LBS INSTITUTE OF TECHNOLOGY FOR WOMEN
Poojappura, Thiruvananthapuram

TESLA

Department of Electronics and Communication Engineering

CONTEXT

S5
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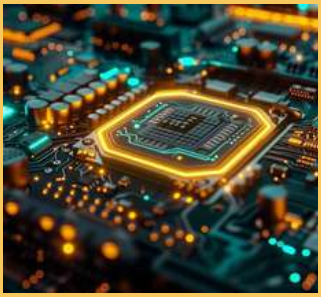
Gowari Madhu,S8ECE,2021-25
H S Vyshnavi,S8ECE,2021-25
Surya S Balan,S8ECE,2021-25

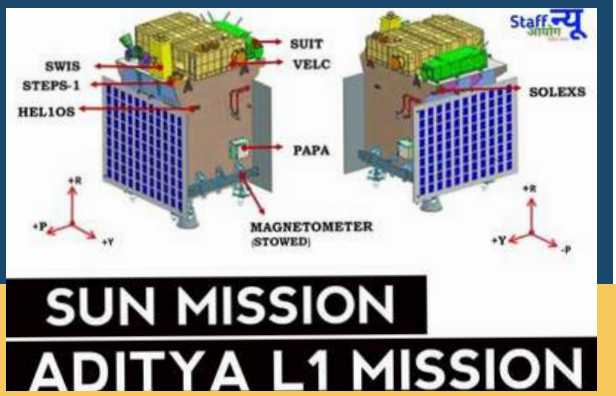


From Campus to Cosmos: Highlights of WESAT, EXPLORICA 5.0, and India's Aditya-L1 Mission

ADITHYA L1

TECH NEWS

Aditya L1 is the first space based Indian mission to study the Sun. Nigar Shaji is the project's director.Aditya-L1 was launched aboard the PSLV C57 at 11:50 IST on 2 September 2023. It successfully achieved its intended orbit nearly an hour later, and separated from its fourth stage at 12:57 IST.It was inserted at the L1 point on 6 January 2024, at 4:17 pm IST.



ADITHYA L1 has 7 distinct payloads developed, all developed indigenously. Five by ISRO and two by Indian academic institutes in collaboration with ISRO. The spacecraft is placed in a halo orbit around the Lagrange point 1 (L1) of the Sun-Earth system, which is about 1.5 million km from the Earth. A satellite placed in the halo orbit around the L1 point has the major advantage of continuously viewing the Sun without any occultation/eclipses. This will provide a greater advantage of observing the solar activities and its effect on space weather in real time.

OBJECTIVES

- To study Solar upper atmospheric (chromosphere and corona) dynamics.
- To study chromospheric and coronal heating, physics of the partially ionized plasma, initiation of the coronal mass ejections, and flares
- To observe the in-situ particle and plasma environment providing data for the study of particle dynamics from the Sun.
- To study space weather, and the origin, composition and dynamics of solar wind

EXPLORICA 5.0

LBSITW successfully hosted Explorica 5.0 on 25th and 26th November 2023, bringing together students and innovators for two exciting days.

Day 1 featured a grand inaugural ceremony, a Project Expo showcasing cutting-edge student projects, and workshops on trending topics like AI and robotics. The Tech Talk Series added valuable insights, making the day a perfect blend of innovation and learning.

Day 2 combined technical brilliance with cultural vibrance. The overnight Hackathon challenged participants to devise creative solutions, while quizzes, gaming tournaments, and treasure hunts added fun. The cultural evening stole the spotlight with vibrant performances, showcasing the talents of LBSITW students and fostering a spirit of togetherness.

WHAT'S AROUND LBS?

IEEE

WESAT: A Groundbreaking Milestone in India's Space Journey

January 1st, 2024

A historic milestone in India's space exploration was achieved on January 1st, 2024, when WESAT – the Women Engineered Satellite – was successfully launched into space. The satellite took flight aboard India's 60th PSLV mission, PSLV-C58, from the prestigious Satish Dhawan Space Centre in Sriharikota.

WESAT, a truly remarkable accomplishment, is the nation's first payload designed and constructed entirely by women engineers. In addition, it proudly represents Kerala's first student satellite, marking a significant achievement in both gender empowerment and student innovation. The satellite successfully entered orbit at a distance of 350 km from Earth.

The primary objective of WESAT is to study ultraviolet radiation, a critical area of space research. This mission underscores India's growing strength in space technology and signifies a leap forward in scientific exploration, with particular emphasis on empowering women and inspiring young minds across the nation.

The project started from 2019 and has gone a long journey till 2024.This groundbreaking achievement is a testament to the power of dedication, ingenuity, and collaboration, shining a light on the potential of India's future innovators, and inspiring countless students to dream big and reach for the stars.

The principal investigator was Dr. Lizy Abraham along with Dr. Sumithra M.D and Dr. Resmi R. Surya Jayakumar, Devika D.K and Sheril Mariam Jose were the space club coordinators 2023-'24. Students from all departments- ECE, CSE, AE&I, IT and CE were part of this mission.

WESAT's successful mission has undoubtedly set a new benchmark in India's space history, exemplifying what can be accomplished through hard work and vision.

WESAT
Women Engineered SATellite

VISION AND MISSION OF THE INSTITUTE

VISION OF THE INSTITUTE

To be a centre of academic excellence empowering women in the technical domain

MISSION OF THE INSTITUTE

Imparting value based technical education to young women transforming them to professionals excelling globally in academics, research and development and industry meeting social challenges.

VISION OF THE DEPARTMENT

To become the centre of excellence in Electronics and Communication and Instrumentation and Computer Engineering to facilitate professional education and research keeping higher level of value systems.

MISSION OF THE DEPARTMENT

M1 : To transform young women to high quality engineers, entrepreneurs and researchers with ethical values.
M2 : To contribute creative engineering solutions to industry by keeping pace with latest technological advancements.
M3 : To provide intellectual services to the society by application of Electronics and Communication and Instrumentation and Computer Engineering.