



CENTRE FOR AIR POWER STUDIES

In Focus

New Delhi

CAPS InFocus: 16/2023

02 March 2023

Chinese Spy Balloon: An Old Yet a Smart Strategy

Vedant Saigal

Research Associate, Centre for Air Power Studies

Keywords: Surveillance Balloon, Chinese Strategy, F-22 Fighter Jet, Supersonic Missile, US Airspace.



Source: <https://www.oregister.com/2023/02/06/chinese-spy-balloon-political-cartoons/>



Disclaimer: The views and opinions expressed in this article are those of the author and do not necessarily reflect the position of the Centre for Air Power Studies [CAPS]

This work is licensed under Creative Commons Attribution – Non-Commercial – No Derivatives 4.0 International License.

On February 4, 2023, a Chinese spy balloon was shot down off the coast of South Carolina by the US using an F-22 fighter jet. The spy balloon was suspected to be used by the Chinese government to monitor critical military sites in the US.¹ This incident has thrown a severe blow to the already strained bilateral relations between the US and China. This is also evident from the fact that a scheduled Beijing visit of Antony Blinken, US Secretary of State, was cancelled.

Chinese Vice Foreign Minister, Xie Feng issued a statement criticising the US action. He said, “however, the United States turned a deaf ear and insisted on indiscriminate use of force against the civilian airship that was about to leave the United States airspace, obviously overreacted and seriously violated the spirit of international law and international practice.”² Beijing had already expressed regrets about its ‘airship’ turning toward US airspace owing to winds. Beijing said that the object was just for civilian meteorological and other scientific purposes.³

This urges many to think on the terms that, despite being so highly technologically advanced, why would China use a method that is sufficiently outdated for surveillance? Why could China not use satellites instead? Is it a strategy that China is using to be noticed? In order to get answers to these questions, one first needs to understand what a spy balloon or a military balloon is.

A spy balloon is an object that uses cameras to carry out surveillance and reconnaissance in airspace. Much like drones, these balloons can be modified with radars, as well as sensors that help them to be remotely controlled.⁴ Perhaps the use of balloons is a wiser idea for China, since it is cost-effective and easier to launch than a satellite. Another advantage is that the path of the balloon becomes difficult to track and predict owing to the impact of winds on it. Additionally, since the balloons fly at a lower speed, it allows them to loiter over and monitor the target area for longer periods of time than a satellite, which is restricted only to its orbital path. Then why not use a drone instead? An unmanned aerial vehicle (UAV) or a drone has altitude restrictions. Small UAVs cannot work in this case. They have a limited surveillance coverage area and hence might not be a feasible option. It has not been the first time that a spy balloon has been sighted over US airspace. By the end of the Trump administration, around three sightings of similar Chinese balloons has been reported. Just a day after the sighting over US airspace, another balloon was sighted flying over Latin America.⁵

The US deployed an F-22 Raptor, one of the most expensive aircraft in the world, to shoot down the balloon. The jet used a supersonic Aim-9 Sidewinder missile to target the balloon. The use of such an expensive weapon system seems to be quite enigmatic.⁶ The aircraft is equipped

with a lightweight (M61A2) 20-mm Gatling gun that could have been used instead of the missile. The US claims that the purpose behind using a missile instead of a gun was that since the balloon was filled with helium gas, the bullets might have just created a few holes and would not have popped the balloon totally, leading it to hover further in unpredictable directions. The US drew their lesson from history when, in 1998, Canadian CF-18s failed to shoot down a rogue weather balloon in one go, which went out of control.⁷

According to the US government, the Chinese spy balloon started its course from mainland China, entered US airspace above the Aleutian Islands on January 28, 2023, and entered Canadian airspace within two days. Within the period of the next five days, the balloon was spotted in Idaho, Montana, which is home to one of America's three nuclear missile silo fields at Malmstrom Air Force Base. Finally, it was shot down in South Carolina. The jet was flying at a distance of 58,000 ft., while the balloon hovered at around 60,000 ft.⁸ It was the first air-to-air kill for the F-22 Raptor, and hence a balloon-shaped sticker on the jet has been put up by the US Air Force (USAF). It was the right decision to shoot down the balloon away from the US mainland so as to avoid any risk to civilian lives or property from the falling debris. After a thorough investigation and examination of the balloon, the US officials said that the surveillance equipment that it carried was different from what China claims to be using in their weather monitoring balloon. Thus, what makes it more pertinent is to understand the importance of surveillance for China as such. It is also evident from the fact that China has not only targeted the US for its expanding military surveillance; Japan, Taiwan, Vietnam, Columbia, Costa Rica, and most importantly, India, were equal targets. There needs to be a deeper understanding of the Chinese spy program, which has conducted missions across five continents.

Furthermore, it is equally vital to understand China's strategies for using balloons for surveillance and perhaps the international fear that it creates among different nations, especially the major powers. China's strategies to revive the old tactics, i.e., using surveillance balloons to utilize the area of the atmosphere it calls 'near space,' have gained the attention of many nations. Examining all the factors that led China to use the balloon, it indeed represents a smart strategy by China. In 2018, China tested a balloon that dropped what appeared to be hypersonic weapons. It was seen in the video that a high-altitude balloon was carrying three wedge-shaped payloads, which resembled a hypersonic glide vehicle.⁹ It seems that China is just sending signals to the US that this was just a test for surveillance and that even unsophisticated Chinese technologies can penetrate US airspace, and there is much more on the way. It was more like a geopolitical provocation to the US. Given China's history of testing of such balloons and its aggressive pace in investments in hypersonic weapon systems in the last few years, the US ought to be much more aware of the alarming situation.

It seems like a new technological advantage for China to use a balloon-based surveillance kit, and given that there are advanced satellite capabilities that the country possesses, it certainly is smart and sensible militarily. It seems like China wanted the US to spot the balloon. Even US officials claimed that the balloon was first spotted by civilians in a commercial airliner.¹⁰ Although many questions remain unanswered, it is clear that this incident has revealed the country's growing interest in lighter-than-air vehicles, which can be used for not only reconnaissance and surveillance but also communication relays.

NOTES:

¹ Jim Garamone, "F-22 Safely Shoots Down Chinese Spy Balloon Off South Carolina Coast," *U.S. Department of Defense*, February 04, 2023, <https://www.defense.gov/News/News-Stories/Article/Article/3288543/f-22-safely-shoots-down-chinese-spy-balloon-off-south-carolina-coast/>. Accessed on February 15, 2023.

² AP, "China accuses US of indiscriminate use of force over balloon", *Telangana Today*, February 07, 2023, <https://telanganatoday.com/china-accuses-us-of-indiscriminate-use-of-force-over-balloon>. Accessed on February 15, 2023.

³ Humeyra Pamuk, Idrees Ali and Michael Martina, "Blinken postpones China trip over 'unacceptable' Chinese spy balloon", *Reuters*, February 05, 2023, <https://www.reuters.com/world/china-expresses-regret-that-civilian-airship-strays-over-us-2023-02-03/>. Accessed on February 15, 2023.

⁴ Mack Harris, "Pentagon testing mass surveillance balloons across the US", *The Guardian*, August, 02, 2019, <https://www.theguardian.com/us-news/2019/aug/02/pentagon-balloons-surveillance-midwest>. Accessed on February 15, 2023.

⁵ Selina Wang and Wayne Chang, "Balloon over Latin America belongs to China, Beijing says", *CNN*, February 06, 2023, <https://edition.cnn.com/2023/02/06/asia/china-balloon-latin-america-intl/index.html>. Accessed on February 15, 2023.

⁶ Anwesha Mitra, "Chinese 'spy' balloon saga: What was it trying to collect from US?", *Mint*, February 10, 2023, <https://www.livemint.com/news/world/chinese-spy-balloon-saga-what-data-was-it-attempting-to-collect-from-us-11676024252285.html>. Accessed on February 15, 2023.

⁷ Sakshi Tiwari, "1000 Rounds Fired, Why Canada Could Not Shoot Down This 'Research Balloon' Using Best of Fighter Jets 25 Years Ago?", *The Eurasian Times*, February 05, 2023, <https://eurasianimes.com/1000-rounds-fired-why-canada-could-not-shoot-down-this-research-balloon-using-best-of-fighter-jets-25-years-ago/>. Accessed on February 20, 2023

⁸ Dario Leone, "Here's why the USAF F-22 used the AIM-9X rather than the gun to shoot down the Chinese spy balloon (and why the Sidewinder don't need to "see" something hot in order to track a target)", *The Aviation Geek Club*, February 14, 2023, <https://theaviationgeekclub.com/heres-why-the-usaf-f-22-used-the-aim-9x-rather-than-the-gun-to-shoot-down-the-chinese-spy-balloon-and-why-the-sidewinder-dont-need-to-see-something-hot-in-order-to/>. Accessed on February 15, 2023.

⁹ Anurakti Sharma, "China tested high-altitude balloons for hypersonic weapons fire, EMP strikes in 2018", *Times Now*, February 12, 2023, <https://www.timesnownews.com/world/china-tested-high-altitude-balloons-for-hypersonic-weapons-fire-emp-strikes-in-2018-article-97833612>. Accessed on February 28, 2023.

¹⁰ Vivian Salama, Nancy A. Youssef, and Michael R. Gordon, "Chinese Spy Balloon Tracked Over U.S. This Week", *The Wall Street Journal*, February 02, 2023, <https://www.wsj.com/articles/chinese-spy-balloon-seen-over-u-s-this-week-officials-11675376397>. Accessed on February 27, 2023.