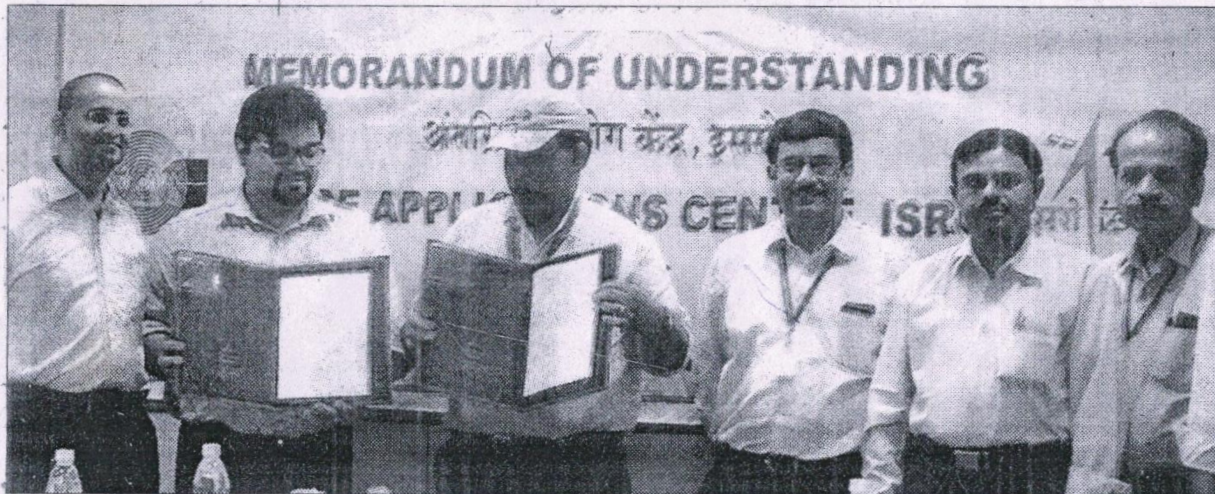


# IIT-I inks MoU with ISRO for satellite navigation research



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Centre of Astronomy of Indian Institute of Technology, Indore has signed a memorandum of understanding (MoU) with Space Applications Centre (SAC) of Indian Space Research Organisation, Ahmedabad, for satellite navigation research.

The MoU has been inked following an initiative by Dr Abhirup

Datta of Centre of Astronomy, IIT-Indore. "This MoU allows Centre of Astronomy to receive two Indian Regional Navigation Satellite System (IRNSS) receivers from SAC, ISRO, for Dr Datta and Prof Hari Hablani's research. Moreover, this MoU also opens up possibility of further research collaboration with ISRO-SAC," a release issued by IIT-Indore said.

These IRNSS receivers will contribute to the ionospheric research initiated by Dr Datta's group.

IRNSS receivers will also be used by Prof Hablani and his students for satellite navigation research.

Recently ISRO successfully established the Indian constellation of satellites that constitutes the IRNSS, or the NAVIC (Navigation with Indian Constellation).

Indian Regional Navigation Satellite System or IRNSS with an operational name of NAVIC is an autonomous regional satellite navigation system that is being set up by India, which will be used to pro-

vide accurate real-time positioning and timing services over India and the region extending to 1,500 kilometres around the country.

The NAVIC system will consist of a constellation of 3 satellites in Geostationary orbit (GEO), 4 satellites in Geosynchronous orbit (GSO), approximately 36,000 kilometres altitude above earth's surface, and two satellites on the ground as stand-by, in addition to ground stations.

The system was developed because access to foreign government-controlled global navigation satellite systems is not guaranteed in hostile situations, as happened to the Indian military in 1999 when it was dependent on the American Global Positioning System (GPS) during the Kargil War. Indian government approved the project in May 2006. The constellation of seven NAVIC satellites is already in orbit and the system is expected to be operational from 2016, after a system check. NAVIC will provide two levels of service, the standard positioning service will be open for civilian use, and a restricted service (an encrypted one) for authorized users.