The ThinSat Program: Flight Opportunities for Education, Research and Industry

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Program goal is to advance STEM education and promote space science and engineering
- The three phase program designed for students in grades 4\textsuperscript{th} – 12\textsuperscript{th}

A solution for regular economical access to space

1. Estimated $30,000 for program cost, including:
   - Bus
   - Integration
   - Launch
   - Data budget
   - Licensing and Paperwork

2. Regular launch opportunities
   - Future Antares ISS resupply missions will carry ThinSats
   - Inaugural launch will be on NG-10 mission
   - Up to 480 ThinSats over the next 3 years.

3. Reduced complexity
4. Decreased development cycle time
5. Reduced burden of licensing and paperwork
6. Mitigation of the threat of space debris with short orbital life
ThinSat Payload Space

- Standard Payload dimensions of 107.85 x 52.58 x 10.9 mm
- Thicker buses available for larger payloads.
- “Strings” - Groupings in multiples of 3 (3, 6, 9, etc.)
  - Articulating Fanfold Solar Arrays
  - Allows for experiments that require large apertures or distributed payloads
- Standard payloads available

A stack of 21 ThinSats which will be separated after being ejected from a CSD deploer
Space Data Dashboard

- User-friendly and secure online portal to view data
- Hub for the data analysis and collaboration
- Receive real-time data from their payload via the Global Star network
- Custom tools and interfaces can be made with program partners
| **Earth and Atmospheric Science** | ✓ Extreme Low Earth Orbit (ELEO) - 100 to 300 km  
✓ Transition from atmosphere to space.  
✓ Effected by space solar storms and flares from above and terrestrial weather from below.  
✓ Received little attention due to limited orbit lifetimes |
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<td><strong>Life Science and Exo-Medicine</strong></td>
<td>✓ Meets the fast-paced, affordable, compact, standard, and repeatable requirements of microbiological experimentation.</td>
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| **Engineering and Technology Development** | ✓ Technology demonstrators  
✓ Individual components or subsystems.  
✓ Achieve higher technical readiness levels within the span of longer-term projects. |
Questions?

Visit the Virginia Space Booth to learn more about the ThinSat Program