

Guidelines for Proposers to ROSES-2020 Dual-Anonymous Peer Review Programs

1. Introduction

In ROSES-2020 SMD is piloting a "dual-anonymous peer review" (DAPR) for the evaluation of proposals submitted to select program elements. Under DAPR, not only are proposers unaware of the identity of the members on the review panel, but the reviewers are not told the identities of the proposers until after the scientific evaluation of the proposal. Proposals to those program elements using DAPR (see below) must be prepared consistent with these special instructions.

This pilot of DAPR is motivated by a strong commitment to ensuring that the review of proposals is performed in an equitable and fair manner that reduces the impacts of any unconscious biases and is informed by [a successful study conducted for the Hubble Space Telescope](#).

This document provides instructions to proposers submitting to the following ROSES elements:

- A.30 Earth Science U.S. Participating Investigator
- B.4 Heliophysics Guest Investigators Open (Step-1 and Step-2 proposals will be anonymized)
- D.2 Astrophysics Data Analysis
- E.4 Habitable Worlds (only Step-2 proposals will be anonymized)

A separate document describes how to prepare proposals for the Astrophysics Guest Investigator/Observer/Scientist Calls (D.5, D.6, D.9-D.12), which use the 2-phase proposal submission process.

2. Guidelines for Proposers

2.1 Submission of Proposals

Proposers must fill in all required information on the cover pages: any identifying information will be redacted by NASA in the copy provided to reviewers. Proposers should note that Step-1 proposals must not be anonymized unless the program element directs it; however, Step-2 proposals must be anonymized according to the guidelines in this document.

2.2 Proposal Summary

Proposers must enter the proposal summary as part of the NSPIRES cover page and as a separate page as the first page in the main body of the uploaded proposal PDF file.

Proposers are required to write the Proposal Summary in an anonymized format that does not explicitly identify the names of the team members or their institutions. Some specific points follow:

- Do not claim ownership of past work, e.g., "my previously funded work..." or "Our prior analysis demonstrates that..."

- Do not include the names of the personnel associated with the proposal or their organizational affiliations. This does not include references to past work, which should be included whenever relevant (see below).
- Do not include page headers, footers, diagrams, figures, or watermarks in the Proposal Summary.
- References must be written in the form of a number in a square bracket, e.g. [1], which will then correspond to the full citation in the reference list.
- When citing references, use third person neutral wording. This especially applies to self-referencing. For example, replace phrases like "as we have shown in our previous work [17], ..." with "as previously shown [17], ..."
- Depending on the program element, it may be occasionally important to cite exclusive access datasets, non-public software, unpublished data, or findings that have been presented in public before but are not citable. Each of these may reveal (or strongly imply) the investigators on the proposal. In these instances, proposers must use language such as "obtained in private communication" or "from private consultation" when referring to such potentially identifying work.

2.3 Scientific/Technical Management Section

Proposers are required to write the Scientific/Technical/Management (i.e., science justification) section of the proposal in an anonymized format, i.e., that does not explicitly identify the names of the team members or their institutions. Some specific points follow:

- Do not claim ownership of past work, e.g., "my previously funded work..." or "Our prior analysis demonstrates that..."
- Do not include the names of the personnel associated with the proposal or their organizational affiliations. This includes but is not limited to, page headers, footers, diagrams, figures, or watermarks. This does not include references to past work, which should be included whenever relevant (see below).
- References must be written in the form of a number in a square bracket, e.g. [1], which will then correspond to the full citation in the reference list.
- When citing references, use third person neutral wording. This especially applies to self-referencing. For example, replace phrases like "as we have shown in our previous work [17], ..." with "as previously shown [17], ..."
- Depending on the program element, it may be occasionally important to cite exclusive access datasets, non-public software, unpublished data, or findings that have been presented in public before but are not citable. Each of these may reveal (or strongly imply) the investigators on the proposal. In these instances, proposers must use language such as "obtained in private communication" or "from private consultation" when referring to such potentially identifying work.

As always, the reviewers expect proposers to make an effort to describe the past work in the field, and how the proposed work would improve, build-upon, complement, contradict, or complete that past work. As long as the above guidelines are followed, proposers should be able to successfully accomplish this objective.

2.4 Bio Sketches

The program element will specify whether Bio Sketches must be included in the separate "Expertise and Resources - Not Anonymized" document; or alternatively whether Bio Sketches must not be submitted at all.

2.5 Current and Pending Support

The program element will specify whether Current and Pending Support documents must be included in the separate "Expertise and Resources - Not Anonymized" document; or alternatively whether Current and Pending Support documents must not be submitted at all.

2.6 Budget Narrative

The Budget Narrative may discuss the financial support for the PI, Co-Is, etc., but it must not identify the names or institutions of these individuals.

2.7 Summary of Work Effort

The Summary of Work Effort, including the Table of Work Effort must be included in anonymized fashion (e.g., PI; Co-I-1; Co-I-2) in both the main proposal document, in the place indicated by the *Guidebook for Proposers*, and in non-anonymized fashion in the separate "Expertise and Resources – Not Anonymized" document.

2.8 Facilities and Equipment

The Facilities and Equipment section must not be included in the main proposal document submitted in response to a program element that employs dual-anonymous peer review. Instead, a shortened version of this information (including Letters of Resource Support) will be gathered in the separate "Expertise and Resources - Not Anonymized" document.

2.9 Data Management Plan

If the program element requires a Data Management Plan (DMP), in most cases proposers must provide it in a separate 2-page section of the proposal document, but there are exceptions (See Section II.(c) of the ROSES Summary of Solicitation) so follow the instructions in the program element.

Proposers are required to write the Data Management Plan section of the proposal document in an anonymized format that does not explicitly identify the names of the team members or their institutions. Some specific points follow:

- Do not include author names or their organizational affiliations. This includes but is not limited to, page headers, footers, diagrams, figures, or watermarks. This does not include references to past work, which should be included whenever relevant (see below).
- In order to adequately anonymize the proposal, NASA requires that proposers refer to the source with a number in a square bracket, e.g. [1], which will then correspond to the full citation in the reference list.
- When citing references, use third person neutral wording. This especially applies to self-referencing. For example, replace phrases like "as we have shown in our previous work [17], ..." with "as previously shown [17], ..."

- NASA encourages references to published work, including work citable by a Digital Object Identifier (DOI). It may be occasionally important to cite exclusive access datasets or non-public software that may reveal (or strongly imply) the investigators on the proposal. We suggest proposers use language like "obtained in private communication" or "from private consultation" when referring to such potentially revealing work.
- In cases where a letter of support from a facility is required, that letter can be included in the separate "Expertise and Resources - Not Anonymized" document outlined in Section 2.11.

2.10 High End Computing

If a proposing team is requesting an allocation of NASA's High-End Computing resources, the Scientific/Technical/Management section of the proposal document must make a simple statement to this effect. Proposers are still required to submit a separate PDF copy of the official HEC request form (see <https://www.hec.nasa.gov/request/science.html> for guidance). In NSPIRES, this document must be uploaded as document type "Appendix".

2.11 Separate "Expertise and Resources - Not Anonymized" Document

Proposers will also be required to upload a separate "Expertise and Resources - Not Anonymized" document, which is not anonymized. There is no page limit to the "Expertise and Resources – Not Anonymized"; however, proposers should strictly restrict the material contained in this document to the elements described below. In NSPIRES, the "Expertise and Resources - Not Anonymized" document shall be uploaded as document type "Appendix". (For proposers with an HEC appendix, there will be two uploaded "Appendix" documents in addition to the proposal itself and the Total Budget file.)

The "Expertise and Resources – Not Anonymized" document will contain the following elements:

- i. A list of all team members, together with their roles (e.g., PI, Co-I, collaborator).
- ii. Brief descriptions of the scientific and technical expertise each team member brings, emphasizing the experiences necessary to be successful in executing the proposed work.
- iii. A discussion of the contribution that each team member will make to the proposed investigation.
- iv. A discussion of specific resources ("Facilities and Equipment", e.g., access to a laboratory, observatory, specific instrumentation, or specific samples or sites) that are required to perform the proposed investigation.
- v. A summary of work effort, to include the non-anonymized table of work effort. Given that the program element requires an anonymized version of this table in the main proposal body, the table here should be identical, but with the roles now also identified with names (e.g., Sandra Cauffman – PI; Nicky Fox – Co-I-1; Lori Glaze – Co-I-2).
- vi. Bio sketches, if required by the program element (limit 2 pages for the PI, 1 page for each Co-I).

- vii. Statements of Current and Pending support, if required by the program element.
- viii. Letters of resource support, if required by the program element.

This "Expertise and Resources - Not Anonymized" document will be distributed to the review panel after all proposals have been reviewed and rated, only for a subset of proposals (typically the top third, according to the distribution of assigned grades and the projected selection rates). This is to allow the reviewers to assess the qualifications, capabilities, and related expertise of the team and the facilities, instruments, equipment and other resources or support systems required to execute the proposed investigation.

Example:

List of investigators:

Mrs. Sandra Cauffman (PI)
 Dr. Nicky Fox (Co-I-1)
 Dr. Lori Glaze (Co-I-2)
 Dr. Paul Hertz (collaborator)

Team expertise:

Mrs. Sandra Cauffman has over 25 years of experience in the project management of space-based science missions. She will coordinate the project and be responsible for obtaining the samples. Dr. Nicky Fox is an expert in telematics and satellite communications, and previously served as the Project Scientist for NASA's Parker Solar Probe. Dr. Fox will integrate the laboratory data with the supercomputer-derived models. Dr. Lori Glaze brings expertise in the conceptualization and development of planetary instrumentation. Dr. Glaze will refine the machine learning algorithm that is necessary to complete the proposed work. Dr. Paul Hertz is an expert in X-ray emission from neutron stars, black holes, and globular clusters. Through his institutional affiliation, Dr. Hertz has access to the synchrotron beamline necessary to complete the proposed work.

Table of Work Effort: (for brevity, only the first section is stated here)

Work Efforts to be funded by this proposal						
Name	Role	Commitment (FTE)				
		Y1	Y2	Y3	Y4	Total
Sandra Cauffman	PI	0.3	0.3	0.3	n/a	0.9
Nicky Fox	Co-I-1	0.2	0.2	0.2	n/a	0.6
Lori Glaze	Co-I-2	0.2	0.2	0.2	n/a	0.6
Paul Hertz	Collaborator	0.2	0.2	0.2	n/a	0.6
Total funded work effort		0.9	0.9	0.9	n/a	2.7

2.12 Total Budget File

The separately uploaded "Total Budget" file must not be anonymous. There are no changes to the content of this document.

2.13 Summary of Requirements for Anonymized Proposals

Item	Requirement
Submission	All proposals are submitted through NSPIRES or grants.gov.
References	References should be in the [1], [2] format.
Proposal length	Refer to the program element, but note that generally one additional page is allotted for the Proposal Summary. Depending on the program element, up to two additional pages may be allotted for the Data Management Plan.
Proposal Summary	Enter as part of the NSPIRES cover page and as a separate page in the main body of the uploaded proposal PDF file.
Bio Sketches	The program element will specify whether Bio Sketches must be included in the separate "Expertise and Resources - Not Anonymized" document; or alternatively whether Bio Sketches must not be submitted at all.
Current and Pending support	Refer to the program element.
Budget narrative	Include in main proposal document in an anonymized format.
Summary of work effort, including Table of Work Effort	Include in an anonymized fashion (e.g., PI; Co-I-1; Co-I-2) in the main proposal document, and in non-anonymized fashion in the separate "Expertise and Resources – Not Anonymized" document.
Facilities and Equipment	Do not include in main proposal document. A shortened version of this information is to be put in the separate "Expertise and Resources - Not Anonymized" document.
Letters of Resource Support	Place in the separate "Expertise and Resources - Not Anonymized" document.
Data Management Plan (DMP)	Include in main proposal document in an anonymized format. Most program elements place the DMP in a separate section of up two pages outside of the Science/Technical/Management portion of the proposal.
High End Computing request	Submit PDF HEC form as document type "Appendix" in NSPIRES.

Separate "Expertise and Resources - Not Anonymized" document	Submit as separately uploaded PDF as document type "Appendix" in NSPIRES. This document provides a list of all team members, their roles, expertise, and contributions to the work. The document should also discuss any specific resources that are key to completing the proposed work, as well as a summary of work effort. Statements of Current and Pending Support must also be included if required by the program element. Letters of support from, e.g., facilities or archives must be included in this section, if required by the program element.
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3. Example Text for Anonymized Proposals

Much of the following text has been reproduced, with permission, from the Hubble Space Telescope dual-anonymous peer review website.

Here is an example of text from a sample proposal:

Over the last five years, we have used infrared photometry from 2MASS to compile a census of nearby ultracool M and L dwarfs (Cruz et al, 2003; 2006). We have identified 87 L dwarfs in 80 systems with nominal distances less than 20 parsecs from the Sun. This is the first true L dwarf census – a large-scale, volume-limited sample. Most distances are based on spectroscopic parallaxes, accurate to 20%, which is adequate for present purposes. Fifty systems already have high-resolution imaging, including our Cycle 9 and 13 snapshot programs, #8581 and #10143; nine are in binary or multiple systems, including six new discoveries. We propose to target the remaining sources via the current proposal.

Here is the same text, re-worked following the anonymizing guidelines:

Over the last five years, 2MASS infrared photometry has been used to compile a census of nearby ultracool M and L dwarfs [6,7]. 87 L dwarfs in 80 systems have been identified with nominal distances less than 20 parsecs from the Sun. This is the first true L dwarf census – a large-scale, volume-limited sample. Most distances are based on spectroscopic parallaxes, accurate to 20%, which is adequate for present purposes. Fifty systems already have high-resolution imaging, including the Cycle 9 and 13 snapshot programs, #8581 and #10143; nine are in binary or multiple systems, including six new discoveries. We propose to target the remaining sources via the current proposal.

Here is another example of text from a sample proposal:

In Rogers et al. (2014), we concluded that the best explanation for the dynamics of the shockwave and the spectra from both the forward-shocked ISM and the reverse-shocked ejecta is that a Type Ia supernova exploded into a preexisting wind-blown cavity. This object is the only known example of such a phenomenon, and it thus provides a unique opportunity to illuminate the nature of Type Ia supernovae and the progenitors. If our model from Rogers et al. (2014) is correct, then the single-degenerate channel for SNe Ia production must exist. We propose here for a second epoch of observations which we will compare with our first epoch obtained in 2007 to measure the proper motion of the shock wave.

Here is the same text, again re-worked following the anonymizing guidelines:

Prior work [12] concluded that the best explanation for the dynamics of the shockwave and the spectra from both the forward-shocked ISM and the reverse-shocked ejecta is that a Type Ia supernova exploded into a preexisting wind-blown cavity. This object is the only known example of such a phenomenon, and it thus provides a unique opportunity to illuminate the nature of Type Ia supernovae and the progenitors. If the model from [12] is correct, then the single-degenerate channel for SNe Ia production must exist. We propose here for a second epoch of observations which we will compare with a first epoch obtained in 2007 to measure the proper motion of the shock wave.

Here is a third example of text from a sample proposal:

Before and after radiolysis, we will test changes in ice composition with our established cryogenic mass spectrometry technique (2S-LAI-MS) [Henderson and Gudipati 2014; Henderson and Gudipati 2015]. Our technique uses an IR laser tuned to the absorption wavelength for water to gently eject the sample into the gas phase, where it can be ionized by a UV laser and analyzed by time-of-flight mass spectrometry. A key advantage of our technique is that compositional information can be obtained directly in situ, for temperatures that are relevant to Europa (i.e., 50, 100, 150 K), without a need for warming to room temperature or other sample preparation. We will also perform continuous mass spectral analyses (using a residual gas analyzer and a quadrupole mass spectrometer already installed) during radiation to quantify the amount of sputtered material and evolved gas byproducts.

Here is the same text, again re-worked following the anonymizing guidelines:

Before and after radiolysis, we will test changes in ice composition with an established cryogenic mass spectrometry technique (2S-LAI-MS) [12,13]. This technique uses an IR laser tuned to the absorption wavelength for water to gently eject the sample into the gas phase, where it can be ionized by a UV laser and analyzed by time-of-flight mass spectrometry. A key advantage of this technique is that compositional information can be obtained directly in situ, for temperatures that are relevant to Europa (i.e. 50, 100, 150 K), without a need for

warming to room temperature or other sample preparation. We will also perform continuous mass spectral analyses during radiation to quantify the amount of sputtered material and evolved gas byproducts.

Another common situation that occurs in proposals is when a team member has institutional access to unique facilities (e.g., access to a laboratory, observatory, specific instrumentation, or specific samples or sites) that are required to accomplish the proposed work. An anonymized proposal does not prohibit stating this fact in the Scientific/Technical/Management section of the proposal; however, the proposal must be written in a way that does not identify the team member. Here is an example:

The team has access to telescope time to the JPL Ice Lab, which will enable us to examine the properties of methane rain in similar conditions to those found on Titan.

Note: in this situation, NASA strongly recommends that the team provide detailed supporting information to validate the claim in the "Expertise and Resources - Not Anonymized" document, which is not anonymized.

4. Return without Review of Unanonymized Proposals

SMD understands that dual-anonymous peer review represents a major shift in the evaluation of proposals and, as such, there may be occasional slips in writing anonymized proposals. However, SMD reserves the right to return without review proposals that are particularly egregious in terms of the identification of the proposing team.

SMD further acknowledges that some proposed work may be so specialized that, despite attempts to anonymize the proposal, the identities of the Principal Investigator and team members are readily discernable. As long as the guidelines are followed, SMD will not return these proposals without review.

5. Evaluation of Proposals in Dual-Anonymous Peer Review

The overarching objective of dual-anonymous peer review is to reduce unconscious bias in the evaluation of the merit of a proposal. In order to ensure this goal, the review panels will be instructed to evaluate proposals based on their scientific merit, relevance, and cost reasonableness without taking into account the identity of the proposers. Here are some specific points:

- i. Consider proposals solely on the merit of what is proposed.
- ii. Do not spend any time attempting to identify the PI or the team. This applies even if you think you know the identities of the team members. Remember to discuss the science and not the people.
- iii. In the panel discussions, do not make guesses on identities, insinuate the likely identities, or instigate discussion on a possible team's past work.
- iv. When writing evaluations, use neutral pronouns (e.g., "what they propose", or "the team has previously evaluated similar data").

In addition, SMD will appoint a "leveler" to be present in the panel room for all discussions. The Leveler is not a reviewer or a panelist but is an individual trained to ensure that the panel deliberations focus on the strengths and weaknesses of the

proposal and do not deviate into a discussion of the identity, qualifications and experience of the PI and team. SMD will provide full and comprehensive instructions to all reviewers, Panel Chairs, and Levelers ahead of the review.

As a final check, and only after the scientific evaluation is finalized for all proposals, the "Expertise and Resources – Not Anonymized" document is distributed to the panel for a subset of proposals (typically the top third, according to the distribution of assigned grades and the projected selection rates). The panel will assess the qualifications, capabilities, and related expertise of the of the team and the facilities, instruments, equipment and other resources or support systems required to execute the proposed investigation. If there are clear, compelling deficiencies in the expertise and/or resources required to see through the goals of the proposal, the panel may note this. This review may not be used to "upgrade" proposals for having particularly strong team qualifications, nor may it be used to re-evaluate proposals.

Furthermore, for those proposals that have an accompanying request for NASA's High-End Computing resources or a letter of support from a specific facility, these documents will be released to reviewers at the same time.

This document was last updated on February 10, 2020. Comments and questions on this document may be directed to Daniel Evans daniel.a.evans@nasa.gov and SARA@nasa.gov.