

China's space ambitions ally glory with pragmatism

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A spacesuit used by Chinese astronauts on display at the Shanghai Science and Technology Museum on January 4. As China pushes to become a global space power, experts say its ambitions go well beyond a symbolic moon landing, to satellite observation and a global positioning system to rival that of the United States.

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The Asian powerhouse laid out its five-year plan for <u>space</u> exploration last week, outlining ambitious plans at a time when the United States -historically at the forefront of the field -- has grounded its space shuttle fleet.



Isabelle Sourbes-Verger, a space expert at France's National Centre for Scientific Research, said it was widely acknowledged that "what matters to China is the role it will play as a major power."

China marked a key success in November last year when it completed its first docking in orbit high above Earth, a crucial step towards fulfilling its ambition to set up a <u>manned space station</u> by 2020.

In 2003, it became the third country in the world to send humans into space after Russia and America, and it is now looking into sending astronauts to the moon, although nothing has been set in stone.

The white paper issued last Thursday -- the third to have been published since 2000 -- said China "will conduct studies on the preliminary plan for a human <u>lunar landing</u>."

Australia-based expert Morris Jones said the logo of the China Lunar Exploration Program, which operates robotic missions to the Moon, had a human footprint at its centre, providing a "useful clue about their longterm plans."

But Beijing is not content with playing catch-up on manned flights, and is also looking to reap economic and scientific benefits from space.





Model Chinese spacerockets are seen on display at the Shanghai Science and Technology Museum on January 4. As China pushes to become a global space power, experts say its ambitions go well beyond a symbolic moon landing, to satellite observation and a global positioning system to rival that of the United States.

By 2016, China will "increase the use of satellites to contribute to the development of strategic industries and satisfy the needs of the economy" in telecommunications, Earth observation or global positioning systems, the white paper said.

China last year launched its version of the US <u>Global Positioning System</u> (GPS), the Beidou <u>satellite navigation system</u>. Further satellites will enable the new system to cover Asia this year, and the whole world by 2020.

Sourbes-Verger said China's ambitions in <u>Earth observation</u> -- an expertise that has both civilian and military applications -- were well ahead of anything currently planned by Europe.

The white paper outlined ambitions for "24-hour continuous, highresolution surveillance of the Earth," she said, adding that the plan, if realised, would put China almost on a level with the United States in this field.

China has long maintained the rapid development of its space capabilities is peaceful in nature, and the white paper reiterated this, saying Beijing "opposes weaponisation or any arms race in outer space."

But concerns remain over China's intentions. In 2009, air force commander General Xu Qiliang caused a stir when he said armed forces



should prepare for the "inevitable" militarisation of outer space -- a claim hastily disavowed by President Hu Jintao.

Jones noted that China had tested anti-satellite weapons by blowing up one of its own in 2007. "No nation that has a respectable major space programme has an entirely peaceful programme," he said.

"The world over, space technologies are used for military communications and to deploy spy satellites. China's no different."

The <u>white paper</u> also outlined plans to equip China's next-generation rockets with the ability to carry heavier cargoes.

The Long March-5 rocket being developed will be able to place 25-tonne payloads into near-Earth orbit -- more than the 20 tonnes Europe's Ariane 5 rocket can carry.

But the payload is still a lot lighter than what Saturn V -- a rocket used by the <u>United States</u> from 1967 to 1973 that transported the Apollo missions to the moon -- was able to carry.

"Now we need vehicles with a greater capability to send more payloads into space," Hu Haifeng, designer at the <u>China</u> Aerospace Science and Technology Corporation -- a contractor for the Chinese space programme -- was quoted as saying by the official Global Times.

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