

Space Comes Into Its Own

By James W. Canan, SENIOR EDITOR

In a major shift of thinking, USAF now regards space as a mission rather than a place. Furthermore, it has put space operations on a par with air operations.



Washington, D. C. Space is finally coming into its own in the Air Force. For the first time ever, it now has the status of a full-fledged mission and is no longer officially regarded as merely "a place" for supporting strategic and tactical missions in the air.

The word from the top is that space operations are to be put on a par with air operations in Air Force planning, programming, and budgeting. This has not always been the case, to put it mildly, in a service long dominated by fighter and bomber pilots.

As Air Force Chief of Staff Gen. Larry D. Welch explained it to AIR FORCE Magazine: "Secretary Aldridge and I agreed that the Air Force was long overdue in considering space as a mission that contributes to virtually every other mission. It was time to integrate space into everything we do. So the great drive now is to institutionalize space as a mission, not only in the Air Staff but in the MAJCOMs."

Edward C. "Pete" Aldridge, Jr., was General Welch's top-level teammate in scoring one for space. They coauthored a new statement of Air Force space policy that went out to the Air Staff, major commands, and special operating agencies last December 2, just two weeks before Mr. Aldridge resigned as Secretary of the Air Force to become president of McDonnell Douglas Electronic Systems Co., a newly established company in McLean, Va.

The statement began: "We have recently completed an intensive review of the role of the Air Force in space. That review concluded that space operations can have a decisive influence on future terrestrial conflict. Therefore, we must make a corporate commitment to integrate spacepower throughout the full spectrum of Air Force capabilities."

To those who may have assumed that the Air Force has always put a premium on space, given USAF's obvious and increasing activity in that arena, all this may seem puzzling. But the fact is that the Air Force, contrary to outward appearances, has always been somewhat space-shy. Only grudgingly has USAF been willing to shell out for the increasingly sophisticated and costly space systems that can, if overbought, eat up a whole year's hardware budget in no time.

Those systems are the communications, early-warning, surveillance, reconnaissance, navigation, and weather satellites on which US strategic and tactical forces now intrinsically depend. They are the stuff of command control communications and intelligence (C³I) and battle management, without which forces would be confused and firepower fragmented. But they are not the stuff of combat itself. They are bloodless and "don't go 'bang,'" as one space-systems advocate expressed it in explaining their relative lack of appeal to Air Force leaders whose preferences run more to bombers, fighters, and missiles.

The big, burly booster rockets that hurl these systems into space on plumes of flame are certainly charismatic. But they, too, have nothing to do with war itself and are throwaways. They are also terribly costly, and the Air Force has been forced by Congress to spend more on them than it wanted to in recent years to resuscitate the US space program, which more than a few Air Force leaders came to regard as a pain in the neck.

The heart of the problem, however, has been the tentative nature of the Air Force's approach to space. To mollify those who cry out against "militarizing space," the service has been at

pains not to seem too warrior-like in that approach. This helps explain why USAF has heretofore insisted that space is a passive place, not an active mission, and why those who disagreed with that, including some general officers, urged USAF to stop regarding the militarily appealing "high ground" above the atmosphere as an R&D arena and start treating it as an operational arena. One such officer was the late Gen. Jerome F. O'Malley, who expressed that view during a stint on the Air Staff as a three-star nearly a decade ago.

Over the years, as the gut questions about the Air Force's identification with space have gone unresolved, the service has shown its ambivalence in the matter.

General Welch addresses this, saying: "For a lot of reasons, space has always been a matter of intense interest to the Air Force, but has always been held off-line. We've sort of had two staves. One worked space and one worked everything else. There has been an 'us versus them' atmosphere, a division.

"So it is important to note that the Air Force has now institutionalized space."

The space policy statement promulgated by General Welch and Secretary Aldridge sets forth the following tenets:

- "Spacepower will be as decisive in future combat as airpower is today."

- "We must be prepared for the evolution of spacepower from combat support to the full spectrum of military capabilities."

Air Force Maj. Gen. Thomas S. Moorman, Jr., Director of Space and Strategic Defense Initiative (SDI) programs with the Assistant Secretary of the Air Force for Acquisition, declares that the Air Force leadership has now "truly endorsed the heritage of space as a core Air Force mission—and this is a key difference between the blue-ribbon study [on space] and the stack of previous assessments conducted predominantly by space people.

"It is important to note that the blue-ribbon panel which supported

the Chief consisted of not only space experts within the Air Force but also operators from our flying commands—SAC, TAC, and MAC. So the first principle of that panel—that 'spacepower will be as decisive in future combat as airpower is today'—was a conclusion reached by airpower advocates and is, in my view, incredibly farsighted. It clearly will be the basis for some fundamental doctrine and strategic studies over the next few years."

Mr. Aldridge can take great credit for the corporate Air Force's willingness to welcome space fully into the fold. Throughout his nearly eight years as Under Secretary and then Secretary of the Air Force, he acted and spoke out steadfastly in behalf of the service's stewardship of space. He was also instrumental in the USAF-led military space program's solid comeback from the *Challenger* disaster of January 1986 and the surrounding series of accidents to unmanned space boosters and their vital payloads.

Mr. Aldridge saw space as the key to the Air Force's future and was concerned about the staying power of the service's commitment to it. He feared that USAF would back away from programming and funding vital space systems as defense budgets became tighter and tighter.

Last year, as Secretary of the Air Force, Mr. Aldridge assessed the situation at one point as follows:

"The Air Force has had a thirty-year history of space leadership. But it's not yet complete. Yes, we have a massive space-launch complex system, a worldwide space-tracking network, a competent space acquisition agency, and an effective space operational component [Air Force Space Command] in Colorado Springs.

"But what we have *not* had is an all-Air Force commitment to space just like we have for air superiority, airlift, air defense, and strategic bomber and missile missions.

"There has been an invisible barrier that has existed between the 'them' in the space community and the 'us' in the rest of the Air Force."

Even as he spoke, Secretary Aldridge had long since moved to do something about his concerns. In early 1987, he and General Welch agreed on the need to summon all Air Force four-stars to Washington for an exhaustive briefing and brainstorming session on space. That meeting came to pass in April of the year, immediately following the regularly scheduled Corona conference of four-star commanders at Homestead AFB, Fla.

"At the end of the meeting," Mr. Aldridge now recalls, "we came to the conclusion that the Air Force didn't have its act together about space. We decided we were not being aggressive about space, but that the other services were. So we agreed to take action."

General Welch put together a team to determine (1) where the Air Force was going in space and (2) where it should be going in space and what it would need to do to get there. The first part was assigned to a steering group led by Air Force Vice Chief of Staff Gen. Monroe Hatch and made up of the Vice Commanders of all operational commands, along with Lt. Gen. Donald Kutyna, Commander of Air Force Space Command. The second part was assigned to a group of officers under the direction of Maj. Gen. Harold Todd, Commandant of the Air War College.

"The whole purpose," recalls Mr. Aldridge, "was to determine the role of the Air Force in space and the role of space in the Air Force."

One major conclusion of the study was that "the future of the Air Force is inextricably tied to space," Mr. Aldridge says. Another: "The Air Force should not be the exclusive agent for space activities. If others have missions requiring satellites, they should be free to build them.

"But because the Air Force has such a tremendous space acquisition and launch infrastructure, it should be the service of preference in building multimission, multiservice satellites, such as Milstar."

As a result of the top-level analysis, the Air Force has moved to permeate its ranks with space experts. Formerly, officers graduating from USAF's three-year-old undergraduate space training course at Lowry AFB, Colo., were assigned almost exclusively to Air Force Space Command. Now they are being dispersed throughout the staffs of all operational commands.

Blue-suiters are being brought up to speed on space at the Pentagon, too. "The word around the Air Staff these days is, 'You'd better know something about space,'" notes Mr. Aldridge.

Evidence of this is perhaps most striking in the Pentagon shop of Lt. Gen. James McCarthy, Air Force Deputy Chief of Staff for Programs and Resources, who has set up a panel of officers to handle space just as other XO panels handle airlift or whatever.

At two Corona meetings of top Air Force commanders last year, space

came in for special attention. Coordination of space matters at the Pentagon is being refined. Space training courses are being expanded.

In short, says Mr. Aldridge: "Space is now incorporated in the organizational structure of the Air Force." He is persuaded that the barrier between the space community and the rest of the Air Force "has been eliminated."

The new Air Force space policy divides USAF's role in space into four parts, as follows:

- **Space Control.** This means acquiring and operating antisatellite (ASAT) capabilities, providing battle management and C³, and integrating and using ASAT and space surveillance systems.

- **Force Application.** Should the US political leadership ever decide to deploy an SDI-type ballistic missile defense (BMD) system, the Air Force would acquire and operate the system's space-based segment and assets, see to its battle management and C³, and integrate its forces.

This section of the policy statement also makes it clear that the Air Force intends to be in charge of any US warfighting in or from space, saying: "The Air Force will acquire and operate space-based weapons when they become a feasible and necessary element of our force structure."

- **Force Enhancement.** USAF will continue to acquire and operate space-based systems for navigation, meteorology, tactical warning and attack assessment, nuclear detection, and multiservice and defense-wide communications.

This section says: "The Air Force will continue to support the multiservice approach to conducting space surveillance and providing mission-unique, space-based communications. The Air Force will acquire and operate a space-based wide-area surveillance, tracking, and targeting capability and will provide space-based means for space surveillance."

- **Space Support.** "The Air Force will continue its long-standing role as the provider of launch and common-user, on-orbit support for the Department of Defense."

The policy statement concludes: "Based on its heritage, expertise, and infrastructure, the Air Force remains uniquely capable of conducting Department of Defense space activities. Just as we have in the past been the major provider of air forces for this nation's defense, the Air Force will in the future be the major provider of space forces for this nation's defense. It is the responsibility of each Air

Force member to make this goal a reality."

Such assertive confirmation of the Air Force's commitment to space should serve to quiet, at least for now, critics both outside and inside the service who have expressed doubts about that commitment in the past. Mr. Aldridge recalls that the Air Force was accused of not having charged ahead strongly enough at various times in support of such space systems as its F-15 ASAT missiles, Global Positioning System (GPS) navigation satellites, Milstar communications satellites, and space-based radars.

The main reason for the criticism was the tendency of the Air Force to cut back or put off funding for all those space systems each year in establishing overall procurement and development priorities. It was no secret that the soaring cost of the Milstar program—paid for by the Air Force but intended to be of enormous benefit to all the services—provoked considerable sentiment against it on the Air Staff. It was seen there as siphoning off money that could be better spent on, say, F-15 fighter procurement.

This attitude made some top officials in space and C³I circles in the Office of the Secretary of Defense rail in private against USAF. The OSD staff also came after the Air Force in 1987 for the service's allegedly lukewarm support of the ASAT program.

In fact, the Air Force gave up on that program only after Congress repeatedly refused to allow further testing of the ASAT in space. In an empty gesture, Congress then lifted the testing ban.

Now the ASAT matter is again on the agenda, but the Air Force is less intimately and immediately involved. OSD has set up a triservice program to devise a family of progressively more potent ASAT weapons. It has assigned the Army to take the lead in building the first one—a ground-launched, and maybe ship-launched, missile like the one that the Army has already developed and partially tested, called ERIS (Exoatmospheric Re-entry-vehicle Interceptor Subsystem), in the SDI program for defense against ballistic missiles.

ASAT advocates expect better fortune on Capitol Hill this time around. To carry the day, they are counting on a multiservice lobbying effort, which was lacking before, to convince the lawmakers that the Soviet space threat grows more ominous even as US space assets become ever more costly, more vital to national security,

and more in need of an ASAT weapon to protect them against attack. In any case, some space buffs at the Pentagon hopefully suspect that congressional resistance to ASAT weapons as potentially destabilizing has been worn down and that anti-ASAT solons will find the ERIS-type ASAT more familiar, and less threatening, than they did its fighter-launched forerunner.

The Navy will lobby for an ASAT, but is not all that wild about the Army's kingpin status in the program. The Navy had laid claim to become the lead service on grounds that it has the greatest need for such a weapon—to shoot down, if war comes, the ubiquitous Soviet radar ocean reconnaissance satellites (RORSATs) and electronic ocean reconnaissance satellites (EORSATs) that orbit over the seas like clockwork to keep track of US warships for targeting purposes. Lately, some of those spy satellites have been launched into much higher orbits, and so have some other types of Soviet satellites.

So it may be just as well that the US fighter-launched ASAT weapon has given way to one described by former Defense Secretary Frank C. Carlucci, just before he left office last January, as capable of "reaching higher altitudes" within "shorter response times."

The Air Force seemed unruffled by the Defense Acquisition Board's tapping of the Army. USAF has no objection to either of the other services building an ASAT weapon. As General Welch explains: "I think we'll have a proper division of labor on ASATs. The Army has long-standing interest in landbased systems for defending CONUS. In any event, the command and control of all ASAT systems will still fall to the Air Force."

The Air Force reserves the right to be in charge of all ASAT mission planning, launching, and battle management, no matter which service builds the weapon itself. Its stance toward the Army, in the words of one USAF officer, is: "If they want to build a bullet, fine. But fire it? No."

This is said to have nothing to do with service parochialism, but rather with the reality that the Air Force already operates the satellites and other systems that would be essential to ASAT battle management and command and control. Moreover, claims USAF, it would naturally fall to North American Aerospace Defense Command (NORAD) and Air Force Space Command as a component of US Space Command to do the surveil-

lance, tracking, and post-attack assessment that an ASAT force would require as combat support.

Laser weapons may someday emerge as ASATs. The Air Force and the Navy are developing such directed-energy weapons in the new triservice ASAT program. Work on lasers powerful enough to be lethal weapons has been a major thrust of the SDI program and may yet bear fruit in a missile-defense system. But many defense aficionados, such as former Defense Secretary Harold Brown, have long claimed that the high-energy laser would first find a home in the military as an ASAT weapon. It is feared that the Soviet Union, which has long possessed a fairly primitive but nonetheless operationally ready, hit-to-kill ASAT, now has lasers that can range far higher.

As part of the US ASAT program, USAF plans to upgrade and expand its space-surveillance systems and its means of identifying and targeting hostile spacecraft. It will set up a new program office, says General Moorman, "to apply our years of expertise in meeting the challenges of surveillance, battle management, C³, and systems integration."

He adds: "I believe that, this time, the renewed activities to develop an operational ASAT capability will be fruitful. I base my optimism on the fact that we not only have broad DoD interest in doing so, based on a clear recognition of the Soviet space threat, but also a strong operational pull from USCINCSpace."

General Moorman's reference was to Air Force Gen. John L. Piotrowski, Commander in Chief of the unified US Space Command. As "the CINC who will operate an ASAT system," General Piotrowski "has had a significant impact on DoD and the Congress with his persuasive advocacy and compelling rationale for building one," General Moorman declares.

It is doubtful that anyone hails the Air Force's embrace of space more heartily than does General Piotrowski. He has been saying all along that spacepower will be as critical to the success of future military operations as seapower and airpower are today.

General Piotrowski has long emphasized that "space is a joint arena, and the systems that operate there serve all our warfighting commanders."

He also has long contended that, as he once put it, "space is central to the future of the United States Air Force." Now it is clear that the Air Force as a whole has come to agree. ■