

Military

Chapter 5

The Evolution of the Patterns of the CPC's Maritime Patrol Aircrafts

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I. Preface

In the early years, the CPC's military was not strong enough and their aircraft seldom went to sea, and Taiwan even had the Air Defense Identification Zone (ADIZ) delineated to the Chinese interior. In 1999, President Lí Teng-hui proposed the "two-state" theory, in which Chinese aircrafts began to fly along the Taiwan Strait west of the median line and crossed the median line. With the expansion of CPC military power, the PLA has been conducting more and more long-distance training flights, including crossing the median line, flying over the East China Sea, flying over the Sea of Japan, flying through the Miyako Strait and out of the Western Pacific Ocean, circling Taiwan's main island, flying out of the Bashi Channel, flying over the South China Sea, and intruding into Taiwan's southwest Air Defense Identification Zone (ADIZ). The PLA emphasized that the soldiers are trained where the war is fought.

The CPC believes that the Air Force of the CPLA is flying around the motherland, even claiming that the mountain behind the cloud of the H-6K is

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Yushan, which is clearly a political intimidation or military coercion tactic by Beijing. There are different views within Taiwan as to whether the Ministry of National Defense will announce the incursions by Chinese aircrafts. Some people think that there is no need to let CPC lead U.S. by the nose and announce the Chinese aircrafts' activities each time, which is exactly what Beijing's political intimidation or military coercion is doing to the Taiwanese people, causing panic and anxiety in Taiwan society. Others believe that Taiwan is already a mature democratic society and that the people have the right to know and the wisdom to judge for themselves. Not releasing the information is tantamount to giving Beijing the power of speech, leaving it to explain the nature of the Chinese aircrafts' operations at will. In the past, the Ministry of National Defense selectively announced the movements of Chinese aircrafts in Taiwan, and the types and numbers of aircrafts were vaguely omitted, so that outsiders could not get a full picture. After September 17, 2020, the Ministry of National Defense began to release daily updates on the incursions by Chinese aircrafts in Taiwan, so that the outside world could have more concrete data for statistical and research purposes.

The Ministry of National Defense has begun releasing data on incursions by Chinese aircrafts in Taiwan, but the Taiwan's southwestern ADIZ fan page also publishes data, with discrepancies between the two, leading outsiders to question whether there are reservations. The Ministry of National Defense of Taiwan itself compiles statistics on incursions by Chinese aircrafts in Taiwan's Air Defense Identification Zone (ADIZ), and some of them include the activities of Chinese aircrafts west of the median line, which is different from the statistics only collected east of the median line. In this article, we use the official data as the basis for the study of the evolution of patterns of the CPC's maritime patrol aircrafts, and do not cover the activities of the CPC's to the west of the median line, in an attempt to find out the types and trends of these activities and how to respond to them.

II. Air Defense Identification Zone (ADIZ) and the Strait Median Line

Air Defense Identification Zone (ADIZ) refers to a certain airspace unilaterally designated by a country for air defense needs, so that the military can quickly locate, monitor, and control aircraft entering that airspace. The legal basis for the establishment of the Air Defense Identification Zone (ADIZ) is uncertain and controversial. The international community does not have an international convention on the ADIZ, and whether or not to establish the ADIZ and how to designate it is a matter within the discretion of each country. A country locates, monitors, and controls aircraft after they enter its Air Defense Identification Zone (ADIZ). The country may take certain measures, such as flying a fighter aircraft to monitor the aircraft, but does not have the right to land or shoot down the aircraft until it enters the country's airspace, otherwise it would be a serious violation of International Law. The Air Defense Identification Zone (ADIZ) was first established by the United States in the late 1950s when the U.S., together with Canada, created a air defense identification zone consisting of five areas, believing that strategic bombers from the Soviet Union posed a threat to the North American continent. Taiwan, South Korea, and Japan have established Air Defense Identification Zones (ADIZ) one after another. On November 23, 2013, the CPC announced the establishment of an Air Defense Identification Zone (ADIZ) in the East China Sea, covering most of the East China Sea, requiring aircraft navigating in the zone to notify the CPC of their flight plans. The CPC claims that it will take defensive emergency measures against aircraft that do not cooperate with identification or refuse to obey instructions.¹

Taiwan's ADIZ is like a rectangular shape with one corner missing in the southeast. The latitudes and longitudes of its five points from the upper right corner are 29°N 123°E, 23°N 123°E, 21°N 121.3°E, 21°N 117.3°E, and 29°N 117.3°E, respectively (Figure 5-1). The northern two points of Taiwan's ADIZ are 29°N,

¹ "Information: Air Defense Identification Zone (ADIZ)," BBC Chinese, November 27, 2013, https://www.bbc. com/zhongwen/trad/world/2013/11/131127_information_adiz.

123°E and 29°N, 117.3°E. The two points of the southern part of the East China Sea ADIZ are 26.44°N 120.58°E and 24.45°N 123°E, which are overlapping. After World War II, the U.S. Army defined the Air Defense Identification Zone (ADIZ) between Taiwan and Japan at the 123°E longitude. This line divides the airspace of Yonaguni Island into two halves, with the eastern part falling within the ADIZ of Japan and the western part falling within the ADIZ of Taiwan. On June 25, 2010, the Ministry of Defense of Japan announced that the ADIZ of Yonaguni Island would be extended 12 miles out from the baseline, and 2 more miles would be a buffer zone.² Taiwan does not accept this decision of Japan, but also tacitly acknowledges the fact, which makes the ADIZ of Taiwan and Japan overlap a little.

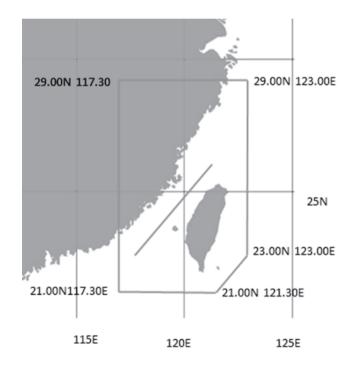


Figure 5-1 Longitude and Latitude of Taiwan ADIZ

Source: Modified by the author from publicly available information on the Internet.

² Hsiu-Chuan Shih, "Japan Extends ADIZ Into Taiwan Space," *Taipei Times*, June 26, 2010, http://www.taipei times.com/News/front/archives/2010/06/26/2003476438.

The formation of the median line in the Taiwan Strait dates back to the 1950s. when Taiwan and the United States signed the Mutual Defense Treaty between the U.S. and the ROC in Washington, D.C., on December 3, 1954. In 1955, the U.S. Thirteen Air Force officially participated in the defense of Taiwan and established an air defense line over the strait. The U.S. Army also named the defense line the Davis Line after Brigadier General Benjamin O. Davis Jr., the first Commander of the Air Force in Taiwan. The U.S. has drawn this air defense line to warn the CPC and to restrict Taiwan's military aircraft from taking the initiative. After several air battles between Taiwan and the CPC in the Taiwan Strait in 1958, the two sides seem to have reached a tacit agreement on the median line, and the conflict has since diminished. On May 26, 2004, then Minister of National Defense Lee Jye announced for the first time the geographical coordinates of the Strait's median line, which ranges from 26.30°N, 121.23°E (Point A), to 24.50°N, 119.59°E (Point B), and south to 23.17°N, 117.51°E (Point C), during a Q&A session with the Legislative Yuan.³ Due to the existence of the median line of the Taiwan Strait, in essence, Taiwan's rectangular air defense identification zone is divided by the median line of the Taiwan Strait and is limited to the airspace east of the median line of the Taiwan Strait.

CPC Ministry of Foreign Affairs spokesman Wang Wenbin said on September 21, 2020 that "The Taiwan region is an inalienable part of China's territory. The so-called 'median line' is non-existent".⁴ On the next day, Minister of Foreign Affairs of Taiwan, Wu Zhaoxie, condemned the CPC for destroying the status quo in the Taiwan Strait with its approach to the median line. On October 8, 2020, a U.S. Army MC-130J entered the Taiwan Strait in the morning and flew along the median line from north to south, leaving exactly one median line on the track

³ "CPC Aircrafts Frequently Crossing the Median Line, a Virtual Line Proposed by the U.S. Army in the 1950s," *Apple Daily*, September 22, 2020, https://tw.appledaily.com/politics/20200922/2SQRFZPZUNHSBH6G JVRDRFPNUM.

⁴ "There is no so-called 'median line' in the Taiwan Strait," *Wenweipo*, September 22, 2020, https://www.wen weipo.com/a/202009/22/AP5f691498e4b0f54bfefa7396.html.

chart.⁵ On June 2, 2021, a U.S. Navy P-8A took off from Kadena airfield and flew south along the median line of the Taiwan Strait, quite literally declaring the existence of the median line of the Taiwan Strait once again.⁶ Incursions by Chinese aircrafts into Taiwan's southwest ADIZ all come from the airspace south of the strait's median line.

III. The Detection of Chinese Aircrafts Training Model by the U.S. and Japan

In the early years, the CPC's military was not strong enough and their aircraft seldom went to sea. In 1999, President Lí Teng-hui proposed the "two-state" theory, in which Chinese aircrafts began to fly along the Taiwan Strait west of the median line and crossed the median line. However, the CPC forces were more restrained under former President Chen Shui-bian and President Ma Ying-jeou until President Tsai Ing-wen took office in 2016, when they returned to their old ways. On March 31, 2019, two CPC J-11 aircrafts flew over the median line of the Taiwan Strait for more than 10 minutes.⁷ On February 10, 2020 and August 10, 2020, there are records of provocations by Chinese aircrafts crossing the median line of the Taiwan Strait. On September 18, 2020, up to 12 Chinese aircrafts crossed the median line of the Taiwan Strait.⁸

According to information from Taiwan's Ministry of National Defense, the U.S.-China Economic and Security Review Commission divides PLA air activity around the Taiwan Strait into training routes across the median line, west of the

⁵ "The Department of National Defense Confirms U.S. Special Forces Transport Aircraft Flew Through the Median Line of the Taiwan Strait," *Liberty Times*, October 8, 2020, https://news.ltn.com.tw/news/politics/break ingnews/3315428.

⁶ "Tension in Taiwan Strait | 7 U.S. Military Aircrafts Showed up at the Same Time! P-8A Aircrafts Flew South Along the Median Line of the Taiwan Strait, CPC's Provocative Broadcast Backfired," *Apple Daily*, June 2, 2021, https://tw.appledaily.com/politics/20210602/M76JOAOMRBDA5BQNBWZI4LLCDY.

⁷ "Exclusive! 2 Chinese J-11s Crossed the Median Line of the Taiwan Strait Today and were Intercepted by Our Forces," *Liberty Times*, March 31, 2019, https://news.ltn.com.tw/news/politics/breakingnews/2744960.

⁸ "United States Under Secretary of State Visits! 18 Incursions by Chinese Aircrafts are Tracked and Controlled by Our Air Force Anti-aircraft Missiles," *Central News Agency*, September 19, 2020, https://www.cna.com.tw/ news/firstnews/202009185008.aspx.

median line, the Miyako Strait, around Taiwan, and the Bashi Channel. From 2015 to October 14, 2020, the total number of aircraft activities around the Taiwan Strait were 9, 6, 24, 14, 7 and 38 times respectively.⁹ During this period, the Ministry of National Defense of Taiwan did not release complete information, so it is clear that the U.S.-China Economic and Security Review Commission statistics are incomplete and do not provide a complete picture.

According to information released by the Review Commission Joint Staff Office of Japan's Ministry of Defense, PLA Y-8 EW began flying in the East China Sea in 2010 and H-6 B and EW flew over the Miyako Strait and the Western Pacific Ocean in 2013 as the CPC expanded its military power. The training flight paths of Chinese aircrafts around the East China Sea and Taiwan Strait includes flying over the East China Sea, Sea of Japan, Miyako Strait, Western Pacific Ocean, and around Taiwan (Table 5-1). Due to the short range of the fighter aircraft, they usually flew as far as Miyako Strait or Bashi Channel before turning back when escorting the bombers or special operations aircrafts.

Table 5-1	Statistics of the Review Commission Joint Staff Office of the Ministry of
	Defense of Japan on the Overflight of Chinese Aircrafts over the Taiwan
	Strait in the Past Years
	(As of October 2021)

Year	East China Sea		China Sea Sea of Japan			Miyako Strait and Western Pacific Ocean			Around Taiwan			Total	
	FA	В	SOA	FA	В	SOA	FA	В	SOA	FA	В	SOA	
2010			1										1
2011			7										7
2012													0
2013			4					8	7				19
2014			3					10	12				25

⁹ U.S.-China Economic and Security Review Commission, "Taiwan," in 2020 Annual Report to Congress, December, 2020, https://www.uscc.gov/sites/default/files/2020-12/Chapter_4--Taiwan.pdf.

Year	East China Sea		Sea of Japan			Miyako Strait and Western Pacific Ocean			Around Taiwan			Total	
icai	FA	В	SOA	FA	В	SOA	FA	В	SOA	FA	В	SOA	Iotai
2015					4			10	9				23
2016					2	4	2	4	5	4	4	4	29
2017				2	8	5				2	2	6	25
2018						9	2	4	5	6	14	6	46
2019					2	5	2	6	6		4	1	26
2020					4	3		2	2		4		15
2021									8			4	12
Subtotal			15	2	20	26	6	44	54	12	28	21	228
Total		15	5		48	3		10	4		61	l	228

Description: FA = Fighter Aircraft; B = Bomber; SOA = Special Operations Aircrafts, including ASW (anti-submarine warfare), EW (electronic warfare), and AEW&C (airborne early warning and control).

Source: Review Commission Joint Staff Office, *Ministry of Defense of Japan*, "Reported Information", https://www.mod.go.jp/js/Press/press2021.htm.

As shown in Table 5-1, from 2010 to October 2021, there were a total of 228 activities of the Chinese aircrafts in the sea around Japan. Among them, 29 times in 2016, 46 times in 2018 as the most, and 26 times in 2019, followed by a significant decline. In terms of flight paths, the most number of long-range training flights conducted by Chinese aircrafts were 104 through Miyako Strait to the Western Pacific Ocean, and the official CPC media claimed to have broken the first island chain, targeting Japan and the U.S. military in Japan; the peak was 15, 22, and 19 times from 2013 to 2015. Then, there were 61 times around Taiwan, with 12, 10 and 26 times from 2016 to 2018 being the most. The total number of flights to the Sea of Japan is 48, and the imaginary enemy is also Japan, with 15, 9 and 7 times from 2017 to 2019 as the peak. There were only 15 flights over the East China Sea, mainly between 2010 and 2011, when the flights first began, with 1 and

7 times respectively. The PLA aircrafts surrounding Taiwan are of most concern to the people of Taiwan. The route of the PLA aircrafts around Taiwan is mainly through the Miyako Strait, southward along the eastern waters of Taiwan, into the Bashi Channel, and back to the station. Alternatively, they can travel north through the Bashi Channel along the eastern waters of Taiwan and enter the Miyako Strait to return to their station. Or they may travel around Taiwan from north to south and south to north at the same time in both directions. On March 29 and October 31, 2021, there was a north-south pincer movement, i.e., one side of the aircraft went south through the Miyako Strait to the middle waters of eastern Taiwan and then turned back the same way, and the other side went north through the Bashi Channel to the middle waters of eastern Taiwan and then turned back the same way, an L-shaped and an inverted L-shaped trajectory forming a north-south pincer movement, which is another variant of the pattern around Taiwan (Figure 5-2). The hypothetical target would be the Hualien and Taitung military bases in Taiwan.

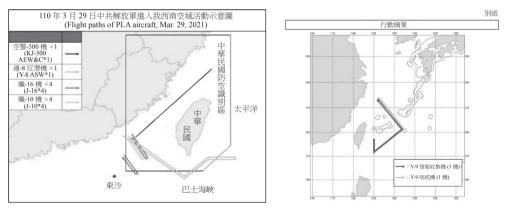


Figure 5-2 Variants of Chinese Aircrafts Surrounding Taiwan

Description: On March 29, 2021, the Chinese aircrafts intruded into Taiwan's southwestern ADIZ to form an L-shaped trajectory, while on the right figure, the Chinese aircrafts formed an inverted L-shaped trajectory in Miyako Strait and northeastern airspace on the same day, showing a north-south pincer movement.

Source: Review Commission Joint Staff Office, Ministry of Defense of Taiwan and of Japan.

If we look at the timeline, the earliest overflights in the East China Sea were from 2010 to 2011. The next most frequent overflights were over the Miyako Strait and the Western Pacific Ocean from 2013 to 2015. The most frequent overflights surrounding Taiwan were from 2016 to 2018, and the most frequent overflights over the Sea of Japan were from 2017 to 2019.¹⁰

After a long silence, the Review Commission Joint Staff Office of Japan's Ministry of Defense stated on August 26, 2021 that CPC drones had been spotted in the airspace around Japan for several days. On August 24, the Japan Self-Defense Force (JSDF) spotted a CPC drone, presumed to be a TB-001 reconnaissance strike drone, over the East China Sea, the first time the JSDF has ever spotted a drone. On August 25, a Chinese BZK-005 drone, a Y-9 patrol aircraft and a Y-9 intelligence gathering aircraft flew through the Miyako Strait to the Western Pacific Ocean and turned back the way they came. On August 26, a TB-001 drone, a Y-9 patrol aircraft and a Y-9 intelligence gathering aircraft flew through the Miyako Strait flew through the Miyako Strait to the Western Pacific Ocean.¹¹

In terms of mission types, there are H-6 for bombers, J-30 for fighter aircrafts, Tu-154 intelligence gathering aircraft, Y-9 intelligence gathering aircraft, Y-9 patrol aircraft, Y-9 AEW aircraft, Y-8 AEW aircraft, Y-8 EW aircraft, Y-8 intelligence gathering aircraft, BZK-005 and TB-001 drones, and even Y-12 maritime surveillance aircraft for special operations aircrafts.

IV. Taiwan's Detection of Chinese Aircrafts Training Model

In the past, the Ministry of National Defense of Taiwan has been selective in releasing facts about Chinese aircrafts' activities on the grounds of protecting classified sources, not letting CPC lead U.S. by the nose, and avoiding public panic. However, Beijing is using incursions by Chinese aircrafts to launch a united

¹⁰ "Reported Information", Review Commission Joint Staff Office, Ministry of Defense of Japan, https://www. mod.go.jp/js/Press/press2021.htm.

¹¹ Same as the previous note.

front offensive, such as the H-6K flying in the clouds on December 16, 2016, with two neighboring peaks visible in the distance. The route around the island is like the outstretched arms of the motherland, with Taiwan in the arms of the motherland.¹² On April 26, 2018, the PLA Air Force flew around the Taiwan of the motherland, measuring the great rivers and mountains of the motherland with the flight path of aircrafts.¹³ In the face of this united front offensive, the Ministry of National Defense of Taiwan can sometimes be put in a passive position, so there are voices that want to follow the example of the Ministry of Defense of Japan in announcing the activities of aircraft from countries in its vicinity. Since September 17, 2020, the Ministry of National Defense of Taiwan has been releasing information on the activities of Chinese aircrafts around Taiwan, mainly crossing the median line and incursions into Taiwan's southwestern ADIZ, while Chinese aircrafts surrounding Taiwan are rare.

The Ministry of National Defense of Taiwan has adopted a schematic diagram for the 2017 National Defense Report on the activities of Chinese aircrafts surrounding the Taiwan Strait, with the date and type of aircraft marked on the side. The brown color represents the training in the Sea of Japan, the yellow color represents the training in the Western Pacific Ocean, the pink color represents the training surrounding Taiwan, and the red color represents the training in the Bashi Channel.¹⁴ The training in the Bashi Channel is mainly aimed at the U.S. military base in Guam as the target, the 2019 National Defense Report is divided into the training around Miyako Island and Taiwan, the training in the Bashi Channel and the training in the South China Sea, the training around the Bashi Channel Defense Report, the 2019 edition has one more flight training in the South China Sea, with the dates and aircraft types of the training removed, and the training

¹² "[Feature Article] PLA aircrafts and Taiwan 'in the same frame'," *Wenweipo*, April 29, 2021, https://www.wen weipo.com/a/202104/29/AP6089c756e4b0476859b902a9.html.

¹³ "Once Again! PLA Aircrafts are 'Circling the Island' Again Today and being Provocative," *Liberty Times*, April 26, 2018, https://news.ltn.com.tw/news/Taipei/breakingnews/2407483.

¹⁴ Ministry of National Defense, R.O.C., 2017 National Defense Report, p. 38.

¹⁵ Ministry of National Defense, R.O.C., 2019 National Defense Report, p. 36.

surrounding in the 2017 edition has been replaced by the training around the Miyako Island and Taiwan (Figure 5-3). From September 2020 to October 2021, there were 815 incursions into the southwest ADIZ, with 194 incursions in October 2021 and 115 incursions in September being the most. The median line was crossed only 23 times, mainly by fighter aircrafts. During the incursions into the southwest ADIZ, there were 208 times by ASW aircrafts, 160 times by EW aircrafts, 343 times by fighter aircrafts, 47 times by bombers, and 34 times by AEW&C aircrafts, which shows that the lack of aerial refueling aircrafts is the weakness of the Chinese aircrafts' combat-oriented mission configuration (Table 5-2).

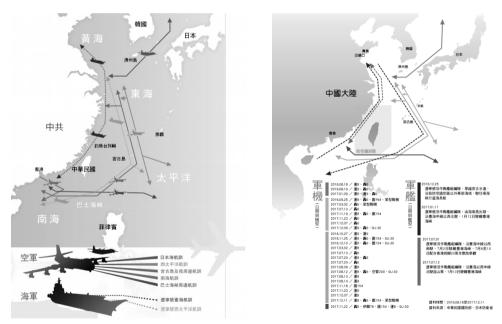


Figure 5-3 The Flight Paths of Chinese Aircrafts' Training Around the Taiwan Strait

Source: Ministry of National Defense of Taiwan, "2019 National Defense Report," p. 36; 2017 "National Defense Report," p. 38.

The Chinese aircrafts routinely harass Taiwan, usually with the Y-8 series of military aircraft as the primary aircrafts, using single or dual aircrafts, but sometimes there is a sudden outburst of large formations of fighter aircrafts, bombers, AEW&C aircrafts, ASW aircrafts, and electronic reconnaissance aircrafts to simulate an attack on Taiwan, or targeting the United States or its allied carrier strike group in a simulated exercise. For example, on April 12, 2021, the CPC deployed 25 aircrafts for incursions into Taiwan's southwest ADIZ, including 2 Y-8 ASWs, 1 KJ-500 AEW&C, 4 J-10s, 14 J-16s, and 4 H-6Ks.¹⁶ On June 15, 2021, China deployed 28 aircrafts for incursions around Taiwan, including 1 Y-8 ASW, 4 H-6s, 1 Y-8 EW, 2 KJ-500 AEW&Cs, 14 J-16s, and 6 J-11s.¹⁷ On October 4, 2021, China deployed 56 aircrafts for incursions around Taiwan, including 38 J-16s, 2 Su-30s, 2 Y-8 ASWs, 2 KJ-500 AEW&Cs, and 12 H-6s into Taiwan's southwestern ADIZ.¹⁸ This is the highest number of incursions by Chinese aircrafts into Taiwan's surrounding airspace in a single day.

Table 5-2Statistics on the Activities of Chinese Aircrafts Surrounding the Taiwan
Strait by the Ministry of National Defense of Taiwan (As of October
2021)

	Median Line						Southwestern ADIZ					
Year/Month	FA	В	ASW	EW	AEW&C	FA	B	ASW	EW	AEW&C	Total	
September 2020	22					10	4	12			48	
October								17	12	3	32	
November						6		17	18		41	
December				1				15	16		32	
January 2021								18	25	3	46	

¹⁶ 'Taiwan Strait Military Situation' The Chinese Aircrafts Have Made 309 Incursions around Taiwan from January to May, with J-16s and Y-8 ASWs for 74 Times Each.," *Liberty Times*, June 5, 2021, https://news.ltn.com. tw/news/politics/breakingnews/3558877.

¹⁷ 'Taiwan Strait Military Situation' Record breaking! 28 Chinese Aircrafts Harass Taiwan's Airspace in One Day," *Liberty Times*, June 15, 2021, https://news.ltn.com.tw/news/politics/breakingnews/3570849.

¹⁸ "The Ministry of National Defense Released Its Second Update on the Total Number of Incursions by Chinese Aircrafts (56) Reaching a New High," *Central News Agency*, October 4, 2021, https://www.cna.com.tw/news/ firstnews/202110040366.aspx.

V		Median Line						Southwestern ADIZ					
Year/Month	FA	B	ASW	EW	AEW&C	FA	B	ASW	EW	AEW&C	Total		
February								16	17		33		
March						27	4	15	6	2	54		
April						54	4	16	16	9	99		
May						2	2	14	10	1	29		
June						26	4	8	3	3	44		
July								11	6		17		
August						10	3	10	7	1	31		
September						64	10	23	15	3	115		
October						144	16	16	9	9	194		
Subtotal	22			1		343	47	208	160	34	815		
Total			2	3			·	815					

Description: FA = Fighter Aircraft; B = Bomber; ASW = Anti-Submarine Warfare; EW = Electronic Warfare; AEW&C = Airborne Early Warning and Control. Source: Ministry of National Defense, R.O.C., *Military News Update*.

When incursions by Chinese aircrafts break out, they are usually highly political, targeting not only Taiwan but also the United States. As Washington positions the U.S. and China in a competitive relationship, the relationship between Taiwan and the U.S. has been escalating in recent years, and, to paraphrase Beijing, incursions by Chinese aircrafts are preventing further collusion between Taiwan and the U.S.¹⁹ On October 4, 56 Chinese aircrafts had a major incursion around Taiwan in protest of U.S., Japanese and UK aircraft carrier drills in the surrounding waters. On June 15, 28 Chinese aircrafts made an incursion into Taiwan's southwestern

¹⁹ "PLA Launches Military Training in Multiple Seas; Experts: Prevent Further Collusion between U.S. and Taiwan," *Xinhua Net*, July 20, 2021, http://www.xinhuanet.com/mil/2021-07/20/c 1211248201.htm.

ADIZ, expressing dissatisfaction with the entry of the USS Ronald Reagan CVN-76 carrier strike group into the South China Sea the day before.²⁰ On April 12, 25 Chinese aircrafts gathered in protest of the USS Theodore Roosevelt CVN-71 aircraft carrier's activities northwest of Huangyan Island on April 11.²¹ On March 26, 20 Chinese aircrafts were deployed in response to the signing of AIT-TECRO MOU on Coast Guard Cooperation the day before.²² Even earlier, on September 18, 2020, 18 Chinese aircrafts intruded into Taiwan's southwestern, western, northern, and northwestern airspace, 12 of which crossed the median line of the Taiwan Strait, just as U.S. Under Secretary of State Keith Krach was visiting Taiwan.²³

The Ministry of National Defense has started to release information on the activities of Chinese aircrafts in the Taiwan Strait. The incursions by Chinese aircrafts include H-6K and JH-7 bombers, and Su-30, J-16, J-11, J-10 and J-7 fighter aircrafts. The old J-7 appeared in the Taiwan Strait, and the Hong Kong media reported that it had been changed to a drone, which would be used as bait to attract enemy air defense weapons, but the military on both sides of the Taiwan Strait remained silent.²⁴ Special operations aircrafts include KJ-500, Y-9 EW, Y-8 RECCE, Y-8 ASW, Y-8 ELINT, and Y-8 EW. The helicopters include the Z-8, Z-9 ASW, WZ-10, and Mi-17. In addition to the above aircraft types, on August 12, 2017, the KJ-200 was seen flying around Taiwan from south to north for co-

²⁰ "The Ronald Reagan Carrier Strike Group Enters South China Sea with Seventh Fleet Announcement: U.S. Navy's Indo-Pacific Routine," *Liberty Times*, June 15, 2021, https://news.ltn.com.tw/news/world/breaking news/3569975.

²¹ "The Latest Position of the U.S. Aircraft Carrier in the South China Sea is Revealed! Activities in the Northwest of Huangyan Island," *Xinhua Net*, April 12, 2021, http://www.xinhuanet.com/mil/2021-04/12/ c_1211107492.htm.

²² "Biden Signs first U.S.-Taiwan Cooperation MOU After Taking Office to Strengthen Maritime Patrol Cooperation," *Liberty Times*, March 26, 2021, https://news.ltn.com.tw/news/politics/breakingnews/3479452.

²³ "United States Under Secretary of State Visits! 18 Incursions by Chinese Aircrafts are Tracked and Controlled by Our Air Force Anti-aircraft Missiles," *Central News Agency*, September 18, 2020, https://www.cna.com.tw/ news/firstnews/202009185008.aspx.

²⁴ Minnie Chan, "Why Has China's PLA Started Sending Grandpa Fighter Aircrafts to Test Taiwan's Air Defense?," South China Morning Post, July 11, 2021, https://www.scmp.com/news/china/military/arti cle/3140627/why-has-chinas-pla-started-sending-grandpa-fighter-aircrafts-test.

training.²⁵ On November 22, 2017, Chinese aircrafts were seen flying via the Bashi Channel to the Western Pacific Ocean with Tu-154 and II-78.²⁶ On May 11, 2018, Su-35 and KJ-2000 were seen flying around Taiwan for co-training.²⁷

V. Implications of Chinese Aircrafts Incursions into Taiwan's Southwestern ADIZ and Response from the United States

Taiwan's southwestern waters, south of the median line of the Taiwan Strait, are vast and far from Taiwan and the CPC, and used to be a non-sensitive area. As the CPC has increased its military forces, it has begun to interfere with Taiwan's southwestern ADIZ more frequently, and such overflights, which do not cross a actual median line but does cross an invisible line, have become a major battleground for incursions by Chinese aircrafts.

The first island chain has put the CPC in an unfavorable geostrategic position by semi-enclosing its coastal waters. In order to move from the shallow coastal waters to the deep distant seas, the PLA Navy must pass through the first island chain with multiple chokepoints and straits, and will face the extremely high risk of chokepoint island chain defense.²⁸ The Southwest Sea is located at the southern end of the Taiwan Strait, connecting the East China Sea to the north, the South China Sea to the south, and the Western Pacific Ocean to the east via the Bashi Channel. The CPC will need to control this area if it is to move far out to sea to compete with the United States. The main implications of the CPC's incursions into Taiwan's southwestern ADIZ are:

1. Emphasizing the weakness of Taiwan's defense. Chinese aircrafts can fly over

²⁵ "China is Causing Trouble Again! Many Military Planes Approach Taiwan Waters," *Liberty Times*, August 12, 2017, http://news.ltn.com.tw/news/politics/breakingnews/2160894.

²⁶ Update: More than 10 PLA Aircrafts Flew Out to Sea Today, Intruding into Our ADIZ," *Apple Daily*, November 22, 2017, https://tw.news.appledaily.com/politics/realtime/20171122/1245757.

²⁷ "Chinese Aircrafts Fly around Taiwan Again, Military Releases Surveillance Video to Strike Back," *Liberty Times*, May 11, 2018, http://news.ltn.com.tw/news/politics/breakingnews/2423039.

²⁸ Ken Moriyasu, "US Eyes Using Japan's Submarines to 'Choke' Chinese Navy," Nikkei Asia, May 5, 2021, https://asia.nikkei.com/Politics/International-relations/Indo-Pacific/US-eyes-using-japan-s-submarines-tochoke-chinese-navy.

the first island chain from the East China Sea, but the U.S. and Japan are closely monitoring, and may even support the Taiwan Strait, the overall air and sea combat power of the CPC is not outstanding. The defense of the Taiwan Strait is heavily deployed in northern Taiwan, with the southwest being the weakest, and the U.S. and Japanese support lines will be lengthened. If the CPC places the same force in the southwest, it may have the ability to reverse the disadvantage in the East China Sea; 2. Attrition warfare. When Chinese aircrafts infiltrate the Taiwan's southwestern ADIZ, they usually use the Y-8 series of slow-speed aircrafts as the main aircraft, either using single or dual aircraft, forcing the Republic of China Air Force (ROCAF) fighters to take off in an emergency. The long term high tension force dispatch tests not only the front line officers and soldiers, but also the logistical material transportation capability.²⁹ Such an approach, in addition to depleting ROCAF's air power, slow-speed aircraft is also less provocative and will not raise tensions; 3. The PLA's attack on Taiwan is likely to be multi-directional. In the past, the PLA emphasized the decapitation strike operation, meaning the first battle is the final battle. It is generally believed that the most likely direction of PLA's attack on Taiwan is mainly in the north, supplemented by the central part, and the east is only a distraction. Now, Chinese aircrafts are frequently flying over Taiwan's southwestern ADIZ, demonstrating their power to attack Taiwan from another direction. This multi-directional approach to encircle Taiwan will make Taiwan spread its forces and create a breach; 4. Threatening Pratas Island and Taiping Island. Not only do Chinese aircrafts intrude into Taiwan's southwestern ADIZ, but their drones have also been conducting reconnaissance over Pratas Island.³⁰ The presence of Chinese aircrafts in Taiwan's southwestern ADIZ demonstrates the ability to intimidate Taiwan's Taiping Island and Pratas Island. Once the CPC wants to punish Taiwan to a limited extent, it would be easy to capture the off-shore islands of Taiwan in the South China Sea.

²⁹ "Forces Reserve Reform/The CPC frequently Attacked Taiwan with Political Intimidation or Military Coercion, Causing Attrition Warfare Themselves," *Central News Agency*, October 11, 2020, https://www.cna.com.tw/ news/firstnews/202010110133.aspx.

³⁰ "To counter the threat of CPC, the construction of the runway in Pratas Island will be completed in February 2022," *Central News Agency*, April 12, 2021, https://www.cna.com.tw/news/aipl/202104120132.aspx.

5. Operate anti-submarine battlefield. Once the PLA launches a nuclear attack, a ballistic missile submarine stationed in the South China Sea would have to exit the Bashi Channel in order to launch a JL-2 ballistic missile. It is believed that the U.S. military and attack submarines will be waiting in ambush to kill the PLA ballistic missile submarines in the Bashi Channel near the Western Pacific Ocean. The southwestern waters are the gateway to the ocean for PLA submarines, with ballistic missile submarines stationed in the South China Sea; U.S. anti-submarine warfare (ASW) and oceanographic research vessels have been conducting reconnaissance activities in these waters for years. The CPC has to do a better job of managing the battlefield and put up multiple barriers to the U.S. antisubmarine warfare; 6. Protection of bastion in the South China Sea. The CPC is building base clusters in the Nansha Islands, the Paracel Islands, and Hainan Island with the aim of turning the South China Sea into a bastion of ballistic missile submarines.³¹ There is a second missile submarine base in Sanya Yalong Bay, with the deployment of 6 094A/094 ballistic missile submarines and 4 093/093A missile submarines. In Sanya Naval Base, the Chinese aircraft carrier Shandong is stationed there. 8 Type 071 landing platform docks are currently in service, 5 of which are deployed in the PLA Southern Theater Command Navy.³² The aircraft carrier provides air cover, the attack submarine ensures underwater safety. the amphibious ships support the island and reefs bases, and the islands and reefs bases provide intelligence, surveillance and reconnaissance (ISR), making the ballistic missile submarine safe and secure. The huge naval air station in Hainan has become the Guam and Murmansk of the CPC. The southwestern waters, which are the periphery and gateway to the South China Sea, are even more in China's hands.

In response to the incursion of Chinese aircrafts into the southwestern ADIZ, Taiwan immediately responded by dispatching air patrol forces, issuing radio warnings, and deploying air defense missile systems. To avoid falling into the trap of attrition warfare, Taiwan has deployed C-130 transport aircraft and P-3C ASW

³¹ "Strategic Weapons: Chinese SLBM Triumph," *Strategy Page*, June 16, 2021, https://www.strategypage.com/ httms/hticbm/articles/20210616.aspx.

³² "Amphibious Warfare Ship," 《世界の艦船》, February 25, Reiwa 3 (February 25, 2021), p. 44.

to counter slow-speed aircrafts from CPC, adjusted personnel deployment and training plan, and used early warning radar and joint air defense of the three armies to deal with the situation. In other words, according to the assessment of the threat, various means are used to match the high-low mix of high-speed aircraft, slow-speed aircraft, air defense missile, and electric warfare forces to effectively use the combat power to avoid excessive damage to the army's logistics.³³

The future strengthening of Taiwan's southwest defense should include: 1. Be vigilant to the regular incursions of Chinese aircrafts. The CPC considers incursions into Taiwan's surrounding airspace to be regular combat training, but the Taiwanese public takes it as a normal practice and loses its vigilance. In the event of a surprise attack by Chinese aircrafts, Taiwan will be caught off guard. The people of Taiwan should be more vigilant so that the CPC will not be able to achieve its goal; 2. Strengthen intelligence, surveillance and reconnaissance in Taiwan's southwestern ADIZ. Chinese aircrafts are intensively intruding into Taiwan's southwestern ADIZ. Due to the inadequacy of the existing intelligence, surveillance and reconnaissance (ISR) detection capability and airspace coverage in the area, a new early warning radar system needs to be deployed in the southern mountainous region to effectively supplement the air defense force in Taiwan's southwestern ADIZ;³⁴ 3. To enhance air defense capabilities. The Air Force's current system covers all types of air defense radar, patriot missiles, anti-tactical ballistic missile (ATBM), and the HAWK missile, but does not include naval ships, high-mountain radar, and shipborne air defense missiles such as Standard 1/2 and Chaparral. The air and naval forces have their own air defense systems, which can lead to omissions and blind spots. "Huanzhan" project is to upgrade the hardware and software to integrate the radar information of the air and naval forces in real

³³ "More than 400 Chinese Aircrafts Have Come around This Year, and We are Doing More to Prevent the 'Attrition Warfare'," *Liberty Times*, August 30, 2021, https://news.ltn.com.tw/news/politics/paper/1469763.

³⁴ China-Taiwan Naval Situation: Strengthen Taiwan's Southwestern ADIZ Air Defense Force! Military Proposes to Procure 'New Early Warning Radar System'," *Liberty Times*, April 20, 2021, https://news.ltn.com.tw/news/ politics/breakingnews/3505288.

time, so that the overall combat capability can be fully utilized:³⁵ 4. To discuss the feasibility of procuring electronic warfare. Incursions by Chinese aircrafts into Taiwan's southwestern ADIZ are most frequent with ASWs and EWs. Taiwan is equipped with 12 P-3C ASWs and only 1 EW. The feasibility of procuring EA-18Gs or small commercial aircrafts to convert to EWs should be discussed to make up for the shortcomings of EWs. In addition to the EA-18Gs, the U.S. Army's conversion of small airliners into intelligence, surveillance and reconnaissance (ISR) carriers may be more appropriate for Taiwan, such as the ARES (Airborne Reconnaissance and Electronic Warfare System) with the Bombardier Global 6000/6500 aircraft, and the ARTEMIS (Aerial Reconnaissance and Targeting Exploitation Multi-Mission Intelligence System) with the Bombardier Challenger 650;³⁶ 5. To strengthen anti-submarine intelligence cooperation with allies. Beijing has built the South China Sea as a bastion to protect the ballistic missile submarine, which it regards as the CPC's internal sea. If successful, it would cut off the U.S. military's access to the Pacific Ocean and the Indian Ocean. The U.S. military will not let this happen and will certainly conduct more close reconnaissance, bomber task force missions and other activities. The U.S. and China are wrestling more and more intensely in the South China Sea, and Taiwan should strengthen cooperation with allies in the Taiwan Strait in the areas of anti-submarine, electronic warfare, and even intelligence, surveillance and reconnaissance (ISR).

In response to the intrusions of Chinese aircrafts into the Taiwan Strait, the U.S. has assisted Taiwan's self-defense, primarily through Salami Slicing, by enhancing aerial surveillance and bomber dynamic force employment in China's near waters.³⁷ As the U.S.-China rivalry becomes clearer, the U.S. is helping Taiwan to strengthen its defense capabilities more frequently. The Biden administration

³⁵ :Taiwan's Military Situation: Combination of Air and Sea Missiles and Radar to Strengthen Air Defense! Military's 'Huanzhan Project' to be Completed by 2024," *Liberty Times*, May 1, 2021, https://news.ltn.com.tw/ news/politics/breakingnews/3517481.

³⁶ Jen Judson, "US Army's Recon, Electronic Warfare-capable Aircraft Flies for the First Time," *Defense News*, August 28, 2021, https://www.defensenews.com/industry/2021/08/27/us-armys-recon-electronic-warfare-capa ble-aircraft-flies-for-the-first-time.

³⁷ Hal Brands, "U.S. Copies China's 'Salami Slicing' to Defend Taiwan," *Bloomberg*, August 12, 2021, https:// www.bloomberg.com/opinion/articles/2021-08-12/u-s-copies-china-s-salami-slicing-to-defend-taiwan.

approved its first arms sale to Taiwan since taking office on August 5, 2021, consisting of the M109A6 Paladin self-propelled howitzers and nearly 1,700 kits to convert projectiles into more precise GPS-guided munitions, valued at US\$750 million. The Biden administration's sale of the M109A6 self-propelled howitzers and the Trump administration's 11 arms sales to Taiwan during his four-year tenure amounted to US\$18.335 billion, making the 12 arms sales US\$19.085 billion (Table 5-3). The most important of these arms sales was the sale of 66 F-16V Block 70 fighters in 2019, which changed the PLA's air superiority over Taiwan. The sale of the AGM-84H/K SLAM-ER and the new F-16 MS110 in 2020 allowed the F-16V to be able to attack mainland China from east of the median line of the Taiwan Strait, forcing the PLA to spend more on air defense power.³⁸

Time	Content	Amount (US\$ 100 million)	Remark
August 5, 2021	40 new M109A6 self-propelled howitzers with nearly 1,700 kits to convert projectiles into more precise GPS-guided munitions.	7.5	First arms sale during Biden Administration
December 7, 2020	Field Information Communications System (FICS), consisting of 154 Communications Nodes (CN); 24 Communication Relays; 8 Network Management Systems (NMS) and relevant equipment.	2.8	Arms sales during Trump Administration
November 3, 2020	4 Weapons-Ready MQ-9B Remotely Piloted Aircrafts.	6	
October 26, 2020	Harpoon Coastal Defense System (HCDS).	23.7	

Table 5-3U.S. Arms Sales to Taiwan by the Biden Administration and the Trump
Administration

³⁸ "Biden and Trump's Arms Sales to Taiwan: Over NT\$530 Billion Dollars in the Past 4 Years, 66 F-16Vs to Help Taiwan Defend Its Airspace," *Apple Daily*, August 6, 2021, https://tw.appledaily.com/politics/20210806/ DSCKSX7CPRE33G7GQGONZJPF2I.

Time	Content	Amount (US\$ 100 million)	Remark
October 21, 2020	11 high mobility artillery rocket system (HIMARS); 135 AGM-84H standoff land attack missile expanded response (SLAM-ER) missiles; 6 MS-110 multispectral airborne reconnaissance pods.	18.113	
July 10, 2020	Repair and Recertification of MIM- 104F (PAC-3) surface-to-air missile, supporting an operational life of thirty years.	6.2	
May 20, 2020	18 Mk-48 Mod6 AT heavyweight submarine-launched wire-guided torpedoes (HWT), etc.	1.8	
August 19, 2019	66 F-16V block 70 multi-role fighters.	80	
July 8, 2019	108 M1A2T main battle tanks; FIM- 92F man-portable missiles, etc.	22.24	
April 15, 2019	Continuation of the pilot training program of 21st Fighter Squadron in Luke AFB, Arizona.	5	
September 24, 2018	Spare parts for F-16, C-130H, F-5E/F, Indigenous Defense Fighter (IDF), and other aircraft.	3.3	
June 29, 2017	HARMs; JSOW air-to-ground missiles; MK48 torpedoes; SM-2 missiles; upgrade the AN/SLQ-32(V)3 Electronic Warfare Systems in support of 4 ex- Kidd-class (now Keelung- class) destroyers.	14.2	

Source: "Biden and Trump's Arms Sales to Taiwan: Over NT\$530 Billion Dollars in the Past 4 Years,66 F-16Vs to Help Taiwan Defend Its Airspace," *Apple Daily*, August 6, 2021, https:// tw.appledaily.com/politics/20210806/DSCKSX7CPRE33G7GQGONZJPF2I; U.S. Sells Taiwan Field Information Communications System (FICS); the 11th Arms Sale to Taiwan during Trump Administration," *Central News Agency*, December 8, 2020, https://www.cna.com.tw/news/firstnews/ 202012085001.aspx.

In terms of symbolic support, U.S. aircraft arrived in Taiwan directly as opposed

to PLA aircrafts surrounding Taiwan or disturbing Taiwan. On June 6, 2021, U.S. Senators Tammy Duckworth, Dan Sullivan, and Chris Coons arrived at Taipei Songshan Airport aboard a C-17 to meet with President Tsai Ing-wen. Due to the lack of diplomatic relations between the U.S. and Taiwan, it is extremely rare for an Air Force marked military aircraft to land in Taiwan.³⁹ On July 15, 2021, a U.S. C-146A transportation aircraft landed from Okinawa to Taipei Songshan Airport in the morning. Neither the Ministry of Foreign Affairs (MFA) nor the American Institute in Taiwan (AIT) commented. The C-146A is a military version of the German Dornier 328, which can be used not only as an executive aircraft, but also as a special forces aircraft in combat.⁴⁰ On July 19, 2021, a U.S. C-130 transportation aircraft landed at Taoyuan Airport and flew off after completing its operations. The C-130 is a contracted aircraft between the U.S. Army and a non-governmental company, and is positioned as a commercial cargo aircraft.⁴¹

On August 9, 2020, Secretary of United States Department of Health and Human Services Alex Azar flew to Taipei's Songshan Airport aboard a U.S. Air Force C-40B executive aircraft with a U.S. flag painted on the tail, representing an official visit by the U.S. in its official capacity and a symbol of enhanced relations between Taiwan and the United States.⁴² Under Secretary of the State Council Keith Krach arrives at Taipei Songshan Airport on September 17, 2020, aboard a modified Gulfstream 5 version of the C-37A.⁴³ The U.S. C-37A aircraft that arrived at Taipei Songshan Airport in the evening of November 22, 2020, was the same model as the one that U.S. Under Secretary of the State Council Clarke took when he came to Taiwan, and it was rumored that the visitor might be Michael William Studeman, the Director of Intelligence of the United States Indo-Pacific

³⁹ "C-17 First Landing! Taiwan Scholar: Demonstrates U.S. Army's Emergency Transport Capability," *Central News Agency*, June 6, 2021, https://www.cna.com.tw/news/aipl/202106060095.aspx.

⁴⁰ "U.S. Army C-146A Executive Aircraft Lands at Songshan Base, Air Force: No Contact," *Liberty Times*, July 15, 2021, https://news.ltn.com.tw/news/politics/breakingnews/3604120.

⁴¹ "Suspected U.S. Transportation Aircraft Landing in Taoyuan International Airport and Leaving After a Short Stay," *Central News Agency*, July 19, 2021, https://www.cna.com.tw/news/aipl/202107190144.aspx.

⁴² "U.S. Air Force 'Air Office'! Alex Azar Arrives in Taiwan; the C-40B Aircraft Has Special Significance," *Liberty Times*, August 9, 2020, https://news.ltn.com.tw/news/politics/breakingnews/3254864.

⁴³ "The State Council's Highest-ranking Official to Visit Taiwan in 1979: Under Secretary Krach Arrives in Taiwan," *Central News Agency*, September 17, 2020, https://www.cna.com.tw/news/firstnews/202009175011.aspx.

Command.⁴⁴ The pattern of U.S. aircrafts arriving in Taiwan in the past two years shows that a military aircraft or a executive aircraft with a clear flag will come first, carrying senators or ministerial officials, followed by two unflagged, semi-official, semi-civilian aircraft. This is a big step forward and two small steps back, highlighting support for Taiwan and not ruling out the possibility of crisis intervention. On the other hand, the possibility of intervention is blurred, so that Beijing will not have the opportunity to provoke.

In addition to more frequent reconnaissance, the U.S. military aircrafts are flying closer and closer to the coast of China. From September 4 to 6, 2021, the U.S. Army RC-135S electronic reconnaissance aircraft took off from Kadena Air Base in Okinawa for three consecutive days, crossing the East China Sea ADIZ and flying directly into the Yellow Sea south of Qingdao to conduct close reconnaissance of the CPC; the first two days were about 30 miles from the baseline of territorial waters, and on September 6, the closest flight was about 26 miles from the baseline of territorial waters.⁴⁵ On March 22, a U.S. Army RC-135U reconnaissance aircraft entered the South China Sea via the Bashi Channel and conducted reconnaissance of the coastal areas of South China, once approaching 25.33 miles from the baseline of territorial waters and getting close to the edge of the contiguous zone (24 miles). The U.S. aircrafts have been approaching for reconnaissance, which can be said to be a departure from the norm. Usually, the U.S. military reconnaissance to China is kept about 50 miles to 70 miles off the coastline.⁴⁶ U.S. aircraft extreme close reconnaissance generally have three kinds of circumstances: First, some image reconnaissance operations must be as close as possible to the opponent's territorial airspace or territorial waters, so as to obtain a clearer image; second is to test, forcing the opponent's radar, air defense facilities

⁴⁴ "Seven U.S. Planes Spotted in Taiwan's Southern Waters before a Mysterious C-37A Arrived at Taiwan," *Liberty Times*, November 23, 2020, https://news.ltn.com.tw/news/politics/breakingnews/3359533.

⁴⁵ "U.S. Army RC-135S with 3 Days of Reconnaissance in the Yellow Sea, Callsign Suspected of Mocking the PLA to Make Chinese Think Tanks Rage," *Liberty Times*, September 7, 2021, https://news.ltn.com.tw/news/ world/breakingnews/3663317.

⁴⁶ "25.33 Nautical Miles from China's Coast, U.S. Military Aircraft Set a New Record for Close Reconnaissance of China," *HK01*, March 22, 2021, https://www.hk01.com/即時中國/602448/距中國沿海 25-33 海里 - 美軍機 刷新對華抵近偵察紀錄.

on, in order to obtain relevant electronic intelligence; third is simply to provoke.⁴⁷

The U.S. military attempts to understand and grasp the various military dynamics of the CPC in and around the South China Sea through ongoing daily air reconnaissance operations against China. According to incomplete statistics, from January to July 2021, 345 U.S. aircrafts have flown to the South China Sea to conduct close reconnaissance.⁴⁸ In 2020, nearly 1,000 U.S. aircrafts have taken off from Osan Air Base of Korea, Kadena Airfield of Okinawa, Andersen Air Force Base in Guam, Clark Air Base in the Philippines and Brunei, mainly U-2S high altitude reconnaissance aircraft, RC-135 series of reconnaissance aircraft, E-3B AEW&C aircraft , E-8C air-to-ground surveillance aircraft, P-8A and P-3C anti-submarine patrol aircraft, EP-3E electronic reconnaissance aircraft, CL-650 reconnaissance aircraft, CL-604 maritime surveillance aircraft and RQ-4B Global Hawk, MQ-4C Triton high altitude unmanned reconnaissance aircraft and other types.⁴⁹ U.S. aircrafts also flew to the East China Sea and the Yellow Sea for close reconnaissance, but the statistics are incomplete.

As for Bomber Dynamic Force Employment, the U.S. Air Force B-52H and B-1B bombers (B: bomber) were deployed on a limited number of occasions in 2021. On February 11, 2021, a B-52 led a formation of U.S. and Japanese fighters during the Cape North 21 exercise in Guam. On January 25, 2 B-52s from Barksdale, Louisiana were deployed to Guam. On their way to Guam, one landed directly on Guam, while the other flew through the Philippine Sea, Sulawesi Sea, and Sulu Sea into the South China Sea, flying over the South China Sea before returning to Guam from the Bashi Channel. On January 11, a B-1B from Dyess, Texas, flew a Task Force mission to the indo-pacific region.⁵⁰

In 2020, U.S. Air Force bombers conducted high intensity military operations

⁴⁷ "20 Years After the Hainan Island Incident, U.S. Military Set a New Record on Air Reconnaissance Distance to China," *ETtoday Military*, April 2, 2021, https://www.ettoday.net/news/20210402/1951916.htm.

⁴⁸ "SCS Probing Initiative," SCS Probing Initiative Official Think Tank Weibo, https://www.weibo.com/ u/7065543812?is_all=1#_loginLayer_1629794756985.

⁴⁹ "SCS Probing Initiative," *Incomplete Report on U.S. Military Activities in the South China Sea in 2020*, March 12, 2021, http://www.scspi.org/sites/default/files/reports/2020nian_mei_jun_nan_hai_jun_shi_huo_dong_bu_wan_quan_bao_gao_.pdf.

⁵⁰ Aircraft Spots, "Monitoring Military Air Movements," https://twitter.com/aircraftspots.

in the South China Sea in an attempt to demonstrate the unpredictability of bomber tactical operations. According to incomplete statistics, the U.S. Air Force bombers flew 17 times in the South China Sea throughout the year, mostly in dual formations, with 1 B-52H and 21 B-1Bs deployed. Of these, 4 took off from home bases and the rest from Guam. It is defined as a north-south attack, one from the Bashi Channel and one from the Philippines Sulu Sea into the South China Sea; emphasizing unpredictability and systematic joint operations closely supported by refueling and reconnaissance aircraft.⁵¹

VI. Conclusion

The Air Defense Identification Zone (ADIZ) and the median line of the Taiwan Strait are products of the Cold War era and have maintained peace in the Taiwan Strait for decades. The U.S. has been sending military aircrafts along the median line of the Taiwan Strait to show Beijing that it disagrees with the claim that it does not exist. With the rise of the CPC, Chinese aircrafts are flying farther and farther, from crossing the median line of the Taiwan Strait, through the Tsushima Strait and out of the Sea of Japan, through the Miyako Strait and out of the Western Pacific Ocean, around Taiwan, and over the Bashi Channel, intruding on Taiwan's southwest ADIZ and patrolling the South China Sea. These training flight paths are not only a threat to Taiwan, but also to the United States and Japan. The Chinese aircrafts are routinely intruding on the Taiwan Strait periphery, emphasizing that the soldiers are trained where the war is fought. In addition to demonstrating its all-around attack capability, its flight training pattern has shifted from crossing the median line and surrounding Taiwan to disrupting Taiwan's southwest airspace. From 2016 to October 2021, the aircrafts have made 61 flights around Taiwan, and from September 2020 to October 2021, the aircrafts have crossed the median

⁵¹ "SCS Probing Initiative," Incomplete Report on U.S. Military Activities in the South China Sea in 2020, March 12, 2021, http://www.scspi.org/sites/default/files/reports/2020nian_mei_jun_nan_hai_jun_shi_huo_dong_bu_wan_quan_bao_gao_pdf.

line of the Taiwan Strait 23 times and entered the southwest airspace 792 times. The Y-8 series of military aircrafts were used as the backbone of the incursions by Chinese aircrafts into the southwestern airspace, with single or dual aircraft formations, and sometimes dozens of aircraft were deployed on a large scale, highlighting their political and military significance.

The main significance of the frequent access of Chinese aircrafts to the southwest airspace is to highlight the weakness of Taiwan's defense, which has always focused on the north. The PLA's slow-speed aircrafts have forced Taiwan's air force to take to the air in a hurry, depleting our air power and logistical supply capabilities. The PLA has demonstrated its ability to launch attacks in multiple directions and areas, leaving Taiwan passive and hard to guard against. Chinese aircrafts can easily threaten the outer Pratas Islands and Spratly Islands, exposing Taiwan's inability to rescue them. The southwestern waters are where the PLA's ballistic missile submarine must pass through, and the CPC is working hard to manage the battlefield. The CPC has established a bastion in the South China Sea to protect the ballistic missile submarine, and the PLA must control the southwestern waters connected to the bastion. Taiwan should strengthen its southwest defense by: Deploying new types of early warning radar to enhance the intelligence, surveillance and reconnaissance of the southwest airspace. Integrating naval and air force radars and missiles, upgrading hardware and software performance, and improving air defense capabilities. Discussing the possibility of procuring electronic warfare (EW: electronic warfare) aircrafts, especially small passenger aircraft converted to intelligence, surveillance and reconnaissance carriers. Strengthening anti-submarine, electronic warfare, and intelligence, surveillance and reconnaissance cooperation and exchanges with allies to deter and counter incursions and threats from Chinese aircrafts.

In response to the incursions of Chinese aircrafts into southwestern airspace, the United States has taken countermeasures, including Salami Slicing, to help Taiwan improve its self-defense capabilities. In recent years, the U.S. has made 12 arms sales to Taiwan, increasing the range and power of its weapons. Taiwan's five-year military build-up has focused on long-range precision strike weapons and strengthening its multi-domain deterrence capabilities. The U.S. has sent various types of aircrafts into the southwestern airspace, the South China Sea, the East China Sea and the Yellow Sea to conduct close reconnaissance missions. The close reconnaissance is getting closer and closer to the coastline of the CPC, and the frequency is quite frequent. The U.S. also sent bombers to the Indo-Pacific on task force missions, demonstrating strategic clarity and tactical unpredictability. The bombers take off from Taiwan or Guam and encircle the South China Sea from the Bashi Channel or the Philippines Sulu Sea from both north and south. At a time when Chinese aircrafts are conducting normalized and actual combat drills to attack Taiwan and relations between the Taiwan Strait are tense, deterring CPC provocations requires the cooperation of Taiwan, the United States, Japan and other neighboring democratic countries to counter Beijing's foreign military expansion. Taiwan's proper preparation for defense in the Taiwan Strait is the greatest contribution to the democratic countries in the Indo-Pacific region.