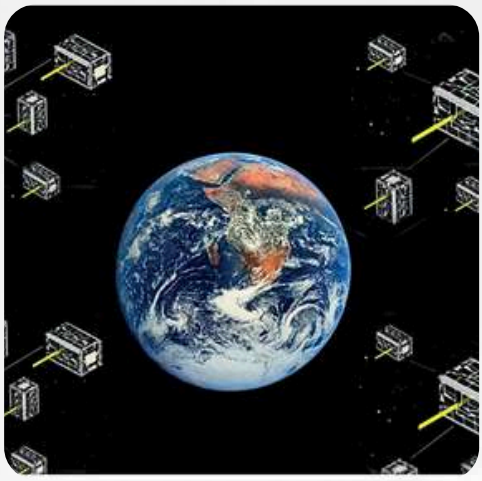
SPACELABS ANALYTICS AND DYNAMICS PVT LTD

India's Premier Aerospace and Defence Company
offering cutting - edge Tools and Technology
for Space and Defence Missions

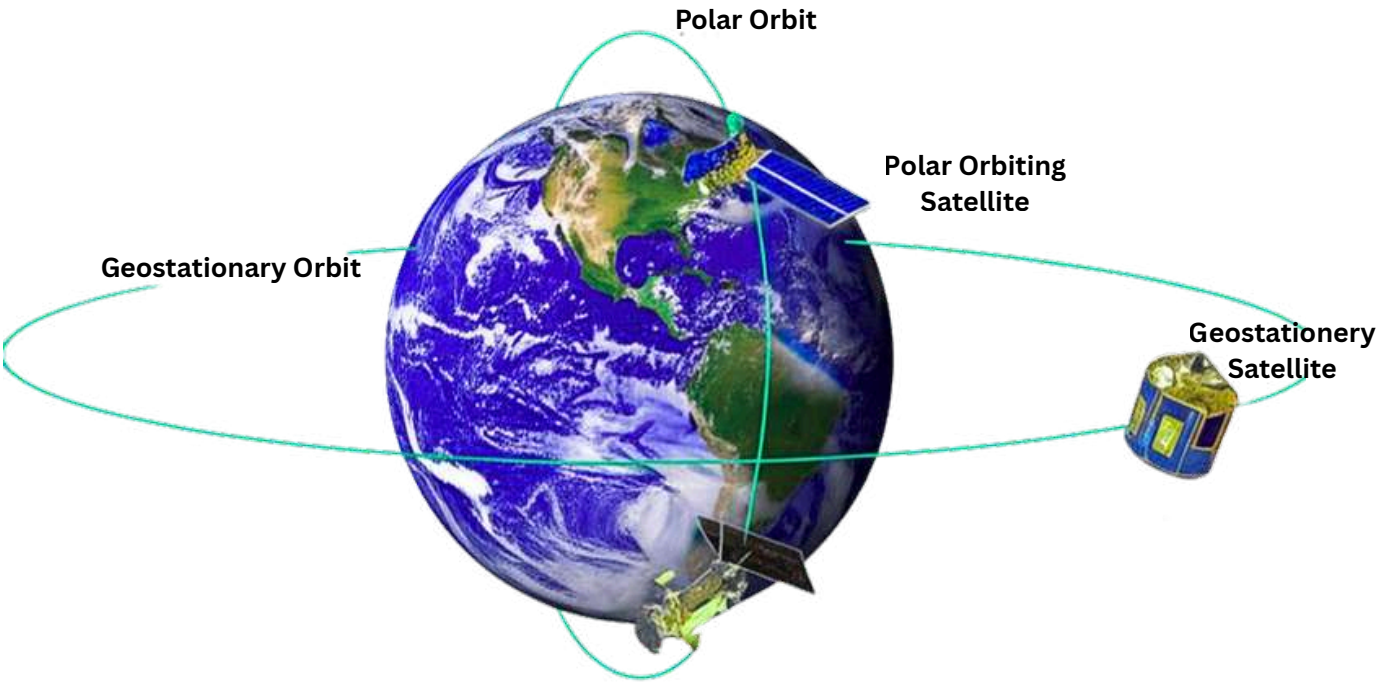


SPACELABS
OPTIMIZE , SIMULATE & SUCCEED

ASTRA

Aerospace Mission Design, Planning and Analysis Tool

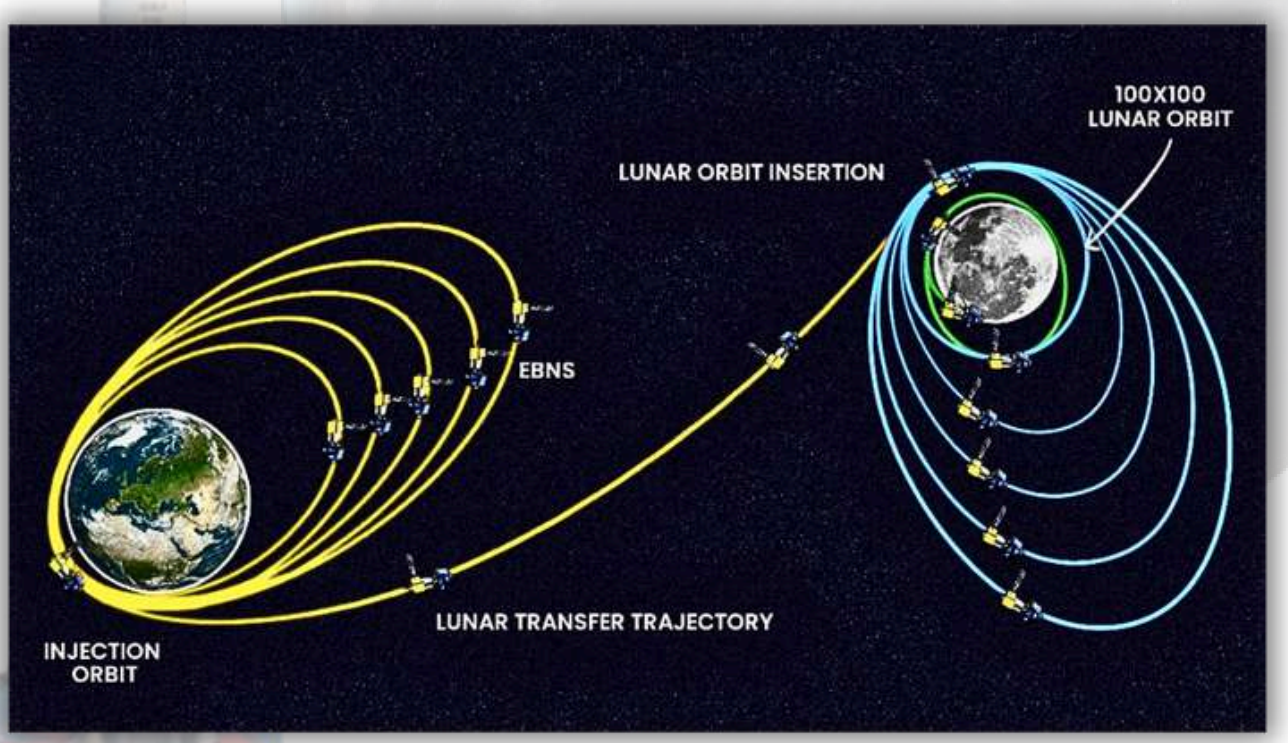
Mission Design & Planning



Accelerate your mission success with cutting-edge global hybrid optimization techniques that drive precision and efficiency in every phase of mission design and planning. Our solutions are expertly crafted for aerospace vehicles ensuring seamless execution from concept through deployment.

Unlock breakthrough capabilities, from advanced human spaceflight systems to intelligent satellite constellations and deep space exploration initiatives. Partner with us to push the frontiers of your mission objectives and achieve unmatched performance beyond boundaries.

Mission Analysis



Your all-in-one solution for mission analysis from orbit propagation and collision risk to Monte Carlo studies and re-entry safety. Drive smarter, safer missions with ASTRA's advanced, integrated capabilities.

SARAS

Simulator for AeRospace Applications

- Multifaceted Simulation Test Bed for a Range of Aerospace and Defence Applications.
- Offers Integration with a range of external tools and sensors.
- Realtime Processing of multiple sensor data and display.

SARAS - A Design and Validation Tool

Model in Loop Simulation

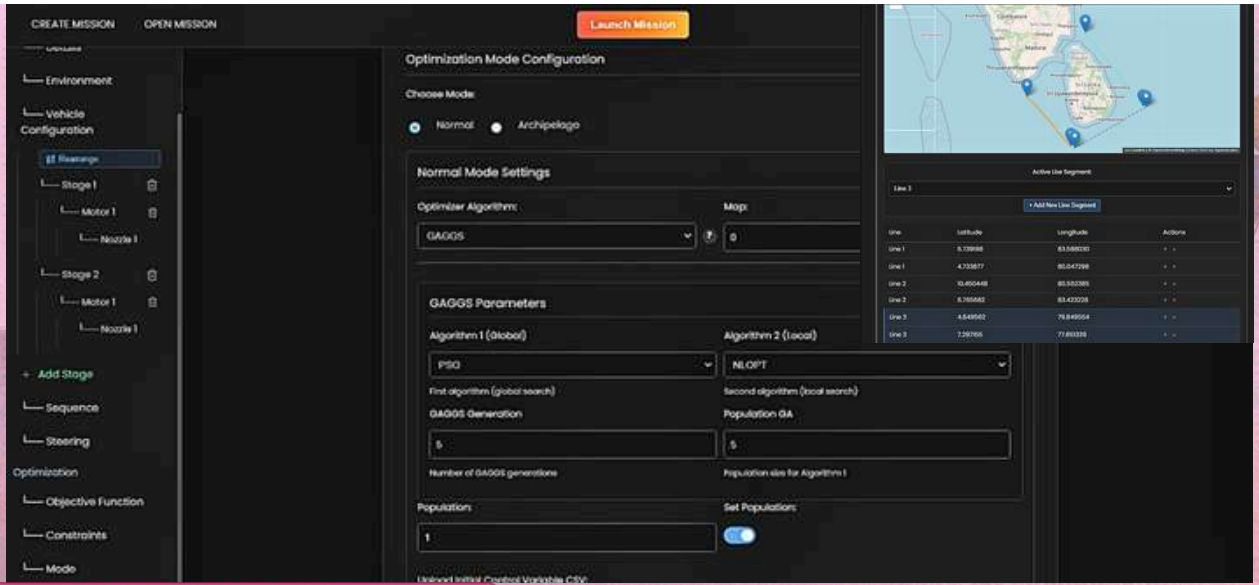
MILS

Mathematical formulation and Design Verification tool

Software in Loop Simulation

SILS

Flight Software Validation tool



SARAS - A Realtime Simulator

Onboard in Loop Simulation

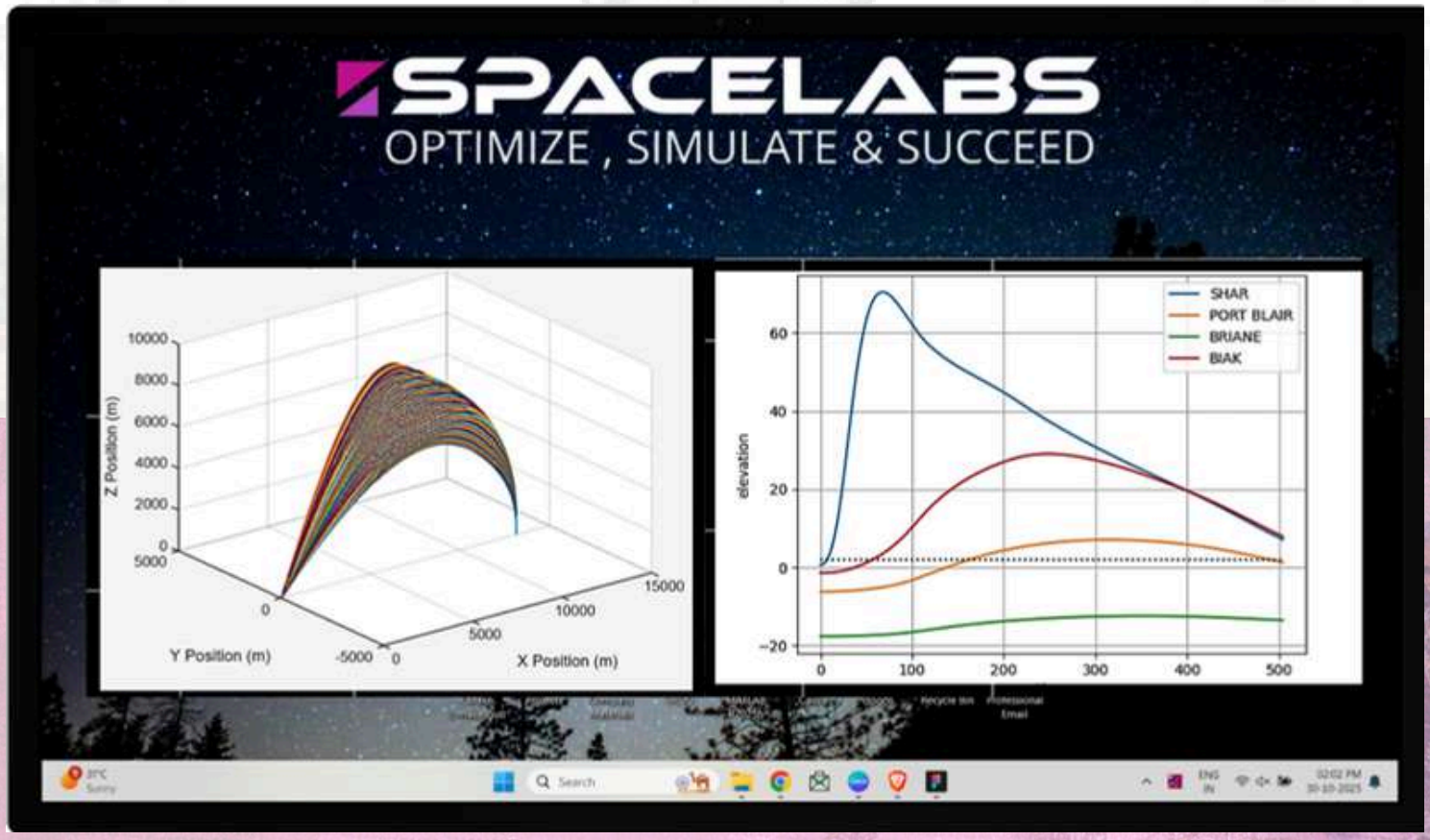
OILS

Onboard Computer, Flight Software and Interface Verification Tool

Hardware in Loop Simulation

HILS

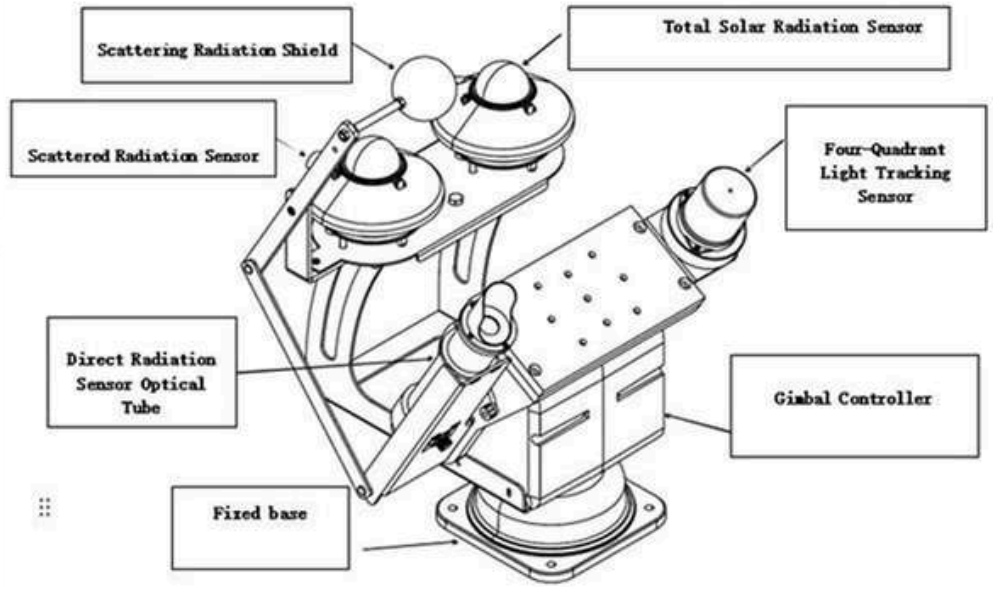
Flight Hardware and Software Validation Tool



AMSTR

Automatic Multispectral Sun Sky Lunar Tracking Radiometer

Conceptual Miniature model of Automatic Multispectral Sun Sky Lunar Tracking Radiometer system

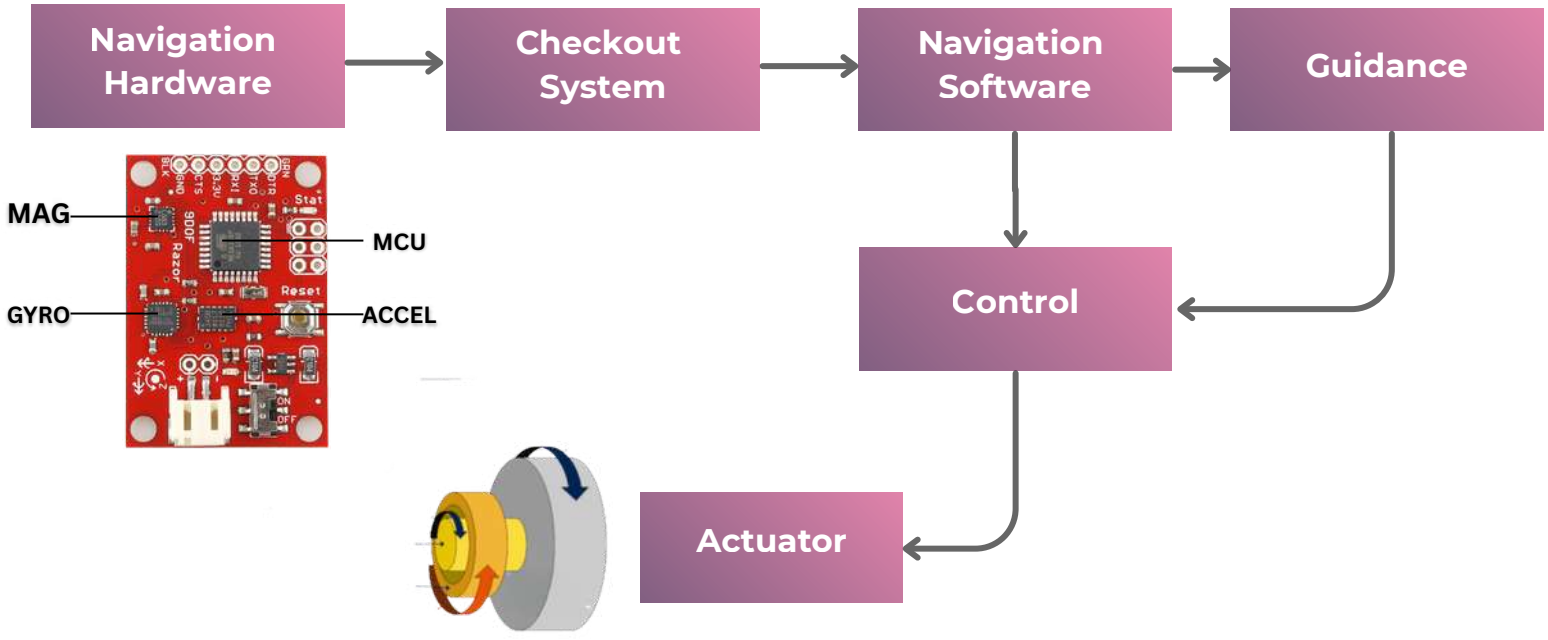


- Measures direct solar irradiance and sky and Lunar radiance.
- Automatically follows the sun position across the sky.
- Tracks moon and take measurements during night.
- Measures the intensity of light in 12 Channel Spectral range (280nm – 3000nm) using filters.
- Low power consumption (5 - 10W solar panel).
- Full autonomy and multiple communication interface.
- Easy operation both on fixed and temporary locations.
- Custom models as per the application.

SERVICES

- **Guidance, Navigation, and Control (GNC) & Attitude Determination and Control Systems (ADCS)**
  - End-to-end design, development, and testing for high-reliability and mission-ready performance.
- **Software Simulator**
  - Advanced simulation platforms that integrate with your tools, hardware, and data accelerating decisions and mission planning with intelligent insights.
- **High-Security Fuse Electronic Circuitry**
  - Triple-layered safety fuse circuits engineered for robust performance and protection.
- **Checkout Systems**
  - Rigorous subsystem and system-level testing from OBC, Navigation, Servo-Actuators, and power to full GNC integration - ensuring all components meet standards for reliability and deployment.

Navigation, Guidance and Control Kit for Aerospace Applications



ABOUT US

SPACELABS provides cutting edge technology to clients, helping them in the areas of configuration design, trajectory optimization, simulations and subsystem development for aerospace and defence applications.

Co-Founder & CEO

Sheela DS

Ms. Sheela is a seasoned professional with over 35+ years of R&D experience at the Indian Space Research Organisation (ISRO). She is a distinguished expert in space vehicle guidance algorithm development, design, and mission planning and analysis. Throughout her career, she has played a pivotal role in shaping mission-critical technologies. At Spacelabs, Ms. Sheela provides strategic leadership, actively guiding the organization's vision, mission, and overall direction.

Our Mentors

Dhekane MV

Mr. M.V. Dhekane is a Distinguished Scientist and former Director of the ISRO Inertial Systems Unit, with over 35 years of experience contributing to numerous successful space missions. He holds deep expertise in launch vehicle control and guidance design, mission design and analysis, and onboard software development. In his academic role as the Prof. Satish Dhawan Professor at the Indian Institute of Space Science and Technology (IIST), he led and coordinated the student satellite program. Mr. Dhekane holds a B.Tech in Electrical Engineering and an M.Tech in Systems and Control from the Indian Institute of Technology (IIT), Bombay.

Dr Dipankar Das

Former Division Head, Aero Dynamics research & Devt., Aero Combustion Modelling ISRO

Dr. Dipankar Das is a distinguished aerodynamic expert specializing in theoretical aerodynamic analysis, with over 35 years of experience at ISRO—including 21 years as a Ph.D. holder. His areas of expertise encompass aero-thermal design and characterization of launch vehicles, venting design and analysis, aeroacoustic analysis, and aero-structural dynamic response studies such as flutter and buffet. As a lead aerodynamic designer and analyst, Dr. Das has made significant contributions to numerous successful space missions, playing a critical role in advancing ISRO's launch vehicle capabilities.

Sabu T

Former Division Head, Inertial Systems Unit, ISRO

Mr. Sabu is an expert in ground system development for testing subsystems of launch vehicles and satellites. With over 35 years of experience at ISRO, he has contributed to a wide range of areas across various space missions, including data acquisition and instrumentation systems for checkout applications, firmware for real-time applications, electronics for reaction wheels, fiber optic communication systems, and lightning protection & grounding systems.

Our Partners

Get connected with us for more details

SPACELABS ANALYTICS AND DYNAMICS PVT LTD

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