First S’pore-built satellite now in orbit

It will be used to record ecological changes on Earth

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LIFT-OFF, finally. Singapore’s first locally built sat-
hellite has officially been launched into space.

Riding on a rocket owned by the Indian Space Re-
search Organisation (Isro), the micro-satellite
X-Sat blasted off from Satish Dhawan Space Centre
in India yesterday, more than four years late.

The 105kg fridge-size satellite, which will be
used to take photographs to measure soil erosion
and environmental changes on Earth, was one of
three riding on Isro’s Polar Satellite Launch Vehicle
(PSLV-C16). The other two were built by India and
Russia.

Yesterday’s launch, at 12.42pm Singapore time,
was PSLV’s 18th successful lift-off since its maiden
flight in 1994. Only two launches have failed.

X-Sat is designed and built from scratch by scien-
tists and engineers from Nanyang Technological
University (NTU) and Singapore’s defence research
body DSO National Laboratories.

Now in orbit, X-Sat is establishing communica-
tion contact with ground control in NTU, a process
likely to take up to a week. Once contact has been
made, an “initial health status of the satellite will be
ascertained and confirmed”, said an NTU spokes-
man.

This includes checking its solar panels and com-
munication systems and the Korean-made camera,
dubbed Iris, that can capture forest fires and sea pol-
lution.

It will then relay data and beam images back to
the National University of Singapore’s Centre for
Remote Imaging, Sensing and Processing.

With the successful launch of X-Sat, Singapore
is one of the first countries in South-east Asia to
have its own satellite in space. Previous satellite
launches by the Republic involved construction ef-
forts by foreign companies.

The launch capped more than nine years of hard
work by scientists and engineers. Experts say the se-
ries of starts and stops had sent the cost of X-Sat
from $10 million to more than $40 million.

NTU president Su Guanming congratulated the
team, and said the launch represents “a huge leap” in
Singapore’s efforts to build space technology. He
added that he hopes X-Sat’s launch will “excite and
inspire” more youth to take up engineering and ven-
ture into space technology.

Other countries with more established space pro-
grammes such as China, the United States and Isra-
el launch more sophisticated satellites weighing be-
 tween 500kg and 1,000kg every year. While X-Sat
is small, space analysts say its launch is a credible
effort by Singapore.

But defence analyst Bernard Loo of the S. Rajarat-
nam School of International Studies does not see a
“strategic need” for Singapore to have its own
space programme yet.

“Singapore’s strategic space is so small, there is
no need for such sophisticated technology for early
warning of an impending attack,” he said.

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