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'Stealth' plane: a secret that's been out since 1976

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The Carter administration's disclosure that it has developed aircraft capable of streaking unobserved through Soviet air defenses was as politically motivated as it was unwise, claims Ronald Reagan's senior defense adviser, William Van Cleave.

"I think it essentially compromises whatever prospects of success the program might have," Dr. Van Cleave declares.

In confirming Aug. 22 that supersecret "Stealth" aircraft have developed a near-invulnerability to existing air-defense systems, Defense Secretary Harold Brown blamed regrettable press and television leaks for the need to make the announcement now.

"I think it is a fair question as to who started those leaks in the first place," retorts Van Cleave, director of the defense and strategic studies program at the University of Southern California.

"Stealth" rumors have been rife in Washington for the last few weeks. The authoritative magazine Aviation Week & Space Technology referred to the "advanced technology Stealth bomber" in its Aug. 11 issue, and Armed Forces Journal reported Aug. 22 that the United States has been test-flying several versions of "virtually invisible new aircraft for over two years," a story that CBS had earlier picked up on its evening news.

Calling it "a major technological advance," the defense secretary claimed that so-called "Stealth" technology now enables the US to build manned and unmanned aircraft that cannot be intercepted by existing air defense systems. "We have demonstrated to our satisfaction that the technology works," he added.

The secretary declined to comment on reports that three of the new aircraft have crashed.

According to Armed Forces Journal, the Stealth aircraft are virtually invulnerable to air defense radar and infrared, electronic, and acoustical detection. While only fighters have been tested so far (supposedly at Nellis Air Force Base, Nev.) a strategic bomber is being designed, the magazine added.

Dr. Van Cleave contends that the administration has revealed the Stealth program now to counter criticism of President Carter's "poor defense record" and specifically his cancellation of the B-1 bomber.

In his view, a bomber "that might emerge from this technology is still a decade off," and he brands the defense secretary's announcement of the Stealth technology "highly premature," asserting that its effectiveness "has yet to be demonstrated." He notes, moreover, that the project was launched under the Ford administration and observes: "President Ford certainly didn't divulge it."

It would be hard to overestimate the military utility of aircraft that are virtually undetectable to radar.

Ever since Britain used a rudimentary form of the technology to great effect during the Battle of Britain, radar has posed an increasingly serious threat to attacking aircraft.

"Subsequent to World War II, defensive missiles — both ground-launched and air-launched — were married with radar fire-control systems," explains William Perry, undersecretary of defense for research and engineering. "This substantially increased the effectiveness of air-defense systems."

Currently, US aircraft rely on a combination of electronic countermeasures and low flying — through so-called "ground clutter," where radar cannot distinguish between them and other signals.

But the Soviet Air Defense Command poses a formidable challenge to assaulting aircraft.

With 10,000 surface-to-air missiles and 2,600 interceptor aircraft, it represents the largest air-defense system in the world. Its effectiveness was demonstrated in 1960 when a SA-1 missile shot down Francis Gary Powers's U-2 spy plane at a height of 65,000 feet.

According to Dr. Perry, a chief architect of the Stealth program, the Soviet Union continues to place heavy emphasis on air-defense missiles to offset US advantages in air power.

"They have built thousands of surface-to-air missile systems. They employ radars with high power and monopulse tracking circuits, which are very difficult to jam. And in the last few years they have developed air-to-air missiles guided by 'look-down' radars, which are capable of tracking aircraft flying in 'ground clutter,'" Perry says.

Hence, Stealth technology — which, says Perry, does not involve "a single technical approach, but rather a complex synthesis of many." More he will not reveal.

According to Armed Forces Journal, the deception techniques involve the special shaping or contouring of aircraft; the use of nonmetallic materials that give a weak or undetectable radar return; infrared shielding of engine exhausts; special paints to absorb, deflect, and shroud radar signals; and electronic countermeasures to generate false returns.

While unwilling to discuss any of the techniques that render Stealth aircraft all but undetectable, Perry notes that "this technology — theoretically, at least — could be applied to any military vehicle which can be attacked by radar-directed fire."

Both Brown and Perry insist that the Stealth program was shrouded in the deepest secrecy until they revealed it Aug. 22. Perry even maintains that its very existence was classified information.

In fact, that existence was far from secret. On July 23, 1976, readers of Aerospace Daily were informed that Clarence L. (Kelly) Johnson, "the nation's premier aircraft designer" and architect of the U-2 and SR-71 spy planes, was building "a new 12,000-pound, one-man Stealth aircraft" at the Lockheed plant in Burbank, Calif.

The magazine claimed that the \$90 million program, sponsored by the Defense Advanced Research Projects Agency, was designed "to reduce aircraft visibility — optical, acoustic, and radar signatures — through new technology."

Lockheed spokesman Dave Crowther declined to comment when asked whether the company is involved in the Stealth program. Johnson, a stickler for secrecy in such matters, has so far not commented on the disclosure of the program.

Whether or not the Soviets have begun devising countermeasures to combat the ghost-like Stealth machines is uncertain. If they were subscribing to Aerospace Daily four years ago, they may have a head start. At the least, Brown's announcement may not have overly surprised them.