



**Statement before the House Homeland Security Committee  
Subcommittee on Transportation and Maritime Security**

***“Beijing’s Air, Space, and Maritime  
Surveillance from Cuba: A Growing  
Threat to the Homeland”***

A Testimony by:

**Dr. Ryan C. Berg**

Director, Americas Program,  
Center for Strategic and International Studies

**Tuesday, May 6, 2025**

Chairman Gimenez, Ranking Member McIver, and distinguished Members of the Subcommittee, I am honored to share my views with you on this important topic. CSIS does not take policy positions, so the views represented in this testimony are my own and not those of my employer. In my testimony, I would like to reflect on the People’s Republic of China’s historical and burgeoning role in Cuba, the Cuban Communist Party’s repressive tactics and China’s role in regime security, as well as China’s use of Cuba as a staging ground for espionage activities against the United States, including its signals intelligence.

“In my recent trip to Santiago, I heard reports from several sources of big military installations under construction in mountains of Oriente Province.”

—Graham Greene, *Our Man in Havana*

## Peering into the United States

Cuba has long served as a perch for great power rivals to the United States. Indeed, the memory of those fateful days in October 1962 when the United States and Soviet Union came perilously close to a nuclear exchange over the latter’s stationing of nuclear tipped missiles in Cuba has tinged discourse about the island ever since. The question of Chinese bases in Cuba touches on some of the same sensitivities—that a rival of the United States might clandestinely exploit the strategic position of Cuba to build up a military presence directly under the nose of the United States, to the detriment of the entire Western Hemisphere’s security. A brief history of the PRC’s partnership with Cuba reveals worrying patterns.

When Soviet missiles left the island, eyes, ears, and antennas stayed. From bases across the island, Soviet and Cuban intelligence and military personnel worked together to gather information on the United States. Of particular note was the Lourdes Signal Intelligence Complex located near Havana. At its peak, the facility was reportedly home to an estimated 1,500 operatives and supplied the USSR with 75 percent of its military intelligence.<sup>1</sup> But Lourdes was one of many such facilities, all dedicated to gathering and processing the firehose of signals coming from the southeastern seaboard of the United States. It is telling that of the facilities identified and surveyed in CSIS’ analysis, just one, the new Circular Disposed Antenna Array in El Salao, was not a preexisting signals intelligence (SIGINT) site left over from the Cold War.

After the fall of the Soviet Union, however, Cuba’s strategic importance for Moscow diminished, and finally in 2002, Lourdes was shuttered as an intelligence facility and converted into the University of Informatic Sciences.<sup>2</sup> Along with a decrease in military presence, the Soviet collapse engendered economic turmoil for Cuba, known as the “special period,” where a lack of subsidized fuel and economic aid brought about shortages of critical goods and near economic collapse for the island. By the end of the 1990s, Cuba was desperately seeking new partners to fill the void its former communist ally had left.

Into this breach stepped, partially, the Chinese Communist Party (CCP). The CCP and the Communist Party of Cuba (PCC) had enjoyed strong relations since the latter’s inception, and as one of the few remaining communist parties at the turn of the century, fell into China’s foreign policy category of both “good friend” and “good comrade.” While Cuba’s economic turmoil meant

that it had little to offer by way of trade, its strategic geography remained unrivaled. In February 1999, China's Minister of Defense, General Chi Haotian, visited Cuba, where he met with his counterpart then-Defense Minister Raúl Castro. According to an article in *El Nuevo Herald*, the two reportedly signed an agreement granting China access to a number of former Soviet listening stations across the island, including the Bejucal base less than 10 miles from the old Lourdes station.<sup>3</sup> Coverage also cited a leaked Federal Communications Commission report claiming China had facilitated the transfer of jamming equipment to help block signals from Radio Martí reaching the island.

China-Cuba ties have continued to grow apace over the past decades. In 2005, Raúl Castro traveled to China to meet with President Hu Jintao, and President Xi Jinping toured Cuba in 2014 as part of his first official trip to Latin America as President of China and General Secretary of the CCP.<sup>4</sup> The PCC has been the number one recipient in Latin America of International Liaison Department Engagements, the CCP's organ for foreign party-to-party diplomacy, helping further cement ties between Cuban and Chinese leadership.<sup>5</sup> In the military domain, China and Cuba have continued to fortify their ties through high-level delegations and at times more active measures. Havana was home to a rare PLAN port call in the Western Hemisphere when three warships docked in November 2015 to commemorate fifty years of China-Cuba relations. As recently as April 2024, He Weidong, Vice Chairman of China's Central Military Commission, and Cuban general Víctor Rojos Ramos, proclaimed an "unbreakable friendship" between the two nations. On January 1, 2025, Cuba officially joined the BRICS as an associate member, a major boost for Havana as the alliance's efforts to weaken the hold of the U.S. dollar over the global financial system are a boon to the embargoed island.<sup>6</sup>

Cuba has received an estimated \$369 million in development finance from the PRC, but this pales in comparison to the island's true financial needs.<sup>7</sup> Venezuela's collapse has also made Cuba's other historical partner unable to fill the void. Today, Cuba is in the midst of its worst economic crisis since the Special Period, registering 30 percent inflation and a 2 percent decline in GDP in 2023. Last fall, island-wide blackouts underscored the fragility of Cuba's dilapidated energy infrastructure. Privately, Chinese officials have even reportedly expressed frustration that the Cuban government has not introduced more market-oriented reforms to ameliorate its deep economic woes.<sup>8</sup> Without much to offer China in terms of trade and raw materials, Cuba has played one of its only cards: its strategic location and relationships with senior CCP officials for support as the regime seeks to weather the present crisis.

## **China and Cuba's Regime Security**

In addition to general financial and development support for the Cuban regime, China has played a critical role in sharing authoritarian best practices and transplanting those tactics in a phenomenon known as "authoritarian export" or "authoritarian diffusion." For instance, China built the island's telecommunications infrastructure. The primary providers to Etecsa, Cuba's sole internet provider, are exclusively Chinese: Huawei, TP-Link, and ZTE.<sup>9</sup> The Swedish organization Qurium discovered that Cuba uses Huawei network management software eSight to help filter web searches.<sup>10</sup> In doing so, China has built telecommunications infrastructure capable of surveillance and repression. This was visible in the July 2021 protests, when the Cuban regime shut off the internet and telephone services, blocking the island's protestors from communicating with the

outside world. This is just one example of how China supports the Cuban regime through the diffusion of authoritarian practices and tools.

### **Strategic Battleground**

On June 8, 2023, the *Wall Street Journal* first reported that Cuba hosted secret Chinese spy bases in return for billions of dollars for the Cuban regime.<sup>11</sup> That same day, the Biden administration's Defense Department denied the *Wall Street Journal's* reporting, characterizing the report as "inaccurate."<sup>12</sup> Three days later, however, National Security Council spokesperson, John Kirby, reversed course and admitted to China's spy bases in Cuba, but insisted that its presence had existed since 2019 under the first Trump administration, implying the Biden administration had "inherited" the challenge.<sup>13</sup> Around the same time, reports surfaced that China was pursuing the construction of a military training base in Cuba.<sup>14</sup>

Subsequently, CSIS published a groundbreaking report, "Secret Signals: Decoding China's Intelligence Activities in Cuba." The CSIS team scoured the island using commercially available satellite imagery, identifying four likely sites for signals intelligence collection in the process.<sup>15</sup> This was followed by a *Wall Street Journal* Exclusive confirming its earlier reporting on the spy stations.<sup>16</sup> CSIS published another updated set of images in December 2024 as it tracked China's progress at these four sites.<sup>17</sup>

Although open-source research and satellite imagery have fueled speculation about nearly a dozen potential SIGINT sites in Cuba, CSIS positively identified four specific facilities as highly likely sites supporting Chinese intelligence operations targeting the United States. Three of these sites—Bejucal, Wajay, and Calabazar—are located around Havana.<sup>18</sup> A fourth site, El Salao, is a previously unreported facility located on the opposite side of the island, just east of Santiago de Cuba.<sup>19</sup> In response to reporting on the Cuba-China SIGINT nexus, high-level PCC officials either outright denied any connection, or attempted to disarm criticism with humor (see appendix for the responses of Foreign Minister Bruno Rodríguez and President Miguel Díaz-Canel to CSIS' reports).

To coincide with this hearing, CSIS is releasing brand new imagery updates. First, after the publication of CSIS' initial reports, construction progress at El Salao appears to have ceased according to image captures dated April 18, 2025. Furthermore, the CDAA site appears to be abandoned for the moment, as evidenced by hitherto well-trimmed and graded areas being taken over by foliage. Second, the PRC appears to be enhancing its SIGINT at a previously identified facility near Havana, Bejucal. On satellite imagery, a new area of the site, some antennas have been removed to make way for a large CDAA. The facility is also active, as evidenced by multiple image captures showing dishes moving positions to different angles and targets. Interestingly, the Soviets also operated a CDAA not far from this exact spot.

### **Motivation and Capability**

The CSIS open-source reports have brought unprecedented clarity to the scope and capabilities of several suspected Chinese SIGINT sites in Cuba, offering fresh insights into how they may be used to monitor sensitive military, commercial, and government activity across the region, but especially in the United States. Given its proximity to both the wider Caribbean and the southern

United States, Cuba holds significant strategic value for signals intelligence collection in the region. The United States maintains critical military installations concentrated in states like Florida and Georgia, so Cuba's location just 93 miles from the Florida Keys gives adversaries such as China a prime vantage point to peer into the United States and intercept sensitive communications.

Both China and Cuba stand to gain significantly from this arrangement. Mired in a socialist nightmare, Cuba is currently facing its worst economic crisis in decades. Presently, the government presides over a moribund economy, daily power outages, and an exodus of over 10 percent of the island.<sup>20</sup> For Cuba, China's financial support represents an important lifeline. For China, the proximity to the United States and potential to access critical military and commercial intelligence strongly incentivizes the PRC to engage in this strategic arrangement with Cuba. Beyond the intelligence efforts, collaborating with Cuba in this domain expands China's military and intelligence footprint across the globe.<sup>21</sup> By pursuing these objectives in partnership with Cuba, China also reinforces the presence of a communist ally in close proximity to the United States.<sup>22</sup>

From a capability standpoint, SIGINT plays a pivotal role in contemporary spy craft and intelligence gathering.<sup>23</sup> Through the use of antennas and specialized equipment, actors can configure SIGINT systems for maximum effectiveness.<sup>24</sup> As the technology leverages antennas and gathers signals, distance and geography are essential. Depending on the objective and scope of the intelligence gathering mission, facilities can be configured in various ways to maximize data collection and operational effectiveness.<sup>25</sup>

For optimal success, SIGINT systems rely on the beamforming technique to ensure the antennas are properly assembled for the mission efforts. The technique behind beamforming is used to enhance the effectiveness and precision of antenna arrays.<sup>26</sup> A single isotropic antenna radiates energy in all directions, resulting in limited range and greater vulnerability to interference. With just two antennas, signals can be synchronized to constructively interfere, producing a stronger, more focused beam. With more antennas, operators can fine-tune the phase and amplitude of signals for even greater directional control. When arranged in a grid, these arrays can steer the beam electronically without physically repositioning the antennas, allowing for flexible and efficient signals interception.<sup>27</sup> Because these antennas are gathering signals, it is imperative that SIGINT operations are within range of their target, meaning Cuba is an ideal partner for China's espionage efforts.<sup>28</sup>

Due to Cuba's proximity to Florida, these facilities grant China SIGINT coverage of around 20 key bases and installations on the peninsula.<sup>29</sup> The most significant military installations in and around Florida include Naval Air Station Pensacola, Tyndall Air Force Base, MacDill Air Force Base, Naval Air Station Key West, King's Bay Submarine Base, Cape Canaveral, and of course, the United States Southern Command.<sup>30</sup>

## Policy Recommendations

**Offer Classified Briefing to Every Member of Congress:** This development is significant enough to national security to justify briefings for members of congress. All members of congress should be able to receive a classified briefing on the topic of China's SIGINT operations in Cuba. Importantly, this should be made available to members of congress on an ongoing basis, to ensure updates on imagery are also briefed.

**Consider Selective and Strategic Declassification of Images:** Given that El Salao appears to have been abandoned since the publication of CSIS' reports, we may reasonably believe that transparency efforts and public criticism have the potential to derail China's ambitions. The United States should consider the strategic declassification of select images at moments that could derail China's operations and apply select pressure to these operations.

**Develop and Articulate Red Lines:** Given Cuba's historically outsized role in U.S. national security calculations and its close cooperation with U.S. adversaries, ensuring clear communication is of the utmost importance to reduce potential misperceptions. If the United States believes China or Cuba to be credibly cooperating to share intelligence with one another, the United States should make this clear to both Havana and Beijing. Simultaneously, while it is difficult to displace existing facilities from the island, the United States should be crystal clear that the permanent installation of offensive military capabilities in Cuba (as was reported as a possibility by the *Wall Street Journal* around the same time as the original reporting on spy bases), or the basing of PLA combat assets, would be seen as a significant escalation and a redline for the United States. Passivity in the face of SIGINT facilities should not be interpreted by Havana as a green light to deepen Cuba-China cooperation.

**Harden Sensitive Civilian Infrastructure Against SIGINT:** So long as China's SIGINT facilities operate in Cuba, the United States cannot be completely certain that no sensitive information will be obtained by an adversary. While modern military communications are encrypted and designed to prevent vital intelligence from leaking, civilian firms may lack the knowledge, means, or resources to safeguard their own infrastructure. Additionally, some private entities like SpaceX, which launch rockets from Cape Canaveral within theoretical range of some of the equipment observed in the CSIS reports, engage in highly strategic activities. The Chinese are top competitors of the United States in space. The U.S. Cybersecurity and Infrastructure Security Agency should spearhead an effort to review which companies operating in range of Cuban SIGINT sites are most vulnerable to this form of intelligence-gathering and develop a plan to help these firms bolster their operational security. This could include training, basic encryption, or financing to help acquire necessary security equipment.

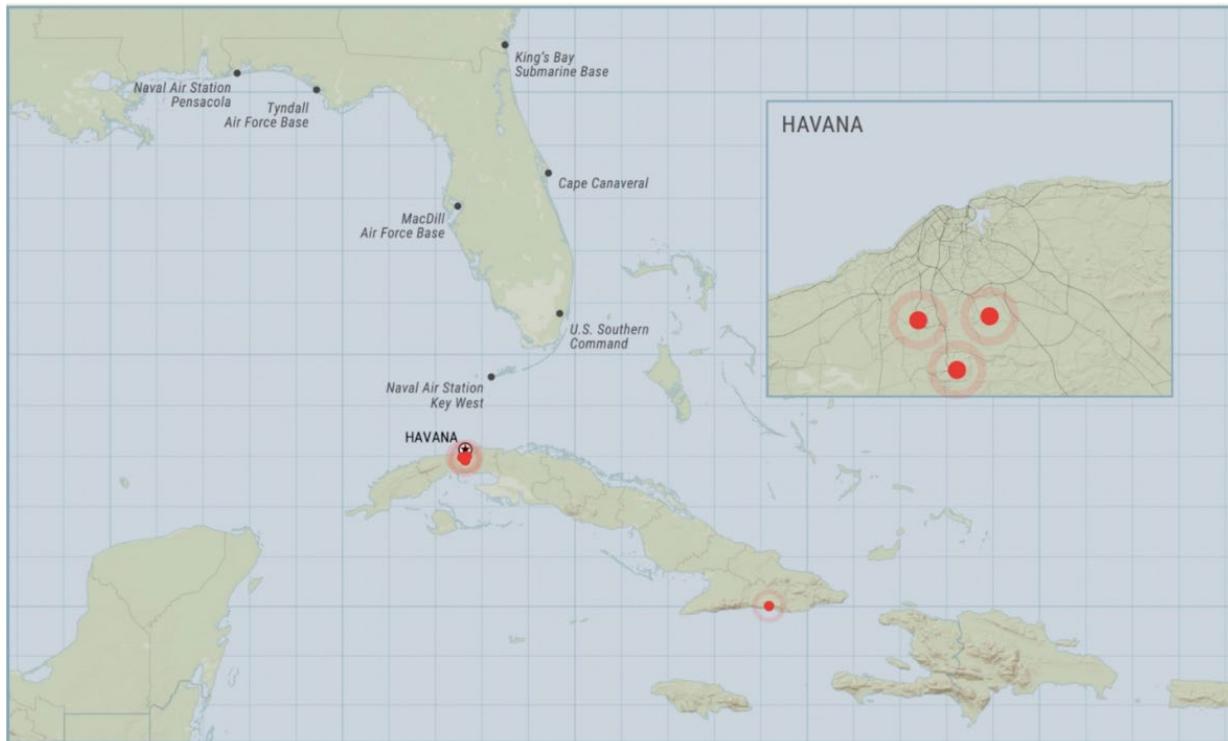
**Enlist Neighbors and Allies:** The presence of SIGINT facilities in Cuba does not pose a risk to the United States alone. Tools like CDAAs collect information omnidirectionally, meaning anything within range is liable to be picked up. Regional allies may be even more vulnerable, as they lack the same sophisticated encryption and stealth technology as the United States, possibly allowing Cuba and any of its partners a window into critical national security functions. As CISA works domestically with private sector actors, the States Department should engage countries like the Bahamas, the Dominican Republic, and Jamaica, to highlight risks and steps these countries can take to reduce their vulnerability to Cuba's SIGINT facilities.

## Appendix of Images

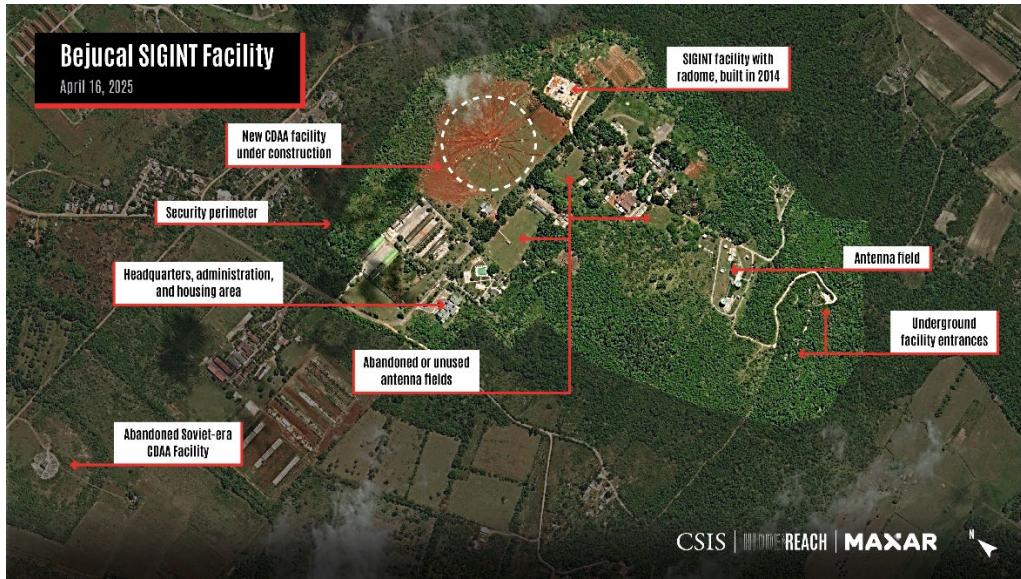
### Public response of the Cuban president and foreign minister to initial revelations.

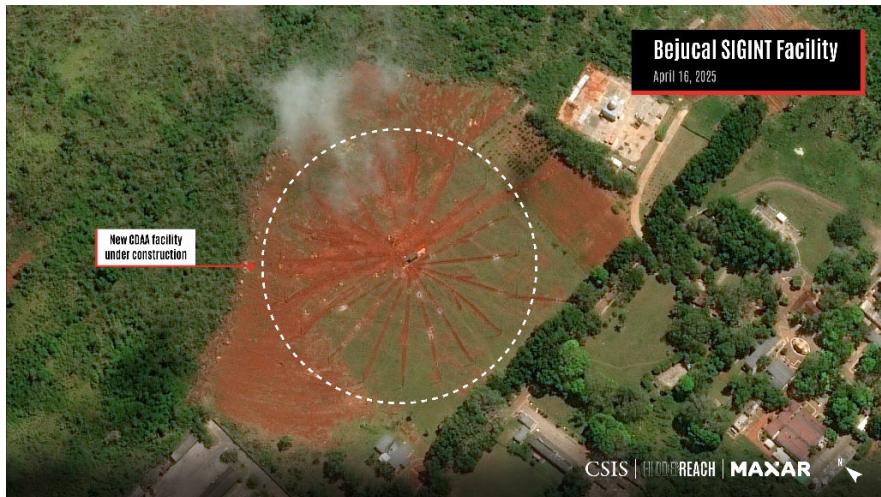


### US Military and sensitive installations within range of China's SIGINT in Cuba.



**Imagery updates from the El Salao site**

**Imagery updates from the Bejucal site**



## Endnotes

- <sup>1</sup> [https://irp.fas.org/congress/1996\\_hr/s960222d.htm](https://irp.fas.org/congress/1996_hr/s960222d.htm)
- <sup>2</sup> <https://www.uci.edu/en/university/history>
- <sup>3</sup> <https://www.csis.org/analysis/chinas-intelligence-footprint-cuba-new-evidence-and-implications-us-security>
- <sup>4</sup> <https://features.csis.org/hiddenreach/china-cuba-spy-sigint/>
- <sup>5</sup> <https://www.csis.org/analysis/exporting-autocracy>
- <sup>6</sup> <https://www.csis.org/analysis/why-are-latin-american-dictators-seeking-membership-brics>
- <sup>7</sup> <https://thedialogue.org/china-latin-america-finance-databases>
- <sup>8</sup> <https://www.ft.com/content/9ca0a495-d5d9-4cc5-acf5-43f42a9128b4>
- <sup>9</sup> <https://thediplomat.com/2021/08/how-china-helps-the-cuban-regime-stay-afloat-and-shut-down-protests/>
- <sup>10</sup> <https://www.qurium.org/alerts/internet-blocking-in-cuba-silencing-dissent-in-the-name-of-moral-and-good-manners/>
- <sup>11</sup> <https://www.wsj.com/world/cuba-to-host-secret-chinese-spy-base-focusing-on-u-s-b2fed0e0>; see also, <https://www.politico.com/news/2023/06/08/china-spy-on-us-cuba-00100990>.
- <sup>12</sup> <https://www.reuters.com/world/pentagon-dismisses-wsj-report-china-spy-station-cuba-2023-06-08/>
- <sup>13</sup> <https://www.wsj.com/politics/white-house-says-china-has-had-cuba-spy-base-since-at-least-2019-42145596>; see also, <https://www.politico.com/news/2023/06/12/kirby-nsc-china-balloon-cuba-00101575>.
- <sup>14</sup> <https://www.wsj.com/politics/beijing-plans-a-new-training-facility-in-cuba-raising-prospect-of-chinese-troops-on-americas-doorstep-e17fd5d1?mod=mhp>; see also, <https://www.politico.com/news/2023/06/20/china-negotiating-with-havana-about-joint-military-training-facility-in-cuba-00102636>.
- <sup>15</sup> <https://features.csis.org/hiddenreach/china-cuba-spy-sigint/>
- <sup>16</sup> <https://www.wsj.com/politics/national-security/china-cuba-suspected-spy-bases-d1d6ec9>
- <sup>17</sup> <https://www.csis.org/analysis/chinas-intelligence-footprint-cuba-new-evidence-and-implications-us-security>
- <sup>18</sup> <https://features.csis.org/hiddenreach/china-cuba-spy-sigint/>
- <sup>19</sup> <https://features.csis.org/hiddenreach/china-cuba-spy-sigint/>
- <sup>20</sup> <https://www.csis.org/analysis/chinas-intelligence-footprint-cuba-new-evidence-and-implications-us-security>
- <sup>21</sup> <https://www.csis.org/analysis/chinas-intelligence-footprint-cuba-new-evidence-and-implications-us-security>
- <sup>22</sup> <https://www.csis.org/analysis/chinas-intelligence-footprint-cuba-new-evidence-and-implications-us-security>
- <sup>23</sup> <https://www.csis.org/analysis/chinas-intelligence-footprint-cuba-new-evidence-and-implications-us-security>
- <sup>24</sup> <https://www.csis.org/analysis/chinas-intelligence-footprint-cuba-new-evidence-and-implications-us-security>
- <sup>25</sup> <https://www.csis.org/analysis/chinas-intelligence-footprint-cuba-new-evidence-and-implications-us-security>
- <sup>26</sup> <https://www.csis.org/analysis/chinas-intelligence-footprint-cuba-new-evidence-and-implications-us-security>
- <sup>27</sup> <https://www.csis.org/analysis/chinas-intelligence-footprint-cuba-new-evidence-and-implications-us-security>
- <sup>28</sup> <https://www.csis.org/analysis/chinas-intelligence-footprint-cuba-new-evidence-and-implications-us-security>
- <sup>29</sup> <https://features.csis.org/hiddenreach/china-cuba-spy-sigint/>
- <sup>30</sup> <https://features.csis.org/hiddenreach/china-cuba-spy-sigint/>