The Goddard Planetary CubeSat Science Institute (PCSI) is an initiative of the Solar System Exploration Division to partner across Goddard and externally to develop, propose and fly CubeSat planetary missions.

Themes include: science concept development; hardware development of subsystems, buses, propulsion, instruments and operations.

Expecting increased opportunities for CubeSat exploration of the Solar System going forward, to cut cost for science and increase participation.
Selected Planetary CubeSat Hardware
Solar System Exploration Division

Lunar Flashlight

BIRCHES on Lunar IceCube
Under Development Planetary CubeSats
Solar System Exploration Division

SIMPLEX

Hydrogen Albedo Lunar Orbiter (HALO)

A Lunar Cubesat Mission For EM-1 - SIMPLEX 2015

PSDS3

CUVE

Nadir Observation

UV Maps UV High Resolution spectra

MiLUV

Phobos Regolith Ion Sample Mission (PRISM)

Si⁺, Al⁺, Mg⁺, Fe⁺, Solar Wind H⁺, Mars O⁺, Micro-meteoroids

BOLAS

C.O.M. Orbit

Center of Mass

Gravity Gradient Force

PrOVE

Gravity Gradient Force
GSFC’s Planetary CubeSat Science Institute (PCSI) - cont.

Its objectives are to be a forum for:

- Presenting and discussing planetary science questions that can be addressed via SmallSats/CubeSats (including level 1 science)
- Sharing lessons learned from previous SmallSat/CubeSat missions
- Presenting the latest mission concepts
- Identifying technical challenges and ways to address them
- Fostering collaboration with other NASA Centers, JPL, APL, universities, the private sector and international partners (ESA, JAXA, ISRO and universities).