

NTU's launch into space



NTU Associate Professor Low Kay Soon (centre) and his students Hui Ang (left) and Charlie Soon (right) with the satellite prototype. ST PHOTO: LAU FOOK KONG

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Satellite built by NTU students sent into space

A first for them; satellite carried by rocket launched from Russia last week

By LEE JIAN XUAN

FOR the first time, Nanyang Technological University (NTU) students have designed and built a satellite which has been successfully sent into space.

Hardly bigger than an iPad, the Velox-Pi1 was carried by a rocket launched from Russia last Thursday. Tests by NTU have shown that the satellite, currently orbiting some 600km above earth, is fully operational.

It will spend the next year running tests to ensure the viability of NTU's satellite technology, such as sun sensors used to orientate the fully solar-powered Velox-Pi1 so that it can absorb enough energy.

If proven to work, the technology could be sold to companies, said Associate Professor Low Kay Soon, director of NTU's Satellite Research Centre.

The size of satellites such as the Velox-Pi1 also makes them less costly to launch, so companies could also use them to test parts that have not been used in space before, like memory chips, he added.

He also noted that the centre was already in "on-going discussions" with some firms, but declined to name them.

The university also declined to reveal the cost of the Velox-Pi1.

This is not the first satellite to be launched by NTU. In April 2011, there was the X-Sat, which was built by the university's staff and DSO National Laboratories. About 100 times as heavy as its 1.33kg successor, the X-Sat has taken almost 5,000 photographs of earth, helping researchers to monitor environmental change.

But Prof Low and his team of students are not resting on their laurels.

They aim to launch another satellite, the Velox-Pi2, in the first half of next year, and complete work on four more satellites by 2015.

The coming month is also a "critical period" for the Velox-Pi1, as equipment problems usually surface after the initial launch of a satellite, Prof Low explained.

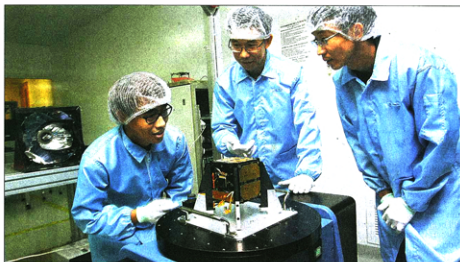
As the satellite is in a low-earth-orbit, it can send signals to the ground station in NTU only four or five times daily.

So members of the team have been staying back every night till as late as 1am to monitor the Velox-Pi1's progress.

But the effort is worth it for NTU PhD student Charlie Soon, 28, who joined Prof Low four years ago when the X-Sat was first launched.

"I am very excited to be part of a team that had actually put a satellite into space," said Mr Soon, who now mentors students in NTU's satellite programme, which trains engineers for Singapore's space industry.

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Prof Low (centre) and NTU PhD students Hui Ang, 27, (left) and Charlie Soon, 28, with the Velox-Pi1 prototype. Tests by NTU have shown that the Velox-Pi1, currently orbiting some 600km above earth, is fully operational. ST PHOTO: LAU FOOK KONG