

WHAT IS
VELOX-PII?

It is called a pico-satellite as it weighs only 1.33kg.

Pico-satellites typically cost between \$100,000 and \$200,000 to build.

The Velox-Pii is now soaring some 600km above Earth on an orbital plane that has a fixed orientation to the Sun.

The satellite has been orbiting in space for five days and has gone 60 times around Earth over this time.

The satellite will be running tests for the next 12 months on NTU's satellite technology.

Students' project is out of this world

NTU project puts S'pore satellite in space

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Mr Charlie Soon had always thought that building a satellite within a short period of time was impossible, let alone have it launched into space.

But the Nanyang Technological University (NTU) students' satellite, which he had been working on with a group for just over a year, is now orbiting in space.

Last Thursday, the satellite, Velox-Pii, was launched on board Russia's RS-200 rocket from the Yasnay Launch Base in Russia at 3:00pm Singapore time.

It began transmitting data 24 hours later.

The satellite, which weighs about 1.3kg, was built by 20 NTU students, including Mr Soon, as part of their final-year project in 2009.

It is also Singapore's second satellite owned by NTU, following the launch of the X-SAT on April 20, 2011.

Mr Soon, 28, who is currently doing a PhD in solar and energy power systems in NTU, said that the experience of building a satellite proved to be unique, but rather tricky.

He told The New Paper: "I felt excited right away when we were told that we were about to build a satellite that would be launched into space. But this project is not just about the end product, but also the journey."

Mr Soon worked on the power management system of the Velox project while other group members were tasked to complete different parts of the satellite according to their expertise, such as mechanical and computer engineering.

"Our only 'salvation' at the end of a busy day was to have supper together," said Mr Soon, who graduated with first-class honours in electrical and electronic engineering in 2010.

Mr Soon recalled that the whole team gathered at NTU's ground station on the day of the launch.

"Once we were able to detect signals from the satellite, all of us rejoiced as our product had finally reached its destination and was fully operational," he said.

SATELLITE PROGRAMME

NTU is Singapore's first university to develop a satellite programme.

Since 2009, second-year engineering students have started developing and building real satellites under the programme managed by NTU's Satellite Research Centre.

The director of NTU's Satellite Research Cen-

tre, Associate Professor Low Kay Soon, said: "Our pipeline of bigger projects will not only train our future students for a career in the aerospace and space industry, it will also further strengthen NTU as an exceptional institution of excellence in satellite technology as well as realise Singapore's ambitions to make a global mark in the space industry."

FINAL YEAR PROJECT: Mr Charlie Soon, 28, with a prototype of Velox-Pii, a satellite his group worked on. PHOTO: NANYANG TECHNOLOGICAL UNIVERSITY

