

Summary of Primary Concepts

Topic	Scientific Observation	Mission Concept
Astrophysics (Leaky-Sats)	Understanding source and mechanism for reionization of the early universe	A-train style constellation of UV coarse spectral imagers
Astrophysics (SoftX)	Measurement of low-energy diffuse background from interstellar medium	X-ray spectroscopy in LEO with collimated CCD or CMOS detector
Astrophysics (Relic)	Understanding energy transport from black holes to the intergalactic medium	Low-frequency aperture synthesis with constellation of dipoles
Heliophysics (MagCon)	Global electro-dynamics of Earth's magnetosphere-ionosphere coupling	Constellation of energetic particle, low-energy instruments, Langmuir
Heliophysics (SPC)	First dedicated solar polar constellation mission for understanding variability, dynamo, and SS effects	Multiple constellations out of the ecliptic and in high incl. solar orbit
Heliophysics (SWS)	Space weather situational awareness for predictive modeling	Fractionated Space Weather Sentinel at L5
Planetary (Fly Trap)	Venus zonal wind flow measurement	Mother (ESPA) daughters (chipsat) with differential Doppler tracking
Planetary (Lunar Cube)	Lunar interior structure mapping and volatile composition	Mothership and multiple cubesats with seismometers
Planetary (Champagne)	Determine spatial, velocity distribution, and physical properties of planetary rings	Mother/daughters (chipsats) with accelerometers and mm-sensors