Air Force control of the mission has never been—and is not today—totally secure.

A Short History of Military Space

By Benjamin S. Lambeth

At left, a V-2 is launched from White Sands Missile Range, N.M. At right, an early Atlas missile lifts off from the USAF Missile Test Center, Patrick AFB, Fla. Far right, a Titan IV with an inertial upper stage is launched from Cape Canaveral AFS, Fla.
The idea that space is a natural extension of the vertical dimension—and thus an Air Force birthright—has been a part of USAF folklore for so long that most airmen accept it uncritically. Nothing, however, could be further from the truth.

Even a cursory review of Air Force involvement in space shows that the service has been engaged in a continuous struggle with the other branches and various political interests for control of military space.

Today’s Air Force planners would do well to recall the history of that struggle. It is a cautionary tale, one that shows the folly of presuming that space should somehow be viewed as a natural Air Force inheritance, never to be challenged again.

The first post-World War II manifestation of interest in military space came not from the US Army Air Forces (AAF), as one might have expected, but from the Navy. A group of US naval officers had been conducting a satellite feasibility study, and, in early 1946, they sought to carve out for the Navy a leading role in military satellite development.

Those early postwar years also saw the “green” Army—that is, the non-flying part of the service—seeking a niche in space. Through its Operation Paperclip, the Army brought some 130 German rocket scientists to White Sands, N.M., along with some 100 V-2 rockets and reams of technical data from the German missile and launch facility at Peenemunde. Before long, Army spokesmen began characterizing rockets as a natural extension of artillery.

In reaction, AAF leaders moved with dispatch to challenge the space pretensions of the other services.

LeMay’s View

For one thing, AAF’s deputy chief of staff for research and development, then-Maj. Gen. Curtis E. LeMay, declined the Navy’s request for the AAF to participate in its satellite initiative. Moreover, LeMay insisted that satellite development should be handed over to the Army Air Forces, on the grounds that satellites represented an extension of strategic airpower.

LeMay turned to AAF’s newly established Project RAND. He wanted to tap RAND’s then-unmatched scientific and engineering talent for a crash inquiry into the prospects of orbiting an Earth satellite. Within three weeks, RAND had produced its now-famous study of a “world-circling spaceship.” That study eventually became widely recognized as the world’s first comprehensive satellite feasibility assessment.

Armed with the RAND report, LeMay argued strenuously for AAF’s primacy in satellite research and development and sought control over any future US military effort to develop a satellite. He claimed that any such satellite was “a matter of strategic aviation,” the AAF’s “natural responsibility.”

Once the Air Force gained independence from the Army in 1947, its leading generals pressed harder to be assigned control of any future military satellite and missile development.

Even so, the new armed service was at first hesitant to actually undertake the development of missiles and satellites for strategic use. Interest in satellites, rockets, and space launch capabilities was overshadowed by the service’s commitment to heavy bombers and “air-breathing,” nonballistic missiles.

The Air Force followed the recommendations of its new Scientific Advisory Board and focused almost exclusively on the development of intra-atmospheric aircraft and jet propulsion systems that promised great near-term combat potential.

In 1950, however, the Truman Administration, in a key decision, gave the Air Force formal responsibility for developing long-range strategic missiles and short-range theater missiles. Using that decision, USAF outmaneuvered the Army, which wanted to extend the range of its Redstone missile beyond 200 miles.

Thereafter, development of land-based strategic missiles would be an exclusive Air Force preserve.

Air Force satellite and ballistic missile programs faced practical problems, however. Some continued to harbor doubts about their military value. An economic downturn brought austerity to the defense program.

Forced to choose between manned aircraft or missiles and satellites, the Air Force elected to concentrate...
on improving its aircraft forces. The slump lasted well into the 1950s.

In the mid-1950s, USAF still lacked an accepted space mission and found itself beset by powerful Army and Navy efforts to dominate the medium. The Naval Research Laboratory, having initiated a satellite effort in 1945, was managing the civilian Vanguard satellite program. The Army Ballistic Missile Agency in Huntsville, Ala., was insisting that the Army possessed the greatest wherewithal for pursuing military space applications. Army officials claimed space was merely “the high ground,” the taking of which was a traditional Army mission.

Army, Navy Successes

Three months after the successful launching of Sputnik in October 1957, the Army’s Explorer I became the first US satellite to achieve orbit. That and the Navy’s subsequent success with Vanguard gave those services operational and bureaucratic advantages in the space arena.

At Congressional hearings, each service was given an opportunity to state its case. So were the Department of Defense, National Advisory Committee for Aeronautics, and Atomic Energy Commission. Each sought to persuade the Eisenhower Administration and Congress of its special claim to the space mission.

At the end of 1958, USAF decided to launch a full-court press for control of military space. Gen. Bernard A. Schriever played a pivotal role by

arguing that the Air Force’s near monopoly in managing and operating the nation’s military space systems demonstrated that it should acquire even greater responsibilities.

Ultimately, thanks in large part to Schriever’s determined effort, the Air Force emerged from the post-Sputnik interservice struggle over space with the lion’s share of the mission. Soon, Congress increased the Air Force’s space funding by a factor of 120, from $2.2 million to $249.7 million.

With the advent of the Kennedy Administration in 1961, the Air Force reached another important milestone.

President science advisor Jerome B. Wiesner issued a new report that assailed the Pentagon’s “fractionated military space program” and called for a single manager of DOD’s diverse systems and activities. Wiesner maintained that the Air Force was the logical choice to do so, given that it was already providing 90 percent of the space-related resources and support for the other services and defense agencies.

Two months later, President Kennedy approved a Pentagon directive giving the Air Force responsibility for the bulk of the space effort. USAF became the lead space service and, as such, the de facto executive agent for military space.

In that directive, Secretary of Defense Robert S. McNamara formally designated the Air Force as the military service for space R&D, mandating that any exceptions to that rule had to be authorized by him personally. That directive largely foreclosed service wrangling over space in the Kennedy years.

In the meantime, the highly classified Corona satellite reconnaissance program was finally hitting pay dirt after failing 14 straight times. On Aug. 18, 1960, a Corona satellite snapped the world’s first image of Soviet territory from space. On Aug. 19, USAF Capt. Harold E. Mitchell, flying a modified C-119J, used two trailing wire hooks to snag a descending Corona capsule over the Pacific.

Gen. Thomas White (left), USAF Chief of Staff (1957-61), said in 1958 that space was a continuation of the vertical dimension, meaning it was Air Force territory. Above, he talks with Lt. Gen. Thomas Power.
Some pressed to have the Corona program, the U-2 spyplane program, and the Satellite and Missile Observation System (SAMOS) handed over to a civilian defense agency. Instead, the Air Force’s Office of Missile and Satellite Systems was redesignated the National Reconnaissance Office and was headed by the undersecretary of the Air Force.

Thanks to that move, the Air Force was able to retain at least nominal ownership of Corona, although its assignment to the civilian Air Force secretariat and the subordination of its tasking to the Director of Central Intelligence effectively cut the uniformed Air Force out of Corona’s day-to-day affairs.

Operational Space

For the first decade or so of military space, those who created space systems were devoted principally to the mission of nuclear deterrence. That was to change dramatically. It became clear by the mid-1970s that fielded military space assets offered great potential to the conventional warfighting community.

The first glimmer of an effort to bring space into the mainstream came in the mid-1960s, when then-Col. Robert T. Marsh suggested that a space directorate be established within the Air Staff. Marsh also saw a need for a separate space directorate within Air Force Systems Command (AFSC). He briefed these suggestions in 1965 to the Air Force’s Chief of Staff, Gen. John P. McConnell, who quickly approved them.

For the most part, however, the Air Force’s assorted space activities remained more a focus of R&D and acquisition activity than a day-to-day concern of Air Force operators. USAF showed little interest in space operations as a core institutional goal.

Then, in 1977, Gen. David C. Jones, Air Force Chief of Staff, issued a major space policy letter portraying development of space weapons and concepts as a key USAF responsibility. Later in Jones’ tenure as Chief, the Air Staff prepared a study of future space objectives. It repeated a 1958 statement by then-Chief of Staff Gen. Thomas D. White that space was but a continuation of the vertical dimension.

That study further maintained that the Air Force deserved to manage all US military space activities because it possessed both a rich history of working in space and a near monopoly on space technology expertise.

Even before Jones’ move, some had taken key steps toward creation of a separate Air Force Space Command. Its proponents clearly understood air and space to be separate and distinct operating mediums and recognized that the Air Force’s space and space-related operational functions warranted an organizational home of their own.

Example: Gen. W.L. “Bill” Creech, commander of Tactical Air Command, freely acknowledged that the Air Force’s embryonic F-15-launched antisatellite (ASAT) demonstrator weapon entailed a space-specific mission application that did not properly belong in TAC, even though the ASAT was to be carried by a TAC-operated fighter. Creech was happy to see TAC relieved of that duty.

Rap on Systems Command

Indeed, Creech and Marsh (by then, the four-star commander of AFSC) were working to convince fellow commanders that the time had come to have a dedicated operational command for space to take over from Systems Command. Eventually, all commanders came on board. This included the head of Strategic Air Command, despite SAC’s initial concern that a new space command would infringe on its prerogatives regarding space warning systems.

Air Force Systems Command came to be viewed as doing things of an operational nature in space that it had no business doing. Such activity, according to commanders, made no more sense than having Systems Command’s Aeronautical Systems Division running Air Force fighter wings or Electronic Systems Division developing concepts of operations for the E-3 Airborne Warning and Control System.

The establishment of Air Force Space Command in 1982 and the unified US Space Command in 1985 was directly traceable to that logic. As Air Force Space Command’s first commander, Gen. James V. Hartinger, remarked several years later, “We were looking at space with a different perspective. Space is a place, like the land, the sea, or the air. It’s a theater of operations, and it was just a matter of time until we treated it as such.”

On Nov. 19, 1983, Air Force Space Command assumed stewardship of the Space Plan, the first Air Force-endorsed concept since the early 1960s. This plan for the first time defined the four now-familiar military space mission areas of space support, force enhancement, space control, and force application. Its genesis was in the continued organizational tension between Systems Command and Space Command on the key question of who had principal responsibility for space.
This issue was forced into the open in 1987 when the Secretary of the Air Force, Edward C. Aldridge Jr., released a white paper on space policy and leadership. It noted that the defense establishment believed that USAF “only grudgingly supported space activities.” The paper further charged that USAF had failed to “exhibit a sense of institutional purpose or responsibility toward space” and relegated space to a distant fourth priority behind bomber, fighter, and mobility activities.

Other services, sensing weakness, were quick to roll in on the Air Force. Outside challenges to USAF’s stewardship of space surfaced. In a clear bid to exploit USAF vulnerability, the Army and Navy produced independent space “master plans.”

The Air Force countered by laying out explicit goals, starting with the declaration of a new policy reasserting USAF’s claim to be “lead” service for space, while conceding that this did not imply an “exclusive” Air Force role.

That task was taken up in the single most important USAF space document to date—the report of the so-called Blue Ribbon Panel on Space Roles and Missions, commissioned in 1988 by the Chief of Staff, Gen. Larry D. Welch.

Welch wanted the panel to address the full spectrum of military space concerns. The panel was aware that the service for 30 years had been at the forefront of military space activity and provided three-fourths of the Pentagon’s space budget. Still, the panel zeroed in hard on the Air Force’s alleged ambivalence toward the space mission. It concluded that the Air Force leadership’s declared commitment to the space mission was in no way universally shared by rank and file members.

In its final report, the Blue Ribbon Panel called for the Air Force to have the principal but not exclusive role as the DOD agent for military space. It also advocated a deliberate USAF pursuit of capabilities for performing warfighting functions in and from space. It recommended that Air Force Space Command continue to be the central advocate, operator, and manager for military space support (launch and operation of satellites) and that US Space Command return to Air Force Space Command peacetime control of Air Force space assets.

In February 1989, the Air Staff issued an implementation plan, stating that “the Air Force is and will be responsible for the global employment of military power above the Earth’s surface.” It directed Air Force Space Command to develop a space roadmap to update the Space Plan by integrating all Air Force space activities and tying the latter to warfighter needs, national strategy, and the four specified mission areas of space support, force enhancement, space control, and force application.

**Equal to Airpower**

The plan further anticipated that “space power” would eventually become as important as airpower in future warfare and declared that the Air Force must accordingly orient its thinking and activities toward preparing “for the evolution of space power from combat support to the full spectrum of military capabilities.”

In October 1990, Systems Command finally turned over its launch centers, ranges, bases, and Delta II and Atlas E launch missions, with provision for the remaining Atlas II, Titan II, and Titan IV missions to be handed over in due course.

The struggle wasn’t over, however. In January 2001, the Congressionally mandated Space Commission recommended some major organizational realignments of the military space program. In May 2001, Secretary of Defense Donald H. Rumsfeld designated the Air Force to be the DOD executive agent for space.

However, the commission’s work raised the issue of—and perhaps laid the groundwork for—creation of a separate “Space Corps” within the Air Force and possibly an independent space service in the not-too-distant future.

At the moment, the commission reported, “the disadvantages ... outweigh the advantages.”

Still, the panel members said they could foresee the day when the commander of Air Force Space Command becomes head of Space Corps and would “join the deliberations of the Joint Chiefs of Staff when space-related issues are on the agenda.” They also saw the prospect of a Space Department “if future conditions support that step more quickly than appears likely from the commission’s vantage point today.”

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Gen. David Jones (left), Chief of Staff (1974-78), here with Gen. George Brown, JCS Chairman, issued a major space policy letter in 1977 that set development of space weapons and concepts as a central Air Force mission.