

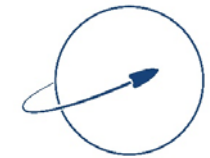
A COMMERCIAL MULTI-MISSION ECOSYSTEM FOR NEAR-EARTH SPACE CONTROL:

(methods and systems for permanent, affordable debris removal plus enhanced national security capabilities)

by

Marshall H. Kaplan, PhD

Chief Technology Officer
Launchspace Technologies Corporation
MHK@LaunchspaceTechnologies.com
(202) 258-6133



**Launchspace
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a special presentation at

TRASH IN THE SKIES III: PROSPECTS FOR ACTIVE REMOVAL OF SPACE DEBRIS

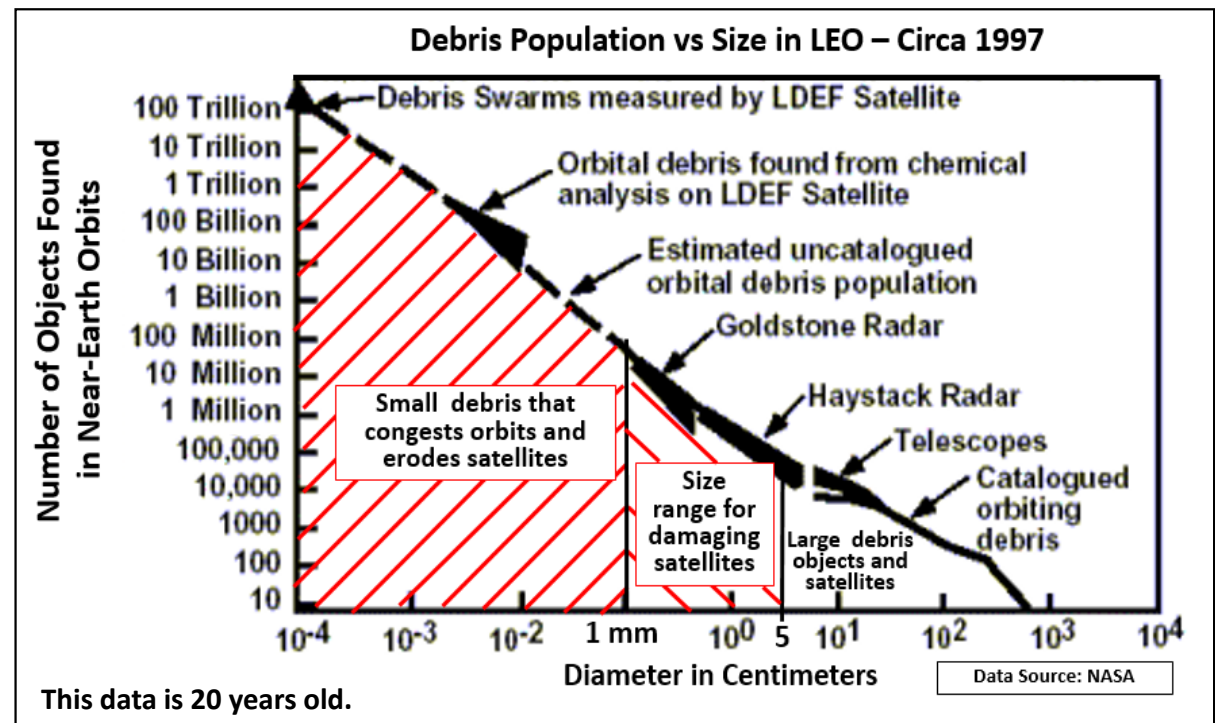
Russell Senate Office Building

November 2, 2017

LEO DEBRIS – THREE THREAT CATEGORIES

1. Large debris (> 5cm) that will be accurately tracked and will be either avoidable or identified for removal
2. Mid-range debris (1 mm - 5 cm) causes most damage and destroys spacecraft
3. Small debris (<1 mm) clog space and will lead to gridlock of low-Earth orbits

This system will accurately track **all** trackable near-Earth Resident Space Objects (RSOs), collect debris of less than 5 cm in size and provide precision, low-latency Space Situational Awareness (SSA) data for dissemination and use.



THE LTC-PATENTED SOLUTION

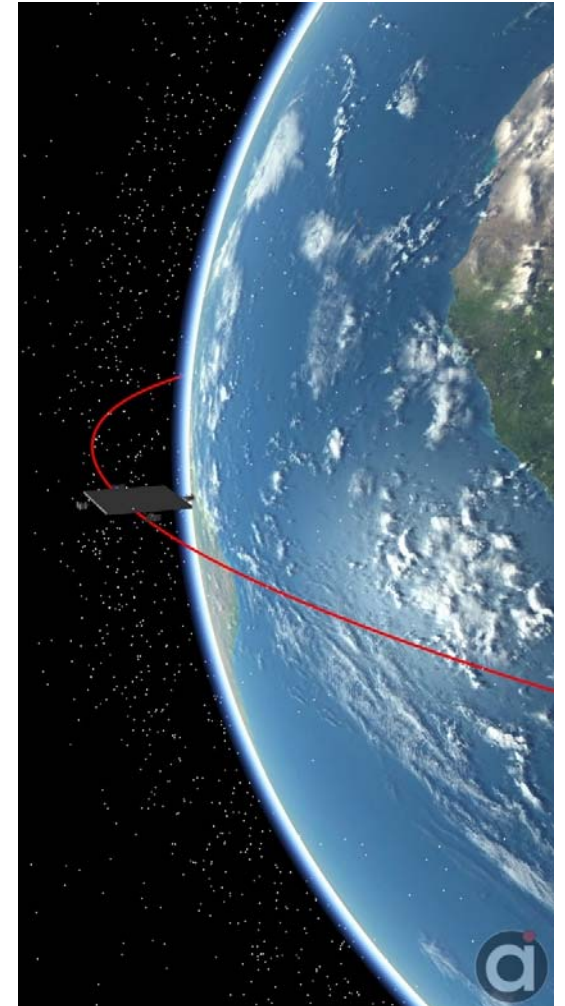
Two satellite constellations in low equatorial orbits:

1. One constellation is at 1,200+ km and consists of dedicated sensor satellites for collecting and processing precision SSA data for use by the other constellation, NSS organizations and others
2. The other constellation consists of debris collector satellites (also in equatorial orbits) between 600 km and 1200 km altitude

All orbital operations are in the **equatorial plane**, allowing:

- Precise and low-latency RSO data collection for greatly enhanced SSA capabilities with required greater sensitivity than is possible with ground-based sensor systems.
- Equatorial debris collectors provide direct wholesale and selective removal of debris in the <5 cm category
- This system provides a permanent, safe environment for satellite constellations

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Courtesy of a.i. solutions