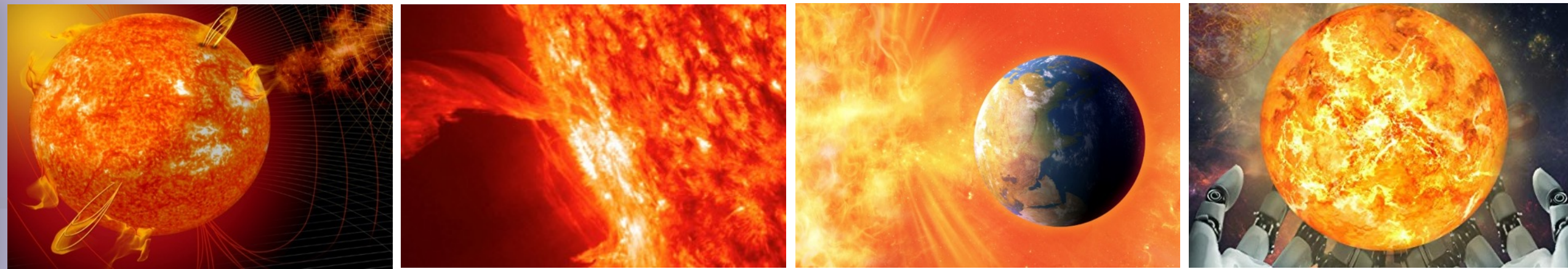


NASA Heliophysics SmallSat for Science Research - Research and Technology Program, Explorers Program & Solar Terrestrial Probe Program

National Aeronautics and
Space Administration



HFORT: Heliophysics Flight Opportunities for Research and Technology

HEP: Heliophysics Explorers Program

STP RideShare: Solar Terrestrial Probes RideShare

Amy Winebarger, Dan Moses, & Roshanak Hakimzadeh
NASA Headquarters

ROSES CubeSat Opportunities

Heliophysics Flight Opportunities for Research and Technology – H-FORT

- 2019 Selections imminent
- 2020 Proposals due March 26, 2021 (tomorrow)
- 2021 Proposals due February 24, 2022

What we learned from 2019

- 2019 funded a formulation phase and had two phase down select
- Helpful for missions that required additional times/funds for mission development
- Two reviews were inefficient for a yearly competition
- Started Heliophysics Flight Opportunities Studies (H-FOS) to fund pre-formulation phase (similar to AS³)

ROSES CubeSat Opportunities

H-FORT : Changes in 2020

- Separated Heliophysics Low Cost Access to Space (H-LCAS: sounding rockets, balloons, airborne) into its own competition
- Allowed platforms under H-FORT:
 - CubeSat/SmallSat up to 27 U including constellations
 - Major Balloon Missions
 - Hosted Rideshares (e.g. ISS)
- Explicitly included both science and science-enabling investigations
- Increased allowed duration of mission (4 -> 5 years)
- Required “keep-alive” budget for up to 2 years – *RideShare is not driven by the CubeSat schedule*
- Added required gate reviews and Key Decision Points.
- Increased page limit to 30 pages

ROSES CubeSat Opportunities

H-FORT : What it takes to write a winning proposal

- Compelling science (or enabling compelling science) is key
- + Clear and well-defined Science Traceability Matrix
- + Reasonable and Realistic budget and schedule
- *Additional factors*, but not required: Training, technology development

H-FORT : Review plan

- First review will be standard science review
- Top proposals will receive an engineering & management review by WFF project office

H-FORT Program Officer

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Additional SmallSat Opportunities

Missions of Opportunity and Small Explorers

- MoO planned to accompany Explorer Announcement of Opportunity
- Next SMEX call mid 2022

Targeted Technology Demonstration Opportunities

- Recent successful STP MoO for Tech Demo
- Future TechDemo competitions expected

Other major HPD AOs

- Individually evaluated for feasibility of accompanying MoO (e.g. IMAP)

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