



# SPACE FLIGHT LABORATORY

[www.utias-sfl.net](http://www.utias-sfl.net) @SFL\_SmallerSats



## From Concept to On-orbit Operations

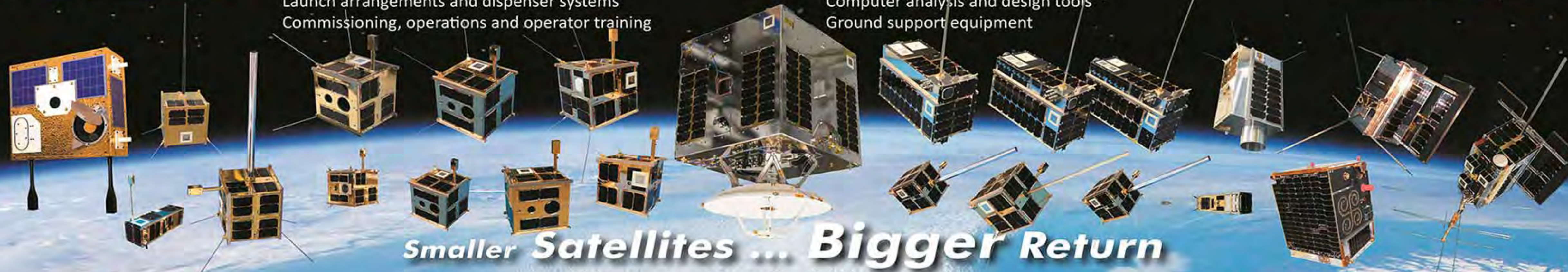
The Space Flight Laboratory (SFL) lowers the entry barrier to space for end users who want performance and data without the complication of satellite manufacturing. SFL understands that today's satellite service providers cannot tolerate high costs, and offers low-cost solutions amenable to mass production. Take advantage of SFL heritage, quality, and cost without being caught by unexpected risks of startup satellite development. We can accelerate the attainment of your goals and independence while minimizing unnecessary investment in roadmaps. By exploiting advances in commercial technologies, we offer top performance advantage for today's satellite service providers.

- Mission and systems engineering
- All major subsystems designed and built in house
- On-board computers and software
- High performance attitude and orbit control
- Radios, antennas, ground stations
- Modular power systems
- Compact propulsion systems
- Structural and thermal analysis and design
- Bus/platform delivery (nano, micro, small)
- Payload development and integration
- Satellite assembly, integration and test
- Complete satellites built to order
- Launch arrangements and dispenser systems
- Commissioning, operations and operator training

## Facilities for Complete Missions

The Space Flight Laboratory (SFL) maintains comprehensive facilities to support the complete development cycle of spacecraft, from initial conception to final environmental testing. SFL also maintains ground support equipment, ground stations, and a mission control center to support needs in the field, including launch campaigns in other countries, and commissioning and operation of satellites either at SFL or abroad. The manufacturing and test facilities at SFL have been used since 1998 to develop many operational satellites currently in space and many more under construction that are about to launch in the near future.

- Full-time professional staff and certified technicians
- Assembly, integration and test equipment
- RF and microwave test equipment
- Thermal cycle chambers
- Thermal vacuum chambers
- Ground stations and ground tracking antenna systems
- Mission control center with worldwide station access
- Anechoic chambers
- Vibration table
- Certified Class 10,000 clean room
- Solar array simulators
- GPS simulators
- Computer analysis and design tools
- Ground support equipment



**Smaller Satellites ... Bigger Return**