The Australian

Swiss scientists to build space vacuum cleaner

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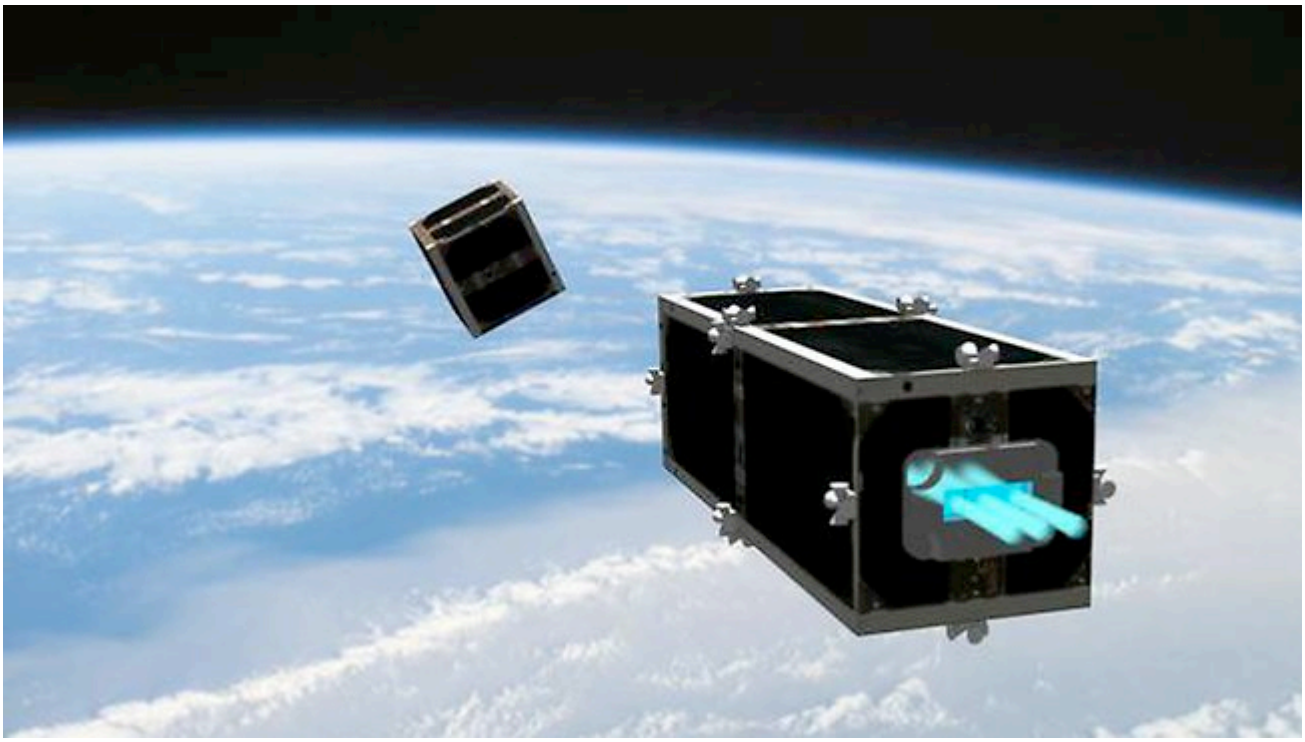

In this illustration provided by the Swiss Space Centre, the CleanSpace One is chasing its target, a piece of space junk.
Source: AP

SWISS scientists have announced plans to develop a machine that acts almost like a vacuum cleaner to scoop up thousands of abandoned satellite and rocket parts, cleaning up outer space.

The Swiss Space Centre at the Ecole Polytechnique Federale de Lausanne (EPFL), a top science university, announced the launch of CleanSpace as the first installment of a family of satellites designed to clear up space debris.

According to EPFL, "16,000 objects larger than 10cm in diameter and hundreds of millions of smaller particles are ripping around the earth at speeds of several kilometres per second."

"It has become essential to be aware of the existence of this debris and the risks that are run by its proliferation," said Claude Nicollier, an astronaut and EPFL professor.

The space centre said it was moving beyond rhetoric to "take immediate action to get this stuff out of orbit."

Centre spokesman Jerome Grosse said two options are being considered for the cleaning satellites.

One is a machine that scoops up debris and then burns itself up in Earth's atmosphere.

The second is a model capable of retrieving the debris, which is then ejected into the atmosphere while the cleaner remains in space.

"We want to offer and sell a whole family of ready-made systems, designed as sustainably as possible, that are able to de-orbit several different kinds of satellites," explained centre director Volker Gass.

"Space agencies are increasingly finding it necessary to take into consideration and prepare for the elimination of the stuff they're sending into space. We want to be the pioneers in this area."

EPL cited a 2011 study by Swiss Re insurance company showing that every year there is almost a one in 10,000 chance that an orbiting satellite measuring 10 square metres will collide with a piece of space debris larger than 1cm.

AFP
