MUMBAI: Satellites have been helping motorists navigate their way to destinations for decades now, but on Thursday, for the first time in Asia-Pacific region, the very same constellation of satellites that offers GPS teamed up with three ISRO satellites to provide three-dimensional navigation guidance to pilots who landed their aircraft safely on to the Ajmer airport runway in a successful trial flight

“india is the first country in Asia-Pacific Region to achieve such a landmark..have a satellite-based landing procedure,” said government-owned Airports Authority of India (AAI), adding the successful trial was a major “air navigation services" milestone in India's civil aviation history. Currently, air navigation services are provided by ground-based systems

IndiGo airline carried out the test flight with its ATR aircraft that departed from Delhi for Aimer's kishangarh airport, piloted by Captain Sandip Sud and Capt Satish Veera, while Capt Shweta Singh, deputy chief flight operations inspector, and other Directorate General of Civil Aviation (DGCA) officials were on board.

The satellite-based navigation system, evocatively called GAGAN (GPS Aided GEO Augmented Navigation) offers almost the same accuracy as a ground-based landing system comprising antennae and beacons that transmit signals to aircraft to help pilots land in runway visibility up to 550 metres or more. The one difference though was that the said ground-based system called CAT-I ILS has a “decision height” of 200 feet. It's the height at which pilots should discontinue the descend to land if they have not yet spotted the runway. But the decision height for the trial flight was set higher, at 250 feet. The Indigo pilots used ‘Localiser Performance with Vertical Guidance (LPVJ’ approach—essentially carrying out a descent and landing with vertical and lateral navigational guidance from GAGAN satellites, that is.