

## **‘Will disappear in 45 days’: DRDO official on NASA concern over A-SAT debris**

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well below the ISS and most satellites in orbit*

New Delhi: The head of American space agency Nasa on Tuesday described India’s destruction of one of its own satellites a “terrible, terrible thing” that had created 400 pieces of orbital debris and led to new dangers for astronauts aboard the International Space Station.

National Aeronautics and Space Administration (Nasa) chief Jim Bridenstine was addressing staff five days after India shot down a low-orbiting satellite in a test to prove it was among the world’s advanced space powers, AFP reported.

Not all of the pieces were big enough to track, Bridenstine said. “What we are tracking right now, objects big enough to track — we’re talking about 10 centimetres [six inches] or bigger — about 60 pieces have been tracked,” the agency quoted him as saying.

The Indian satellite was destroyed at a low altitude of 300 kilometres, well below the ISS and most satellites in orbit. But 24 pieces “are going above the apogee of the ISS,” said Bridenstine. The ISS apogee is at 408km. “That is a terrible, terrible thing to create an event that sends debris at an apogee that goes above the International Space Station,” Bridenstine said. “That kind of activity is not compatible with the future of human spaceflight.”

The Indian Space Research Organisation (Isro) declined to comment, saying the mission was executed by the Defence Research and Development Organisation (DRDO). The DRDO chief and a spokesperson did not comment. An official of the agency, while asking not to be named, said the debris will disappear in 45 days. “The test was calibrated keeping in mind the debris issue. The world should know that debris from two Chinese tests is still floating whereas those created by the Indian test will disappear,” he added.

An Indian expert said that India conducted the anti-satellite test responsibly but agreed it could have raised risks for the ISS. “I would say India conducted the test responsibly. At 300km, the altitude is lower than that of the ISS and most of the other satellites and the debris will come back to the atmosphere of the earth eventually. That said, there is a possibility that some debris might enter the apogee of the space station; the risk of collision increases as it does with any object sent to space ,” said Rajeswari Rajagopalan, head of nuclear and space initiative, Observer Research Foundation (ORF).

The anti-satellite missile strike was announced by Prime Minister Narendra Modi on live television on March 27, an address that was condemned by the Opposition parties. Congress leader P Chidambaram said the test was unnecessary and India already had the capability.

The US military tracks objects in space to predict the collision risk for the ISS and for satellites. They are currently tracking 23,000 objects larger than 10 centimetres. That includes about 10,000 pieces of space debris, of which nearly 3,000 were created by a single event: a Chinese anti-satellite test in 2007 at 530 miles from the surface.

As a result of the Indian test, the risk of collision with the ISS has increased by 44% over 10 days, Bridenstine said.

But the risk will dissipate over time as much of the debris will burn up as it enters the atmosphere.

According to Dr M Annadurai, former director of Isro satellite centre in Bengaluru, the problem of space debris is a wider issue. “Space debris is composed of satellites, parts of launch vehicles, etc. The only difference with the debris from the anti-satellite mission is that a satellite would be a larger piece weighing a few tonnes, the debris from the destroyed satellite would be smaller,” he said.

With 830 satellites, US leads the world in the number of satellites, followed by China with 280 satellites. India has 54 satellites.

Late on Monday, Pakistan released a statement criticising India’s A-SAT test and saying the reports about the debris posing a risk to ISS were “worrying”.

<https://www.hindustantimes.com/india-news/terrible-terrible-thing-nasa-on-a-sat-debris/story-Pk6wX2sPCW0sObjFRHDEN.html>