



ESE Program

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Agenda

- ESE Overview
- Cost Policies and Requirements



ESE Overview

Earth System Explorers (ESE) Overview

ESE was recommended by the National Academies of Sciences, Engineering, and Medicine *2017 Decadal Survey for Earth Science and Applications from Space*

- Cost-capped
- Modest and focused programmatic scope
- Medium-sized
- Ability to be developed quickly
- Executed on-orbit for 3 years or less
- ESAS-priority observations

ESD Flight HQ

Earth Systematic Missions (ESM) Program

NASA Directed

GSFC
(ESMPO-G)

JPL
(ESMPO-J)

Landsat Next
AOS
TSIS-2
PACE
CPF

MC
SBG
Sentinel-6B
NISAR
SWOT
CRISTAL

Earth System Explorers (ESE) Program

Competed

GSFC

TBD

Earth System Science Pathfinder (ESSP) Program

Competed

LaRC

INCUS
GLIMR
Libera
GeoCarb

MAIA
PREFIRE
TROPICS

Higher Cost

Lower Cost

Lower Risk

Higher Risk

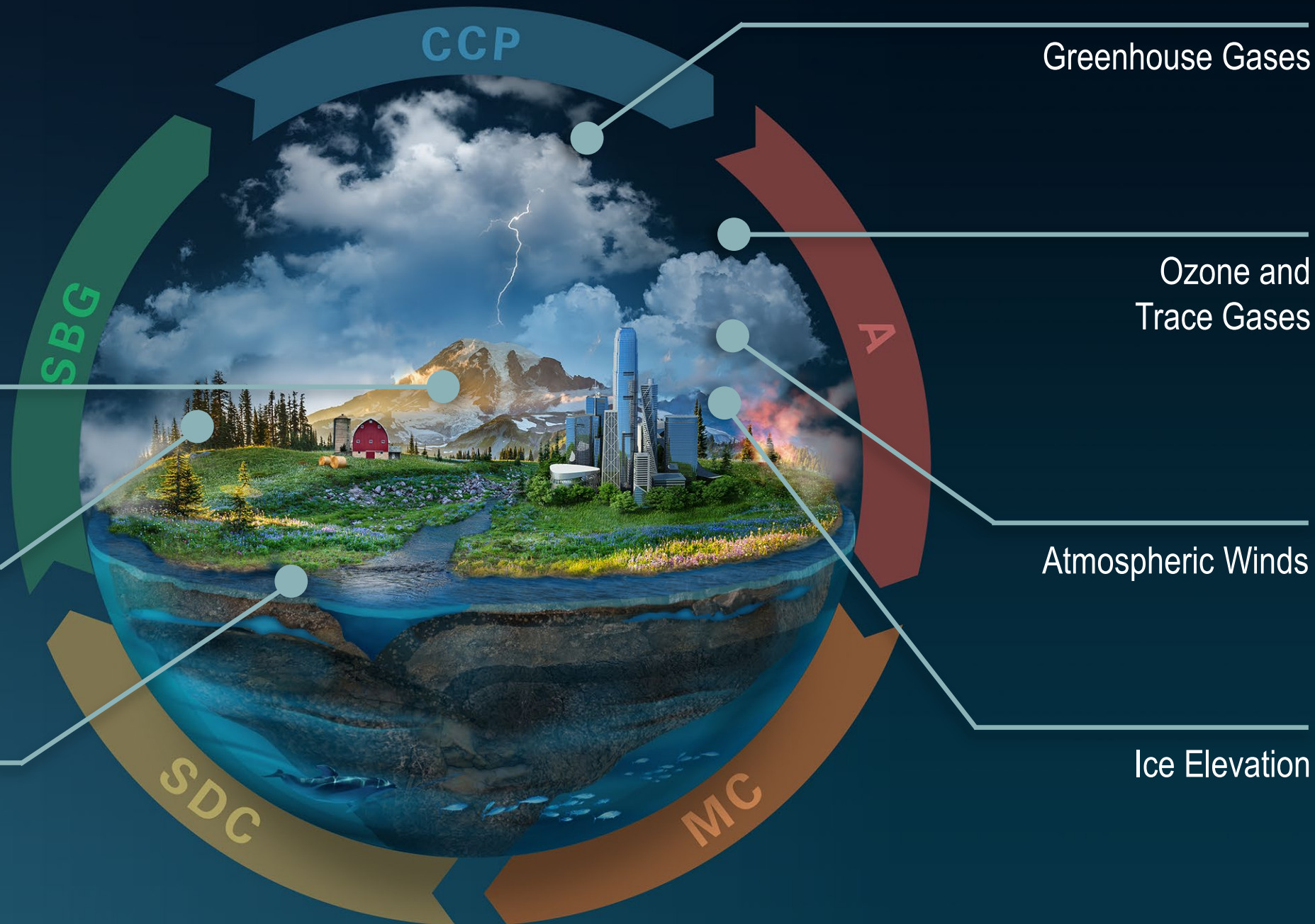
EARTH SYSTEM OBSERVATORY

INNOVATION & COMPETITION
EARTH EXPLORER MISSIONS

Snow Depth and
Water Content

3D Ecosystem
Structure

Ocean Surface
Winds and Currents



Greenhouse Gases Targeted Observable

- At least one of the estimated four selected proposals will prioritize the Greenhouse Gases Targeted Observable
- This is consistent with the Administration's priorities and urgent national need for understanding and addressing climate change and reducing greenhouse gas emissions

“NASA prioritizes understanding how our home planet is changing -- and greenhouse gases play a central role in that understanding. We are committed to making key methane and carbon dioxide observations, integrating them with measurements collected by other national, international, and private sector missions, and making actionable information available to communities and organizations who need it to inform their decisions.”

- Dr. Karen St. Germain, NASA ESD Director



Cost Policies and Requirements

Cost Requirements

- PI-Managed Mission cost (PIMMC), including all mission phases, excluding cost of launch vehicles, is capped at the AO Cost Cap of \$310M in FY 2024 dollars
- Step-1 selected proposers will be awarded a contract to conduct Phase A concept studies, capped at \$5M FY 2024 dollars
- Proposals may use estimates derived from models or cost estimating relationships from analogous missions for cost estimate
- Proposals that are unable to show adequate unencumbered cost reserved are likely to be judged high-risk and not selected

Additional details can be found in Section 5.6 of the AO

Cost Policies

- PIMMC is the cost proposed by the PI's implementation team for the development and execution of the proposed project during Phases A through F
- Examples of PIMMC
 - Development activities (e.g., instrument development, spacecraft development, management, software, testing, etc)
 - Launch services outside standard services provided by NASA
 - Subcontracting costs and fees
 - Insurance
 - Implementation of space systems protection requirements
 - All labor (contractor and Civil Servant)
 - Science Co-Is and all others required for investigation, data analysis, and publishing results
- Enhanced PIMMC is the PIMMC plus the cost of optional components such as the Science Enhancement Option and is deferred until Step 2

Additional details can be found in Section 4.3 of the AO

Cost Policies

- ESE's planning budget can accommodate a selection at the AO Cost Cap with a typical funding profile over a nominal 4-5 year development period
- The Government's obligation to make awards is contingent upon the availability of sufficient appropriated funds

Additional details can be found in Section 4.3 of the AO

Cost Requirements

Accounting for NASA Facilities and Personnel

	Identify in Proposal?	Include in PIMMC?	Funding Source	Comments
Civil Service Labor	Yes	Yes	SMD Program	Includes salaries and benefits
Civil Service Travel	Yes	Yes	SMD Program	
Other Direct/ Procurements	Yes	Yes	SMD Program	Includes procurements as typically identified by flight projects in NASA N2 budget database
CESO	Yes	Yes	SSMD	Applied to NASA-provided labor, civil servants and on-site contractors
AM&O	No	No	SSMS	
NASA Contributed Costs	Yes	No	Identify	Must be non-SMD
Non-NASA Federal Government	Yes	Yes	SMD Program	If NASA funding is requested for the non-NASA Federal Government agency
Contributions	Yes	No	Identify	Includes all non-NASA contributions

Additional details can be found in Section 5.6 of the AO