

National Aeronautics and
Space Administration



Cross-Divisional Prizes and Challenges

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Cross-SMD Prizes and Challenges

This effort represents an early open source science inspired initiative to use prizes and challenges to help support the overall strategy and spur innovative, cross-divisional ideas, engaging both internal NASA community and eventually the general public.

Chair: Katie Baynes (ESD)

Team: Quang-Viet Nguyen (JASD), Steve Crawford (SMD)

CoE Collaborative Innovation: Carissa Callini, Steven Rader

Building off Past Successes: CoECI and the NASA Tournament Lab

The Center of Excellence for Collaborative Innovation (CoECI) collaborates with innovators across NASA and the Federal Government to generate ideas and solve important problems by working with global communities via the NASA Tournament Lab.

<https://www.nasa.gov/coeci/ntl>



NASA @ Work Internal Solicitation



Using NASA Science Data and Computing for Cross-Disciplinary Science

Do you have an idea for using data from Earth observation to help us better understand physical interactions on other planets?

Have you thought about how to use data about our sun to inform our understanding of other systems?

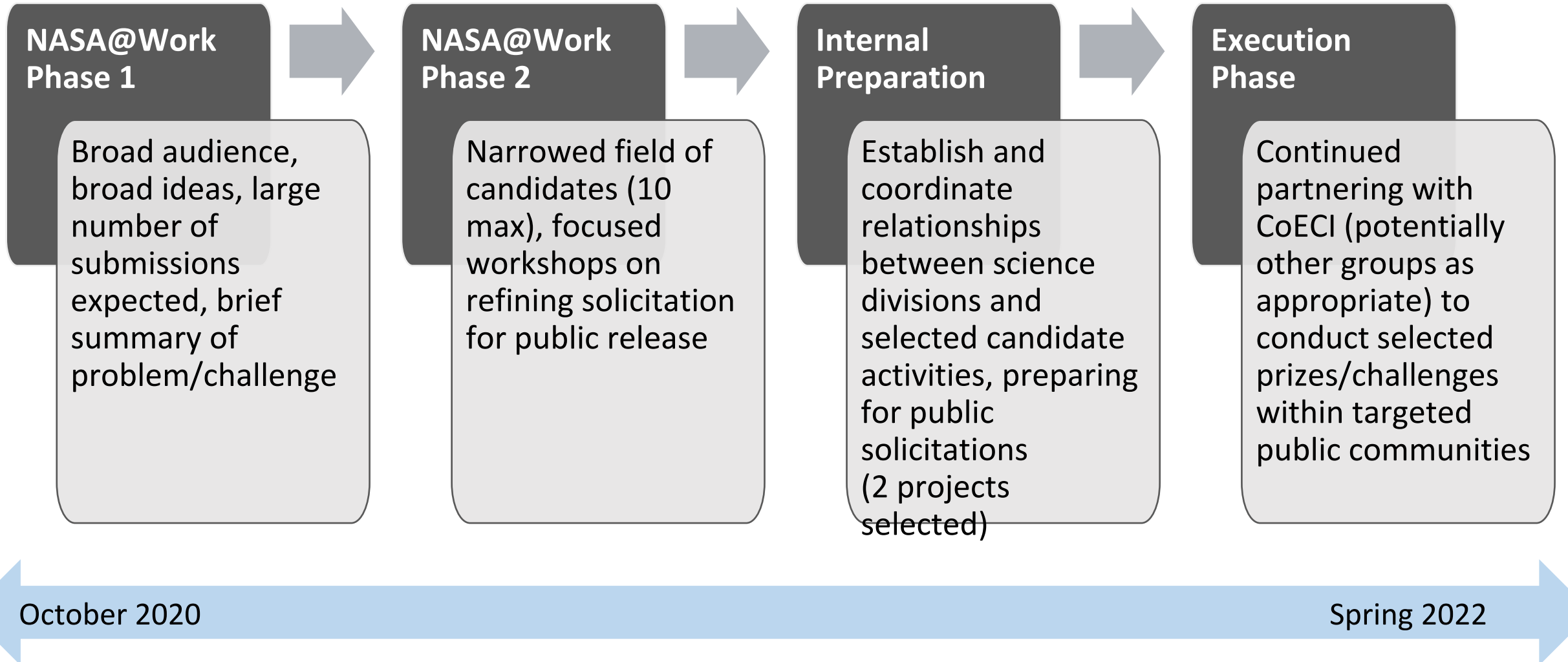
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NASA's Science Mission Directorate Strategic Data Management Working Group (SDMWG) is looking for ideas that could be turned into topics for significant prizes and challenges focusing on utilizing NASA's free and open science data from multiple science disciplines. Science Mission Directorate (SMD) has allocated to put toward these challenge ideas. We expect up to 7 challenge ideas to be selected for funding and implementation.

[Browse Ideas](#)

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Multi-Staged Solicitation and Execution



Leveraging ML for Data Constrained Planetary Mission Instrumentation

PI: Victoria da Poian, GSFC

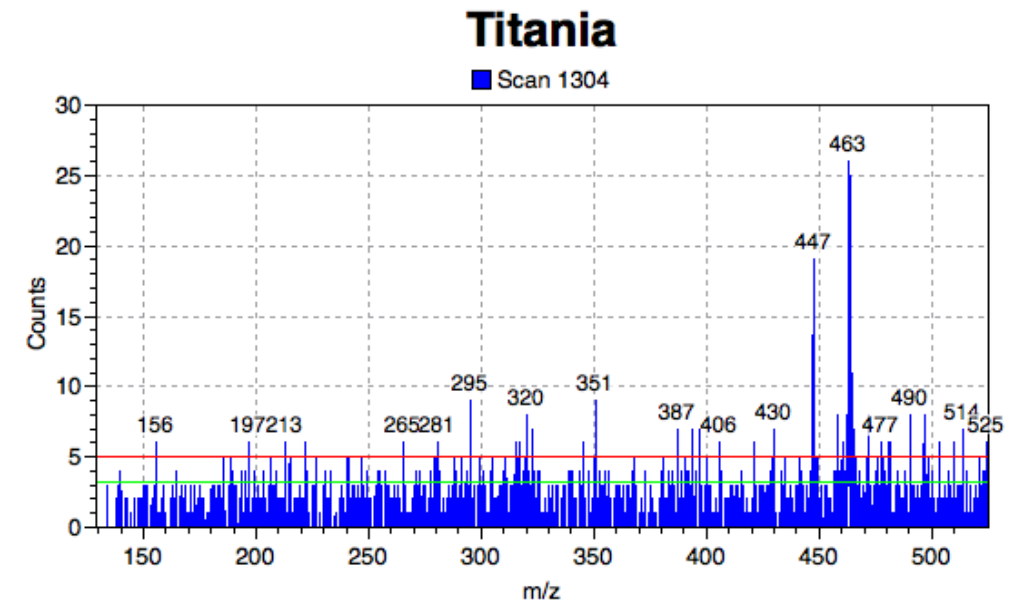
Having a clear a streamlined pipeline supporting planetary science exploration missions

Short-term: Earth-based in order to support scientists in their decision-making process

Long-term: on the instrument, onboard the mission to enable science autonomy

Challenge Objective:

To develop innovative approaches that can most accurately classify the chemical composition of material samples taken on planetary missions by leveraging data collection terrestrially



DRIVEN DATA

Comet Detection using SOHO/LASCO data

PI: Ekaterina Verner, HQ

During more than 25 years of operation SOHO/LASCO instrument identified more than 4200 comets, most of them being very faint.

Challenge Objective:

To build AI/ML based approach which can help to identify the faintest noise-level comets by reducing the background noise in the SOHO/LASCO data.

