ESE Implementation

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Agenda

- AO Overview
- Proposal Opportunity Period and Schedule
- NASA Management Policies
- Management Requirements
- Technical Requirements

Announcement of Opportunity (AO) Overview

- Proposed investigations will be evaluated, selected, and down-selected through a two-step competitive process and must:
  - support the goals and objectives of the Earth System Explorers Program
  - be implemented by Principal Investigator (PI)-led investigation teams
  - be implemented as complete spaceflight projects
- Implementation of several proposal requirements are deferred until Step 2; Proposals are required to account for expected resources needed to meet the requirements that have been deferred to Step 2

Additional details can be found in Section 1 of the AO

Announcement of Opportunity (AO) Overview

- NASA recognizes and supports the benefits of having diverse and inclusive scientific, engineering, and technology communities
  - NASA fully expects that such values will be reflected in the composition of all proposal teams as well as peer review panels science definition teams; and science investigation, mission and instrument teams
- Proposers are encouraged to include career development opportunities in science, engineering, and management areas of their proposed mission

Additional details can be found in Section 1 of the AO

EARTH SYSTEM EXPLORERS

National Aeronautics and Space Administration

NASA

Proposal Opportunity Period and Schedule

Proposal Opportunity Period and Schedule

AO Release Date	May 2, 2023
Preproposal Conference	May 22, 2023
Mandatory Notice of Intent to Propose Deadline at 11:59 p.m.	May 31, 2023
Electronic Proposal Submittal Deadline at 11:59 p.m. Eastern Time	August 2, 2023
Letters of Commitment Due (with Proposal)	August 2, 2023
Deadline for Augmented Submission via the NASA Box service at 4:30 pm EDT	August 4, 2023
Step-1 Selections Announced (target)	April 2024
Initiate Phase A Concept Studies (target)	April 2024
Phase A Concept Study Reports Due (target)	February 2025
Down-selection of Investigation(s) for Flight (target)	July 2025
First Launch Readiness Date	No later than April 2030
Second Launch Readiness Date	No later than April 2032

Additional details can be found in Section 3 of the AO

Key Points Regarding Launch Date Requirements

- There are only No Later Than (NLT) launch date requirements; there is no requirement for No Earlier Than (NET) launch dates

- Must submit proposal to target the April 2030 launch date with commentary regarding positive *and* negative impacts for switching to the April 2032 launch date

NASA Management Policies

NASA Management Policies

- Projects selected will be implemented in accordance with NASA space flight project management processes as defined by NASA Procedural Requirements (NPR) 7120.5
- The Associate Administrator for SMD has established the Earth System Explorers Program Office at NASA Goddard Space Flight Center (GSFC) to be responsible for project oversight
- The Earth System Explorers Program Office plays no role in the AO process; NASA SMD at NASA HQ will manage the evaluation and selection process

Additional details can be found in Section 4.1 of the AO

NASA Management Policies

- ESE projects selected from this AO have been determined to be Category 2 projects (per NPR 7120.5) with Class C payloads (per NPR 8705.4)
- The culture of science is to share your science results
  - The Principal Investigators (PI) of selected investigations are required to work in conjunction with a NASA Center or JPL, and with NASA HQ to communicate mission updates, science, and new discoveries
- The PI's inability to remain within budget or schedule, or failure at any time during formulation and implementation to maintain a level of science return at or above the Threshold Science Investigation, can result in project cancellation accompanied by appropriate contract action, which may involve termination

Additional details can be found in Section 4.1 of the AO

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Management Requirements

Management Requirements

- The Principal Investigator (PI) is accountable to NASA for success of the investigation with responsibility for its scientific integrity and execution within committed cost and schedule
- Project Manager (PM) oversees technical and programmatic implementation. PM works closely with PI to ensure the investigation meets objectives
- Project Systems Engineer (PSE) is responsible for the systems engineering management and process implementation of the project
- A proposed management approach must be provided to include an organizational chart clearly indicating how the mission team is structured with the decision-making authority and Key Management Team members described

Additional details can be found in Section 5.3 of the AO

Management Requirements

- Proposers must demonstrate clear understanding of specific risks inherent in formulation and implementation and approaches in mitigating these risks
- As a method of responding to cost and/or schedule growth in the proposed formulation and implementation of the project, Any set of descopes, which still allows the investigation to satisfy the objectives of the Threshold Science Investigation, may be proposed

Additional details can be found in Section 5.3 of the AO

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Technical Requirements

Technical Requirements

- AO solicits complete science investigations that are accomplished through a complete spaceflight mission
  - A complete spaceflight mission encompasses all appropriate project phases from Project Initiation (Phase A) to closeout (Phase F) as described in NPR 7120.5
- ESE missions are expected to meet requirements for safety, reliability, and mission assurance in the *ESE Mission Assurance Requirements (MAR) – Class C* document (in Program Library)
- The National Environmental Policy Act (NEPA) requires all federal agencies, including NASA, to consider the environmental impacts of their proposed actions and any reasonable alternatives to those actions
  - When responding to an announcement, proposers must include (National Environmental Policy Act) NEPA cost and schedule needs into their estimates

Additional details can be found in Section 5.2 of the AO

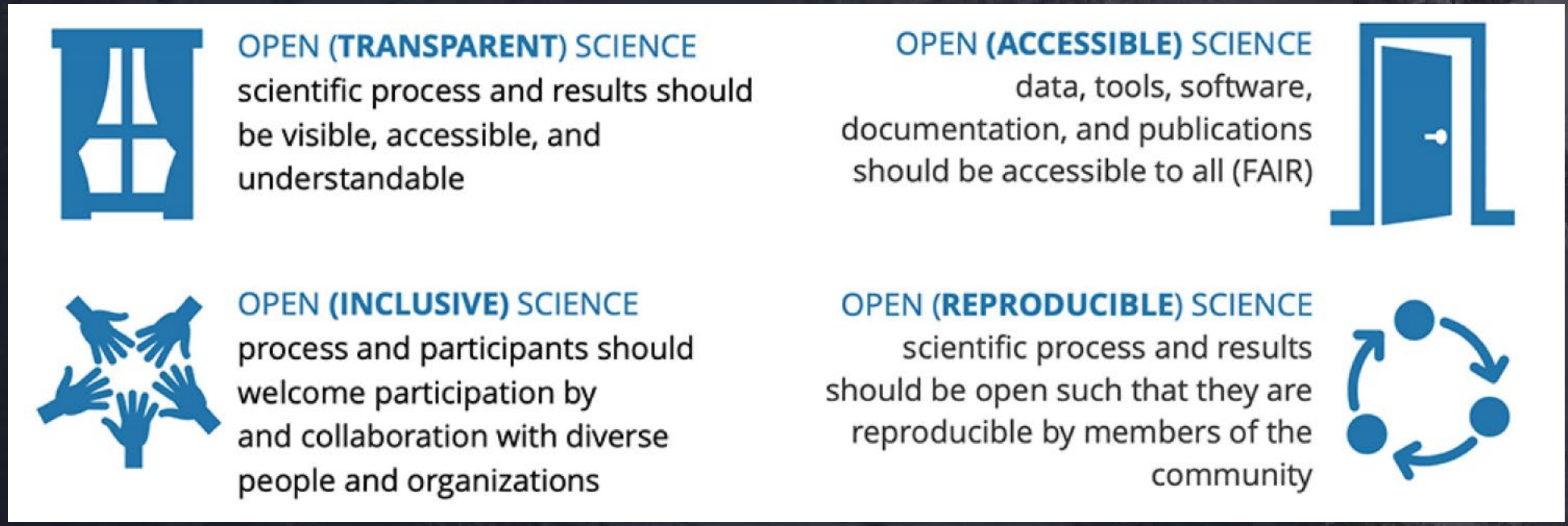
Technical Requirements

- NASA Policy Directive (NPD) 8074.1 directs that the NASA Mission Directorates “coordinate with SCaN for planning the space Communication & Navigation (C&N) requirements for all new missions, projects, AO’s and NASA partnerships”
  - Regardless of where the proposed mission is planning to operate, proposers are encouraged to engage with SCaN as early as possible
- If a mission has a need to fly in an existing orbital constellation, such as the Afternoon Constellation (A-train), the proposer should be aware that the constellation members may levy additional requirements on the mission

Additional details can be found in Section 5.2 of the AO

Technical Requirements

- By NASA policy, all science data returned from NASA missions are made available immediately in the public domain. No period of exclusive access is permitted



Additional details can be found in Section 5.2 of the AO