Earth Venture Mission - 3
Announcement of Opportunity
Evaluation Plan

February 26, 2021

Outline

Introduction

Introduction

Purpose of the EVM-3 Evaluation Plan

This Earth Venture Mission - 3 (EVM-3) Evaluation Plan covers evaluation information from the Announcement of Opportunity (AO) and from the evaluation processes conducted by the Science Panel and the Technical Management and Cost (TMC) Panel.

The AO Cost Cap for the EVM-3 solicitation is $190 million in NASA Fiscal Year (FY) 2022 dollars for Phases A-F, including the cost of access to space.

This Evaluation Plan describes a one step competitive process.

The approval page for the Evaluation Plan is on page 61.

The AO Cost Cap for the EVM-3 solicitation is $190 million in NASA Fiscal Year (FY) 2022 dollars, including the cost of access to space.

Introduction

EVM-3 Solicitation

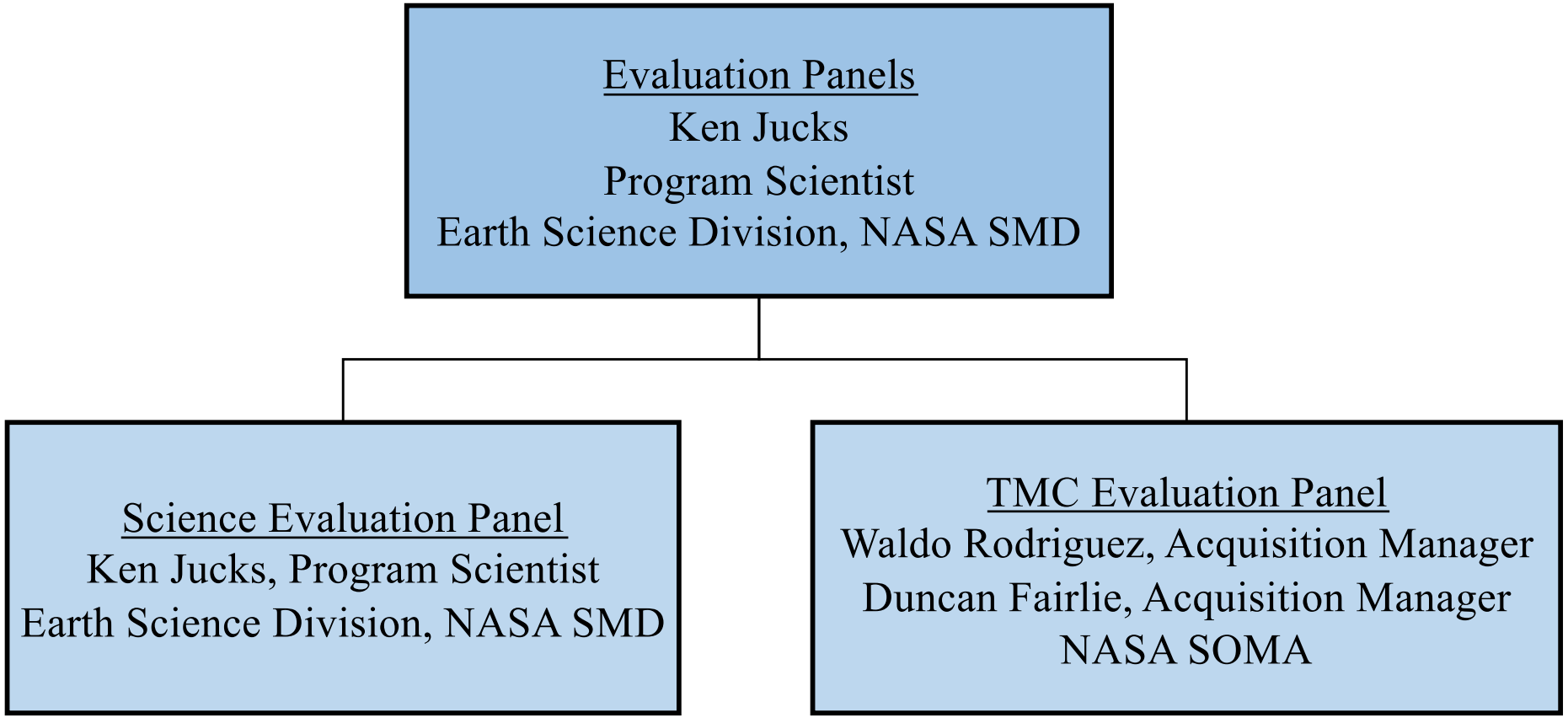
All investigations proposed in response to this solicitation must support the goals and objectives of the Earth Venture Program Element (Section 2 of the EVM-3 AO), must be implemented by Principal Investigator (PI) led investigation teams (Section 5.4.1), and must be implemented through the provision of complete spaceflight missions (Section 5.3.1).

The EVM-3 AO includes AO-provided Access to Space (Section 5.10.3) and allows for Alternative Access to Space (Section 5.10.4).

The cost of all standard AO-provided access to space is to be reflected as a reduction in the Adjusted AO Cost Cap (Section 5.10.3).

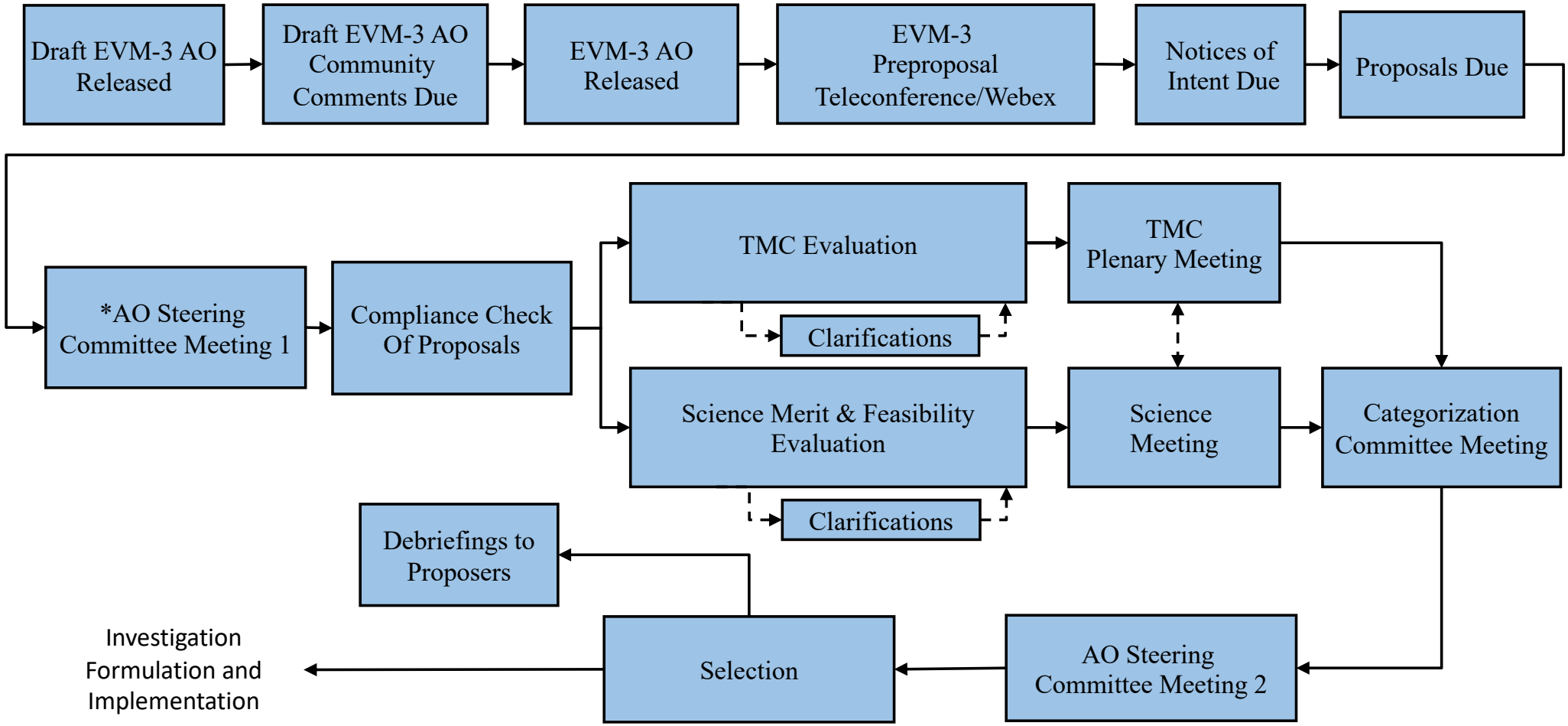
Introduction

Evaluation Organization



Introduction

EVM-3 AO Solicitation, Evaluation and Selection Flow



*Or an alternative simplified procedure such as one or more direct meetings with the NASA SMD DAAR.

Compliance Checklist

Compliance Checklist

Administrative

1. Electronic proposal received on time
2. Proposal on Large File Transfer (LFT) file received on time
3. Signature of PI and authorizing official included
4. Meets page limits
5. Meets general requirements for format and completeness (maximum 5.5 lines of text per vertical inch, maximum 15 characters per horizontal inch -- approximately 12 pt font)
6. Required appendices included; no additional appendices
7. Budgets are submitted in the required formats
8. All individual team members who are named on the cover page indicate their commitment through NSPIRES
9. All export-controlled information has been identified
10. Restrictions Involving China acknowledged on Electronic Cover Page

Compliance Checklist

Scientific

11. Addresses solicited science research programs
12. Requirements traceable from science to instruments to mission
13. Appropriate data archiving plan
14. Baseline science mission and threshold science mission defined

Compliance Checklist

Technical

15. Complete spaceflight mission (Phases A-F) proposed
16. Team led by a single PI
17. PIMMC within AO Cost Cap or Adjusted AO Cost Cap, as applicable
18. Phase A costs within Phase A cost limit
19. Contributions within contribution limit
20. Co-investigator costs in budget
21. Launch readiness prior to launch readiness date
22. Includes table describing non-U.S. participation
23. Includes letters of commitment from funding agencies for non-U.S. participating institutions
24. Includes letters of commitment from all U.S. organizations offering contributions
25. Includes letters of commitment from all major partners and non-U.S. institutions providing contribution of efforts of anyone on the Proposal Team.

EVM-3 Proposal Evaluation

EVM-3 Proposal Evaluation

Principles of the Evaluation

- All proposals are to be treated fairly and equally.
- Merit and Risk are to be assessed on the basis of the material in the proposal and the clarification process.
- Ratings reflect the written strengths and weaknesses.
- Everyone involved in the evaluation process is expected to act in an unbiased objective manner; advocacy for particular proposals is not appropriate and is not permitted.

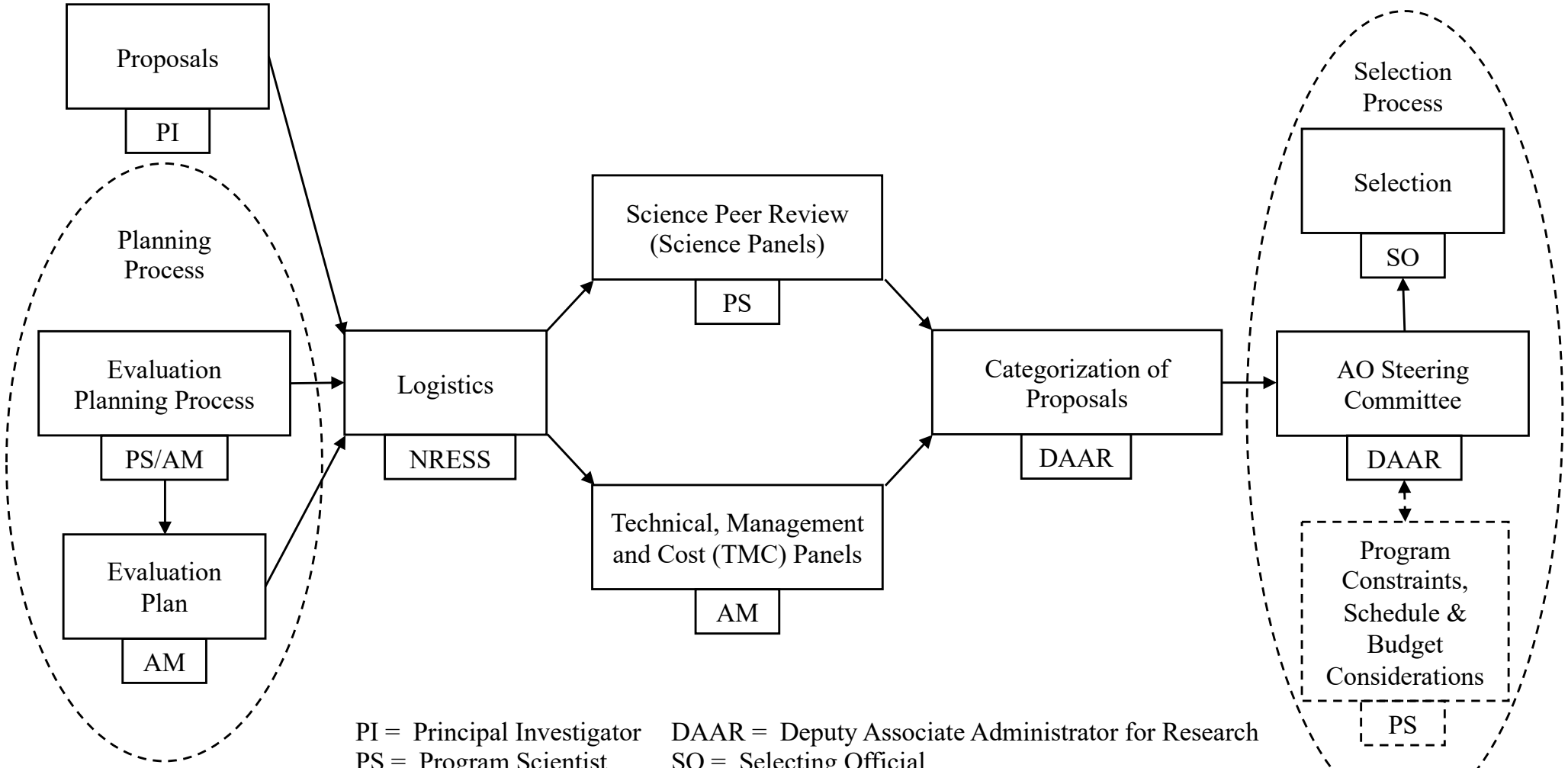
EVM-3 Proposal Evaluation

Evaluation Ground Rules

- All proposals are evaluated to uniform standards established in the EVM-3 AO, and without comparison to other proposals.
- All evaluators are experts in the areas that they evaluate.
- Specialist Evaluators (to provide special technical expertise to the TMC Panel) and non-panel/mail-in Reviewers (to provide special science expertise to the Science Panels) may be utilized, respectively, based on need for expertise in a specific technology or science that is proposed.

EVM-3 Proposal Evaluation

Evaluation Responsibilities



PI = Principal Investigator
PS = Program Scientist
AM = Acquisition Manager
DAAR = Deputy Associate Administrator for Research
SO = Selecting Official
NRESS = NASA Research and Education Support Services

EVM-3 Proposal Evaluation

Conflict of Interest Mitigation (1 of 3)

- The NRESS contractor cross-checks all the Science Panel members against the lists of personnel and organizations identified in each proposal submitted to determine whether any organizational Conflict of Interest (COI) exists.
- Cornell Technical Services (CTS) cross-checks all contracted TMC Panel members against the lists of personnel and organizations identified in each proposal submitted to determine whether any organizational COI exists.
- Additionally, all contracted evaluators are required to divulge any other financial, professional, or potential personal conflicts of interest, and whether they work for a profit-making company that directly competes with any profit-making proposing organization.
- All Civil Service (CS) Intergovernmental Personnel Act (IPA) Assignee evaluators are required to self-certify their COI status by reviewing a combined listing of individuals and organizations associated with the proposals submitted.

EVM-3 Proposal Evaluation

Conflict of Interest Mitigation (2 of 3)

- The Science evaluators are required to notify the EVM-3 Program Scientist, Dr. Ken Jucks, in case of a potential conflict that arises during the evaluation. The TMC evaluators are required to notify the NASA Science Office for Mission Assessments (SOMA) Acquisition Manager, Dr. Waldo Rodriguez, in case there is a potential conflict that arises during the evaluation.
- All known conflict of interest issues are documented and a COI Mitigation Plan is developed to minimize the likelihood that an issue will arise in the evaluation process. Any potential COI issue is discussed with the EVM-3 Program Scientist and the NASA SMD Deputy Associate Administrator for Research (DAAR) and documented in the COI Mitigation Plan. All determinations regarding possible COIs that arise are logged as an appendix to the COI Mitigation Plan.

EVM-3 Proposal Evaluation

Conflict of Interest Mitigation (3 of 3)

- If any previously unknown potential conflict of interest arises during the evaluation, the conflicted member(s) is notified to stop evaluating proposals immediately, and the Panel Chair is notified immediately. If a COI is confirmed, the conflicted member(s) is immediately removed from the evaluation process, and steps are taken expeditiously, to remove, mitigate, or accept any actual or potential bias imposed by the conflicted member(s). The steps are documented in the COI Mitigation Plan.
- Members of the Science and TMC panels are prohibited from contacting anyone outside their panel for scientific/technical input, or consultation, without the prior approval of the EVM-3 Program Scientist.

EVM-3 Proposal Evaluation

Protection of Proprietary Data (1 of 2)

- All proposal and evaluation materials are considered proprietary.
- Viewing of proposal materials is only on a need-to-know basis.
- Each non-CS or non-IPA evaluator signs a Non-Disclosure Agreement (NDA) that is required to be on file at NRESS prior to any proposals being distributed to that evaluator. CS and IPA evaluators are under statutory obligations.
- The proposal materials that each evaluator has access to is documented.
- Evaluators are not permitted to discuss proposals with anyone outside their Science or TMC Panel.

EVM-3 Proposal Evaluation

Protection of Proprietary Data (2 of 2)

- All proprietary information exchanged between evaluators is exchanged via the secure NASA Solicitation and Proposal Integrated Review and Evaluation System (NSPIRES), via the secure Remote Evaluation System (RES), via the secure NASA Large File Transfer (LFT) system, via secure Webex, via NASA Google docs or via encrypted email, parcel post, fax, or regular mail.
- Web conferences or teleconferences among Panel evaluators are conducted via controlled Web conference/teleconference lines.
- Evaluators' electronic and paper evaluation materials are deleted/destroyed when the evaluation process is complete. Archival copies are maintained in the NASA SOMA vault.

EVM-3 Proposal Evaluation

Evaluation Criteria

1. Scientific Merit of the Proposed Investigation (Section 7.2.2 of the EVM-3 AO)
2. Scientific Implementation Merit and Feasibility of the Proposed Investigation (Section 7.2.3)
3. TMC Feasibility of the Proposed Mission Implementation (Section 7.2.4)

Weighting: the first criterion is weighted approximately 40%; the second and third criteria are weighted approximately 30% each.

Selection Factors

- Programmatic considerations
- PI-Managed Mission Cost (PIMMC)

Science Evaluation

Science Evaluation

Science Panel Composition and Organization (1 of 2)

- The EVM-3 Program Scientist leads the Science Panel.
- Science Panel evaluators are typically, but not exclusively, recruited from the academic, governmental, and industrial research communities.
- The approach to evaluator identification is reviewed by an SMD Steering Committee convened by the DAAR.
- The Science Panel evaluates Scientific Merit of the Proposed Investigation (Section 7.2.2 of the EVM-3 AO) and Scientific Implementation Merit and Feasibility of the Proposed Investigation (Section 7.2.3).
- The science evaluation is conducted via a single Science Panel, and sub-panels may be employed, depending on the number and variety of proposed investigations. Any sub-panel is led by a NASA Civil Servant and may be co-chaired by a member from the scientific community. Sub-panels may have an Executive Secretary.

Science Evaluation

Science Panel Composition and Organization (2 of 2)

- Each proposal is reviewed by assigned panel members.
  - The Lead Reviewer for each proposal leads the discussion. At least two secondary (supporting) reviewers are assigned to each proposal.
  - At the request of the Lead Reviewer, a supporting reviewer takes notes on the discussion.
- The TMC Panel may provide comments and questions to the Science Panel, and vice versa.
- The Science Panel may request Scientific Implementation Merit and Feasibility of the Proposed Investigation clarifications from proposers on Potential Major Weaknesses (PMWs) identified during the evaluation process.

Science Evaluation

Science Evaluation Procedures (1 of 3)

- Each Science Panel member reviews Proposals as directed by the Chair.
- If special science expertise is required, the Science Panels may utilize non-panel/mail-in reviewers to assist with one or more proposals. Non-panel/mail-in reviewers evaluate only those parts of proposals pertinent to their scientific specialties.
- Each proposal is discussed by the evaluators in web conferences.
  - Findings in the form of Strengths and Weaknesses provide the basis for initial panel discussions.
  - Each Evaluator provides an individual evaluation prior to web conferences.
  - The proposal and the evaluations by the individual evaluators, including non-panel evaluators, are discussed during web conferences.

Science Evaluation

Science Evaluation Procedures (2 of 3)

- Following the web conferences, the Lead Evaluator captures/synthesizes individual evaluations, including discussion, and generates the Draft Evaluation including draft findings. Draft findings include PMWs to be sent to the proposers for clarification.
- Merit grades are not assigned prior to receiving responses to the PMW clarification requests.

• A Science Panel Meeting is held upon completion of individual reviewer evaluations for all proposals.

- The Science Panel compiles all the findings for each proposal.
- For each proposal, the Chair or designated Lead Reviewer leads the discussion, summarize the proposed investigation, and document the results.
- The PMWs clarifications provided by the PIs are considered and the Science Panel composes a panel summary review for each proposal.

Science Evaluation

Science Evaluation Procedures (3 of 3)

- Evaluations of all proposals are reviewed during the Science Panel Meeting to ensure that standards have been applied uniformly and in an appropriate and fair manner.
- After the discussion, each member of the Panel or sub-panel assigns a merit rating for Scientific Merit (Form A) and for Scientific Implementation Merit and Feasibility (Form B) to each proposal. Non-panel reviewers do not assign ratings.

Science Evaluation

Science Evaluation Criteria and Factors (1 of 2)

Scientific Merit of the Proposed Investigation*

Factor A-1. Compelling nature and scientific priority of the proposed investigation's science goals and objectives.

Factor A-2. Programmatic value of the proposed investigation.

Factor A-3. Likelihood of scientific success.

Factor A-4. Scientific value of the Threshold Science Mission.

Factors A-1 through A-3 are evaluated for the Baseline Science Mission assuming it is implemented as proposed and achieves technical success. Factor A-4 is similarly evaluated for the Threshold Science Mission.

*Refer to Section 7.2.2 of the EVM-3 AO for details.

Science Evaluation

Science Evaluation Criteria and Factors (2 of 2)

Scientific Implementation Merit and Feasibility of the Proposed Investigation*

Factor B-1. Merit of the instruments and mission design for addressing the science goals and objectives.

Factor B-2. Probability of technical success.

Factor B-3. Merit of the data analysis, data availability, and data archiving plan.

Factor B-4. Science resiliency.

Factor B-5. Probability of science team success.

*Refer to Section 7.2.3 of the EVM-3 AO for details.

Science Evaluation

Science Evaluation Products

For each proposal, this process results in Form A and Form B, that includes:

- Proposal title, PI name, and submitting organization;
- Proposal summary;
- Based on findings, adjectival median ratings for Scientific Merit of the Proposed Investigation (Form A) and for Scientific Implementation Merit and Feasibility of the Proposed Investigation (Form B), ranging from "Excellent" to "Poor"; half-grades (e.g. Very Good/Good) are permitted during polling, resulting in nine polling bins*;
- Summary rationale for the median rating;
- Narrative findings, identified as major or minor strengths or weaknesses;
- Comments to PI, comments to NASA*, and comments to the TMC Panel*. (optional)

*Items not provided to proposers.

Science Evaluation

Science Evaluation Products: Findings Definitions

Major Strength: An aspect of the proposal response that is judged to be of superior merit and can substantially contribute to the ability of the project to meet its scientific objectives.

Major Weakness: A deficiency or set of deficiencies taken together that are judged to substantially weaken the project's ability to meet its scientific objectives.

Minor Strength: An aspect of the proposal that is judged to contribute to the ability of the project to meet its scientific objectives.

Minor Weakness: A deficiency or set of deficiencies taken together that are judged to weaken the project's ability to meet its scientific objectives.

Note: Findings that are considered "as expected" are not documented on Forms A and B.

Science Evaluation

Science Evaluation Products: Grade Definitions

Excellent: A comprehensive, thorough, and compelling proposal of exceptional merit that fully responds to the objectives of the AO as documented by numerous and/or significant strengths and having no major weaknesses.

Very Good: A fully competent proposal of very high merit that fully responds to the objectives of the AO, whose strengths fully outbalance any weaknesses .

Good: A competent proposal that represents a credible response to the AO, having neither significant strengths nor weaknesses and/or whose strengths and weaknesses essentially balance .

Fair: A proposal that provides a nominal response to the AO, but whose weaknesses outweigh any perceived strengths .

Poor: A seriously flawed proposal having one or more major weaknesses (e.g., an inadequate or flawed plan of research or lack of focus on the objectives of the AO).

Note: Only Major Findings are considered in the adjectival rating.

TMC Evaluation

TMC Evaluation

TMC Evaluation Panel

- The Acquisition Manager, who is a Civil Servant in the NASA Science Office for Mission Assessments (SOMA) at NASA Langley Research Center (LaRC), leads the TMC Panel. NASA SOMA works directly for NASA Headquarters and is firewalled from the rest of NASA LaRC.

- TMC Panel evaluators are a mix of the best non-conflicted contractors, consultants, and Civil Servants who are experts in their respective fields.
  - Evaluators read their assigned proposals.
  - Evaluators provide individual findings on their assigned proposals.
  - Evaluators provide ratings of proposals that reflect final findings.

- Additionally, specialist evaluators may be called upon in cases where technical expertise that is not represented on the panel is needed.
  - Specialist Evaluators evaluate only those parts of a proposal that are specific to their particular expertise.
  - Specialist Evaluators provide only findings; they do not provide ratings.

- A Consistency Assessment Team that is a subset of the TMC Panel will review all findings throughout the evaluation to ensure similar findings (e.g., major vs. minor for similarly worded findings) are treated the same across different proposals.

TMC Evaluation

TMC Evaluation Criteria and Factors

TMC Feasibility of the Proposed Mission Implementation*

Factor C-1. Adequacy and robustness of the instrument implementation plan.

Factor C-2. Adequacy and robustness of the mission design and plan for mission operations.

Factor C-3. Adequacy and robustness of the flight systems.

Factor C-4. Adequacy and robustness of the management approach and schedule, including the capability of the management team.

Factor C-5. Adequacy and robustness of the cost plan, including cost feasibility and cost risk.

*Refer to Section 7.2.4 of the EVM-3 AO for details.

TMC Evaluation

TMC Evaluation Panel: Other Considerations (1 of 2)

The panel evaluating the "TMC Feasibility of the Proposed Mission Implementation" may provide comments to NASA regarding the feasibility of the proposed access to space. While these comments are not considered in the evaluation, they may be considered during selection.

Student Collaboration proposals, if any, are evaluated only for the impact they have on overall TMC mission feasibility to the extent that they are not separable; Student Collaboration proposals are not penalized for any inherent higher cost, schedule, or technical risk, as long as the Student Collaboration is shown to be clearly separable from the implementation of the Baseline Science Mission.

TMC Evaluation

TMC Evaluation Panel: Other Considerations (2 of 2)

The panel evaluating the "TMC Feasibility of the Proposed Mission Implementation" will provide comments to NASA regarding the extent to which the proposed investigation provides career development opportunities to train the next generation of engineering and management leaders. While these comments will not be considered in the evaluation, they may be considered during selection.

Programmatic risks may be assessed but are not included in the TMC risk rating. Examples include but are not limited to: stability and reliability of proposed partners and their contributions, and environmental assessment approvals.

TMC Evaluation

TMC Evaluation Cost Analysis

- The evaluation assesses the cost risk, cost realism, and cost completeness including the basis of estimate, the adequacy of the approach, the methods and rationale used to develop the estimated cost, the discussion of cost risks, the allocation of cost reserves by phase, and the team's understanding of the scope of work.
- An independent cost verification of the proposed cost for Phases A-D is performed using at least two independent cost models.
- An independent cost verification of the proposed cost for Phase E is performed using at least two cost models.
- The likelihood and cost impact of major weaknesses is assessed.
- Cost threat impacts to the proposed unencumbered cost reserves is assessed (see slides 39).
- The adequacy of the remaining unencumbered cost reserves is assessed.
- All draft Forms C and Cost Evaluation Summaries (CESs) are completed prior to the Plenary Meeting.
- The entire panel participates in the Cost deliberations.
- All information from the entire evaluation process is considered in the final cost assessment.
- All cost findings are included on the Form C and considered in the TMC Risk Rating.

TMC Evaluation

TMC Evaluation Cost Analysis: Cost Threat Matrix

- The *likelihood* and *cost impact*, if any, of each weakness is stated as "This finding represents a cost threat assessed to have an Unlikely/Possible/Likely/Very Likely/Almost Certain likelihood of a Very Minimal/Minimal/Limited/ Moderate/Significant/Very Significant cost impact being realized during development and/or operations, which results in a reduction from the proposed unencumbered reserves."
- The *likelihood* is the probability range that the *cost impact* will materialize.
- The *cost impact* is the current best estimate of the range of costs to mitigate the threat.
- The cost threat matrix defines the adjectives that describe the *likelihood* and *cost impact*.
- The minimum cost threat threshold is $1M.

			Cost Impact (CI) % of PI-Managed Mission Cost to complete Phases B/C/D or % of Phase E not including unencumbered cost reserves or contributions					
	Likelihood of Occurrence	Weakness	Very Minimal 0.5% < CI ≤ 2.5% 1% < CI ≤ 2.5%	Minimal 2.5% < CI ≤ 5% 2.5% < CI ≤ 5%	Limited 5% < CI ≤ 10% 5% < CI ≤ 10%	Moderate 10% < CI ≤ 15% 10% < CI ≤ 15%	Significant 15% < CI ≤ 20% 15% < CI ≤ 20%	Very Significant CI > 20% CI > 20%
Likelihood (L, %)	Almost Certain (L > 80%)							
	Very Likely (60% < L ≤ 80%)							
	Likely (40% < L ≤ 60%)							
	Possible (20% < L ≤ 40%)							
	Unlikely (L ≤ 20%)							

Note: For each proposal the percentages in the above table will be converted to dollars by the cost estimator.

TMC Evaluation

TMC Evaluation Products: Findings

Major and minor strengths and weaknesses are defined as follows:

Major Strength: A facet of the implementation response that is judged to be well above expectations and can substantially contribute to the ability of the project to meet its technical requirements on schedule and within cost.

Minor Strength: A strength that is worthy of note and can be brought to the attention of Proposers during debriefings, *but is not a discriminator in the assessment of risk*.

Major Weakness: A deficiency or set of deficiencies taken together that are judged to substantially weaken the project's ability to meet its technical objectives on schedule and within cost.

Minor Weakness: A weakness that is sufficiently worrisome to note and can be brought to the attention of Proposers during debriefings, *but is not a discriminator in the assessment of risk*.

Note: Findings that are considered "as expected" are not documented in the Form C.

TMC Evaluation Products: Cost Risk Ratings (1 of 3)

Low Risk

- No cost threats have been identified by the TMC evaluation panel that reduce the proposed unencumbered cost reserves below the Appropriate Cost Reserves.
- The proposed investigation cost and the cost of all modelled lower Work Breakdown Structure (WBS) levels are greater than or equal to the lower bounds of the TMC Base Independent Cost Estimate error bars.
- The proposed investigation cost estimate is very well supported by the information in the proposal.

Low/Medium Risk

- No cost threats have been identified by the TMC evaluation panel that reduce the proposed unencumbered cost reserves below the Appropriate Cost Reserves.
- The proposed investigation cost and the cost of most modelled lower WBS levels are greater than or equal to the lower bounds of the TMC Base Independent Cost Estimate error bars.
- The proposed investigation cost estimate is well supported by the information in the proposal.

TMC Evaluation Products: Cost Risk Ratings (2 of 3)

Medium Risk

- Cost threats have been identified by the TMC evaluation panel that reduce the proposed unencumbered cost reserves below the Appropriate Cost Reserves.
- The proposed investigation cost or the cost of most modelled lower WBS levels are greater than or equal to the lower bounds of the TMC Base Independent Cost Estimate error bars.
- The proposed investigation cost estimate is mostly supported by the information in the proposal.

Medium/High Risk

- Cost threats have been identified by the TMC evaluation panel that reduce the proposed unencumbered cost reserves below the Appropriate Cost Reserves.
- The proposed investigation cost or the cost of most modelled lower WBS levels are lower than the lower bounds of the TMC Base Independent Cost Estimate error bars.
- The proposed investigation cost estimate is not well supported by the information in the proposal.

TMC Evaluation Products: Cost Risk Ratings (3 of 3)

High Risk

- Cost threats have been identified by the TMC evaluation panel that reduce the proposed unencumbered cost reserves significantly below the Appropriate Cost Reserves.
- The proposed investigation cost and the cost of most modelled lower WBS levels are significantly lower than the lower bounds of the TMC Base Independent Cost Estimate error bars.
- The proposed investigation cost estimate is not supported by the information in the proposal.

TMC Evaluation

TMC Evaluation Products: TMC Risk Ratings

Based on the narrative findings, each proposal is assigned one of three risk ratings, defined as follows:

Low Risk: There are no problems evident in the proposal that cannot be normally solved within the time and cost proposed. Problems are not of sufficient magnitude to doubt the proposer's capability to accomplish the investigation well within the available resources.

Medium Risk: Problems have been identified, but are considered within the proposal team's capabilities to correct within available resources with good management and application of effective engineering resources. Investigation design may be complex and resources tight.

High Risk: One or more problems are of sufficient magnitude and complexity as to be deemed unsolvable within the available resources.

Note: Only Major Findings are considered in the risk rating.

TMC Evaluation

TMC Evaluation Products: Form C

For each proposal, the TMC Evaluation results in a Form C that contains:

- The proposal title, PI name, and submitting organization;
- Based on the findings, an adjectival median Risk Rating for the TMC Feasibility of the Proposed Mission Implementation of "Low Risk", "Medium Risk" or "High Risk" as defined in page 44†;
- A summary rationale for the median TMC Risk Rating;
- An adjectival median Cost Risk Rating of "Low Risk", "Low/Medium Risk", "Medium Risk", "Medium/High Risk", or "High Risk" as defined in pages 41-43†;
- Narrative findings, identified as major or minor strengths or weaknesses as defined in page 40;
- Comments to the Proposer, comments to the Selection Official*, and comments to the Science Panel*,

*Items not provided to proposers. † The higher risk rating is reported when the result of polling is a tie between to adjacent risk ratings.

Potential Major Weaknesses Clarifications

PMWs Clarifications

PMWs Clarification Process: Modified from Previous AOs

Section 7.1.1 of the EVM-3 AO states that "Proposers should be aware that, during the evaluation and selection process, NASA may request clarification of specific points in a proposal; if so, such a request from NASA and the proposer's response must be in writing. In particular, before finalizing the evaluation, NASA will request clarification on specific, Potential Major Weaknesses (PMWs) in the *Scientific Implementation Merit and Feasibility of the Proposed Investigation* (see Section 7.2.3) and the *TMC Feasibility of the Proposed Mission Implementation* (see Section 7.2.4) that have been identified in the proposal. NASA will request clarification in a uniform manner from all proposers. Proposers will be allowed up to six pages (with some restrictions) for clarifications of PMWs associated with the *Scientific Implementation Merit and Feasibility of the Proposed Investigation* evaluation criterion and up to six pages (with some restrictions) for clarifications of PMWs associated with the *TMC Feasibility of the Proposed Mission Implementation evaluation criterion.* These clarifications may include text, tables and figures to address the PMWs and to provide additional information. The requirements and constraints of the clarification process will be addressed in the Pre-proposal Web Conference and the EVM-3 Evaluation Plan found in the EVM-3 Acquisition Homepage."

PMWs Clarifications

PMWs Clarification Process Requirements (1 of 4)

Clarifications Responses must conform to the following requirements:

Requirement 1: Proposers shall submit only one Clarification Response Document per criteria , i.e., one for Scientific Implementation Merit and Feasibility of the Proposed Investigation and one for the TMC Feasibility of the Proposed Mission Implementation.

Requirement 2: The Clarification Response Document shall be a single unlocked (e.g., without digital signatures) searchable Adobe Portable Document Format (PDF) file, composed of the response text, figures, and/or tables. Images (e.g., figures and scans) shall be converted into machine-encoded text using optical character recognition. Animations shall not be included. Links to materials outside of the response are not permitted. Do not insert any comment fields.

PMWs Clarifications

PMWs Clarification Process Requirements (2 of 4)

Requirement 3: The Clarification Response Document shall be presented in 8.5 x 11 inch paper (or A4). Text shall not exceed 5.5 lines per vertical inch and page numbers shall be specified. Margins at the top, both sides, and bottom of each page shall be no less than 1 inch if formatted for 8.5 x 11 inch paper; no less than 2.5 cm at the top and both sides, and 4 cm at the bottom if formatted for A4 paper. Type fonts for text, tables, and figure captions shall be no smaller than 12-point (i.e., no more than 15 characters per horizontal inch; six characters per horizontal centimeter). Fonts used within figures shall be no smaller than 8-point.

Requirement 4: The Clarification Response Document shall not exceed a total of six pages per criteria , i.e., six for Scientific Implementation Merit and Feasibility of the Proposed Investigation, and six for the TMC Feasibility of the Proposed Mission Implementation. Text, table(s) and figure(s) are permitted, however all material shall be within the six page limit per criteria and limitations in Requirement 3.

PMWs Clarifications

PMWs Clarification Process Requirements (3 of 4)

Requirement 5: The Clarification Response Document shall not contain International Traffic in Arms Regulations (ITAR), Export Administration Regulations (EAR), or classified material.

Requirement 6: Each PMW shall be addressed and each clarification response labelled with the PMW number provided. Each PMW clarification response shall only contain information relevant to the PMW.

Requirement 7: The proposers are free to provide any additional information on any criteria or requirements relevant to the proposed mission, e.g., for TMC Feasibility of the Proposed Investigation Implementation, advances in proposed technologies since proposal submission. However, this response together with the PMW clarification responses shall fulfill requirements above and not exceed the six total page limitation per Clarification Response Document.

PMWs Clarifications

PMWs Clarification Process Requirements (4 of 4)

Requirement 8: In support of each PMW clarification response, proposers shall not provide more than two references; references are restricted to peer reviewed literature. In support of any additional information response, proposers shall not provide more than three additional references; references are restricted to peer reviewed literature. Proposers shall not provide URLs with any of the responses.

Categorization

Categorization

Categorization Committee

Subsequent to the evaluation process, NASA convenes a Categorization Committee, composed wholly of Civil Servants and Intergovernmental Personnel Act appointees (some of whom may be from Government agencies other than NASA) and appointed by the Associate Administrator for the Science Mission Directorate.

The Categorization Committee considers the Scientific Merit of the Proposed Investigation, Scientific Implementation Merit and Feasibility of the Proposed Investigation, and TMC Feasibility of the Proposed Mission Implementation and, based on the evaluations, categorizes the proposals in accordance with procedures required by NFS 1872.404.

Categorization

Categories: Defined in NFS 1872.404(k)

Category I. Well-conceived, meritorious, and feasible investigations pertinent to the goals of the program and the AO's objectives and offered by a competent investigator from an institution capable of supplying the necessary support to ensure that any essential flight hardware or other support can be delivered on time and that data can be properly reduced, analyzed, interpreted, and published in a reasonable time. Investigations in Category I are recommended for acceptance and normally will be displaced only by other Category I investigations.

Category II. Well-conceived, meritorious, and feasible investigations that are recommended for acceptance, but at a lower priority than Category I, whatever the reason.

Category III. Meritorious investigations that require further development. Category III investigations may be funded for further development and may be reconsidered at a later time for the same or other opportunities.

Category IV. Proposed investigations which are recommended for rejection for the particular opportunity under consideration, whatever the reason.

Steering and Selection

Steering and Selection

Steering Committee

NASA convenes a Steering Committee, composed wholly of Civil Servants (some of whom may be from Government agencies other than NASA), appointed by the Associate Administrator for the Science Mission Directorate. The Steering Committee reviews the results of the evaluations and categorizations. The Steering Committee conducts an independent assessment of the evaluation and categorization processes regarding their compliance to established policies and practices, as well as the completeness, self-consistency, and adequacy of all supporting materials.

Steering and Selection

Selection Process

After the review by the Steering Committee, the final evaluation results are presented to the Associate Administrator for the Science Mission Directorate, who makes the final selection(s). As the Selection Official, the Associate Administrator for the Science Mission Directorate may consult with senior members of Science Mission Directorate and the Agency concerning the selections.

As part of the selection process, a decision is made as to whether or not any Category III proposals will receive funding for technology development.

Observers

Observers

Observers Approval and Compliance

Under special circumstances, Civil Servants, IPAs, and/or contractors with downstream implementation responsibilities may be invited to participate as observers to panel meetings.

- Observer participation must be approved by the Program Scientist and the Deputy Associate Administrator for Research.
- Observers must comply with SMD Policy Document SPD-17, Statement of Policy on Observers at Panel Reviews of Proposals. This policy is provided to all approved observers who have implementation responsibilities.

Approved Observers (this list will be updated as Observers are approved)

- Bruce Tagg, EVM-3 Program Executive, Earth Science Division, NASA SMD
- Gail Jackson-Skofronick, Earth Science Division, NASA SMD
- Emily Sylak-Glassman, Earth Science Division, NASA SMD

Approval

Approval

Dr. Waldo J. Rodriguez
Acquisition Manager, NASA SOMA

Dr. Kenneth W. Jucks
Program Scientist, Earth Science Division,
NASA Science Mission Directorate

Dr. Cindy L. Daniels
Director, NASA SOMA

Dr. Karen M. St Germain
Director, Earth Science Division,
NASA Science Mission Directorate

Approval on File.

Dr. Michael H. New
Deputy Associate Administrator for Research,
NASA Science Mission Directorate