



UPSC & STATE PCS CURRENT AFFAIRS · UJIYARI.COM

DAILY CURRENT AFFAIRS

GalaxEye Mission Drishti — World's First OptoSAR Satellite, India's Largest Private Satellite

5 May 2026 · SCIENCE & TECH · GS3

CURATED & WRITTEN BY

**Bharat Choudhary**

UPSC Educator & Content Creator

[linkedin.com/in/epicbharat](https://www.linkedin.com/in/epicbharat)

ALSO FROM THE CREATOR

BharatNotesFree UPSC notes, MCQs, PYQ analysis. **100% Free.**bharatnotes.com →

ADVERTISE

Advertise with Ujiyari

Reach thousands of UPSC aspirants daily.

epicbharat@gmail.com

GalaxEye Mission Drishti — World's First OptoSAR Satellite, India's Largest Private Satellite

5 May 2026 · 3 min read · 1 tag

WHY IN NEWS

GalaxEye Space Solutions, an **IIT Madras-incubated** Indian space startup, successfully launched **Mission Drishti** on **May 3, 2026** aboard a **SpaceX Falcon 9** rocket from **Vandenberg Space Force Base, California, USA**. Mission Drishti is the **world's first OptoSAR satellite** — fusing an optical multispectral imager and a Synthetic Aperture Radar (SAR) sensor on a single spacecraft. At **190 kg**, it is also **India's largest privately-built satellite** to date. PM Modi congratulated the team, calling it “a major achievement in our space journey.”

WHAT IS OPTOSAR? — THE TECHNOLOGY

OptoSAR = Optical sensor + Synthetic Aperture Radar (SAR) fused on one platform. This is a world first in commercial Earth observation.

SENSOR TYPE	MECHANISM	STRENGTH	LIMITATION
Optical / Multispectral	Captures visible + near-infrared reflected sunlight	Rich colour/spectral data; easy to interpret	Cannot penetrate clouds, smoke, or operate at night
SAR (Synthetic Aperture Radar)	Emits microwave pulses; records backscatter	All-weather; day/night; penetrates clouds/smoke	Monochrome; complex interpretation
OptoSAR (fused)	Both sensors on one satellite; AI fuses outputs	Combines all-weather capability with spectral richness	World's first commercial implementation

Combined resolution: ~1.8 metres — the fused product delivers up to **3× more actionable intelligence** compared to either sensor alone.

Onboard AI: Mission Drishti carries an **NVIDIA Jetson Orin** AI processor — enabling real-time edge computing in orbit. Images are processed before downlinking, reducing bandwidth requirements and latency.

MISSION DRISHTI — KEY SPECIFICATIONS

FEATURE	DETAIL
Satellite name	Mission Drishti
Operator	GalaxEye Space Solutions Pvt. Ltd.
Mass	190 kg — India's largest privately-built satellite
Launch vehicle	SpaceX Falcon 9
Launch site	SLC-4E, Vandenberg Space Force Base, California, USA
Launch date	May 3, 2026
Orbit	Sun-Synchronous Low Earth Orbit (SSO-LEO)
Sensors	7-band multispectral imager + SAR
Onboard AI processor	NVIDIA Jetson Orin
Propulsion	Electric propulsion system
Fused resolution	~1.8 metres
World first	First commercial OptoSAR satellite

ABOUT GALAXEYE SPACE SOLUTIONS

FEATURE	DETAIL
Founded	2020
Incubated at	IIT Madras (Research Park)
HQ	Chennai, Tamil Nadu
Regulatory clearance	IN-SPAcE (Indian National Space Promotion and Authorisation Centre)
Future plan	Drishti Constellation — 10 satellites by 2029 for high-frequency global revisit

APPLICATIONS

SECTOR	USE CASE
Defence & Intelligence	All-weather border surveillance; SAR sees through camouflage nets and cloud cover
Disaster Response	Flood/cyclone damage assessment even when clouds block optical sensors
Agriculture	Simultaneous crop health (optical) and soil moisture (SAR) monitoring
Maritime Domain	Ship detection in open ocean, day and night
Urban Mapping	Infrastructure change detection, construction monitoring
Forestry	Deforestation detection through canopy and cloud cover

INDIA'S PRIVATE SPACE SECTOR — CONTEXT

MILESTONE	COMPANY	YEAR
First private Indian rocket to reach space	Skyroot Aerospace (Vikram-S)	2022
First private rocket launch from Indian soil	Agnikul Cosmos (Agnibaan SOrTeD)	2024
Hyperspectral constellation	Pixxel (Fire-2, Fire-3)	2024
World's first OptoSAR + India's largest private satellite	GalaxEye (Mission Drishti)	2026

IN-SPACE (est. 2020) — the regulatory body that enabled all of this — provides one-window clearance for private space activities, removing ISRO's monopoly.

PM Modi's statement (verbatim): "Mission Drishti by GalaxEye marks a major achievement in our space journey. The successful launch of the world's first OptoSAR satellite and the largest privately-built satellite in India is a testament to our youth's passion for innovation and nation-building."

UPSC RELEVANCE

PAPER	ANGLE
GS3 — Science & Technology	SAR, remote sensing, private space, IN-SPACe policy
GS3 — Security	Dual-use satellite applications — defence surveillance without foreign dependence
GS2 — Governance	IN-SPACe liberalisation, Space Activities Bill, FDI in space

Mains Keywords: OptoSAR, Mission Drishti, GalaxEye, IN-SPACe, Drishti Constellation, synthetic aperture radar, remote sensing, private space India, NVIDIA Jetson Orin, dual-use satellite, IIT Madras

Prelims Facts Corner

ITEM	FACT
Mission Drishti	World's first OptoSAR satellite; launched May 3, 2026
Launch vehicle	SpaceX Falcon 9 from Vandenberg SFB, California
Mass	190 kg — India's largest privately-built satellite
OptoSAR	Optical + SAR fusion; ~1.8m resolution; 3× more intelligence than single-sensor
GalaxEye	IIT Madras-incubated startup; founded 2020; Chennai
Onboard AI	NVIDIA Jetson Orin edge processor
Constellation plan	10-satellite Drishti Constellation by 2029
IN-SPACe	Indian National Space Promotion and Authorisation Centre; est. 2020
PM Modi	"Major achievement in our space journey"

← **NEWER ARTICLE**

State Assembly Election Results 2026 — BJP Wins West Bengal,...

OLDER ARTICLE →

Nepal Objects to Kailash Mansarovar Yatra via Lipulekh —...

RELATED EDITORIALS

THE HINDU

[The Elephant in India's Data Room: Fragmented Governance, Missed Potential](#)

9 May

INDIAN EXPRESS

[How Can India Produce AI, Instead of Becoming Its Tenant?](#)

6 May

THE HINDU

[At Sea: On India's Naval Indigenisation and the Limits of Project 17A](#)

6 May

BUSINESS STANDARD

[Hear the Alarm — India's SACHET Mobile Disaster Alert System Is a Step in the Right Direction](#)

5 May

RELATED KEY TERMS

KEY TERM

[Active Case Finding \(TB\)](#)

A proactive public health strategy where health workers systematically...

KEY TERM

[Advanced Technology Vessel \(ATV\) Programme](#)

India's classified, decades-long programme to indigenously design and...

KEY TERM

[Agri-Photovoltaic](#)

A dual land-use technology that integrates elevated solar panels with...

KEY TERM

[BharatNet](#)

India's flagship programme to provide broadband internet connectivity...



CURATED & WRITTEN BY

Bharat Choudhary

UPSC Educator & Content Creator

[linkedin.com/in/epicbharat](https://www.linkedin.com/in/epicbharat)[Read Full Article on Ujiyari](#) →<https://ujiyari.com/daily/2026/05/05/galaxeye-mission-drishhti-optosar-satellite/>

ALSO FROM THE CREATOR

BharatNotes

Free UPSC study platform — subject-wise notes across all 4 GS papers, Prelims MCQs, Mains answer frameworks, PYQ analysis & progress tracking. **100% Free • No Login Required.**

[Start Preparing](http://bharatnotes.com) → bharatnotes.com

📌 OPPORTUNITY

Advertise with Ujiyari

Reach **thousands of serious UPSC & State PCS aspirants** daily through our PDFs, website, and social channels.

Ideal for: Coaching institutes • EdTech platforms • Book publishers • Exam prep apps

[✉ epicbharat@gmail.com](mailto:epicbharat@gmail.com)

Write to us for rates & media kit

Free UPSC & State PCS Current Affairs · ujiyari.com · bharatnotes.com