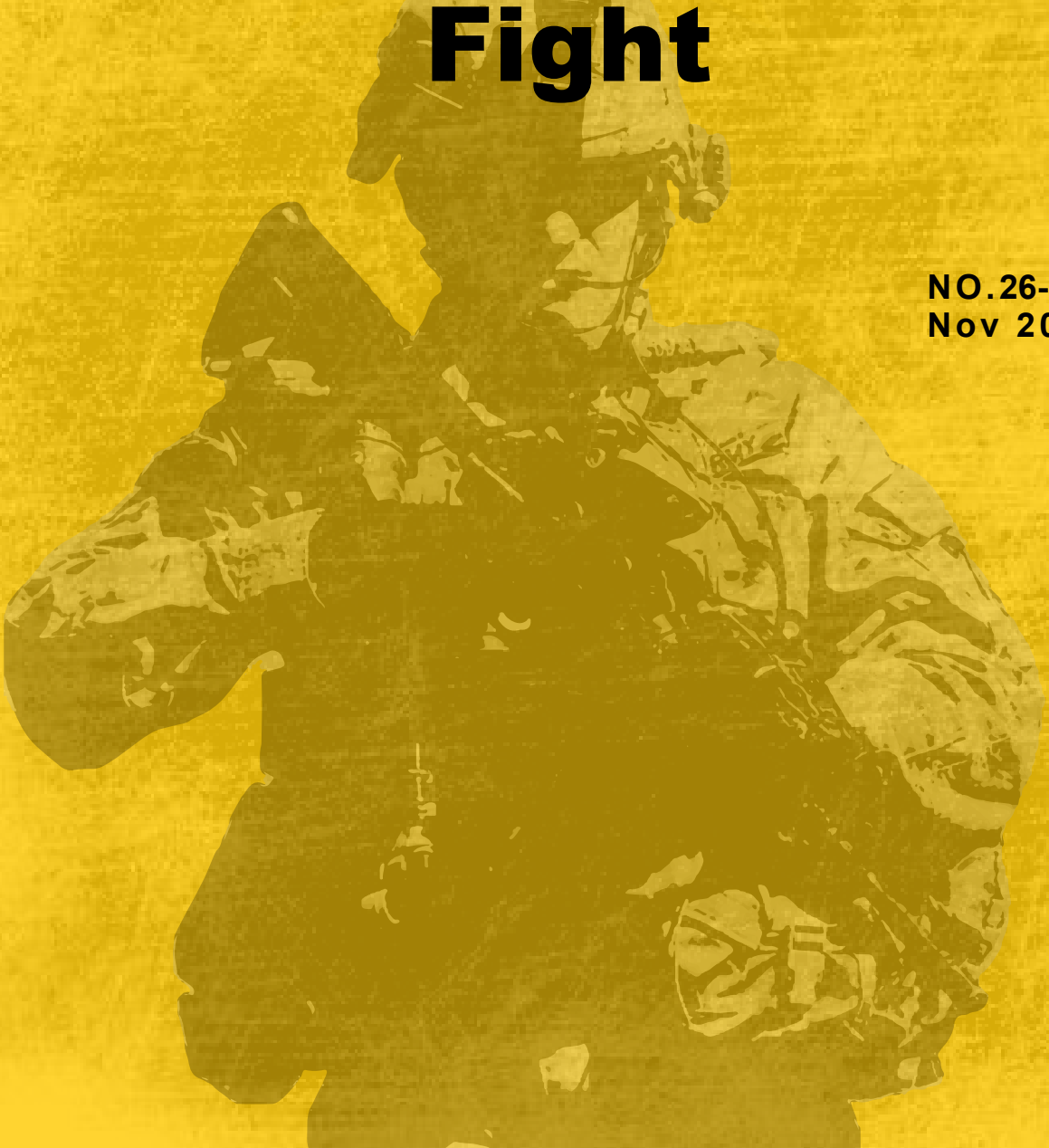




Aviation TAA Survivability in the Multi-Domain Fight

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CONTACT US

10 Meade Ave.
Bldg 50
Fort Leavenworth
KS 66027

DSN: 552-9533
913-684-9533



Center for Army Lessons Learned

DIRECTOR

COL Scott Allen

AUTHORS

CPT Michael Leinen
CPT Joshua COX

CALL Analyst

Willis Heck III

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Introduction

War is evolving, but Army Aviation units continue to establish the same, exposed tactical assembly areas (TAA). Observations captured by Falcon Team (Aviation Observer Coach Trainers - OCTs) at the Joint Multinational Readiness Center (JMRC) in Germany show regular, disappointing trends in how rotary wing aviation task forces (AV TFs) deploy and operate in force-on-force exercises that simulate multi-domain threats seen in large scale combat in Europe. Aviation task forces consistently establish large, static tactical assembly areas that resemble exposed flight lines and motor pools with no aircraft concealment. These positions are easily identifiable via UAS or satellite and are regularly destroyed by fires and UAS.

The modern battlefield punishes exposed high value targets. Aviation task forces persistently operate with an "iron mountain mentality," creating dense concentrations of helicopters, FARPs, and maintenance assets in open terrain. Air Crews are adapting to emerging threats by increasingly training TTPs to defeat enemy Integrated Air Defense Systems (IADS), but AV TFs have not adopted basic protection measures to remain survivable while at their most vulnerable: while on the ground. This article presents the critical need for survivability as the foremost priority in tactical assembly area planning and execution to ensure aviation units survive initial enemy attacks. It provides a framework for combat aviation brigades to shift toward dispersed, concealed tactical assembly areas with decentralized maintenance and sustainment to maintain operational viability against multi-domain threats.

The Persistent Legacy of the Iron Mountain

There are consistent trends of aviation task force rotational training units (RTU) establishing their TAAs in open terrain approximately 50 KM from the FLOT with crews arranging aircraft in neat, maintenance-friendly rows directly adjacent to their FARP. OPFOR UAS consistently identify their position and utilize a barrage of artillery and one way attack UAS to destroy the AV TF's combat power.

During multiple rotations, aviation units establish TAAs as if they are operating in a COIN environment. Units maintain a deeply ingrained "iron mountain" mentality that prioritizes convenience over tactical necessity. The dense aggregation of fuel, aircraft, and personnel transforms TAAs into one-stop-shops for enemy targeting. When we concentrate assets, we simplify the adversary's kill chain.



Figure 1. Vulnerable Aviation Task Force TAA with aircraft concentrated on a single flightline and HEMTT fuelers arranged in motor pool formation. Enemy UAS reconnaissance enabled simulated artillery strikes that destroyed four fuelers and three aircraft. (JMRC)

Exposed Aircraft: The Most Obvious Target

Enemy sensor operators easily detect the lineup of 6x UH-60, 4x CH-47s, and 7x AH-64s parked on airbases or in large open fields. Aircraft rotor blades and bodies create distinctive signatures, readily identifiable through both UAS and satellite imagery. Despite this, aviation task forces repeatedly emplace unconcealed aircraft together with zero overhead cover and remain emplaced for days at a time. A peer threat, equipped with drones and space-based sensors will find and target the TAA. During the Russian-Ukraine War, OPERATION SPIDERWEB demonstrated how vulnerable strategic air assets can be when they stay in one place for too long. Helicopters provide superior agility to operate in austere environments compared to the bombers targeted by Ukraine. They maneuver rapidly across the battlefield, offering tactical advantages in contested environments. Ground equipment requires cover and concealment for protection, while helicopter survivability depends on their inherent agility. Commanders should move helicopters every 24 hours, even just 200-400 meters away to keep adversaries in a constant targeting cycle. Concealment requires deliberate planning, rehearsals, and a shift in culture.

Dispersion: The Antidote to Mass Targeting

Concentration of aviation assets is a surefire way to lose them. Dispersion is essential to survival against peer threats. "Dispersion may be the best damage-limiting measure. Proper dispersion of

a unit and equipment lessens target density and reduces lethal effects of the ordinance used against that organization.”¹ Dispersed operations have become increasingly feasible as flight companies rotating through JMRC now utilize government-issued or personal Starlink/Starshield systems that enable improved command and control capabilities. AV TFs must deploy their AV TAA over a wide footprint, dispersing combat power and sustainment teams into decentralized nodes.

Leaders must deliberately plan dispersion for aircraft, Class III/V resupply, maintenance teams, and mission command elements. Each node must be semi-autonomous and able to operate with degraded or decentralized C2. This requires training, SOP refinement, and a fundamental redesign of how aviation units sustain themselves in the field.

During a recent rotation, an AV TF demonstrated expert dispersion by detaching an AH company away from the main TAA. The attack company, supported by the BN TAC, maintainers, and a fuel element, executed three successful attack missions over three days while maintaining lethality and survivability. This approach requires commanders to assume risk in maintenance, conducting only 50-hour inspections at dispersed locations and deliberately planning to relocate aircraft needing 125 and 250 hour inspections.

Satellite ISR and UAS

UAS represent the most persistent threat at JMRC. Our OPFOR routinely use drones to locate TAAs and execute call for fire missions. Simulated artillery or one-way strike UAS target and destroy spotted aircraft, sustainment assets, and command posts.

Aviation units must develop and incorporate a counter-UAS plan. “Commanders, leaders, and planners must include the simultaneous application of both passive and active measures during operational planning and employment as part of a layered defense strategy against UAS threats.”² This includes early warning systems, layered defenses (small arms, jammers, and if available, kinetic defeat systems), and most importantly, preventative concealment and dispersion. Aviation task forces also must develop and practice scatter plans, which are increasingly rare at JMRC.

Satellites maintain continuous surveillance operations without interruption. “Planners must assume that the majority of manned and even unmanned flights will be observed via one or more of the nine forms of contact, and that the patterns and routes flown will telegraph critical locations as well as unit boundaries and fire support control measures.”³ Peer adversaries can access both national and commercial constellations, providing persistent overhead coverage.

¹ ATP 3-01.81, *Counter-Unmanned Aircraft System*. 23 May 2025.

² Ibid.

³ Field Manual (FM) 3-04, *Army Aviation*. 27 March 2025.

With machine learning models, our adversaries can process satellite imagery faster and more effectively by the day. Exposed units face detection and subsequent destruction.



Figure 2. Satellite imagery of "40S" shows a Division Support Area with clearly identifiable aircraft, ground support equipment, and command posts. Long-range precision one-way attack drones have rendered these concentrated "Iron Mountain" airfields vulnerable to destruction. (Google Maps)

Training the Survivability Mindset

Survivability begins with a mindset that prioritizes tactical necessity over convenience despite the inherent challenges. Leaders must train their formation to prioritize concealment, deception, and dispersion as core combat skills. Units demonstrating the highest survivability at JMRC enforce it as a discipline through planning, SOPs, and leader engagement rather than relying on superior equipment.

Army doctrine must evolve to reflect the reality of peer-threat ISR and fires capabilities in updated field manuals. Home-station training must reinforce signature reduction, mobility, and counter-reconnaissance tactics. Aviation leaders must be willing to accept risk in complexity and discomfort to gain protection through dispersion. The iron mountain cannot be the default mindset for aviation units.



Figure 3. A vulnerable Battalion main command post (MCP) with multiple tents and vehicles positioned outside the tree line, fully exposed. A single UAS operator detected this easily visible target, executed a strike causing two simulated casualties, then called for artillery fire on exposed medical responders, resulting in simulated mass casualties.

Conclusion

Aviation units must adapt to today's battlefield. Modern adversaries employ sensor-to-shooter kill chains with lethal precision against large, exposed, and static TAAs. Effective TAAs require dispersion and concealment, making them smaller, dispersed, displaceable, and harder for enemies to detect. Aviation leaders must recognize the threat of persistent satellites and UAS ISR sensors that enable long range UAS and fires systems. Soldiers must evolve from the COIN "Iron Mountain" mentality to survive in LSCO. Army Aviation's ability to win future conflicts depends first on its ability to survive them.

