

National Aeronautics and Space Administration

# Heliophysics

Explorers PI Forum Crystal City, VA

**Guidance and Expectations** 



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## The First Explorer was a *Heliophysics* Investigation



#### A proud tradition

-Manage risk to achieve high-reward science -Maintain frequent access to space

Risk management

- Performance
- Cost
- Schedule

To achieve frequent access to space for highreward science, Explorers program *must* understand and manage risks.



### Heliophysics SMEX 2016 Step 1 Selections July 2017



FOXSI – NASA GSFC - PI: Christe

- Hard x-ray imaging of Sun : Flares (very big to very small) & AR
- ► MUSE LMSAL –PI: Tarbell
  - EUV simultaneous multi-slit/multi temperature spectroscopy of loops
- **PUNCH** SWRI PI: DeForest
  - Coronagraph and Heliospheric Imagers with 360° coverage
- **TRACERS** Univ. Iowa PI: Kletzing
  - Multi-smallsat measurements of precipitating particles in cusp region traced to reconnection sites at magnetosphere boundary
- ► MEME-X NASA GSFC PI: Moore
  - multi-smallsat measurements of ion outflow









Mission of Opportunity Small Complete Mission

- SunRISE Univ. Michigan PI: Kasper
  - Multi-smallsat phased array for *imaging* of Type II & Type III radio
- **AWE** Univ. Utah PI: Taylor
  - ISS-based global observations of gravity waves at top of mesosphere

Partner Mission of Opportunity – Univ. New Hampshire - Kucharek

- THOR-US participation in ES mission to characterize role of turbulence in magnetospheric-boundary plasma physics
- ➢ Pending ESA downselect of M5



**SunRISE** 

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THOR-US