain situations, NASA may ask individuals to participate as reviewers even if identified in a competing proposal. In such situations, NASA takes appropriate measures to assure the objectivity and integrity of the evaluation process, including, excusing the individual from panel discussions of proposals for which a conflict exists. In some cases, the individual may also be excused from the discussion of

proposals other than those giving rise to the conflict of interest if these proposals are in direct programmatic competition with those proposals giving rise to the conflict.

Proposal titles, project summaries and project team participants may be revealed to potential reviewers who ultimately decline to act as reviewers because of conflict or lack of knowledge.

Overview of the Selection Process

An overview of the process from proposal submission through selection is as follows:

- The Program Officer selects reviewers based on their known expertise relevant to the content of each proposal and the avoidance of conflicts of interest. While in person panelist reviewers generally have access to all proposals reviewed by the panel, access is removed in the cases of identified conflict of interest.
- Mail in panelist reviewers only see the proposals to which they are assigned.
- The scientific and technical merits of each proposal are evaluated by the peer reviewers while meeting as a panel. The peer reviewers may also be asked to comment on the perceived programmatic relevancy, the cost reasonableness of the proposals, and other evaluation criteria specified by the FA.
- The Program Officer develops a recommendation on which proposals to fund based on the science/technical merit peer review, any program-unique criteria stated in the FA, relevance to the objectives stated in the FA, programmatic balance/comparison to competing proposals of equal merit, and the available budget resources. Selections are then made by the NASA Selection Official as identified in the FA.
- After selection, each proposer is notified of the disposition of their proposal. However, such correspondence does not constitute an award of funds. The proposer may request a debriefing from NASA, regarding the evaluation of that proposal.
- Notification of selection is then forwarded by the Program Officer to a NASA Award Office that will contact the proposing organization to negotiate funding through an appropriate award instrument.
- Upon award, NASA notifies Members of Congress of awards to any of their constituents. Following notification to proposers and of Congress, a list of selected proposals is posted at <http://nspires.nasaprs.com/>. NASA considers the Proposal Title, the Principal Investigator's name and organization, and the proposal summary to be in the public domain and will post that information on an appropriate publicly accessible location. Selected proposers are free, but not required by NASA, to release any additional information about their proposals that they may choose.

It is NASA policy not to release any information about individual proposals that are not selected.

Evaluation Criteria

Unless otherwise specified in the FA, the evaluation criteria considered in evaluating a proposal are its relevance to NASA's objectives, intrinsic merit and its cost. The failure of a proposal to be rated highly in any one of these elements is sufficient cause for the proposal to not be selected.

Evaluation of a proposal's relevance includes the consideration of the potential contribution to NASA's mission as expressed in its most recent NASA strategic plans and the permitted scope and specific objectives and goals given in the FA. If an FA describes the program's relevance to the NASA strategic plans, it is not necessary for proposals to show relevance to NASA's broader goals and objectives but, rather only to demonstrate relevance to the goals and objectives of the specific goals and objectives of the FA.

Evaluation of Intrinsic Merit includes the consideration of the following factors, as applicable to the particular proposal:

- The scientific quality of the proposed project, including, but not limited to, the scientific rationale and the expected significance and/or impact of the proposed work;
- Overall technical quality of the proposed work, including, but not limited to, the quality of the management plan and project timeline for carrying out the work and the effectiveness and resilience of the proposed experimental designs, methods, techniques, and approaches for achieving the proposed goals and/or objectives;
- The qualifications, capabilities, and related experience of personnel demonstrated by the proposal (e.g., publications, delivered products, and other measures of productivity and/or expertise) that would affect the likelihood of achieving the objectives.
- Facilities, instruments, equipment and other resources or support systems presented in the proposal that would affect the likelihood of achieving the proposed objectives.

Evaluation is against the state-of-the-art. Review panels are instructed not to compare proposals to each other; any comparative evaluations are conducted by NASA program personnel.

Evaluation of the cost of a proposed effort may include the reasonableness of the proposed cost, as well as whether costs are allowable and allocable to the project. The comparison of the proposed cost to available funds is performed by NASA program personnel and is not part of the peer review process.

The combined significance of a proposal's strengths and weaknesses determines its final summary evaluation. This may be given for each criterion or as a single overall evaluation. In the absence of a criterion-specific scale, the evaluation is based on the following adjectival scale.

Summary Evaluation	Basis for Summary Evaluation	Relationship of Summary Evaluation to Potential for Selection
<u>Excellent</u>	A thorough, and compelling proposal of exceptional merit that fully responds to the objectives of the FA as documented by numerous or significant strengths and with no major weaknesses.	Top priority for selection in the absence of any issues of funding availability, suspension or debarment, past performance or programmatic priorities.
<u>Very Good</u>	A competent proposal of high merit that fully responds to the objectives of the FA, whose strengths fully out-balance any weaknesses and none of those weaknesses constitute fatal flaws.	Second priority for selection in the absence of any issues of funding availability, suspension or debarment, past performance or programmatic priorities.
<u>Good</u>	A competent proposal that represents a credible response to the FA, whose strengths and weaknesses essentially balance each other.	May be selected as funds permit based on programmatic priorities.
<u>Fair</u>	A proposal that provides a nominal response to the FA but whose weaknesses outweigh any strengths.	Not selectable regardless of the availability of funds or programmatic priorities.
<u>Poor</u>	A seriously flawed proposal having one or more major weaknesses that constitute fatal flaws.	Not selectable regardless of the availability of funds or programmatic priorities.

To help ensure uniformity of the reviews, NASA asks its reviewers to document their findings using clear, concise language that is understandable to the non-specialist by means of perceived strengths and weaknesses, which may each be designated as a “major” or “minor” finding.

A strength is a finding that increases a proposal’s suitability for funding by a given criterion. A major strength significantly increases a proposal’s suitability, and a minor strength increases, but not significantly, increases a proposal’s suitability. A reviewer may conclude, however, that multiple minor strengths together are equivalent to a major strength.

A weakness is a finding that decreases a proposal’s suitability for funding by a given criterion. A major weakness significantly decreases a proposal’s suitability and a minor weakness decreases, but not significantly, a proposal’s suitability for a weakness to be minor, it must not significantly affect an appreciable portion of the proposed work or the final outcome. A reviewer may conclude, however, that multiple minor weaknesses together are equivalent to a major weakness. A fatal flaw is any single weakness or collection of weaknesses that would effectively prevent, in part or in whole, the proposed objectives from being accomplished or that otherwise may render the proposal unsuitable for consideration for funding (e.g., the proposal fails to address the FA’s

objectives, will have no impact, has a plan of research that is incapable of succeeding, proposes an unrealistic level of effort).

If proposals are rated equally, the Program Officer and Selection Official may use other factors to determine final selections. These factors include, but are not limited to, the balance of the research objectives addressed by other tasks within the program and available program funds.

Occasionally a proposal may include tasks that rate low on one or more evaluation criteria or have other aspect(s) that is(are) considered undesirable or unnecessary (e.g., tasks not permitted by an FA, plans for excessive travel, the support of certain personnel). In such a case, and at the option of the cognizant NASA Program Officer, a proposal may be evaluated more than once: first as originally proposed, and then again as "descoped" of one or more of its original provisions. In such a case, the rating of the descoped proposal may justify its consideration for funding consistent with the policy for Partial Selections and a revised proposal may be requested.

Although a proposal may be rated by peer review to be of high Intrinsic Merit, it still may not be selected owing to budget limitations, lack of relevance to the FA or for programmatic balance.

Partial Selections

NASA may elect to fund only a portion of a proposal. Partial selections also may offer tentative selections in which NASA requests investigators to team in a joint investigation. In such a case, the proposer will be given the opportunity to accept or decline such selection. If the proposer accepts such an offer, a revised budget and statement of work may be required from the proposer should this reduction be greater than 20 percent of the originally proposed budget. However, as a general rule, if the reduction is less than 20 percent of the originally proposed budget, the adjustment to the budget and statement of work can be extracted from the original proposal and no further submission would be required.

If a proposal is partially selected by NASA, the proposer may be given the opportunity to modify the proposal summary so that it correctly describes the funded research.

If the proposer declines the offer of a partial selection, or participation in a joint investigation, the offer of selection may be withdrawn in its entirety by NASA.

Debriefing of Proposers

A proposer has the right to be informed of the major factor(s) that led to the acceptance or rejection of the proposal. Debriefings will be available upon request. Again, it is emphasized that non-selected proposals should be aware that proposals of nominally high intrinsic and programmatic merits may be declined for reasons entirely unrelated to any scientific or technical weaknesses.

Resubmission of a Non-selected Proposal

Non-selected proposals may not be submitted as an unsolicited proposal. The non-selection of a proposal does not restrict the submission of a similar or even the same effort by the proposer(s)

in response to appropriate future NASA FAs or to other appropriate funding agencies or organizations. However, if a proposal to NASA is contemplated, proposers are strongly urged to carefully consider the entirety of comments offered during their debriefing, as well as the proposal guidelines, before making the decision to resubmit the same, or nearly the same, proposal. Merely correcting any perceived deficiencies in a proposal as noted by a review process for one FA in no way guarantees a higher rating or selection in response to another FA.

APPENDIX E

Security Requirements

Requirement for Grant and Cooperative Agreement awards.

- (a) Recipients needing access to a NASA Center, facility, or computer system, or to NASA technical information shall comply with agency personal identity verification procedures identified in the award that implement Homeland Security Presidential Directive-12 (HSPD-12), Office of Management and Budget (OMB) guidance M-05-24 and Federal Information Processing Standards Publication (FIPS PUB) Number 201.
- (b) The Recipient shall account for all forms of Government-provided identification issued to the Recipient employees in connection with performance under this contract. The Recipient shall return such identification to the issuing agency at the earliest of any of the following, unless otherwise determined by the Government:
 - (1) When no longer needed for grant performance.
 - (2) Upon completion of the Recipient's employee's employment.
 - (3) Upon grant completion or termination.
- (c) The Grant Officer may delay final payment under a grant if the Recipient fails to comply with these requirements.
- (d) The Recipient shall insert the substance of this clause, including this paragraph (d), in all subcontracts or subagreements when their employees are required to have routine physical access to a Federally-controlled facility and/or routine access to a Federally-controlled information system. It shall be the responsibility of the Recipient to return such identification to the issuing agency in accordance with the terms set forth in paragraph (b) of this section, unless otherwise approved in writing by the Grant Officer

Requirement for Contract awards.

PIV Card Issuance Procedures in accordance with FAR Clause 52.204-9, Personal Identity Verification of Contractor Personnel (Jan. 2011)

PERSONAL IDENTITY VERIFICATION OF CONTRACTOR PERSONNEL (JAN 2011)

- (a) The Contractor shall comply with agency personal identity verification procedures identified in the contract that implement Homeland Security Presidential Directive-12 (HSPD-12), Office of Management and Budget (OMB) guidance M-05-24 and Federal Information Processing Standards Publication (FIPS PUB) Number 201.
- (b) The Contractor shall account for all forms of Government-provided identification issued to the Contractor employees in connection with performance under this contract. The Contractor shall return such identification to the issuing agency at the earliest of any of the following, unless otherwise determined by the Government:
 - (1) When no longer needed for contract performance.
 - (2) Upon completion of the Contractor employee's employment.
 - (3) Upon contract completion or termination.

- (c) The Contracting Officer may delay final payment under a contract if the Contractor fails to comply with these requirements.
- (d) The Contractor shall insert the substance of this clause, including this paragraph (d), in all subcontracts when the subcontractor's employees are required to have routine physical access to a Federally-controlled facility and/or routine access to a Federally-controlled information system. It shall be the responsibility of the prime Contractor to return such identification to the issuing agency in accordance with the terms set forth in paragraph (b) of this section, unless otherwise approved in writing by the Contracting Officer.

(End of clause)

APPENDIX F

Funding Continuation of Multiple-Year Awards

Continuation funding for multiple-year awards is dependent on several factors including satisfactory progress and availability of funds.

When the period of performance is for multiple years of funding, those funding levels are fixed at the time that the award is made. When funding is released for a multiple-year award, new proposals and technical evaluations are not required as long as this information for the multiple-year period was reviewed and approved as part of the original proposal. A revised budget for the next year of a multiple-year award is required only if (i) the anticipated expenditures are greater than that stated in the award, (ii) the research has appreciably changed in scope, or (iii) changes have been made to the planned purchases of equipment.

Requests to fund work that is beyond the scope of the originally approved proposal may require technical evaluations by NASA.

NASA reserves the right to terminate any multiple-year grant or cooperative agreement as allowed under 2 CFR 200.

Reports for Multiple-Year Awards

See Grant and Cooperative Agreement Manual (GCAM) https://prod.nais.nasa.gov/pub/pub_library/srba/index.html#, Exhibit E, for a list of the required reports.

Annual Reports

An Annual Progress Report is due 60 days prior to the anniversary date of award except for the final year when a final progress report, called a “Summary of Research”, is due within 90 days of the expiration date of the award. Investigations with a period of performance exceeding three years may be subject to full peer evaluation after the first three years in order to qualify for the next level of funding. Content of Annual Progress Reports potentially include:

- Changes in originally approved scope of work for coming year,
- Updates to management plans,
- Interim New Technology Summary Report (as applicable),
- Any publication of peer reviewed articles,
- Any publication of data sets or other products (including code), and
- Any other elements needed or requested by NASA staff to determine progress on the project.

Quarterly Reports

Federal Financial Reports – SF 425 are due quarterly.

Completing an Award

At the completion of a grant or cooperative agreement, certain reports are required by NASA and will be specified in the award document. For a research grant, the following final reports are generally required:

- Federal Financial Report (SF 425)
- Summary of Research
- Final Inventory Report of Federally Owned Property
- New Technology Summary Report
- Management Plan
- Any peer reviewed articles published or planned
- Any data sets or other products (including code) published or planned

APPENDIX G

Requests for Reconsideration

A PI will receive a synopsis of the reviewers' comments.

Written Request for Reconsideration to Selecting Official. To have a declined proposal be reconsidered for funding, the PI must, within 30 calendar days of receipt of the synopsis of reviewers' comments, submit in writing a Request for Reconsideration to the Selecting Official. If no synopsis of reviewers' comments was received, the Request for Reconsideration must be submitted within 60 calendar days of notification that the proposal had been declined. The Selecting Official will respond to the Request for Reconsideration within 30 calendar days. If additional time is required to prepare a response, an explanation of the need for more time will be given to the PI within 30 calendar days.

Appeals above the Selecting Official. Appeals of the Selecting Official's decision must be made within 30 calendar days of receipt of that decision. The written appeal must be submitted to the Assistant Administrator of the Mission Directorate or Office issuing the FA. A response to the appeal will be provided to the PI within 30 calendar days.

Process for Appeals – Contracts Only

Ombudsman Review Process

The NASA Procurement Ombudsman Program is available as a procedure for addressing concerns and disagreements. The clause at NASA FAR Supplement (NFS) 1852.215-84, Ombudsman, is incorporated into NRAs by reference. The cognizant Ombudsman is as follows:

Monica Manning
Deputy Assistant Administrator for Procurement
Office of Procurement
NASA Headquarters
300 E Street SW Room 5L14
Washington DC 20546-0001

Telephone: (202) 358-1050
Facsimile: (202) 358-3082
Email: agency-procurementombudsman@nasa.gov

Protest Process

Only prospective proposers seeking contract awards (not grant and/or cooperative agreement awards) under NRAs have the right to file a protest either with the Government Accountability Office (GAO) or with the Agency, as defined in FAR 33.101. The provisions at FAR 52.233-2, Service of Protest, FAR 52.233-3, Protest after Award, and NASA FAR Supplement (NFS) 1852.233-70, Protests to NASA, are incorporated into NRAs by reference. The designated

official for receipt of protests to the Agency and copies of protests filed with the GAO is as follows:

William P. McNally
Assistant Administrator for Procurement
Office of Procurement
NASA Headquarters
Washington, DC 20546.

Telephone: 202-358-2090
Facsimile: 202-358-3082
Email: William.P.McNally@nasa.gov

APPENDIX H

GUIDE TO KEY DOCUMENTS

Guidance for the Preparation and Submission of Unsolicited Proposals:

http://prod.nais.nasa.gov/pub/pub_library/unSol-Prop.html

NASA Solicitation and Proposal Integrated Review and Evaluation System (NSPIRES):

<http://nspires.nasaprs.com>

Grants.gov: <http://www.grants.gov>

NASA solicitations for contracts are found at the Federal Business Opportunities (FBO) site:

<https://www.fbo.gov>

Find NASA research grant award information at [Research.gov](http://www.research.gov) site:

https://www.research.gov/research-portal/appmanager/base/desktop?_nfpb=true&_pageLabel=research_home_page

The following items may be found through active links from the NASA homepage:

- The NASA Strategic Plan:
http://www.nasa.gov/sites/default/files/files/FY2014_NASA_SP_508c.pdf
- The Vision for Space Exploration:
http://www.nasa.gov/mission_pages/exploration/main/index.html
- Links to all NASA Headquarters Mission Directorates:
http://www.nasa.gov/about/org_index.html
- Space Technology Roadmaps:
<http://www.nasa.gov/offices/oct/home/roadmaps/>
- Links to all NASA Centers and the Jet Propulsion Laboratory:
http://www.nasa.gov/about/org_index.html

The following URL can be used to track the process of a grant and/or cooperative agreement prepared by the NASA Shared Services Center (NSSC) on behalf of one of the NASA Centers/HQ: <https://www.nssc.nasa.gov/grantstatus>

APPENDIX I

INTELLECTUAL PROPERTY

Data Rights: NASA wishes to disseminate data and material produced under this award as broadly as possible with minimal restrictions. While recipients are not restricted in their own use and distribution of data first produced in performance of an award, NASA's goal is to reduce restrictions on dissemination and use of data to the greatest extent possible, consistent with the terms and conditions of the award. Data rights differ based on whether data is first produced under an award or instead was developed at private expense outside the award.

“Limited Rights Data”: The U.S. Government will not normally require delivery of confidential or trade secret-type technical data developed solely at private expense prior to issuance of an award, except as necessary to monitor technical progress and evaluate the potential of proposed technologies to reach specific technical and cost metrics.

Government rights in Technical Data Produced under Awards: The U.S. Government normally retains unlimited rights in technical data produced under awards, including the right to distribute to the public. However, invention disclosures may be protected from public disclosure for a reasonable time in order to allow for filing a patent application.

Invention Rights: Recipients that are Small Businesses or nonprofit organizations may elect to retain title to their inventions pursuant to the Bayh-Dole Act (35 U.S.C. § 202). Large business recipients are subject to section 20135 of the National Aeronautics and Space Act (51 U.S.C. § 20135) relating to property rights in inventions. Title to inventions made under an award by a large business recipient initially vests with NASA. However, these recipients may request a waiver to obtain title to inventions made under the award. Such a request may be made in advance of the award or within 30 days thereafter. Even if a waiver request is not made, or denied, a large business recipient may request a waiver on individual inventions made during the course of the award.

In the case of contract awards, intellectual property provisions (patent and data rights) are subject to the Federal Acquisition Regulations (FAR) and the NASA FAR Supplement (NFS). In the case of grants and cooperative agreements, intellectual property provisions are subject to the terms and conditions in 2 CFR 200, 2 CFR 1800, and 14 CFR 1274.

Appendix J

Publishing Datasets on the NASA Open Data Portal

What is the NASA Open Data portal?

NASA's Open Data portal at data.nasa.gov is a registry of NASA dataset metadata which enables machine-readable dataset discovery. Making information resources accessible, discoverable, and usable by the public can help fuel entrepreneurship, innovation, and scientific discovery.

This portal is a collection of descriptions of datasets; each description is a metadata record. The intention of a data catalog is to facilitate data access by users who are searching for particular types of data. The portal hosts both metadata records and/or original datasets.

What is a dataset?

A dataset is an identifiable collection of data products unified by a set of criteria, also referred to as a Dataset Metadata Record (i.e., contains information on authorship, subject, scope, location and/or time, etc.). The NASA Open Data Portal contains two types of datasets: 1) Dataset Metadata Records, and 2) Data files hosted on the platform. All Dataset Metadata Records cataloged on data.nasa.gov conform to a metadata schema described here: <https://project-open-data.cio.gov/v1.1/schema/>.

How do I host my data on the Open Data portal?

1. Contact the Open Data mailing list (nasa-data@lists.arc.nasa.gov) and describe your data products and whether or not you have a Data Management Plan.
2. Consider where your data currently resides. If you would like to host it through the data.nasa.gov server, consider data transport options such as the Large File Transfer for NASA personnel.
3. Be prepared to provide the metadata about your dataset(s) that conform to the requirements of the [Project Open Data Schema v1.1](https://project-open-data.cio.gov/v1.1/schema/).

What data are accepted for hosting on the Open Data portal?

[Data.nasa.gov](https://data.nasa.gov) can support any file type (machine-readable formats are preferable). We may need to limit file size in some cases. The portal offers the capability to create visualization and RESTFUL APIs if your data is in tabular format.

Please note: The Open Data team cannot host any data that contain [Personally-Identifiable Information \(PII\)](#).

How do I transfer data files to host on the Open Data portal?

NASA personnel may use the internal agency Large File Transfer Service to transport data to the appropriate Open Data team member.

If I host my data on the Open Data portal, what other information must I provide?

For each dataset you want to host, you must provide the following metadata to the Open Data team:

- 1) Title of dataset
- 2) Description of dataset
- 3) Point of contact (full name and email)
- 4) Keywords or tags that describe or categorize your data
- 5) Proposal number, award number, and/or ORCID
- 6) Area of proposal research area or name of supporting NASA program (if known)
- 7) Number, size, and format/type of data products
- 8) URLs to
 - a. Related documents
 - b. Publication(s) related to this dataset
 - c. Web pages on the datasets/research
- 9) Information about any software or code that is needed to work with your data
- 10) Any temporal information about your dataset, such as date ranges for when the research was conducted
- 11) Any spatial information about your dataset, such as latitude and longitude coordinates or geographic regions for which the data is relevant
- 12) Any other supporting documentation, such as a data dictionary