PRC Spy Balloon Reveals New Arena of Strategic Competition

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The overflight of a People’s Republic of China (PRC) spy balloon across the continental United States reveals Beijing’s ambitions to establish itself as a military power with global reach. PRC balloons have overflown more than 40 countries across five continents.¹ Lacking an airborne strategic reconnaissance capability, the People’s Liberation Army (PLA) appears to have sought a low-cost intelligence collection platform that was so retro that it has revealed gaps in the ability of the US and other militaries to defend their sovereign airspace.

The spy balloon episode also highlights the increasingly heated diplomatic relationship between the United States and the PRC. The balloon overflight and subsequent shootdown have derailed efforts by both countries to lower tensions and demonstrate how unplanned events can complicate the relationship. The competing narratives from both the United States and the PRC, with the United States portraying the PRC as a malign actor intent on subverting the established international system and the PRC portraying itself as an innocent victim of US aggression, underline a competition that is increasingly likened to a "Cold War 2.0."²

Technical characteristics of the balloon

At the heart of the competing diplomatic narrative is the PRC’s insistence on referring to the balloon’s mission as meteorological. The PRC balloon, however, exceeded the size, payload, and flight time of normal weather balloons. According to reports, the PRC balloon was 200 feet tall with solar panels and a surveillance payload the size of a regional jet, and it weighed more than 2,000 pounds.³ The balloon was flying at an altitude of 60,000 feet and was equipped with propellers for steering. In contrast, a typical weather balloon carries a payload of just 200 grams and has a diameter of about 1.4 meters at release, with a flight time between 90 and 120 minutes. According to the US government, the balloon payload consisted of “multiple antennas to include an array likely capable of collecting and geolocating communications,” suggesting that the main purpose of the balloon was signals intelligence. Moreover, its solar panels were large enough to support additional types of sensors.⁴ The combination of the balloon’s size and technical capabilities suggest it served a strategic rather than a purely meteorological purpose for the PRC.

High-altitude spy balloons may fill a gap in the PLA’s strategic intelligence, surveillance, and reconnaissance (ISR) capabilities. Although the US military conducts airborne reconnaissance missions in international airspace off the PRC coast and in the South China Sea, the PRC has no such capability against the United States. The PLA Air Force maintains several types of airborne early warning and control aircraft that have an inherent intelligence collection function; it also has dedicated electronic intelligence versions of the Y-8 and Y-9 cargo aircraft. But with only one overseas base in Djibouti, the PLA lacks access to airfields from which to operate these platforms more globally.

The PRC does, however, have the world’s second largest fleet of satellites (behind only the US). With nearly 600 satellites in orbit—229 of them ISR satellites—the PRC space program is likely China’s main source of strategic ISR. But PLA perceptions of the US military’s determination to achieve space dominance against the PRC during war may have led the PLA to pursue high-altitude balloons. Fearing that the US military would take out its satellites during an armed conflict, the PLA may be seeking to use high-altitude balloons as a backup to a degraded space-based remote sensing system.

In fact, balloons of the type that flew over the United States offer some advantages not offered by other types of intelligence collection platforms. Unlike satellites in low Earth orbit, which revolve around the Earth every 90 minutes, the ability of balloons to loiter over a location for long periods of time allows for extended views of the target and enough time to monitor communications or pick up other electronic signals, such as those emitted by radar. Aerostar, a US company that manufactures balloons similar to the PRC balloon, advertises its balloons as vehicles that can fill “the capability gap between aircraft and satellites,” capable of conducting ISR and other missions ”for months at a time.”

What was it doing over the United States?

The balloon’s track has led to speculation that the balloon attempted to collect intelligence on the 341st Missile Wing, a unit responsible for 150 missile launch sites spread out over 13,800 square miles in Montana. The PRC is conducting a massive expansion of its nuclear force and could have as many as 1,500 nuclear warheads by 2035, generating concern that it may be considering a more offensive-oriented nuclear policy. Collecting intelligence on the US nuclear force may have been part of an effort to learn more about

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the US nuclear force makeup that would in turn allow the PRC to better target or counter US nuclear forces in the case of nuclear war.

A diplomatic tussle reminiscent of the Cold War

The overflight and shootdown of the PRC spy balloon and the resulting diplomatic tussle present in stark relief the competition between the US and the PRC as each tries to control the narrative—not only of the balloon flight itself, but also of their respective roles in the world. The US has used the incident to call out the PRC as an untrustworthy global actor intent on upsetting the established rules-based order. The PRC, on the other hand, has used the incident to portray itself as an unwitting victim of a violent US hegemon.

The situation is not without precedent. In 1960, the Soviet Union shot down a US U-2 spy plane flying over Soviet territory on a mission to photograph nuclear sites—an action that also developed into a diplomatic incident.11 Soviet leader Nikita Khrushchev publicly exposed the US cover story that the aircraft was on a mission to collect weather data as false. Confronted with undeniable evidence, president Dwight Eisenhower admitted that the aircraft was on an intelligence collection mission. The two leaders met several days later for a summit in Paris where the Soviet leader denounced the United States, proclaiming, “Thanks to the U-2, the [US-Soviet] honeymoon was over.”12

Similar to the 1960 event, the 2023 PRC spy balloon incident occurred right before planned meetings in Beijing between US Secretary of State Antony Blinken and the Director of the Office of the Central Foreign Affairs Commission Wang Yi and the newly minted Foreign Minister Qin Gang. Unlike the 1960 summit between Eisenhower and Khrushchev, however, the United States postponed its PRC visit to protest the violation of US sovereignty.

After initially expressing regret for the overflight and stating that it “will continue communicating with the US side and properly handle this unexpected situation caused by force majeure,” the PRC Foreign Ministry has attempted to establish narrative dominance, alleging that the US conducted more than 10 balloon overflights of China in 2022. It has also called the shootdown “unacceptable and irresponsible” and a “clear overreaction and a serious violation of international practice,” and it has accused the US of waging “information and public opinion warfare” against the PRC.13 The PRC Foreign Ministry also warned the US not to take action against the company that manufactured the balloon, stating that “China will resolutely

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safeguard the legitimate rights and interests of the company concerned, and reserves the right to make further responses if necessary.”

Diplomatic pushback was not limited to the PRC Foreign Ministry. The PRC Ministry of National Defense (MND) refused to take a call from US Secretary of Defense Lloyd Austin, declaring, “We solemnly protest this move by the US side and reserve the right to take necessary measures to deal with similar situations.”

The US has also continued its diplomatic efforts, denying the PRC accusation that the US conducted balloon overflights of China. It has also sanctioned PRC entities involved with the balloon, presented the shootdown as a legitimate use of force against a foreign intelligence collection effort in US airspace, briefed 40 countries on the PRC balloon effort, and released information on the balloon’s intelligence collection payload.

Ironically, some of this information was collected by a U-2 reconnaissance aircraft—the same type of aircraft downed by the Soviet Union in 1960. Unlike the 1960 incident, however, the PRC continues to claim that its balloon was intended for meteorological research and had accidentally entered US airspace.

A wartime use for balloons?

While the PRC balloon overflight and shootdown are reminiscent of the Cold War, PLA writings on the use of high-altitude balloons and other “near space” vehicles evoke memories of World War II. A 2018 article in the PLA Daily calls the upper reaches of the Earth’s atmosphere, where balloons like the PRC spy balloon operate, a “new battlefield.” A 2022 article published by PLA researchers in the journal Shipboard Electronic Warfare argues that balloons are a low-cost alternative to other platforms and are well suited to conducting ISR and extending communications over the horizon. The 2018 article also notes that balloons do not present a large radar or infrared signature—making them less detectable than other types of aircraft—and that most aircraft and surface-to-air missile systems cannot effectively intercept them.

But it is PLA researcher discussions on the use of balloons in offensive operations that may be most surprising. According to the 2022 Shipboard article, balloons can act as decoys to exhaust enemy air defenses in swarm operations that require the defender to use expensive missiles and aircraft to down
them. The article even posits that these balloons, reminiscent of “barrage balloons” used during World War II, could interfere with intercepting aircraft in enemy airspace. The article argues that balloons can be used offensively in electronic warfare and psychological warfare missions.

PLA researchers also discuss near space vehicles, possibly including high-altitude balloons, as kinetic strike platforms. According to the 2018 PLA Daily article previously mentioned, there is great potential in the possibility of conducting strikes from near space against ground targets and targets in space. A 2021 PLA Daily article also notes that balloons can serve as launch platforms for rockets and missiles. Missions like these are not beyond the realm of possibility. The Japanese military in World War II used balloons armed with incendiary devices in a failed attempt to start forest fires in the western United States. The invention of precision-guided munitions could turn this once-discredited tactic into a viable option.

**Implications**

PLA writings on the use of high-altitude balloons and other near space vehicles reveal an interest in exploiting this domain for strategic military purposes. By evoking memories of the Cold War, the balloon incident highlights the tense environment in which strategic competition between the United States and the PRC is taking place. The PRC’s spy balloon program likely represents the PLA’s continued effort, begun in 1999, to develop asymmetric means to counter or overcome US military capabilities; it also demonstrates the creativity and breadth of that effort.

Swarms of balloons sent against the United States and its allies and partners during wartime could divert limited resources away from defending against other air and missile threats. Whether the balloons were equipped with an ISR or a strike payload, the US and its allies and partners would have to honor the threat by deploying aircraft and missiles to intercept and shoot down the balloons before they reached their intended targets. This scenario is not without a historical corollary. The 1942 Doolittle Raid resulted in a similar outcome. Although mainly a public relations boon to the US after repeated losses in the Pacific following the attack on Pearl Harbor, the relatively small US attack against Tokyo and other cities prompted Japan to redeploy four fighter groups to defend the Japanese islands at a time when they were needed in the South Pacific.

Swarm tactics may also have peacetime uses. The PRC could use balloon flights in the airspace of the US and its allies and partners to protest violations of what it considers its sovereignty. As indicated by the shootdown of multiple objects over the US and Canada after the February 4 shootdown of the spy balloon, such tactics could consume the time, resources, and attention of the governments involved.

Although the US and China have managed to control the damage of the balloon overflight and shootdown, the incident demonstrates that unplanned events can and do occur and that a lack of trust can easily turn such events into crises. The longer-term consequences of the incident may have yet to play out, however. After the US postponed Secretary Blinken’s trip to Beijing, it is unclear when it may be appropriate to hold a summit between Blinken and Qin Gang. Secretary Blinken and Wang Yi met on the sidelines of the Munich

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Security Conference on February 18, 2023, but this meeting was not intended to replace the canceled summit. After this, opportunities for a summit meeting are less clear. In March the PRC leadership will be occupied with convening its “two sessions”—its annual meetings of China’s top legislature and top political advisory body, the National People’s Congress, and the Chinese People’s Political Consultative Conference. A rumored US congressional leader’s visit to Taiwan could also derail a future meeting.

The incident also raises other questions. The PRC Foreign Ministry statement that the shoot down by the US was a “serious violation of international practice” remains at odds with its past actions. A 2020 China Central Television aired a clip of PLA Air Force fighters scrambling to intercept and down a small weather balloon on its border with India. The PRC Ministry of Defense’s statement that it “reserves the right to take necessary measures to deal with similar situations” suggests that the PLA may become more aggressive toward uncrewed systems operating in areas it considers PRC territory. In 2016, PRC ships seized a US Navy uncrewed underwater vehicle (UUV) in international waters but eventually returned it. Although that seizure was not approved by the PLA, the MND’s statement may reflect a reconsideration of that policy—one that could involve actively searching for and sinking UUVs operating in contested areas the PRC considers its territorial seas or exclusive economic zone, as well as shooting down uncrewed aerial vehicles operating in what it considers its territorial airspace.

The timing of the balloon mission right before the Blinken-Qin summit also raises questions about civil-military relations in China. The PRC Foreign Ministry appeared to be caught unaware of the mission. It first stated that it would “look into” the matter, that China “is a responsible country and has always strictly abided by international laws, and [that] China has no intention of violating the territory and airspace of any sovereign country” before confirming later in the same day that it was a PRC balloon, albeit one for meteorological research. During a February 9 press briefing, a PRC Foreign Ministry spokesperson stated that she was “not aware of any ‘fleet of balloons.’” As such, the PRC Foreign Ministry appears to have been put in the awkward position of upholding the principle of national sovereignty while at the same time maintaining PRC innocence.

This is not the first time that the PLA has conducted activities without the seeming knowledge of other parts of the government. In 2007, the PLA conducted an antisatellite test that also appeared to catch the Foreign Ministry flatfooted, and in 2011, the PLA conducted a test of a J-20 fighter jet during the visit of then-secretary of defense Robert Gates to Beijing. According to Gates, PRC leader Hu Jintao professed ignorance of the test. As noted by CNA Senior Research Scientist Drew Thompson, the lack of coordination and

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The opaqueness of PRC decision-making is a “feature” of the PRC system that the US will likely have to deal with again.29

The overflight may further harm US public opinion of the PRC. Positive public opinion of the PRC in the United States has been trending downward since 2017.30 By demonstrating in stark terms the threat posed by a Communist China, the brazen overflight may further complicate rapprochement between the two countries and further harden attitudes among average Americans and Congress against the PRC.

Finally, PRC attempts to extend the military competition between the US and the PRC from the land, air, sea, space, and cyberspace to near space is another example of what University of California San Diego professor Susan Shirk calls Beijing’s “overreach.” 31 In its attempt to demonstrate China’s strength, the heavy handedness and assertiveness of the Chinese Communist Party under Xi Jinping has only served to undermine his own foreign policy and national security goals.

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