FUNSAT

Florida UNiversity SATellite Design Competition

John Robinson

Florida Space Institute™

FLORIDA SPACE GRANT CONSORTIUM

PROMOTING AND DEVELOPING FLORIDA'S AEROSPACE INDUSTRY

SPACE FLORIDA

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What is FUNSAT?

- A Design Competition
- Sponsored by Florida Space Grant Consortium, Space Florida, and Florida Space Institute
- Participants can design either a full CubeSat or a specified sub-system or payload

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Who can participate?

- Florida University Students
- Supervising Faculty Member
- Additional Support and Advisory Personnel
- Multiple teams from same school is okay

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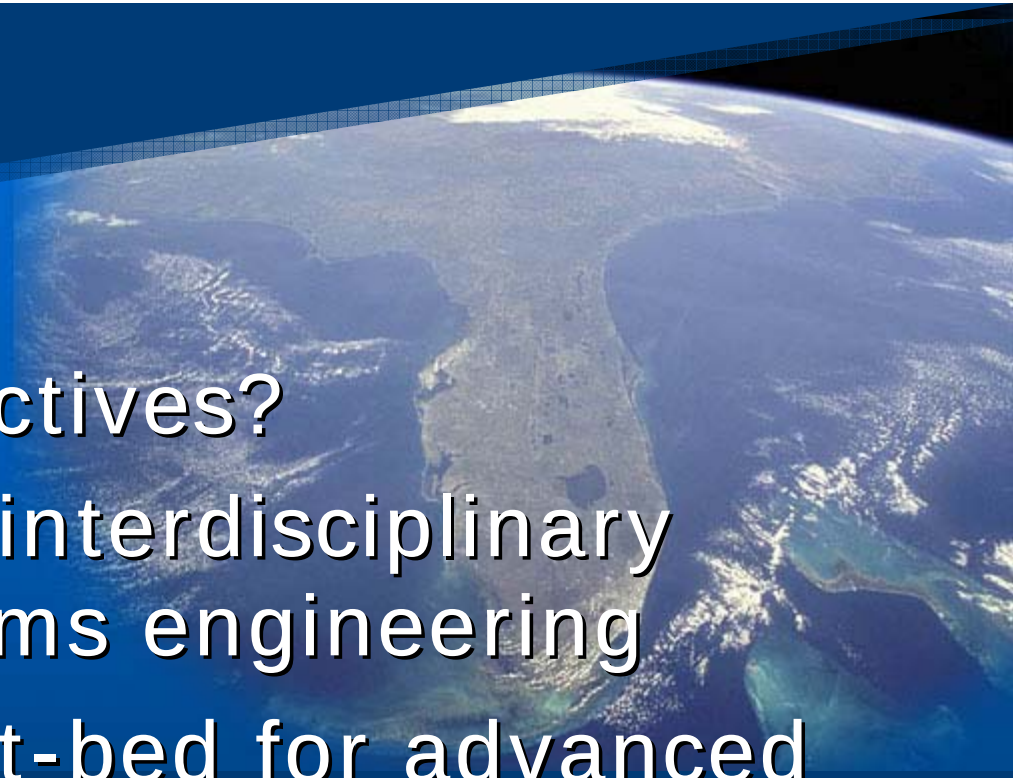

What are our objectives?

- Promotion of an interdisciplinary project for systems engineering
- Supporting a test-bed for advanced technologies
- Promoting advanced study and career development for Florida students in the field of aerospace

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A Brief History

- Began as a NASA HQ Workforce Development Program in 2004
- Three Schools Participated:
  - Embry-Riddle Aeronautical University
  - University of Central Florida
  - University of Florida

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A Brief History

- First two FUNSATs were won by ERAU
- Third Competition won by University of Central Florida

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A Brief History

- FUNSAT IV saw six entrants:
  - Original Three Universities
  - Florida Gulf Coast University
  - Florida Institute of Technology
  - Florida International University
- Judged by Cal-Poly, AMSAT, Honeywell

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A Brief History

- On Friday May 9, 2008, UF and FIT were co-awarded first place. FIU placed second, and ERAU placed third.

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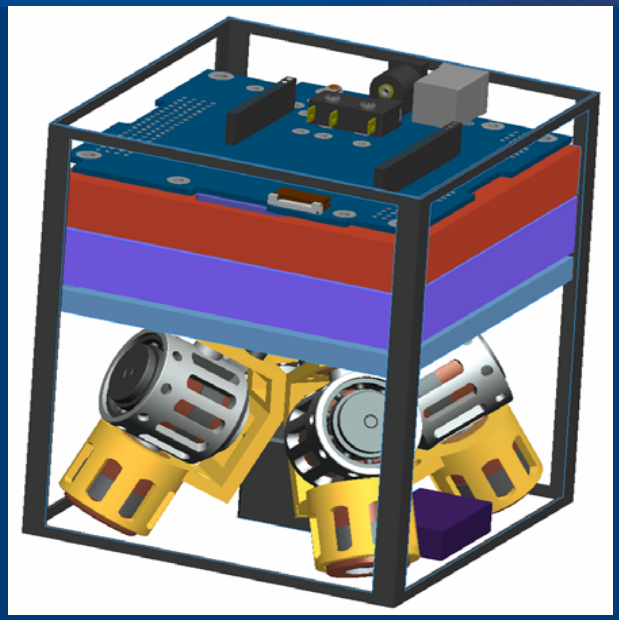
ASTREC-I

- Mission: On-orbit demonstration of a compact three-axis attitude controller capable of precision pointing and rapid retargeting.



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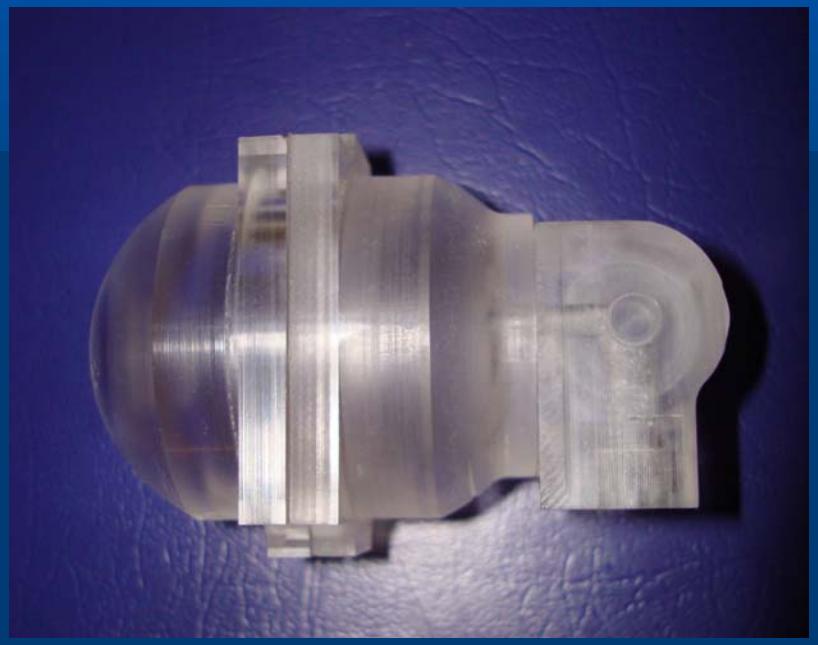
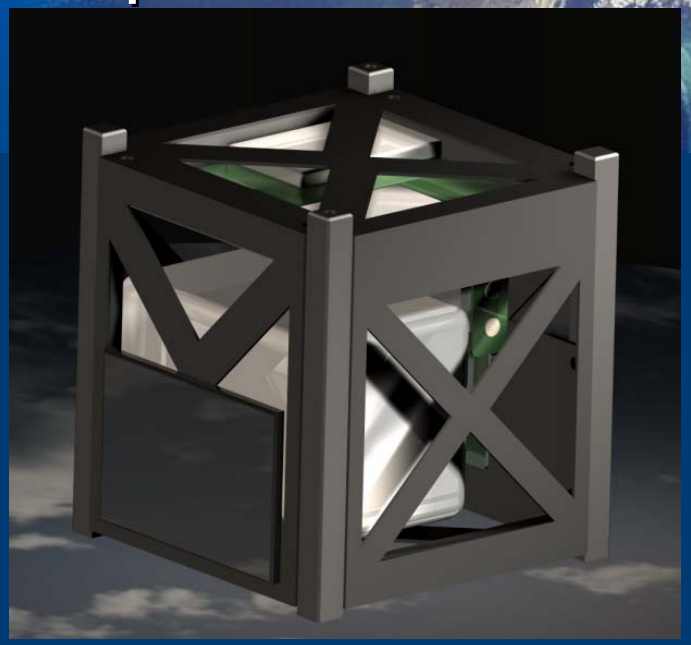
FITSat IV

- Mission: Determine if Shewanella MR-1 bacteria can survive in space





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FUNSAT V

- Our biggest competition yet
- Total of eight schools
  - Six previous schools
  - University of Miami
  - University of West Florida
- Truly a statewide competition

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FUNSAT V

- Deadlines
  - Letter of Intent – September 12
  - Conceptual Design Report – December 3
  - Finalists Announced – January 6
  - Detailed Design Report – April 22
  - FUNSAT Workshop and Award Ceremony – May 8

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FUNSAT V

- Technical Support
  - Support from AMSAT and industry partners
  - Tech CD: Database of technical information and examples

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FUNSAT V

- Awards
  - 1st Place
    - $7500 – To be used for development of Flight Model
    - Launch Costs – Funding Pending
  - 2nd Place
    - $1000
  - 3rd Place
    - $500

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FUNSAT V

- Additional Support
  - No less than $500 in seed money for each team that submits a CDR
  - Additional award of no less than $500 if school is new to FUNSAT

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Ground Station

- Under Construction
- Located at Astronauts Memorial Foundation Building at Kennedy Space Center
- Built with assistance from AMSAT
  - Lee McLamb
  - George Cannon
  - Donald Hartge

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Ground Station

- Capabilities
  - UHF (uplink and downlink)
  - VHF (uplink and downlink)
  - S-Band (downlink only)

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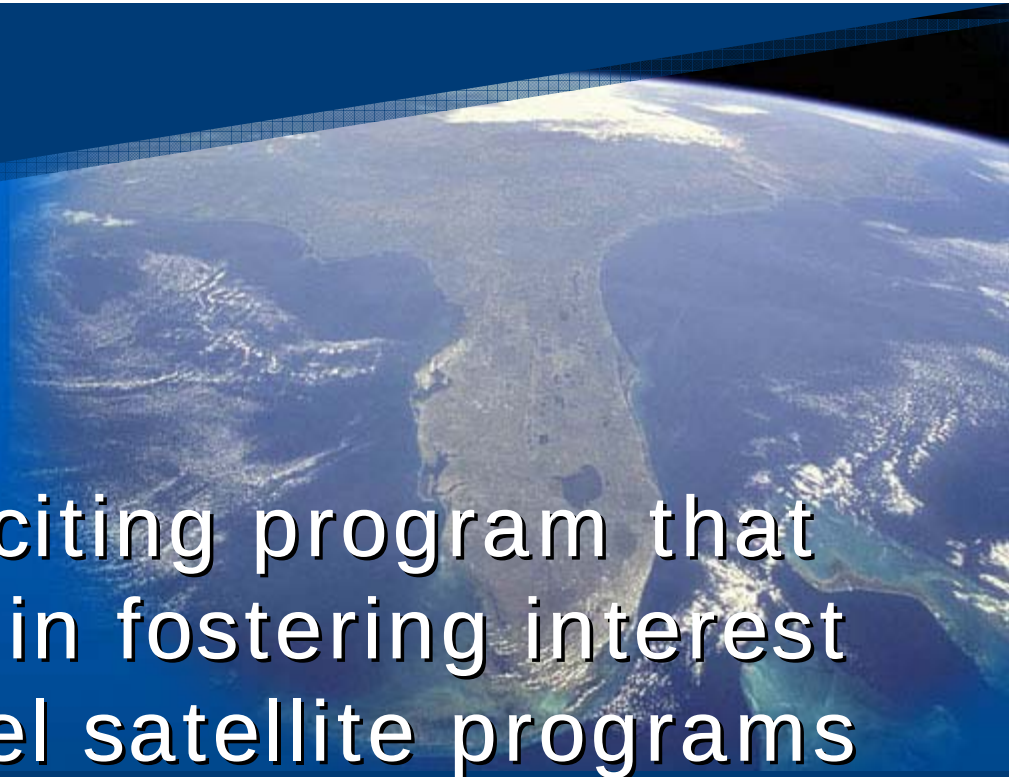

Summary

- FUNSAT is an exciting program that has been critical in fostering interest in University-level satellite programs in Florida
- Program continues to grow and has more and more to offer participants

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Contact Us

- Email: FUNSAT@mail.ucf.edu

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THANK YOU!