

# EXPLAINED

Relevant for: Science & Technology | Topic: Space Technology & related matters

Indian Space Research Organisation (ISRO) headquarters in Bengaluru. | Photo Credit: [REUTERS](#)

**The story so far:** India's attempt to place a geosynchronous satellite (GISAT-1) with its GSLV-F10-EOSS-3 mission [did not succeed](#). The GSLV-F10 rocket of the Indian Space Research Organisation (ISRO), which blasted off from the Satish Dhawan Space Centre at Sriharikota on Thursday with the purpose of launching the Earth Observation Satellite EOSS-3 into space, failed in its mission due to a 'performance anomaly'. ISRO chairman K. Sivan announced that "a technical anomaly was observed in the cryogenic stage and the mission could not be accomplished."

According to the ISRO, GSLV-F10 launch took place at 05.43 IST as scheduled. Performance of the first and second stages was normal. However, cryogenic upper stage ignition did not happen due to a technical anomaly. Chris Bergin of NASASpaceFlight.com tweeted that the mission suffered a major failure in the third stage: "2-3 sep looked fine but the third stage started to roll after ignition and then it progressively worsened. Then the telemetry lines diverged." It appears that while the first two stages separated without a hitch, the ignition of the third stage did not take place as programmed. The ISRO has confirmed that this mission could not be accomplished as planned. This failure is all the more surprising because the rocket launches since 2017 have been successful, and this breaks a long run of successful launches. According to a video of the Doordarshan presentation posted on YouTube by RocketGyan — a channel that posts details of all rocket launches — around 352 seconds after launch, after the separation of the stages two and three, at an altitude of about 139 km, the deviation from plan appears to have taken place. After a lot of consultations and perhaps attempts to revive the programme, at about 15 minutes after the launch, the Director of ISRO announced that the mission could not be accomplished.

EOSS-3 was the first state-of-art agile Earth Observation Satellite which would have been placed in a Geo-Synchronous orbit around the Earth. While the first and second stage separations worked out fine, and nearly 12 minutes before the separation of the EOSS-3, the mission failed. The objectives of EOSS-3 were to provide real-time imaging of large areas of the Earth; to monitor natural disasters from its position in the sky; to provide warnings for natural disasters, observe cyclones, cloudbursts, thunderclouds etc.

The GSLV Mark II is the largest launch vehicle built by India until now. The GSLV expands to geosynchronous satellite launch vehicle. As its name suggests, it can launch satellites that will travel in orbits that are synchronous with the Earth's orbit. These satellites can weigh up to 2,500 kg and are first launched into transfer orbits that have a distance from Earth of 170 km at closest approach and about 35,975 km at furthest approach which is close to the height of the geosynchronous orbit. From this transfer orbit, the satellite gets set free into a geosynchronous orbit.

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The Ad Observatory project at NYU was started by the Cybersecurity for Democracy group with over 6,500 volunteers at the University's school of engineering in September 2020

Telstra Corp, Optus and TPG Telecom are alleged to have made incorrect claims about the maximum speed of the internet connections they offer and also accepted payments from some customers for plans without providing the promised speeds, the Australian Competition and Consumer Commission (ACCC) said in a notice on Monday.

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