

SAC - VISION 2030

Harnessing space technology for societal, science and strategic applications through innovative and self-reliant satellite communication, navigation, Earth observation, space science payload and human centric systems.

MISSION STATEMENTS

- ✚ Envisioning a new paradigm of space borne observations for Earth system and Planetary studies with special emphasis on advanced techniques for geophysical parameters retrieval and customised web-based solutions to meet the national needs.
- ✚ Evolving competitive & advanced Satellite Navigation (SATNAV) services and achieve total penetration of NavIC solutions across strategic, civilian and scientific domains; enabled by indigenous technology, products & services and propelled by Indian industry.
- ✚ Enable all pervasive Satellite Communication Services & Applications across strategic, civilian and scientific domains through an operationally efficient, affordable, resilient, secure and self-reliant Satellite Communication (SATCOM) systems.

Programmatic Directions/Objectives

- ✚ Design and develop globally competitive Electro-Optical sensor systems in synergy with user requirements to deliver high quality analysis-ready data and information products for Earth Observation, Planetary and Space science missions.
- ✚ Conceptualise and realise active and passive Microwave and Terahertz instruments to enhance observation capabilities for earth observation, planetary and space science missions.
- ✚ Conceptualize and realise state of the art satellite communication and navigation Payload Systems through cost effective, innovative and disruptive technologies to meet existing as well as emerging user requirements from GSO and NGSO platforms.
- ✚ Enhance cost effective utilization of Satellite Communications systems through innovation in ground segment architectures and user terminus by indigenous development of new technology frontiers in synergy with Indian industrial capabilities to meet national demand.
- ✚ Focus on continuous advancement, innovation & excellence in Antenna Systems technology to meet next generation payloads & ground systems requirements.
- ✚ Enabling payload miniaturization through micro, nano and advanced packaging and Electronics and Mechanical fabrication technologies.

- ✚ Enhancing productivity through process automation and augmentation of space environment Simulation and testing capabilities.
- ✚ Development and utilization of multi-disciplinary technologies for innovative Mechanical systems for state-of-the art payloads.
- ✚ Formulate an agile and absolute R&QA system tailored for a variety of payloads and ground applications employing NextGen technologies and best engineering practices
- ✚ To achieve state of the art capability and self-reliance in design and development of crew centric systems for Human Space Programme and ensure crew safety through specific human-rated R&QA practices.
- ✚ Design and development of state-of-the-art techniques, algorithms and software for simulations, data processing, data quality evaluation, calibration & validation and visualisation for all future earth observation and planetary sensors for generation of high-quality Data Products.
- ✚ Enabling an efficient & amiable Capacity Building framework for promoting indigenisation & industry participation and encouraging Research, Training, Education and Outreach endeavours to achieve Vision 2030.