

China's space programme

# Shooting the moon

BEIJING

After a successful Olympics, China's next spectacular

**H**AVING put three men into orbit without a hitch since 2003, the scientists and policymakers behind China's space programme are gaining confidence. Their latest extraterrestrial project will include a space walk, the nation's first. If all goes to plan, the event will be shown live on national television. Abroad, however, applause will be tinged with misgivings.

As *The Economist* went to press on September 25th, the Shenzhou VII spacecraft was ready for launch on a Long March II-F rocket from a launch centre in western Inner Mongolia. Three astronauts were on board, with their mission expected to last about three days. China's first manned space flight five years ago carried just one astronaut, and the second in 2005 bore two. This time, say Chinese press reports, one of the crew will walk in space. And he will do so wearing a Chinese-made suit.

It is 43 years since the first such feat was performed by the Soviet Union, but the Chinese leadership clearly hopes that the sight of a Chinese man floating in space will give cheer to a domestic audience (just in case he needs any help, another astronaut wearing a Russian suit will be standing by in the airlock).

The timing of the launch was clearly intended to round off a summer filled with patriotic pride at China's staging of the Olympic games and its world-beating haul of gold medals. It has also proved a fortuitous distraction from a growing scandal involving tainted milk that has embarrassed China's leaders (see page 77).

## Space litterbug

For the first time since China began its manned space flights, the authorities have allowed foreign journalists (albeit only a handful of them) to witness the launch. Even getting anywhere near the remote launch site is normally tricky for foreigners. The nearest city is Jiuquan, some 200km (125 miles) to the south-west. Taxi drivers there say they can be fined for taking unauthorised non-citizens along the desert road towards the base, run by the People's Liberation Army. Foreigners who visited Jiuquan on August 1st to view a total solar eclipse from a site nearby had to register with the police to use the road. A notice in their hotel warned them not to use their satellite-navigation devices to engage in any mapping.

Live television broadcasts, shunned at the time of the first launch in 2003, appar-



Ready for lift-off

ently because of fears of failure, and a flicker of friendliness towards the foreign press are unlikely to impress the Americans. This is China's first manned venture since it tested an anti-satellite missile in January 2007. It blasted a disused weather satellite into tiny fragments that threaten the safety of other man-made objects in space. Joan Johnson-Freese of the Naval War College in Rhode Island says there had been "positive signs" of possible space co-operation between China and America. But these, she says, "pretty much went away" after the test. American politicians still fume.

Worries in America are likely to grow if China's space programme keeps up its steady pace of development. Subsequent Shenzhou missions are expected to focus on building a space station. Another programme, which began last October with the launch of a lunar probe called Chang'e, aims to put an unmanned rover on the surface of the moon around 2017 and return it to earth with samples.

Jiao Weixin of Peking University says that with the development in the next few years of a new rocket, the Long March V, with a heavier lift capability, "it's a matter of time" before China formally announces plans for landing a man on the moon. According to the Washington Post, Michael Griffin, the head of America's space agen-

cy, NASA, has given warning that if China were to achieve this before the return of a manned American spacecraft to the moon for the first time since 1972, "the bare fact of this accomplishment will have an enormous, and not fully predictable, effect on global perceptions of US leadership in the world." The newspaper said this comment appeared in a draft of a statement Mr Griffin was preparing to submit to Congress this year, but it was deleted by White House budget officials.

During the cold war between America and the Soviet Union, the two were closely matched in their struggle for supremacy in space. Now, however, America remains far ahead of China in military and civilian space capabilities. Chinese officials, anxious not to appear threatening, are at pains to stress this. But Japan and India have space ambitions that are similar to China's, and, like America, have uneasy political relations with it. Gaining an edge on its neighbour, Japan launched a lunar probe shortly before China did last year. India plans to do the same next month.

## First Taiwan, then Mars

National pride is at stake. "Some of the concerns are prestige-based," says Adam Segal of the Council on Foreign Relations in New York, "viewing the manned Chinese space programme as a symbol of China's power in the region, possibly at the expense of Japan." As for security worries, he says, Japan, like America, is wary of China's efforts to improve its ability to cripple or destroy enemy satellites. It also worries that China's (still fledgling) Beidou satellite-positioning system could improve the accuracy of its weapons.

Such anxieties, along with the perennial worries about North Korea, helped prompt Japan's parliament, or Diet, in May to rescind 31969 resolution mandating that Japan only pursue peaceful uses of space. The new policy allows space technologies to be used for "national security" as well. This is seen as a green light for the deployment of new spy and early-warning satellites used for missile-defence systems.

Russia still holds a few cards. China has drawn extensively on its neighbour's expertise to get its manned space programme going. It has even sent its astronauts for training by Russians. In October next year a Russian rocket will launch a Chinese probe to Mars. Some Americans fret that they too may have to depend on Russia between the scheduled retirement of the Space Shuttle programme in 2010 and the introduction of a new launch vehicle, which will probably not appear before 2015. Vincent Sabathier, of the Centre for Strategic and International Studies in Washington, says this would be a good opportunity for America to look to China for help. But nobody in Washington, he says, wants to talk about it. •