

National Aeronautics and  
Space Administration



# EXPLORE EARTH

## STV Community Meeting

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# EARTH SYSTEM OBSERVATORY

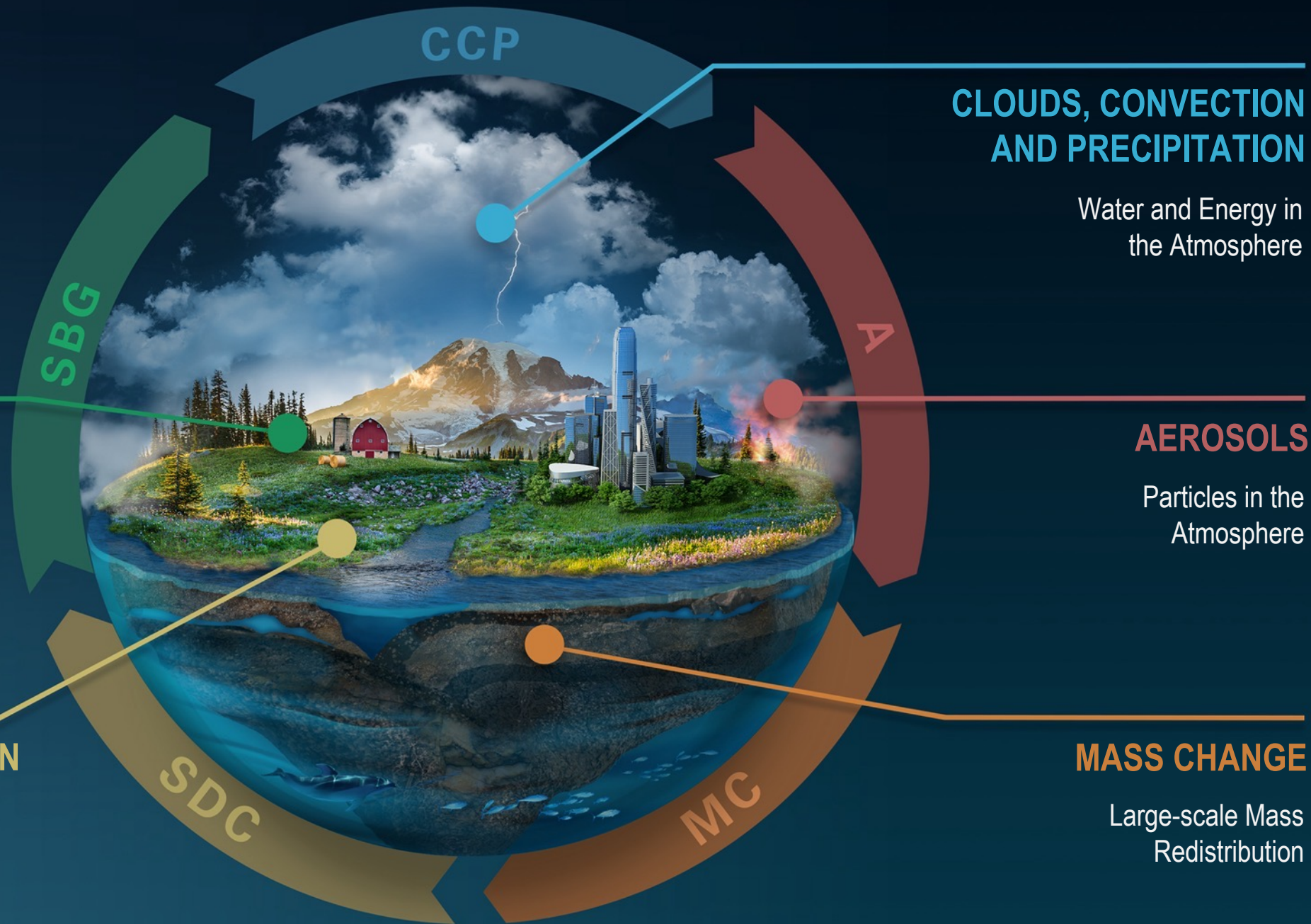
INTERCONNECTED CORE MISSIONS

## SURFACE BIOLOGY AND GEOLOGY

Earth Surface & Ecosystems

## SURFACE DEFORMATION AND CHANGE

Earth Surface Dynamics





# Earth Science to Action Strategy







# Earth Science to Action Strategy



Earth Science to Action

## Public Understanding & Exchange

- STV benefits convey to life, property, infrastructure, agriculture, land and maritime navigation, with knowledge shared through partners (e.g., FEMA, USDA, NOAA)

## Solutions & Societal Value

- STV partners will integrate situational and forecasting products for policy and management decisions for people, infrastructure, and natural resources
- Relevance at local to Federal levels

## Earth System Science & Applied Research

- STV will map geological hazards and impacts of disasters
- Track coastal change, ice sheet processes, and connections to sea level
- Map ecosystems, carbon storage, biodiversity, deforestation, and wildfires
- Quantify changes in the water cycle and track floods

## Foundational Knowledge, Technology, Missions, & Data

- STV builds on NASA's Earth observations over the last several decades with high-resolution, repeat, global data products:
  - bare surface land topography, ice topography, vegetation structure, shallow water bathymetry, and snow depth



# Goals for the STV Community in the Next ~2-3 Years



## Position STV as a priority observing system identified in the next Decadal Survey

1. Science and applications case – *Refine SATM and STV's key roles in the Earth Action pyramid*
2. Targeted technology maturation – *Advance the most beneficial and promising solutions*
3. Community OSSE modeling capability – *Support preliminary architecture studies*
4. Coordinated field campaigns – *Advance joint study sites for coordinated observations*
5. Heritage – *Leverage STV pathfinders (e.g., ICESat-2, GEDI, NISAR, QUAKES, possible ESE, etc.)*
6. Publication – *Peer reviewed journal articles including synthesis papers*
7. Uniqueness – *Clarify the unique role of STV in underpinning and adding to the ESO*
8. Community – *Build a strong community with participation, input, and buy in*

## Notional Decadal Survey Schedule



**EARTH  
SYSTEM  
OBSERVATORY**



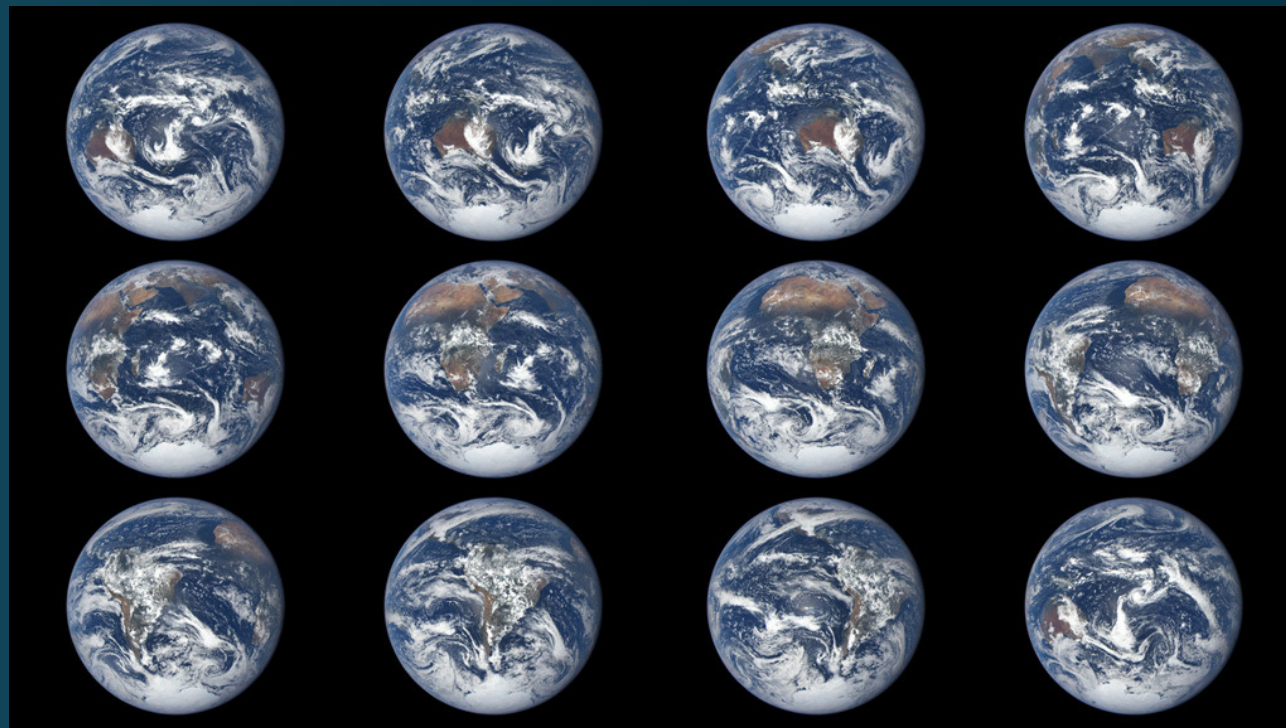


# Get Involved



## Opportunities to Contribute

- Community meetings – *Welcome to the STV Incubation Team!*
- Working group participation
- ROSES-2024 Decadal Survey Incubation call



*It's Time to Map the Earth in 4D!*