Dr. Roshanak Hakimzadeh

Presentation to HPAC

INVESTING IN OUR FUTURE

- In 2020 the Heliophysics Technology Program was put in place

Vision:

- Enable New Realms of Heliophysics Knowledge and Capability

Mission:

- Advance science by disrupting the limits of what is measurable, observable and achievable in Heliophysics. With space-based advanced instrumentation capability, improved methodologies and novel mission concepts, set the tone for the future of the field, enabling science and missions that are not conceivable or achievable today.

- Heliophysics Technology Strategic Goals
  - Invest in novel and transformative technologies and mission concepts
  - Improve the likelihood of technological and scientific success
  - Optimize the return of our investment

HELIOPHYSICS TECHNOLOGY SOLICITATIONS

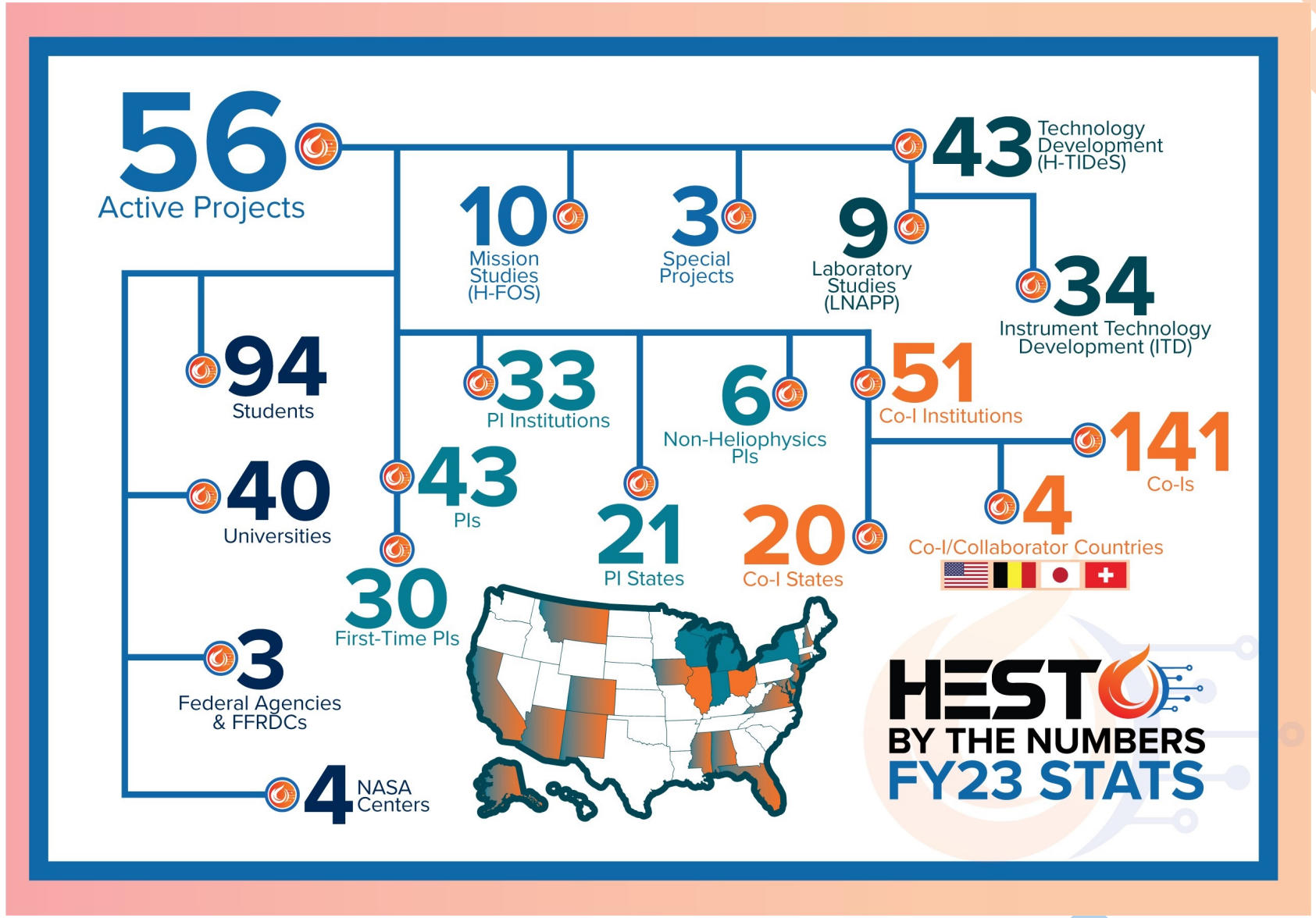
- ROSES Heliophysics Technology and Instrument Development for Science (HTIDS)
  - Released annually on Feb 14th
  - Solicits instrument technology development (ITD) and laboratory nuclear, atomic and plasma physics (LNAPP) proposals
  - Updated annually to incorporate new initiatives (non-Heliophysics technologists, high risk/high impact, space working environment…)
- ROSES Heliophysics Flight Opportunities Studies (HFOS)
  - Released annually on Feb 14th
  - Solicits pre-phase A studies of novel mission concepts
  - One year seed funding
- Small Business Innovation and Research (SBIR)
  - Heliophysics topic, two subtopics
- Future Investigators in NASA Earth and Space Science Technology (FINESST)
  - Graduate student projects that contribute to science, technology, and exploration goals

FLIGHT MATURATION OF TECHNOLOGIES

- ROSES Heliophysics Low-Cost Access to Space (HLCAS)
  - Released annually on Feb 14th
  - Goal is Heliophysics Science investigations on sounding rockets and balloons
  - Technology maturation on low-cost flight platforms a future goal of the Heliophysics Technology Program

HELIOPHYSICS STRATEGIC TECHNOLOGY OFFICE (HESTO)

- In 2022 the Heliophysics Strategic Technology Office (HESTO) was put in place
- HESTO was competitively selected and implemented at the Wallops Flight Facility (WFF)
  - Active management of technology projects
    - Value-added management oversight of each technology investigation to nurture, advance, and infuse matured technologies into future science missions.
    - Conduct quarterly status review with our principal investigators
  - Conduct periodic technology gap and trend analysis
    - Invest in the right technologies (the first gap and trend analysis was published in June 2023)
  - Engage and Inform the community
    - Develop a virtual institute to inform the community (in works)
    - Conduct annual technology symposia (the first technology symposium was held on Oct 18-19, 2023)
    - Publish annual technology highlights report (in works)
    - Put in place the Heliophysics Technology Program Analysis Group (H-TPAG) (ToR has been signed)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