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Singapore launches its first nano-satellite

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BY PAUL LIM - JULY 4

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VELOX-I, Singapore's first nano-satellite, and VELOX-PIII, a pico-satellite the size of an iPhone, were launched into space on Monday, on India's Polar Satellite Launch Vehicle. They join two other NTU satellites currently operating in space.

"The VELOX-I is unique as it has an extensible mechanism to capture high-res images, designed to withstand radiation and can perform inter-satellite communication with VELOX-PIII," said Professor Freddy Boey, NTU's provost. "This is important to us as the data collected will be used to improve the aerospace and engineering industry. These new satellites will be used for research and testing purposes to develop future satellites, and help solve existing problems such as the haze."

In two to three months, VELOX-I will deploy the attached VELOX-PIII. They will be able to communicate with each other autonomously for a year and work in tandem. Weighing 4.28kg, the pair will travel at speeds of up to 7.5km per second and orbit the earth 15 times daily.

The data collected from previous NTU satellites was used to modify VELOX-I and VELOX-PIII, and will be used to develop two satellites due next year — Singapore's first weather satellite used for tropical climate study and a bigger nano-satellite.

To control and monitor its growing fleet of satellites, NTU has built a new Mission Control Centre, which has advanced satellite communication and computer systems.

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