ISRO says it has lost contact with GSAT-6A

ISRO's GSLV-F08 carrying GSAT-6A communication satellite blasts off into orbit from Satish Dhawan Space Centre, in Sriharikota on March 29, 2018. | Photo Credit: <u>PTI</u>

A day after GSAT-6A, the country's newest communication satellite, went incommunicado in space, officials of the Indian Space Research Organisation (ISRO) said on Sunday that they were working to restore the link with it.

All you need to know about ISRO's GSAT 6A satellite launch

The silence is initially believed to have been caused by a power glitch or a short circuit on the satellite.

The spacecraft, launched on March 29, was meant to support military communications in hostile regions using handy ground terminals. Built to last 10-12 years, it was to be a standby for its three-year-old replica GSAT-6.

ISRO chief hopeful

ISRO Chairman K. Sivan, for whom this was the first mission after taking charge, said, "Going by preliminary data, we expect that we will be able to recover the satellite. Its systems are in good health. Our teams are working round the clock to re-establish contact with the satellite. We are trying through our ground stations across the world." Functionally, there would be no shortage or disturbance as GSAT-6 was at work for some more years, he said.

"There will be no impact of this problem on our next missions," Dr. Sivan said.

The launch of the navigation satellite IRNSS-11 is scheduled for April 12. An expert committee is looking into the issue and will suggest recovery and other options.

Orbit correction

After the 36-minute second orbit correction of Friday, GSAT-6A had an orbital period of 18-20 hours, close to the final 24 hours. The command team at the ISRO's Master Control Facility at Hassan would get another shot at recovery when the satellite passes over India on Monday morning.

Dr. Sivan also referred to the latest case of Russian scientists getting back an Angolan satellite that had lost its link after launch in December.

Earlier on Sunday, an ISRO statement said, "Communication from the satellite was lost after the second firing of the on-board engine" on Saturday. "Efforts are under way to establish the link with the satellite," it said.

News about a glitch started floating in around forenoon on Saturday. The ISRO brass, including Dr. Sivan and officials of the satellite and control teams, went into a huddle at the ISRO headquarters and later at the MCF. Multiple but unofficial sources connected with the ISRO believe the spacecraft may have died.

One person familiar with satellite technologies said spacecraft have redundancies or backups; MCF worked at them overnight on Saturday. "There are occasions when satellites have sprung alive after a few days. But in this case, the chances appear to be dim," the expert said, requesting not to be named.

The 2,000-kg-plus GSAT-6A was launched on the indigenous GSLV rocket on March 29 from the Satish Dhawan Space Centre, Sriharikota. It was placed in an initial elliptical orbit 169.4 km x 36,692 km.

MCF picked up its control within minutes. From March 30, it started routinely correcting the orbit into a circular one, a critical but frequently done exercise that lasts about a week to 10 days.

After the first on-board motor firing for about 36 minutes on Friday morning, ISRO announced that the satellite's orbit became 36,412 km x 5,054 km with an inclination of 11.93 degrees to the Equator; it was circling the Earth almost every 13 hours.

The space agency said a third orbit raising exercise was due on Sunday. The second manoeuvre is said to have been tried at 10.15 a.m. on Saturday.

GSAT-6A came with a technology that combines a large unfurlable S-band antenna in space and small, hand-held ground terminals highly suited for the military in remote area operations.

Perkin discovered the first synthetic dye, known as mauveine.

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