

# Key Activity Phase 2

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## **How did the actions of the United States of America and the Republic of Cuba during the missile crisis influence the aeronautical sector of North America and the Caribbean?**

This is a big question (not as big as I wanted to), but it's a big question. Let's start.

Let's see how this started: one day on October 14, 1962, a Lockheed U-2 reconnaissance plane took off from a still-classified place with Richard S. Heyser as a pilot. "He met the sun over the Gulf of Mexico and flew over the Yucatán Channel before turning north to penetrate denied territory. There was no contrail. Heyser switched on the camera and did his stuff. He was over the island for less than seven minutes"(1); here we have a couple of images of what he took.

## **Following World War II and the Crisis**

It's not a coincidence that on a random day in October, the USAF (United States Air Force) decided to fly a reconnaissance plane over Cuba. We need to understand this conflict in the context of the "Cold War."

But what's the cold war, and how did it start? The average definition of the "cold war" I have found is: "a period of geopolitical tension between the United States and the Soviet Union, lasting from 1947 to 1991". How has it started? Well, on August 6 and 9, 1945, the US detonated two atomic bombs, "Little Boy" and "Fat Man," over the cities of Hiroshima and Nagasaki, respectively. The US now had the capability of destroying any other nation. This was not to the liking of the USSR, which were opposites ideologically. Soon after that, they immediately changed the hierarchy of priorities on the USSR agenda by pressuring the scientists about their nuclear program. In 1949, the USSR tested their first nuclear weapon, called RSD-1. Hours later, the US detected the fission products of the bomb, and later, the United States Air Force confirmed to President Harry S. Truman that the Soviets had achieved a nuclear weapon.

Soon after that, a new political and technological battle started, and the US was especially interested in knowing what the Soviets were doing, which takes us to the history of spy planes.

In America in the 1950s, there was a secret competition inside the aeronautical industry. Their objective was to create a spy plane for the military; the higher and faster the plane could go, the better for radar evasion, an obvious need a spy plane needed to have.

The military tried to design spy planes, but designing a new aircraft with the capabilities required from nothing was expensive, especially if you're operating with a public budget, so

it was way cheaper to give contracts to companies for developing planes. One of the first companies to win a contract was Boeing, which was developing the Boeing 2707, a supersonic airliner that will be the base for creating a reconnaissance plane. Later on, they gave another contract to Lockheed for developing a spy plane later code-named "Project Dragon Lady."

### The "Dragon Lady" U-2.

The Dragon Lady was approved by the US military in 1954, and its first test flight was in 1955. The Dragon Lady was a plane capable of reaching a top speed of 805 km/h and a top height of 23,000 meters. For comparison, the cruise altitude of a normal airliner is around 11,000 meters, so basically the "Dragon Lady" was capable of flying as high as an airliner.

### Gary Powers flight

The US started to test the U-2's near the USSR territory in 1959, but they never flew above them until May 1st, 1960. On that day, pilot Francis Gary Powers flew over the USSR when suddenly, in mid-flight, a SAM (surface-to-air missile) shot down the U-2. Gary Powers survived by using his ejection seat, but he was captured and interrogated.

Initially, the US said that it was a civilian weather research plane operated by NASA, but later, when the Soviets announced the wreckage parts they had found of the plane, the US revealed the mission's true purpose, and Gary was traded back a few years later in a prisoner exchange.

This event generated severe tensions between the US and the USSR, tensions that repeated in 1962 during the missile crisis.

### The next generation of reconnaissance aircraft

The Central Intelligence Agency was interested in creating a new generation of reconnaissance planes for flying over the USSR, especially in 1959 when the Sputnik orbited above the heads of US citizens and the idea of the Soviets having a technological advantage over the US started appearing everywhere all over the US. They also wanted to create a new aircraft because they had learned that the "Dragon Lady" was not as stealthy as they first thought. So around 1958, a new competition started for creating a stealth reconnaissance aircraft, and companies started developing the idea.

### Bay of Pigs invasion

It was 1961, and Joseph Fitzgerald Kennedy was elected president, and it was almost received with a plan for overthrowing the Cuban government. The plan was created during the Eisenhower administration, and it consisted of destroying as many combat aircraft as possible and then proceeding with the invasion at the "bay of pigs."

On April 14, the USAF (United States Air Force) tried to bomb Cuban combat planes with a group of old B-26s painted in a way that seemed like a Cuban air force plane. During the bombing, most of the targets were missed, and JFK canceled the bombing operation.

On April 17, the invasion was made by a brigade of Cuban exiles financed and commanded by the US government. Within 2 days, the invasion was defeated and “tightened” Castro’s “iron grip on Cuba.”.

Castro was quite nervous about the US overthrowing his government and/or killing him, so he later agreed with the USSR to place nuclear missiles on the island to “deter” a future invasion.

## Cuban missile crisis

On October 14, Richard S. Heyser and Rudolf Anderson “meted the sun over the Gulf of Mexico”!(1) When they arrived at the base back in Texas, they noticed the missiles in the photos. The photographs were shown to Kennedy on October 16. It is often said that this period started with the blockade of Cuba on October 22, 1962.

Rudolf's flight. Almost at the end of the conflict, Rudolf Anderson was sent to Cuba for another reconnaissance flight. He was shot down over Banes, Cuba, probably by an SA-2 SAM (surface-to-air missile). Rudolf died in the accident.

Resolution. On October 28, Khrushchev informed Kennedy that construction on the missile sites in Cuba would cease and the existing missiles would be returned to the Soviet Union. In exchange, Kennedy would promise never to invade Cuba and also sign a confidential agreement to remove the U.S.'s missiles they have in Turkey, which had been stationed there in earlier years.

## Aftermaths

The SR-71 “Black Bird” had the urge to have an almost impossible-to-shut-down plane; this was one of the capabilities the SR-71 “Blackbird had. Originally designed from a previous plane or prototype, the A-12 “Arcangel,” the Blackbird was capable of reaching crazy altitudes and speeds. His top altitude was 25,000 meters, and his top speed was as crazy as Mach 3 (3500 km/h). These stats make the Blackbird the fastest reaction engine plane in a straight line. It was also incredibly stealthy for 1960’s radars, making shutting down the Blackbird an impossible mission.

The first test flight was in April 1962, but there were a couple of details they needed to fix. The Cuban missile crisis exposed the vulnerabilities of the U-2, and they started making changes in the design to take the Blackbird even faster and higher.

Lockheed made the first flight of the Blackbird in December of 1964, and it entered production lines by 1966. 32 units were made, and it's still one of the most famous military planes ever made.

Were civilians and airlines affected?

Airlines and civilians were barely affected because of the missile crisis; it almost only affected the military and their programs.

The importance of alarm systems on reconnaissance planes

The Cuban missile crisis opened the window to having alarms on planes. What could Garry Powers or Rudolf Anderson do if they had an alarm that told them if a missile was launched at them? Later on, because of this conflict, they started adding alarms to their reconnaissance planes.

## **How did the actions of the United States of America and the Republic of Cuba during the missile crisis have influenced the aeronautical sector of North America and the Caribbean ?**

The actions of the United States of America and the Republic of Cuba during the period defined as the missile crisis have affected the aeronautical industry in different ways, from making aircraft capable of flying higher and being stealthy and fast, passing through alert systems and new concepts of planes, this event was a point of infection to the aeronautical industry and i really enjoyed developing this question.

Thanks for reading Mariana :).

F22 RAPTOR :) 

“Some times figuring out what to prove is harder than actually proving it”  
-Javier Caram Quiros.

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