University of New Hampshire

SPACE TECH HUB

PROVIDING AFFORDABLE SOLUTIONS

UNH Space Science Center | eos.unh.edu/sth

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Decades of UNH Space Experience

1950s

UNH-built instrumentation:
Discoverer.

UNH scientists:
Mt. Washington, NH neutron monitor and Explorer-12.

1960s

UNH instrumentation:
Explorer-14, OGO-6, and Explorer 26, Pioneer 8 and Pioneer 9.

UNH scientists:
Durham, NH neutron monitor.

1970s

UNH instrumentation:
OSO-7, ATS-6, Pioneer 10, and Pioneer 11.

UNH scientists: Voyager 1 and Voyager 2.

1980s

UNH instrumentation:
SMM and DGT.

UNH scientists:
AMPTE.

1990s

UNH instrumentation:
Compton GRO, WIND, FAST, POLAR, Equator-S and ACE.

UNH scientists: Ulysses, Rosat, SOHO, RXTE, Terra, and SeaWIFS

2000s

UNH instrumentation:
Cluster, STEREO, GRAPE, EPOP, IBEX, and Balloon Winds.

UNH scientists:
RHESSI, Integral, and Aqua.

2010s

UNH instrumentation:
RBSP, GOES, and MMS.

2020s

RECENT MISSIONS:
Firebird, LRO, ESA/NASA Solar Orbiter, NOAA/NASA GOES R

IN DEVELOPMENT:
IMAP, NOAA/NASA Space Weather Follow On, Helio Swarm, Tracers

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Legacy of Specialized Space Experience

The UNH Space Technology Hub (STH) is the newly-launched, commercially-focused branch of the UNH Space Science Center.

STH draws upon UNH's long-standing space expertise for support of the commercial space sector.

By offering space qualification testing resources at affordable cost, we aim to help New Space startups survive and grow.

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Space Tech Hub: Misson & Vision

MISSION

Provide affordable space solutions to the commercial space sector through our state-of-the-art assembly and testing facilities.

VISION

Drive the growth of the space economy through collaboration and innovation, developing a skilled work force to meet the evolving needs of the space industry.

Facilities & Testing

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Comprehensive AI&T (Assembly, Integration, and Test) Services

- Proven processes and procedures for testing & calibrating space technologies
  - Electronics, subsystems, full instrumentation, smallsats
- Flight Certified Thermal Vacuum Chamber
  - 4'x5' cylinder, Liquid Nitrogen shroud, 10^{-7} Torr, RGA scanner, TQCM
- Flight Assembly and Integration Facilities
  - ISO 7 clean rooms, ISO 5 laminar flow assembly benches
  - Clean room storage
- EMI/EMC Testing
- Thermal Cycling Chamber
- On-site Electronic Assembly Lab
- On-site Machine Shop
- Vibration testing at partner facility nearby

Space Tech Hub: Specialized Skillsets

Space Weather / Lunar Environment Instrumentation,
Data Analysis & Science Operations Center

Highly Experienced Mechanical, Electrical & Systems Engineering

- HV analog / digital engineering
- FPGA, flight software, onboard data processing
- Thermal + structural analysis
- Test engineers and data analysis

Technician Expertise

- Board assembly, cable harnessing fabrication
- Machine shop for specialized parts
- IPC J-STD-001 Certification for soldered electrical and electronics assemblies (*NASA required certification*)

STH: Customized Cubesat Development

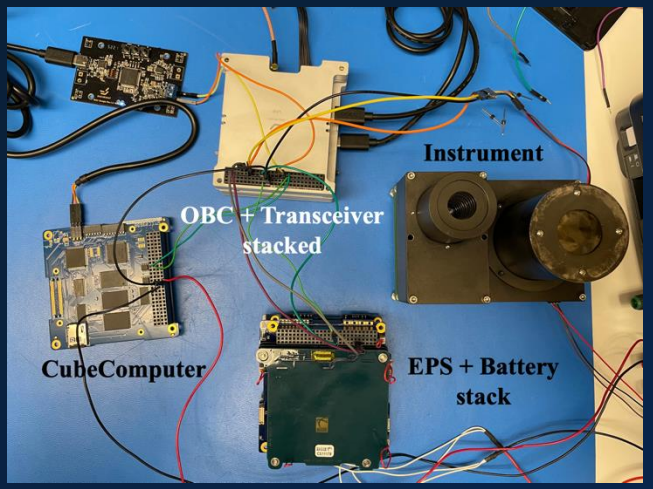
Tailored cubesats for your unique mission requirements

Recent experience developing 3UCubed mission (3U cubesat for NASA)

- *Student involvement can keep costs down*

Timeline of customized cubesat development: 1-2 years

Based on bus parts from Endurosat (or similar)



We do bus integration, flight software, payload to bus integration, environmental testing

- ***Offering choice of full package or specific components***

Space Tech Hub: Staffing

WHO DOES THE WORK?

30 Technical Staff

Full-time engineers, instrument scientists, and technicians

25 Faculty Members

Focus in Space Science and Heliophysics

Student Assistants

Depending on the project

NASA Leap Assembly

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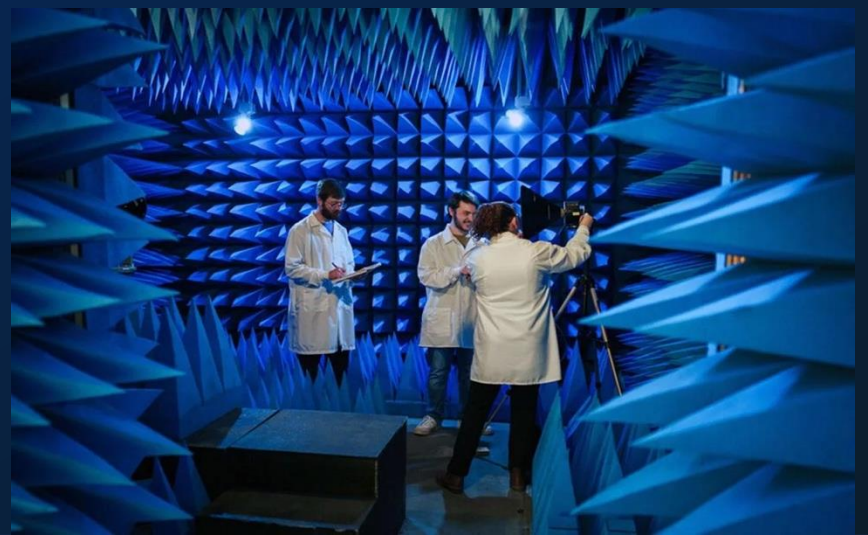
Space Tech Hub: Ways to Engage

1. **Comprehensive assembly, integration, and test services**
2. **Cubesat development**
3. **Professional services** (engineering/technical work, space weather/lunar environment)
4. **Government grants (e.g. SBIR/STTR)**
5. **Student intern / work force pipeline**

Visit the Space Tech Hub site to learn more about engaging with us



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