

Navigating the National Aeronautics and Space Administration (NASA) Proposal Submission Process

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Intro to NASA Proposals

- **Objectives**

- Learn basic information about NASA, its divisions and how solicitations are organized.
- Describe the requirements for the most common entries in a NASA/NSPIRES submission.

Intro to NASA Proposals- Overview

- **NASA's Congressional Charter and Organization**
- **NASA Sponsored Research Programs and Opportunity Definitions**
- **Some tips and Info on using the NASA Handbook for proposers and the ROSES NRA**
- **Submission Systems for NASA Proposals**
- **Common entries and requirements for a NASA/NSPIRES submission**
- **After Submission and Post Award Considerations**

Intro to NASA Proposals

- **NASA's Congressional Charter**
 - NASA is chartered by Congress with the expansion of human knowledge of Earth, phenomena in the atmosphere and space.
 - This charter is supported by their directorate organization and drives the focus of their mission and their funding.
 - They have an operational and utilized strategic plan that is involved in their funding.

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• **NASA's Organization**

• Currently is lead by Administrator, Jim Bridenstine. (Led by Administrator and Deputy Administrator who is nominated by the President, confirmed by Congress and sworn into office)

• NASA is a large organization comprised of

- HQ level offices (Education, Safety, Health & Medical, Small Business Programs, etc.)
- Several Directorates (5 with Educations sometimes considered a 6th – Mission Support, Aeronautics Research Mission, Human Exploration and Operations Mission, Space Technology Mission, and Science Mission)
- 18 Centers and Facilities (Ames Research, Armstrong Flight Research, Glenn Research, Goddard Space Flight, Jet Propulsion Laboratory, Johnson Space, Kennedy Space, Langley Research, Marshall Space Flight, Stennis Space Center, Wallops Flight Facility, plus the NASA Management Office [oversees JPF and Federally Funded Research and Development Center {FFRDC} work])

https://www.nasa.gov/about/org_index.html

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- **NASA's Sponsored Research Programs**

- Any of the offices, Directorates, or Centers can specifically solicit a proposal or might be involved in the review or management of an unsolicited proposal or a response to a solicited proposal.

- Difference between Solicited, Unsolicited, and Response
- Unsolicited cannot be within scope of a current Opportunity (has own general guidance)
- Investigate and subscribe to RSS feeds

- Most of the solicitations come from/through one of the Directorates: Mission Support Directorate, Aeronautics Research Mission Directorate, Human Exploration and Operations Mission Directorate, Space Technology Mission Directorate, and Science Mission Directorate.

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- **NASA's Sponsored Research Programs**

- The Science Mission Directorate (SMD) has 4 research programs (see ROSES)

- **Earth Science Research & Applied Sciences Program**
 - sponsors integrative research to advance knowledge of and to explore interactions among the major components of the Earth system — continents, oceans, atmosphere, ice, and life — to distinguish natural from human-induced causes of change and to understand and predict the consequences of change
- **Heliophysics Research Program**
 - sponsors research to understand the Sun as a magnetic variable star and its effects on the Earth and other planets and the dynamics of structures in the Solar System
- **Planetary Science Research Program**
 - sponsors research to explore the Solar System to study its origins and evolution, including the origins of life within it.
- **Astrophysics Research Program**
 - sponsors research to explore the Universe beyond, from the search for planets and life in other planetary systems to the origin, evolution, structure, and destiny of the Universe itself.

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• NASA's Sponsored Research Programs

- Appropriations (their Budget) has a big impact not only on how many dollars they have to spend in any area but is also impacted by special instructions from Congress and the President on areas or missions that should be focused on.
 - For example the FY18 Appropriations bill approved by Congress directed NASA to pursue the Europa Clipper Mission.
- NASA's website provides a lot of information about their budget and how it is spent <https://www.nasa.gov/news/budget/index.html> these are other good sites; <https://www.aip.org/fyi/2019/final-fy19-appropriations-nasa> and <https://www.forbes.com> (usually puts out something about NASA budget and what is changing)

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- **NASA's Sponsored Research Programs**

- It is common for NASA to have webinars or conferences prior to submission dates especially on complicated proposals.
- Program Officer relationships are critical; Program Officers are long term positions.
- If you have multi-organizational teams be clear on how you will communicate and interact.
- Many NASA solicitations allow contingency funds.

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- **NASA's Opportunity Definitions**

- **4 Primary**

- Announcement Opportunity (AO) – usually to solicit proposals for unique, high cost research investigation opportunities (experimental hardware, research involving Earth orbiting or free-flying space flight missions). AO's can be for awards that last many years with many million dollar budgets. Usually awarded as contracts although grants can be used.
- NASA Research Announcement (NRA) – announce research interests in support of NASA programs or interests. May result in grants, contracts, or cooperative agreements. (largest of these is the ROSES NRA [Research Opportunities in Earth and Space Science])

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NASA's Opportunity Definitions (continued)

- Cooperative Agreement Notice (CAN) – solicits ground-based research opportunities where a high degree of cooperative work is done with NASA and the selected organization. Usually to further one of NASA's strategic objectives. Normally awarded as cooperative agreement.
- NASA Announcement (AN) – a competitive award for non-funded support such as giving a researcher access to a still-operating astronomical satellite. Recipients receive a letter indicating their proposal was accepted and that there will be further contact with the NASA program office.
- Centers (and Labs) (and possibly other areas of NASA) can provide funds to organizations or individuals for a variety of purposes such as fellowships, internships, visiting researchers, etc. –outside of the prior opportunities given.

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Some tips and Info on using the NASA Handbook for proposers and ROSES NRA

- NASA Handbook for Proposers
 - Is issued yearly or as NASA deems necessary.
 - Contains information on submission format, common items like CV, Current and Pending, and some file content info.
 - Has a general checklist for proposal requirements.
 - Has a little information about NSPIRES (the NASA submission system).
 - Has links to a lot of forms and other information of interest.

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Some tips and Info on using the NASA Handbook for proposers and ROSES NRA - continued

- **ROSES (Research Opportunities in Space & Earth Sciences)**
 - Usually comes out annually or as needed by NASA.
 - Contains a link to the strategic plan update on first content page. Most of the time ROSES will refer you to the handbook for many proposal submission items/proposal contents
 - Is arranged in support of the 4 Research programs previously mentioned (for example)
 - Appendix A is tied to Earth Science Research & Applied Science Programs
 - Appendix E is for Cross division program elements that involve 2 or more program areas
 - Always look at significant changes near the first page of content.
 - Is not easy to use (over 600 pages, has many links, is often updated).

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Some tips and Info on using the NASA Handbook for proposers and ROSES NRA – continued

- You can submit to certain programs in the ROSES but it is more common for each of the program elements in the ROSES to have an amendment issued for a specific topic or focus. It is common for them to also do what is called a Step 1 and Step 2 proposal. It is also not uncommon to see a request or requirement for a Notice of Intent, a preliminary, or a white paper.
- A Step 1 is usually essentially a white paper – short description of work proposed, the team composition, sometimes a budget number. They can be invite/non-invite, encourage/discourage or they may be simply informative to NASA.
- Usually a Step 2 is your full proposal; although I have seen at least one that was a more detailed proposal than the Step 2 but they didn't want budget details until the decision on the Step 2 was done.

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Submission Systems for NASA Proposals

- Submissions to NASA are normally through Grants.gov or NSPIRES
 - Sometimes the solicitation will specify the system or alternatives like paper submission or email.
 - Paper is unusual but email is sometimes used for white papers or step 1 proposals.
 - Grants.gov can be used for ROSES and CAN submission but most (especially NASA's Science Mission Directorate) prefer NSPIRES submissions.
 - NSPIRES stands for NASA Solicitation and Proposal Integrated Review & Evaluation System.
 - If you submit in Grants.gov keep in mind you must still register with NSPIRES for COI checking and post submission information.

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- **NASA-via grants.gov** (my caveat)
 - PI and Authorized Representative Supplemental Data Sheet
 - The NSPIRES username for your organization's AOR must be included on this form. This is not the PI's NSPIRES username.
 - Summary Form
 - Sometimes NASA programs require the summary be input on a NASA specific form. The file is included in a .zip file that is the "opportunity instructions" download from the Grants.gov Apply function (or from the solicitation). This form is then attached in Field 6 on the R&R Other Project Information form.
 - Project Specific Data Form
 - NASA programs require s Project Specific Data Form. The file is included in a .zip file that is the "opportunity instructions" download from the Grants.gov Apply function (or from the solicitation). This form is then attached in Field 4 on the NASA Other Project Information form.

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- **NSPIRES (NASA's submission system)**

- PI must be registered and affiliated with organization (ergo organization has to be registered too). Requires ARO to submit.
- PI must include SRO on research team while completing application for them to have access or they must have an ARO registration.
- Has a 'lock' and 'unlock' feature.
- All team members must have an NSPIRES registration as they must accept through their log in a notice that they are involved in the proposal.
- Really good guide <http://science.nasa.gov/researchers/sara/how-to-guide/nspires-submission/> .

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Common entries and requirements for a NASA/NSPIRES submission

Electronic Form Tabs for:

- Proposal Information (PI name, address, Proposal title, dates, project summary [public releasable])
- Application Information (Directorate considering [usually prefills], type of application, if it is a resubmission, foreign involvement, NASA civil servant involvement)
- Submitting Organization Information (name, DUNS, Cage, address)
- Point of Contact (prefills with PI info unless otherwise selected)
- Team Members (their contact info and they also have to confirm)
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Common entries and requirements for a NASA/NSPIRES submission

Electronic Form Tabs continued:

- Budget – detailed category breakdown year by year
- Program Specific Data (questions on type of organization, use of High End Computing [HEC], students involved in project, relevance of proposed project)
- Attachments section (may be one or more files depending on solicitation)

Note: When you submit a certifications statement also has to be accepted

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Common entries and requirements for a NASA/NSPIRES submission cont.

ODDs and ENDS of interest:

- Not uncommon for budget to be in 3 formats/entries (budget form in system, Redacted, and Total Budget)
 - Redacted Budget in Narrative vs Total Budget File
- Real Year Dollars, Fiscal Year Dollars, Calendar Year, and Fiscal Year Budgets
- Personnel Work Effort (funded and unfunded [no cost share])—watch placement in submission (usually just before the budget or just after the budget; guidance may or may not specify).

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Common entries and requirements for a NASA/NSPIRES submission cont.

ODDs and ENDS of interest:

- Limitation on CVs and CPs and different lengths (10% rule).
- Each Program Element may specify different page limits for parts of the proposal submission (one place to look is 'Summary of Key Information at the end of the program element description) or forms.
- Some capability for error checking internal to NSPRIRES package; you can submit with warnings.
- If NOI submitted, normally the package for the full submission is created from the NOI.

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Common entries and requirements for a NASA/NSPIRES submission cont. ODDs and ENDS of interest continued:

- Check for amendments 30 days prior to due date.
- Due date deadline is usually 1159pm Eastern (late proposal accepted at discretion of PO but usually rejected w/o review).
- DMP is usually required (8000 character entry in cover page unless solicitation tells you otherwise).
- Cost share usually not required or considered in review but if offered (especially in budget area) may be claimed.

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Common entries and requirements for a NASA/NSPIRES submission cont. ODDs and ENDS of interest continued:

Foreign Entities:

- NASA will conduct research with foreign entities but normally on a cooperative, no exchange of funds basis (each country participating in the proposal bears their cost of the research). This includes subawards and travel to conduct research or present at conferences. Direct purchase of supplies/services is allowed. There are exceptions to this – sometimes stated in the solicitation and other times with the permission of the program officer (due to the unique nature of the project or unique expertise of the proposer).
 - China exclusion
- It is possible, depending on the entity and origin of the projected ‘subcontract’, to handle it as a vendor (depending on your organizational policies you might still handle it as a subcontract internally).

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After Submission

- Goal is to announce award 150 days after proposal due date but may be constricted due to NASA/Federal budget process. Goal for implementation of awards is 46 days after selections are announced to proposers.
- NASA Handbook for Proposers contains information on the review process and criteria.
- It is possible NASA might contact you for more information or may ask for changes in certain areas of your proposal as part of the review (or prior to the review) process.
- Some solicitations mention that a site visit will be done as part of the review process (and they can also decide to do one without mentioning it in the solicitation). If you have multiple organizations involved in the proposal they may visit all sites, one, or select ones. They may also ask for a meeting or conference call with the submitting organization's team or with all personnel involved in the proposal (in the event of subcontracts).

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Post Award Considerations

- NASA sends notices to the contact person who was listed on the submission; usually it just says information is available and you log into NSPIRES to obtain the status or updates. PI receives notice (sometimes they get notices before ORS so ask them to notify you).
- Normally you are allowed 15 days from receipt of the award package to complete the initial forms such as access to the Payment Management System (PMS).
- When award notice/agreement is received check the reporting requirements (property, financials).
- NASA has a Grants and Cooperative Agreements Manual.

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Post Award Considerations

- Personnel restrictions (if not addressed at submission) will need to be resolved and certified (for example Chinese affiliations/involvement).
- The type of the award agreement may drive different types of reports and forms (for example financial on SF425 vs NF533).
- Normally award vehicle is not a contract (cooperative agreement, fellowship, etc.) and NASA contacts are usually easy to deal with.

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Post Award Considerations

- NASA usually allows no cost extensions on most normal awards (still encourage timely spending and don't assume a NCE will be approved; if you think you may need one contact them early to discuss).
- Fly America Act and Buy America Act should be monitored on expenditures (and remind PI as soon as award is released).
- Serious on timely reports and Final reports – they can pull or delay funds or halt all operations.
- Some good FAQs available from NASA Sponsored Research Business Activity (SRBA) at https://prod.nais.nasa.gov/pub/pub_library/srba/faq.html#2

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Post Award Considerations– Announcement Opportunity

- AO (for high risk or long-term investments) may involve post award budget restructuring (including additional funds that NASA directs the spending of), several weeks to months of negotiations, the award vehicle may not be an agreement but may be a special contract. On going and continuous relationship/involvement with NASA through the life of the project.
- Special Contracts have a higher lever of paperwork, strict guidelines on deliverables and data collection, and a high level and intensity of reporting (not just regular budget/expenditure reporting, may include effort, the science team). There are go/no go points as the project is developing and a no go result could shut the project down. Normally there is no management of FFRDC funds but on AO awards the lead university may also be responsible for gathering and reporting on all the entities involved in the project including the FFRDCs.
- Earned Value Management training may be required to manage the expenditures

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A Final Note

NASA has lots of blogs <https://blogs.nasa.gov/>, webcasts, newsletters(NASA EXPRESS is STEM related), list serves etc. Latest is #AskNASA a video series.

Volunteer to Review

- Being a reviewer gives you more contact with program and science officers and you become more familiar with what they are looking for in a proposal.
- (SMD) To sign up as a volunteer reviewer visit the [Volunteer for Review Panels](#) web page. If you don't see anything relevant there then write to the program officer who runs the program that most closely aligns with your expertise. You can find contact information for all of them at the [Program Officers List](#).
- If you don't want to be a reviewer in a science area, NASA Education looks for reviewers for anyone from the STEM education community.

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- **Questions??**
- **Thank you for your attention; don't forget to do your evaluation so I know how I did and where to improve 😊**
- **Feel free to contact me!**
 - Fran Stephens at fran@ou.edu