



National Aeronautics and
Space Administration

EXPLORE

NASA SmallSats and CubeSats Update

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Deputy Chief Technologist

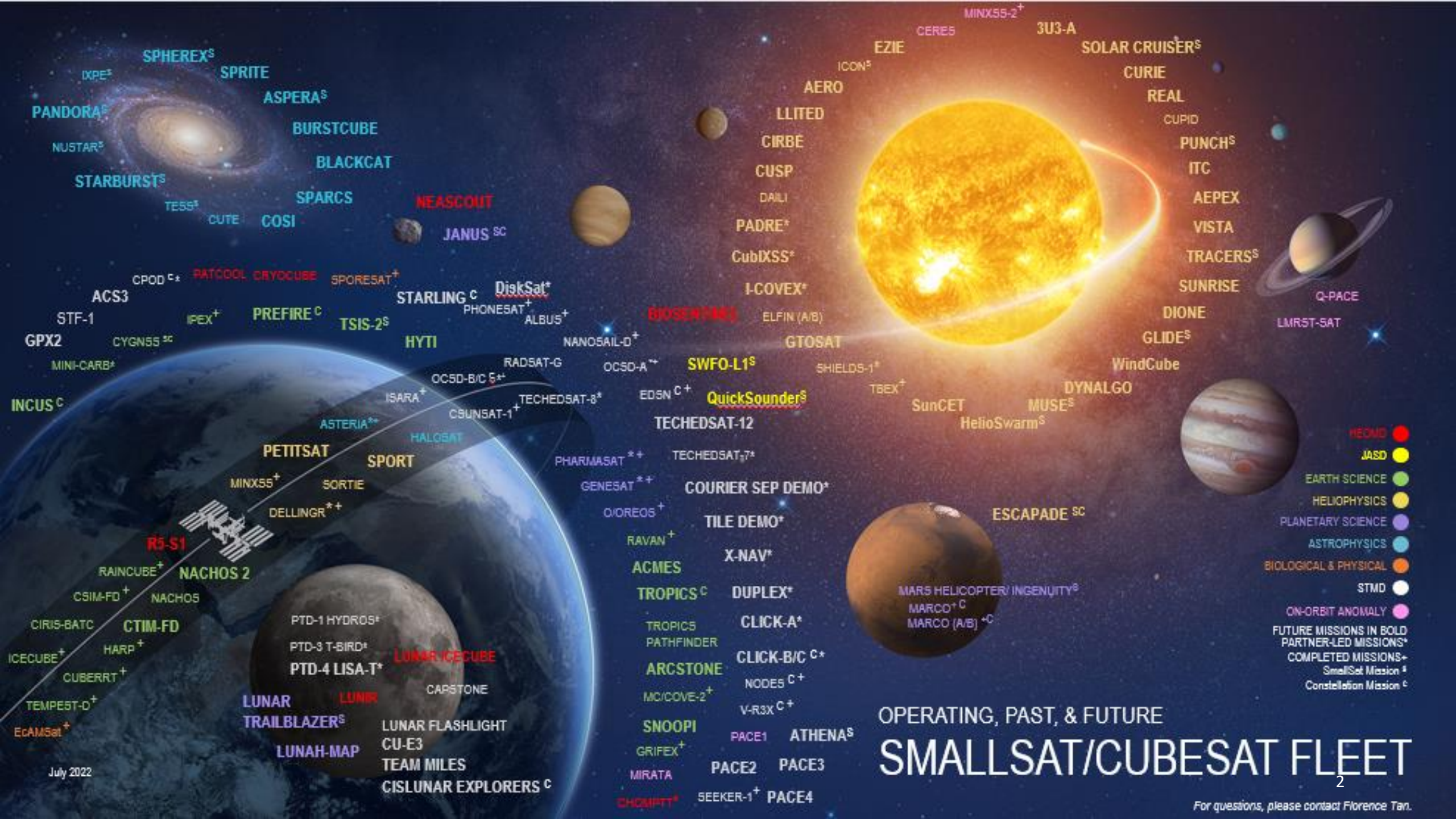
Science Mission Directorate (SMD)

Chair, Small Spacecraft Coordination Group

NASA Headquarters

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OPERATING, PAST, & FUTURE SMALLSAT/CUBESAT FLEET

NASA SmallSat Status

Missions (formulation or development) as of August 2022

ASPERA (APD)
BLACKCAT (APD)
BURSTCUBE (APD)
COSI (APD)
PANDORA (APD)
SPARCS (APD)
SPHEREX (APD)
SPRITE (APD)
STARBURST (APD)
ACMES (ESD)
ARCSTONE (ESD)
HYTI (ESD)
INCUS (ESD)
PREFIRE (ESD)
SNOOPI (ESD)
TROPICS (ESD)
TSIS-2 (ESD)
AEPEX (HPD)
AERO/VISTA (HPD)
CIRBE (HPD)
CUBIXSS (HPD)
CURIE (HPD)
CUSP (HPD)
DIONE (HPD)
DYNAGLO (HPD)
ESCAPADE (HPD)
EZIE (HPD)
HELIOSWARM (HPD)
GLIDE (HPD)
GTOSAT (HPD)
I-COVEX (HPD)
ITC (HPD)
LLITED (HPD)
MUSE (HPD)
PADRE (HPD)
PETITSAT (HPD)
PUNCH (HPD)
REAL(HPD)
SOLAR CRUISER (HPD)
TRACERS (HPD)
SPORT (HPD)
SUNRISE (HPD)
SunCET (HPD)
WINDCUBE (HPD)
SWFO-L1 (JASD)
JANUS (PSD)
LUNAR TRAILBLAZER (PSD)
LunaH-Map (PSD)
ACS3 (STMD)
CISLUNAR EXPLORERS(STMD)

CLICK B/C (STMD)
COURIER SEP DEMO (STMD)
CU-E3 (STMD)
DUPLEX (STMD)
LUNAR FLASHLIGHT (STMD)
PACE-2 (STMD)
PACE 3 (STMD)
PACE 4 (STMD)
PTD-4 LISA-T (STMD)
STARLING (STMD)
TEAM MILES (STMD)
X-NAV (STMD)
BIOSENTINEL (HEOMD)
LUNAR ICECUBE (HEOMD)
LUNIR (HEOMD)
NEASCOUT (HEOMD)

Studies Selected

DORADO (APD)
ARCS (HPD MIDEX)

Launched/Deployed

CAPSTONE (STMD / HEOMD)
CLICK-A (STMD)
CPOD (STMD)
CIRIS-BATC (ESD)
CUPID (HPD)
DAILI (HPD)
PTD-3 TBIRD (STMD)
SORTIE (HPD)
TECHEDSAT-7 (STMD)

Deorbited/EOM

CSIM-FD (ESD)
CUBERRT (ESD)
CHOMPTT (STMD)
DELINGR (HPD)
HaloSat (APD)
HARP (ESD)
PTD-1 HYDROS (STMD)
RADSAT-G (STMD)
RAINCUBE (ESD)
TBEX (HPD)
TEMPEST-D (ESD)
TILE DEMO (STMD)
V-R3X (STMD)

Failed

Q-PACE (PSD)
PACE 1 (STMD)

Operating

CIRIS-BATC (ESD)
CYGNSS (ESD)
TROPICS Pathfinder (ESD)
CTIM-FD (ESD)
CUTE (APD)
ELFIN (HPD)
PTD-1 HYDROS (STMD)
ICON (HPD)
IXPE (APD)
NACHOS (ESD)
NUSTAR (APD)
ICON (HPD)
SHIELDS (HPD)
TECHEDSAT-8 (STMD)
TESS (APD)

White: 3U or 6U units
Dark Blue: MiniSat
Yellow: Multiple units
Blue: ESPA-Class Mission
Green: 12U Mission

Missions in formulation or development are trending towards larger form factors or constellations

Activities 2021-2022

- Community Engagement with PI communities
 - SmallSat LEARN “Learning from Experiences, Achievements, and Resolution Navigation” Forum
 - SmallSat CoP, Science, and Industry Webinars
- Release of Small Spacecraft Technology Plan (with the RFI to be released this month)
- Spring Technology Expo <https://www.nasa.gov/smallsat-institute/2022-techexpo-agenda>
- State of The Art Report at S3VI <https://www.nasa.gov/smallsat-institute>
- 2021 Virtual SmallSat Forum Report https://science.nasa.gov/science-red/s3fs-public/atoms/files/2021_SmallSat_Virtual_Forum_Report_final_TAGGED.pdf
- SmallSat Reliability Institute Website <https://s3vi.ndc.nasa.gov/ssri-kb/>
- Access to Space Opportunities (VADR, FOP, CSLI)

Learning from Experiences, Achievements, and Resolution Navigation (LEARN)

NASA's SmallSat LEARN Forum encourages knowledge sharing within the SmallSat Community

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LEARN offers:

- Information exchange
- Community discussions
- Networking

Sessions held or
Planned: March 23,
May 25, July 27,
Oct 25

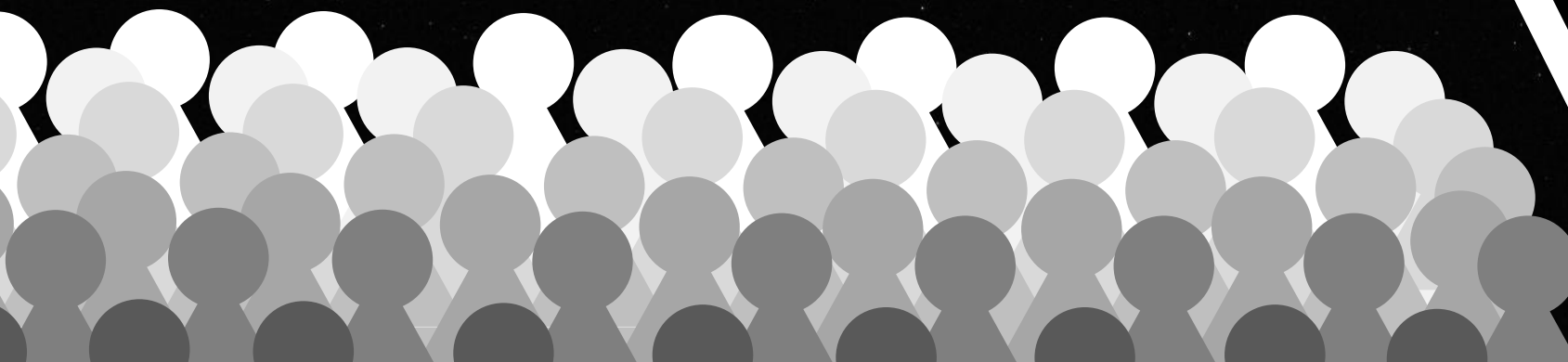
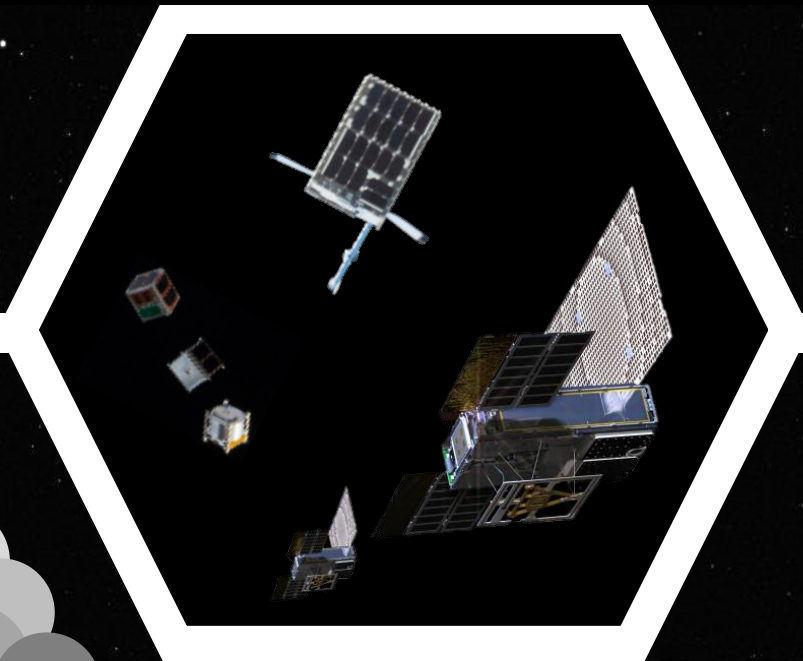


Venues Include:

- Bi-monthly mission introductions and community discussions
- Yearly in-person gathering for information exchange and networking
- Online platform (internal & external access)

Eligible participants include **NASA-funded SmallSat PI's, PM's, and SE's** from all sectors and those who have proposed, but not been awarded

Small Spacecraft Coordination Group sponsors LEARN. Organization by GSFC's SmallSat Office, Strategic Partnerships Office and S3VI





NASA Ask Me Anything Panels

Location: ESLC 130 (auditorium)

Ask Me Anything Panel 1: **Tues., Aug. 9, 9:45AM – 10:45AM**

- CyberSecurity and Enterprise Protection
- Communications Licensing
- Anomaly Reporting

Ask Me Anything Panel 2: **Tues., Aug. 9, 12:45PM – 1:45PM**

- Access to Space
- Conjunction Assessment and Mitigation

Ask Me Anything Panel 3: **Wed., Aug. 10, 9:45AM – 10:45AM**

- Small spacecraft-related program updates in NASA's Research Opportunities in Space and Earth Sciences (ROSES) 2022 and other solicitations

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with us COME

"Twenty years from now you will be more disappointed by the things that you didn't do than by the ones you did do. So throw off the bowlines. Sail away from the safe harbor. Catch the trade winds in your sails. Explore. Dream. Discover." Mark Twain