NASA SMD / Astrophysics / CubeSats & SmallSats

SMD/APD solicits CubeSat & SmallSat investigations primarily via two ROSES appendices:

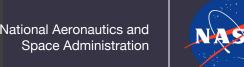
- Astrophysics Research and Analysis (APRA)
 Program
 - Primarily Science investigations with modest technology development, peer reviewed alongside balloons and sounding rockets with similar science
 - Typically, 6U (one 12U)
 - ROSES released annually Feb 14
 - Approximately \$5M per CubeSat
 - Access to space is via CSLI or SMD Rideshare
 - Eligibility per ROSES rules
 - Current Mission Status
 - HaloSat mission complete 2/2021 with 2 years of great data
 - CUTE to launch 9/16/2021 CSLI with Landsat 9
 - Most recent selection (APRA-2020) SPARCS-2

Pioneers

- Primarily Science investigations with modest technology development, SmallSats, major Balloons (ULDB), ISS payloads, early career 25% of total score
- Typically, >12U to ~ ESPA class
- ROSES released annually Feb 14
- PI cost cap \$20M excluding launch
- Access to space is via CSLI or SMD Rideshare, or 'bring your own ride' at PI cost
- Eligibility per ROSES rules

NEW Program with ROSES-2019, 4 missions

selected and undergoing Concept Study Report (CSR) evaluation. Missions that pass Systems Requirements Review (SRR/)cost gate will continue.



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Current Small Spacecraft Activities/Future Plans

<u>CubeSats</u>

Will continue to solicit CubeSats via APRA 1 new selection per year

Will continue annual solicitation for Pioneers selection rate dependent in part on success rate of previous selections (if all 4 current mission pass, we will select << 4 in ROSES-2020)

SmallSats

SmallSats are also included in the Explorers MO/SMEX, but at up to ~10x high price point

Point(s) of Contact

- NSPIRES.NASA.GOV: https://nspires.nasaprs.com/external/
- NASA Astrophysics: <u>https://science.nasa.gov/astrophysics</u>
- APRA Point of Contact:
 Dominic Bedford <u>Dominic.I.Benford@nasa.gov</u>
- CubeSats Points of Contact:
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