If aliens attack the Earth...

Afghani *mujahideen* may save us

by Marco Fosci

In a recent press conference, Sergey Berezhnoy, deputy head of the main Russian satellite control facility, the Titov Space Centre in Krasnoznamensk, admitted that, as things stand, Russian armed forces would be unable to repeal an alien attack.

According to *Russia Today*, Berezhnoy answered a journalist's question by saying "We are unfortunately not ready to fight extra-terrestrial civilisations. Our centre was not tasked with it, as there are too many problems on Earth and near it."

The centre is located 40 km to the south-west of Moscow and reports directly to the Russian Aerospace Defence Force Command (BKO). It controls around 75% of the country's military and commercial satellites as well as the link with the International Space Station (ISS).

The possibility of our coming into contact with alien life forms hit the headlines again just a few months ago, following the announcement by NASA, the American space agency, of the discovery of a solar system in the Cygnus constellation comprising a red dwarf star with five orbiting planets.

One of them, Kepler-186f, is approximately the same size as Earth and located in what is called the 'Goldilocks zone', the habitable zone, just the right distance from its own star so that water could pool on the planet's surface. Although it is 500 light-years away and earth probes cannot reach it for further investigation, Kepler-186f is seen as proof there are worlds out there that can support life.

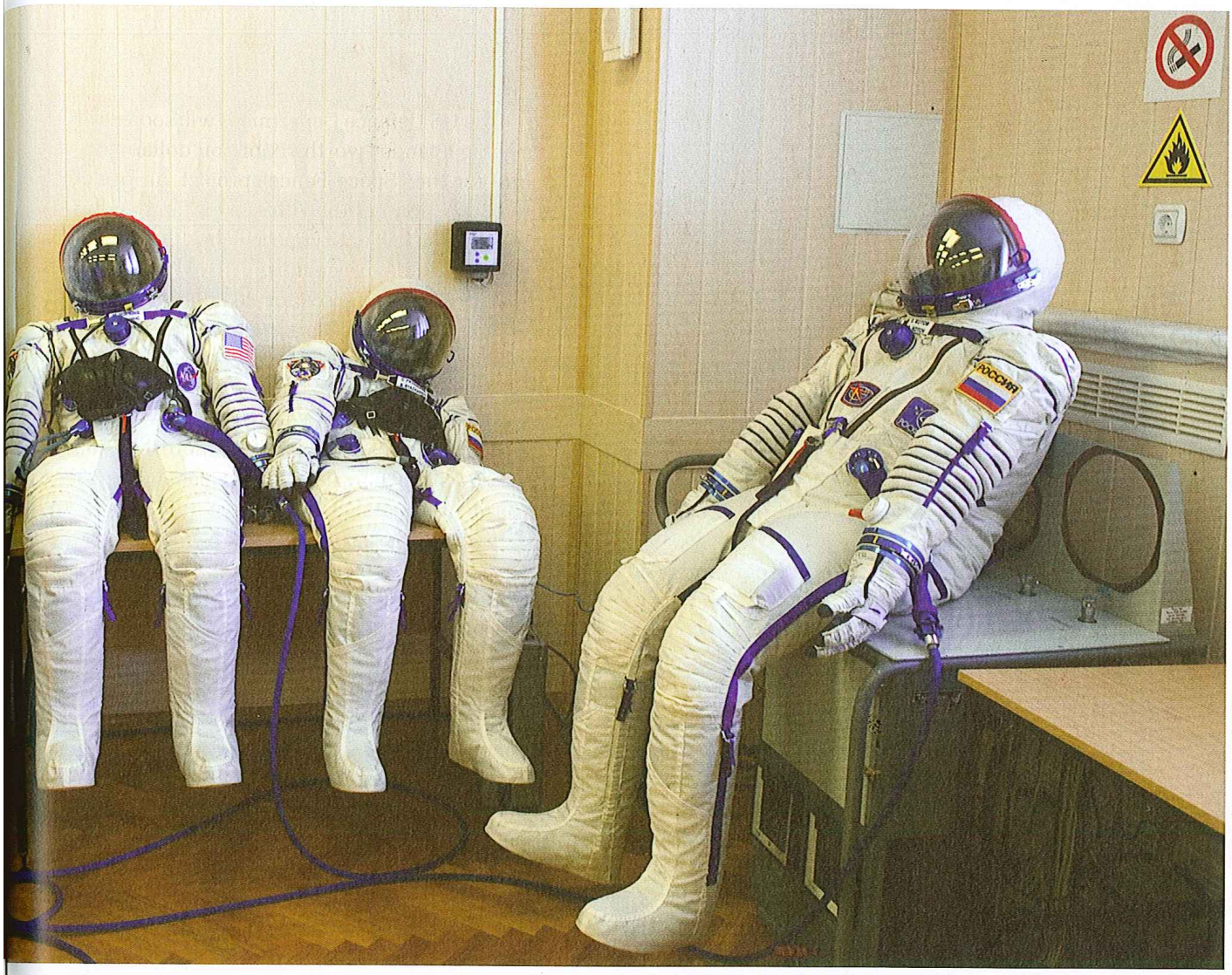
The assumption that intelligent alien forms might be peaceful has a considerable hold over popular imagination, thanks to the worldwide success of films like *E.T. the Extra-Terrestrial* or the more recent *Avatar*, but the scientific community has often proven sceptical about the matter.



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In 2010 the famous physicist and cosmologist Stephen Hawking was critical of the whole idea. "We only have to look at ourselves to see how intelligent life might develop into something we wouldn't want to meet", he explained.

According to Hawking, should alien civilisations use up their own resources, they could wind up as space nomads, travelling through the cosmos on huge space ships, trying to "conquer



An attendant prepares space suits for a joint US-Russian mission in orbit.

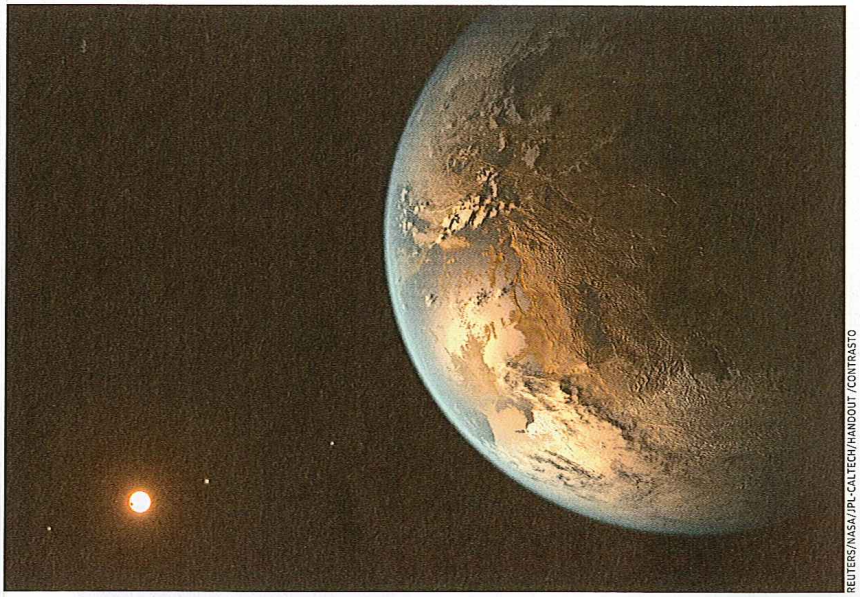
and colonize whatever planets they could reach".

The idea of an invasion of this kind has been taken into serious consideration ever since 1897, with the publication of *The War of The Worlds* by British writer H. G. Wells, who imagined a violent attack on Earth by outsized mechanical monsters from Mars.

The theme was further embroidered upon in 20th-century literature until it became a metaphor for all the fears linked to the Cold War. Those were the years when the United States and the Soviet Union both set up space programs and began vying to see who would be the first to conquer the cosmos, with the Russians sending Yuri Gagarin into orbit in 1961, and the Americans landing Neil Armstrong and Buzz Aldrin on the Moon in 1969.

The so-called "space race" was also a pretext used by the two superpowers to develop sophisticated satellite-based espionage systems and defence technologies to ward off long-range nuclear missiles.

With the fall of the Berlin Wall and the dismantling of the USSR, the Russian Federation inherited most of the Soviet military bases, but the country's severe financial crisis has ended



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An image of Kepler-186f, the planet outside the solar system is around 500 light years from Earth. It would seem to have all the right characteristics to be classed as 'habitable'.

up stifling their space program development considerably.

In this context Berezhnoy's statements come as no surprise, and in any case it would seem obvious that in the event of a conflict of galactic proportions, the onus for coordinating the Earth's defences would fall on the United States.

According to a 2002 report published by SIPRI (Stockholm International Peace Research Institute) "no country can rival or contest US space dominance".

John Pike, writing in the Swedish research institute's 2002 Yearbook, specified that at the end of 2001 the US had approximately 110 operational military satellites, equivalent to two thirds of the military satellites orbiting the Earth, while Russia controlled forty odd and the rest of the world a further 20.

Since then the international picture has changed, and countries such as China and India now want their say on space issues. The Beijing government in particular has set up lunar exploration programs and is bent on launching its own orbiting space station, with plans to explore Mars as well. None of this, however, remotely suggests that the United States' current technological supremacy is in any way threatened .

The US Defence Department will soon be assigning a tender worth six billion dollars (€4.4 bln) for the "Space Fence" project, an orbital radar system that the US Space Command intends to use to identify space debris threatening orbiting craft and satellites.

Euroconsult figures for 2012 show that investments in space programs worldwide totalled 72.1 billion dollars (€52.5 bln) that year. Well over half of this sum, $38.7 bln (€28.5 bln), were spent by the Americans alone, over $10 bln (€7.5 bln) by Russia and approx. $1 bln (€0.75 bln) each by China, India, Japan, France, Germany and Italy.

It remains to be seen whether or not the most advanced technologies on earth – such as neutron beams, electromagnetic railguns or even the latest remote-controlled space ship, America's Boeing X-37B – could really be a match for weapons deployed by an alien civilisation advanced enough to reach Earth with a mind to conquering it.

In the meantime, using the precautionary principle as a guide – that is, the idea that it's better to be 'safe', and prepare for an invasion that may never happen, than be 'sorry', and overrun by one – some American aerospace engineers have written a book (*An Introduction to Planetary Defense: A Study of Modern Warfare Applied to Extra-Terrestrial Invasion* by Travis S. Taylor, B. Boan, R.C. Anding and T. Conley Powell) in which they suggest that the best tactic to be used in the event of asymmetrical warfare with alien forces would be the same kind of guerrilla warfare approach employed by the Mujahideen against Soviet forces in Afghanistan.

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