

STRATEGIC ASSESSMENT

Iran's Passive Air Defense Options Against the

February 2026 US Military Buildup

Employing the 358, 359, and Hypothetical 369 Loitering SAM Systems

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1. Current Situation: The February 2026 Crisis

1.1 The US Military Buildup

As of 23 February 2026, the United States has assembled the largest military force in the Middle East since the 2003 invasion of Iraq. The buildup, which began in mid-January following Trump's threats of military action over Iran's nuclear program and the regime's violent crackdown on domestic protests, has reached what multiple analysts describe as "critical mass" capable of sustaining a multi-week bombing campaign.

1.1.1 Naval Forces

The centerpiece of the naval deployment consists of two carrier strike groups converging on the region. The USS Abraham Lincoln (CVN-72) with Carrier Air Wing Nine has been operating in the Arabian Sea since late January, positioned approximately 700 km from the Iranian coast. The USS Gerald R. Ford (CVN-78), the world's most advanced carrier, passed through the Strait of Gibraltar on 20 February and is transiting the Mediterranean toward the Eastern Mediterranean, expected to reach its operating station near Israel by early March.

Supporting these carriers are at least 12 surface combatants including Arleigh Burke-class destroyers, three Littoral Combat Ships in the Persian Gulf, and undisclosed submarine assets. The combined carrier air wings deliver over 150 strike and support aircraft including F/A-18E/F Super Hornets, EA-18G Growler electronic warfare aircraft, E-2D Advanced Hawkeye AEW platforms, and critically, F-35C Lightning II stealth fighters aboard the Lincoln.

1.1.2 Air Forces

The air deployment represents the most target-rich environment Iran's passive air defense systems could face. Key assets deployed to the region include:

Platform	Quantity	Role	Base/Location
F-35A Lightning II	~30	Stealth strike / SEAD	Muwaffaq Salti, Jordan
F-22A Raptor	12	Air superiority / SEAD escort	Staging via RAF Lakenheath
F-15E Strike Eagle	~24	Deep strike / CAS	Muwaffaq Salti, Jordan
F-16C/D Fighting Falcon	~48	Strike / Wild Weasel SEAD	Multiple European/ME bases
EA-18G Growler	6+	Electronic attack	Jordan
E-3G Sentry AWACS	6	Airborne C2 / radar	Prince Sultan AB, Saudi Arabia
E-11A BACN	2+	Comm relay / datalink	CENTCOM AOR
RC-135 Rivet Joint	3	SIGINT/ELINT	Chania, Greece + regional
KC-135/KC-46 Tankers	~50	Aerial refueling	Al Udeid, Prince Sultan, Diego Garcia
U-2S Dragon Lady	1+	High-alt ISR	Transiting to ME

F-35C (carrier)	~12	Stealth strike (naval)	USS Abraham Lincoln
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The deployment of nearly 40% of the entire E-3 Sentry fleet (6 of 16 remaining airframes) signals the scale of anticipated air operations. These AWACS aircraft, along with the E-2D Hawkeyes from both carrier air wings, would provide the command and control backbone for any air campaign. They represent the single most critical enabler—and the single most valuable target set for passive air defense systems.

1.1.3 Trump’s Timeline and Intent

Trump has given Iran “10 to 15 days” to reach a deal, a deadline that would expire in early March. He has publicly stated he is “considering” limited strikes followed by a pause to give Iran a chance to negotiate, while simultaneously voicing support for regime change. CNN reports that military options presented to the president range from targeted strikes to sustained campaigns lasting weeks, with some plans including operations against Iranian leadership. The US military could reportedly be ready to strike as early as the last weekend of February, though diplomatic channels remain active with a new round of Geneva talks scheduled for 27 February.

1.2 Iran’s Current Military Posture

Iran enters this crisis significantly weakened compared to 18 months ago, following the June 2025 “Operation Midnight Hammer” US/Israeli strikes that destroyed nuclear facilities at Fordow, Natanz, and Isfahan, along with significant damage to missile production infrastructure and air defense networks. However, reconstitution efforts have been substantial.

1.2.1 Post-Midnight Hammer Damage and Recovery

- **Ballistic missiles:** The June 2025 conflict destroyed approximately two-thirds of Iran’s ballistic missile launchers and between one-third to one-half of the pre-war arsenal (estimated at ~2,500 missiles). Iran is working to rebuild toward a stockpile of 2,000 missiles. A new solid-propellant motor production line at Shahrud that survived the strikes is now operational, potentially increasing production capacity beyond pre-war levels.
- **Air bases:** Tabriz and Hamadan air bases have undergone extensive repairs. Runways have been restored and aircraft shelters rebuilt at Hamadan. Tunnel entrances bombed shut at northern missile bases have been reopened.
- **Air defense:** Iran’s conventional IADS (Bavar-373, S-300PMU2, 15-Khordad, etc.) suffered significant losses during the 12-day conflict when Israeli and US forces systematically destroyed radars and SAM launchers using anti-radiation missiles and precision strikes. Recovery of these radar-emitting systems is ongoing but creates a dilemma: replacements face the same vulnerability to SEAD that destroyed the originals.
- **Nuclear hardening:** Satellite imagery from February 2026 shows Iran fortifying nuclear sites with concrete and soil, particularly at tunnel entrances at Pickaxe Mountain near Natanz. This indicates expectation of further strikes.
- **Russian support:** Reports indicate Russia is expected to supply 48 Su-35 fighter jets starting in 2026, and China has supplied sodium perchlorate for missile propellant. A “dark barter and credit system” between China and Iran bypasses SWIFT sanctions.

1.2.2 Iran's Asymmetric Response Posture

Iran's defensive strategy is not built around defeating the US military in a decisive engagement. Rather, it centers on generating sustained friction across multiple domains to exhaust US interceptor inventories, complicate mission planning, and raise the political cost of continued operations. Key elements include:

- Mining the Strait of Hormuz (estimated stockpile of 5,000-6,000 mines)
- Anti-ship cruise and ballistic missile salvos against naval targets
- Swarm boat attacks by IRGC Navy fast craft
- Ballistic and cruise missile strikes against US regional bases
- Drone saturation attacks (Shahed-series)
- Submarine operations with Kilo-class and midget submarines

What is notably absent from most public analyses is a discussion of Iran's passive air defense capability—the 358 and 359 loitering SAM systems—and their potential to complicate the air campaign that would underpin every US military option.

2. Existing Capabilities: The 358 and 359 Loitering SAMs

2.1 System Overview

The 358 and 359 represent Iran's most innovative contribution to modern air defense: loitering surface-to-air missiles that combine drone endurance with missile lethality. Unlike conventional SAMs that require radar emissions to track and engage targets, these systems use passive sensors—primarily infrared and optical—to detect and intercept aircraft without revealing their launch positions.

Attribute	358	359
Length	~2.7 m	~5+ m (nearly doubled)
Diameter	150 mm	~300 mm
Weight	58 kg	Est. 150-200 kg
Warhead	10 kg HE-frag	Larger (est. 20-30 kg)
Speed	700 km/h	800-1,000 km/h
Range	100 km	150+ km
Altitude ceiling	8,500 m (28,000 ft)	9,000+ m (30,000+ ft)
Engine	Small turbojet	Tolou-10 turbojet
Seeker	TV/IR + optical prox. fuse	Enhanced dual-mode seeker
Recovery	None (expendable)	Parachute recovery option
Operational since	2016-2019	Unveiled 2025
Combat proven	Yes (Yemen, Syria, Iraq)	Limited

2.2 Combat Record

The 358 has an established combat record through Iranian proxy forces. Houthi forces in Yemen (operating the system as "Saqar-1") have used it to shoot down US MQ-1 Predator and MQ-9 Reaper drones, as well as Israeli UAVs. Kurdish SDF forces in Syria reportedly intercepted a Turkish TAI Aksungur MALE UAV using a captured 358. The system's combination of loitering capability and passive sensors makes it effective against slow-moving, high-value targets that emit detectable signatures.

The 359 (Saqar-2 in Yemeni service) was publicly unveiled in early 2025 and represents a significant capability upgrade. Its doubled dimensions, more powerful Tolou-10 engine, and extended range to 150+ km with a ceiling above 30,000 feet bring it into the engagement envelope of strategic enablers like AWACS, tankers, and large ISR platforms.

2.3 Optimized Employment Against the Current US Buildup

Given the specific force composition deployed against Iran in February 2026, the 358 and 359 can be employed across several mission profiles to maximize their impact.

2.3.1 Priority Target Sets for the 358

The 358's 100 km range, 28,000 ft ceiling, and proven effectiveness against drones make it best suited for:

- **Counter-ISR screen:** MQ-9 Reapers, RQ-4 Global Hawks, and other ISR drones operating near Iranian airspace. These platforms fly at medium altitude, emit radar and datalink signatures, and are slow enough for the 358's 700 km/h intercept speed. Destroying US ISR coverage creates gaps in the targeting chain that degrade strike effectiveness.
- **Low-altitude cruise missile defense:** Tomahawk cruise missiles fly subsonic at low altitude with significant IR signatures from their turbofan engines. Pre-positioned 358s along likely Tomahawk approach corridors (from the Arabian Sea through southern Iran, or from the Mediterranean via Iraq/Syria) could engage these weapons before they reach their targets.
- **Helicopter and rotary-wing denial:** Any US special operations or combat search-and-rescue helicopters entering Iranian territory would be vulnerable to pre-positioned 358 ambushes.
- **Point defense augmentation:** Deployed around critical facilities (nuclear sites, missile bases, leadership complexes), 358s create an additional layer that conventional SEAD cannot suppress because they do not emit.

2.3.2 Priority Target Sets for the 359

The 359's 150+ km range and 30,000+ ft ceiling open up engagement of the strategic enablers that make the US air campaign possible:

- **E-3 Sentry AWACS:** The six E-3s deployed to Prince Sultan AB represent nearly 40% of the entire US AWACS fleet. These aircraft orbit at 25,000-30,000 ft, emit massive radar signatures detectable at extreme range, and are essential for managing the air battle. The loss of even one or two E-3s would be operationally devastating and strategically shocking. The 359's 30,000+ ft ceiling puts E-3s within its engagement envelope. At approximately \$540-600M per airframe (2026 dollars), the cost-exchange ratio is extraordinary.
- **KC-135/KC-46 tanker fleet:** The ~50 tankers deployed are the single most critical enabler of sustained air operations. Without aerial refueling, F-35s and F-22s operating from Jordan cannot maintain combat persistence over Iranian targets, carrier aircraft range is limited, and B-2s from Diego Garcia cannot execute round-trip missions. Tankers orbit at 20,000-30,000 ft in predictable refueling tracks, emit radar and IFF signatures, are large (enormous IR signature), slow-moving, and completely defenseless. The loss of even a modest number of tankers would force a fundamental restructuring of the air campaign.
- **E-2D Hawkeye AEW:** The carrier-based early warning aircraft are critical for fleet air defense and strike coordination. They operate at medium-to-high altitude with powerful radar emissions. Unlike the E-3s (which have some self-protection EW), E-2Ds are essentially defenseless.

- **RC-135 Rivet Joint SIGINT:** These ELINT/SIGINT platforms collect the electronic intelligence that drives the targeting cycle. Their own collection systems are powerful emitters. Loss of RC-135s degrades the US ability to locate and target Iranian mobile assets.

2.3.3 Proposed Deployment Concept for 358/359

Iran should deploy these systems in a layered, geographically distributed architecture that exploits the predictability of US air operations:

Western Screen (Iraq border / Zagros Mountains): The most likely approach corridor for strikes from Jordan-based aircraft. 359 batteries positioned along the Zagros ridgeline could engage tanker and AWACS orbits over western Iraq. Pre-positioned 358s in border areas provide counter-ISR and low-altitude defense.

Southern Belt (Persian Gulf coast / Strait of Hormuz): Carrier-based aircraft must approach from the south. 359s deployed among the coastal mountains overlooking the Gulf of Oman can engage carrier AEW (E-2D) and any tanker tracks in the Arabian Sea. 358s provide anti-drone screening for naval bases and IRGC assets.

Central Ring (around Tehran, Isfahan, and nuclear sites): Final defensive layer of 358s providing point defense against penetrating strike aircraft and cruise missiles that have survived the outer screens.

Eastern Corridor (Afghanistan/Pakistan border): If B-2 or B-52 missions route from Diego Garcia through Pakistani airspace or eastern approaches, 359s positioned in eastern Khorasan can engage the tanker support these missions require.

2.3.4 Limitations of the 358/359

Despite their innovative concept, the existing systems have significant limitations against the forces now arrayed against Iran:

- **Speed deficit vs. fast jets:** At 700-1,000 km/h, both systems are too slow to reliably engage F-35s (Mach 1.6+), F-22s (supercruise at Mach 1.8+), or even F-15Es at combat speeds. They are effective only against slow movers—tankers, AWACS, ISR platforms, and cruise missiles—or against fast jets caught in predictable patterns (refueling, orbit, ingress/egress corridors).
- **No passive RF detection:** The 358/359 rely on IR/optical seekers, meaning they must visually or thermally acquire targets. Against stealth aircraft with reduced IR signatures or in poor visibility/weather, acquisition range is limited. They lack the ability to home on radar or electronic emissions during the cruise phase.
- **Limited ceiling vs. high-altitude threats:** At 30,000 ft, the 359 can engage AWACS and tankers, but B-2 bombers cruising at 40,000+ ft are beyond its reach. B-52s launching JASSMs from outside Iranian air defense range are similarly untouchable.
- **No cooperative engagement:** Each 358/359 operates independently. There is no networked sensor fusion, no distributed targeting, and no missile-to-missile data sharing. This limits the system's effectiveness against targets that employ electronic countermeasures or take evasive action.

- **Single-shot engagement:** If the seeker fails to acquire or loses lock, the missile is expended. There is no retargeting capability or mid-course guidance correction from external sources.

These limitations are precisely what the 369 concept was designed to address.

3. The 369 Concept: Capabilities If Operational

3.1 Architecture Review

The 369, as developed in previous analysis, is a carrier-based passive SAM system that combines a 358/359-derived cruise body with a separating air-to-air missile for the terminal engagement phase. The core architecture consists of three stages:

Phase	Propulsion	Sensor	Function
Boost	Solid rocket booster	None (inertial)	Launch to altitude, accelerate to cruise
Cruise/Loiter	Tolou-10 turbojet	Passive RF seeker	Transit to patrol zone, detect emissions, position for handoff
Terminal	AAM solid rocket motor	Dual-band IIR (captive carry, powered pre-release)	Separate from carrier, high-G intercept of target

3.1.1 Key Specifications (from previous analysis)

Attribute	369 Carrier	Terminal AAM (RVV-MD2)
Length	~4.5 m	~2.9 m
Diameter	~200 mm	~170 mm
Total weight	~180-200 kg	~110 kg
Speed (cruise)	700-800 km/h	N/A
Speed (terminal)	N/A	Mach 2.5+
Carrier range	120-150 km	N/A
AAM range (post-release)	N/A	40-50 km
Total engagement envelope	160-200 km	N/A
Loiter time	15-20 min	N/A
Altitude	Up to 9,000 m	Up to 12,000+ m
Primary seeker	Passive RF (30 MHz-18 GHz)	Dual-band IIR
Cooperative engagement	Basic carrier-to-carrier datalink	N/A
Unit cost (est.)	\$200-300K total	Included

3.2 The Critical Advantage: Passive RF + IIR Dual-Mode

The 369's decisive advantage over the 358/359 is the passive RF seeker on the cruise body. This capability fundamentally changes the engagement paradigm:

- **Home-on-emission during cruise:** The carrier can detect and track any RF emitter—radar, IFF transponder, TACAN, datalink, radio—without revealing its own position. This allows it to navigate toward targets that the 358/359's IR seeker could never acquire at long range.
- **EMCON-silent target fallback:** If targets go emissions-silent, the IIR seeker on the AAM section (powered pre-release) provides an independent acquisition mode. The dual-mode architecture means there is no single countermeasure that defeats both sensors simultaneously.
- **Engagement of stealth aircraft:** Even F-35s emit. Their MADL datalink, IFF transponders, radar (when active), and radio communications all produce RF signatures. The passive RF seeker can detect these emissions at ranges far beyond what IR alone could achieve, then hand off to IIR for the terminal phase.
- **Anti-ARM immunity:** Because the 369 never emits, anti-radiation missiles like AARGM-ER—the primary US SEAD weapon—are entirely ineffective against it. This negates the cornerstone of US SEAD doctrine.

3.3 Employment Against the February 2026 Force Disposition

If the 369 had been developed and was now operational in Iranian service, it would fundamentally alter the threat calculus for every US aircraft operating in the theater. The following analysis maps 369 employment against the specific targets and operations present.

3.3.1 Tanker Kill Chain

This is the 369's highest-value mission and the one most likely to produce strategic effect.

Target characteristics: The ~50 KC-135/KC-46 tankers orbit at 20,000-30,000 ft in predictable refueling tracks over western Iraq, the Arabian Sea, and potentially eastern Mediterranean. They emit IFF, TACAN, weather radar, and maintain continuous radio contact. They are large, slow (300-350 kt), and have enormous IR signatures from four turbofan engines. They carry no defensive systems.

369 employment: Launch 369s from western Iran toward suspected tanker tracks over Iraq. The passive RF seeker homes on tanker TACAN/IFF emissions from 150+ km. As the carrier closes to 50-60 km, the IIR seeker on the captive AAM acquires the tanker's thermal signature. At optimal release point, the AAM separates and accelerates to Mach 2.5+, executing a terminal intercept that the tanker cannot evade. The engagement is entirely passive—no warning to the target or to defensive CAP.

Operational impact: Loss of 5-10 tankers would force an immediate reduction in sortie generation rates for Jordan-based F-35s and F-22s, reducing their combat radius to the point where sustained operations over central Iran become impossible. Carrier aircraft ranges are similarly constrained. B-2 missions from Diego Garcia may have to be curtailed. The entire air campaign tempo drops precipitously.

3.3.2 AWACS/AEW Suppression

Target characteristics: E-3 Sentries operate at 25,000-30,000 ft with AN/APY-2 radar continuously scanning—the most powerful airborne emitter in the battlespace. They are

detectable by passive RF at extreme range (200+ km). E-2D Hawkeyes from the carrier groups operate similarly.

369 employment: The passive RF seeker makes the E-3's radar the 369's homing beacon. Launch from concealed positions, cruise toward the emission source, and release the AAM when IIR confirms target. The E-3's limited self-defense EW suite is designed to counter radar-guided missiles, not passively-guided ones. The IIR terminal seeker is not affected by chaff or radar jamming.

Operational impact: Destroying or forcing withdrawal of even 2-3 E-3s out of 6 deployed would cripple US airborne command and control, creating gaps in radar coverage that Iranian drones and cruise missiles could exploit. Given that the 6 deployed represent nearly 40% of the entire fleet, losses would have global force management implications extending well beyond this theater.

3.3.3 Anti-Stealth Operations

This is the most consequential and analytically interesting mission for the 369.

The F-35 problem: The ~42 F-35s in theater (30 land-based, 12 carrier) are the tip of the US spear. They conduct SEAD, strike, and escort missions. Their low-observable design defeats radar-guided threats, but they still emit: MADL datalinks communicate with wingmen, IFF transponders respond to interrogation, AN/APG-81 radar activates for targeting, and pilots use radios. In the F-35's SEAD role, it actively seeks out and destroys air defense radars—but against a passive system, there is nothing to find.

369 employment: Deploy 369s along known or likely F-35 ingress corridors. The carrier's passive RF seeker detects F-35 emissions at ranges that depend on the specific emitter—MADL is LPI but detectable at close range; radar emissions when active are detectable at longer range. Once the carrier maneuvers to within AAM release range and the IIR seeker acquires the target, the released AAM's Mach 2.5+ speed and thrust-vectoring maneuverability present a threat that even the F-35 cannot easily counter: it arrives with no radar warning (passive launch), no missile approach warning optimized for this profile (the AAM's small size and IR-only guidance produce minimal warning signatures).

Operational impact: Even a single F-35 loss to an undetected passive system would produce enormous strategic shock. The F-35 force would be forced to adopt emission control discipline that degrades its cooperative engagement capabilities, reduce its reliance on radar and datalinks (degrading combat effectiveness), and fly with dedicated escort—consuming sortie generation capacity. The cost-exchange ratio of a \$200-300K 369 missile against an \$80-100M F-35 is devastating.

3.3.4 Cruise Missile Defense

While the 358/359 can already engage Tomahawk-class cruise missiles through IR acquisition, the 369 adds passive RF detection of the cruise missile's TERCOM/DSMAC radar altimeter and GPS navigation updates, enabling earlier detection and engagement at longer range. This is particularly valuable for protecting hardened underground facilities where Iran has concentrated its surviving nuclear and missile assets.

3.3.5 Force Protection for Ballistic Missile Launchers

Iran's mobile ballistic missile launchers (TELs) are primary US targets. The US kill chain for mobile TELs relies on ISR platforms detecting launch signatures, followed by rapid strike by F-35s or F-15Es. The 369 can protect TEL operating areas by:

- Destroying ISR drones (RC-135, MQ-9, RQ-4) conducting surveillance of dispersal areas
- Engaging strike aircraft attempting to respond to launch detection
- Creating no-fly zones around TEL operating areas without any emitting radar signature for SEAD aircraft to target

4. Comparative Effectiveness Assessment

4.1 Target Engagement Matrix

The following matrix assesses each system's effectiveness against specific targets in the February 2026 force disposition.

Target	358 Effectiveness	359 Effectiveness	369 Effectiveness
MQ-9 Reaper / ISR drones	HIGH – Proven combat record	HIGH – Overkill but effective	HIGH – Passive RF makes it trivial
KC-135/KC-46 Tankers	LOW – Ceiling limit, range short	MODERATE – Can reach, but IR-only detection limits range	VERY HIGH – Passive RF homes on TACAN/IFF, AAM gives kill assurance
E-3 Sentry AWACS	NONE – Below ceiling, out of range	LOW-MOD – Marginal ceiling match, IR acquisition difficult at range	VERY HIGH – E-3 radar is a beacon; passive RF detects at 200+ km
E-2D Hawkeye	NONE – Below ceiling	MODERATE – Better speed match	VERY HIGH – Same as E-3
F-35A/C (in SEAD role)	VERY LOW – Too fast, too high	LOW – Speed mismatch, marginal IR acquisition	MODERATE-HIGH – Detects emissions, AAM speed compensates
F-15E Strike Eagle	VERY LOW – Speed mismatch	LOW – Speed mismatch	MODERATE – Larger signature; emissions detectable
F-22A Raptor	NONE – Supercruise evades	VERY LOW – Minimal IR/speed match	LOW-MODERATE – LPI emissions harder to detect
Tomahawk TLAM	MODERATE – IR detection, speed match	HIGH – Better range/speed	VERY HIGH – RF altimeter detectable + IR
B-2 Spirit (at altitude)	NONE – Out of envelope	NONE – Out of envelope	LOW – Ceiling still marginal; minimal emissions
B-52H (standoff JASSM)	NONE – Out of range/ceiling	NONE – Out of range/ceiling	NONE – Launches from outside envelope

4.2 Cost-Exchange Analysis

The economic logic of passive air defense is compelling. The following table illustrates the cost-exchange ratios for successful engagements:

Target	Target Cost	369 Cost	Exchange Ratio
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E-3G Sentry AWACS	\$540-600M (2026)	\$200-300K	1,800:1 to 3,000:1
KC-46A Pegasus	\$176M	\$200-300K	590:1 to 880:1
KC-135R Stratotanker	\$140M (replacement)	\$200-300K	470:1 to 700:1
F-35A Lightning II	\$80-100M	\$200-300K	270:1 to 500:1
E-2D Hawkeye	\$176M	\$200-300K	590:1 to 880:1
RC-135V/W Rivet Joint	\$330M+	\$200-300K	1,100:1 to 1,650:1
MQ-9A Reaper	\$32M	\$100K (358)	320:1

Even accounting for a modest probability of kill per engagement (say, 20-30% for the 369 against alerted targets), the economics overwhelmingly favor the defender. A salvo of 4-5 missiles costing \$1-1.5M to achieve a kill against a \$540M AWACS is an exchange rate no air campaign can sustain.

4.3 The Enabling Architecture Gap

The most significant finding from this analysis is that the 369's impact is not primarily about destroying fighters. It is about destroying the enabling architecture that makes the air campaign possible.

Modern US air operations depend on a small number of irreplaceable, high-value platforms:

- **6 E-3 AWACS** manage the entire air battle
- **~50 tankers** keep every other aircraft airborne
- **3 RC-135s** provide the electronic intelligence for targeting
- **E-2D Hawkeyes** protect the carrier groups

These platforms share common vulnerabilities: they are large, slow, fly predictable orbits, emit continuously, and carry minimal self-defense. They are the pillars on which the entire structure rests. The 369 is specifically designed to knock out these pillars. Without them, the F-35s, F-22s, and F-15Es are still individually potent but collectively degraded—shorter range, no airborne C2, no aerial refueling, limited situational awareness.

5. Operational Scenarios

5.1 Scenario A: US Launches “Midnight Hammer II” (Targeted Nuclear Strikes)

This scenario assumes Trump orders a repeat of the June 2025 operation—targeted B-2 strikes against rebuilt nuclear facilities, supported by F-35/F-22 SEAD and Tomahawk salvos.

Without 369 (358/359 only)

- Iran deploys 358s around known nuclear sites for point defense against cruise missiles
- 359s attempt to engage tanker tracks but face detection and ceiling limitations
- US SEAD suppresses conventional radar-based air defenses using proven doctrine
- B-2s penetrate at high altitude, above 359 ceiling; GBU-57 strikes proceed
- **Assessment:** 358/359 impose modest friction but do not alter the campaign outcome. Iran may shoot down several drones and possibly a tanker, but the strike succeeds.

With 369 (hypothetical)

- 369 batteries positioned along western and southern approach corridors detect tanker and AWACS emissions immediately
- Pre-positioned 369s engage 2-3 tankers in the first hours, disrupting refueling for the SEAD sweep
- 369 salvo against E-3 orbits forces AWACS to withdraw or increase stand-off distance, degrading air battle management
- F-35 SEAD aircraft find no emitting targets to suppress; 369s remain invisible
- B-2s face same high-altitude operation but with degraded tanker and C2 support; mission still possible but higher risk
- **Assessment:** 369 does not prevent the strike but significantly degrades supporting architecture. The campaign takes longer, costs more in irreplaceable assets, and US willingness to sustain operations is tested. If 2+ AWACS or 5+ tankers are lost, the campaign may pause—exactly what Iran needs to reach the negotiating table from a stronger position.

5.2 Scenario B: Sustained Air Campaign (Weeks-Long)

This scenario assumes Trump orders an extended campaign targeting missile infrastructure, military bases, leadership targets, and economic infrastructure. This is the scenario where the 369’s attrition logic becomes dominant.

Without 369

- Iran’s conventional IADS is systematically destroyed in the first 48-72 hours (repeat of Midnight Hammer pattern)
- 358/359s impose ongoing low-level threat to ISR and slow-movers
- US achieves air supremacy and strikes at will for weeks

- **Assessment:** Iran suffers severe attrition of military infrastructure with limited ability to impose costs on the air campaign itself. The asymmetric response shifts entirely to the ground/maritime domain (mining, missile strikes on bases, Strait closure).

With 369

- Week 1: US SEAD sweeps find and destroy conventional radar SAMs as expected, but 369 batteries remain undetected
- US declares air superiority prematurely; tankers and AWACS move to standard orbits
- 369 ambush engagements begin: 2-3 tankers lost in first 48 hours of sustained ops
- AWACS orbits pushed back 200+ km, degrading coverage over central Iran
- Week 2: US adapts by increasing CAP around enablers, but this consumes fighter sorties
- 369 salvo against AWACS forces E-3s to operate with fighter escort, consuming more sorties
- Strike sortie rate drops 30-40% due to tanker losses and diversion of fighters to escort duty
- Week 3: US has lost 4-6 tankers and 1-2 AWACS; remaining enablers operate at maximum stand-off
- Iran's strike aircraft coverage gaps grow; some hardened targets survive
- **Assessment:** The 369 transforms the campaign from a one-sided degradation of Iranian capability into a two-sided attrition contest where the US must weigh irreplaceable enabling assets against campaign objectives. This is the strategic effect that changes the political calculus.

5.3 Scenario C: Deterrence (No Shots Fired)

Perhaps the 369's most valuable contribution is one that never appears on a battle damage assessment.

If Iran had publicly demonstrated the 369—showing passive RF detection, AAM separation, and engagement of a target drone—and deployed batteries at known locations, the mere existence of the capability would force US planners to:

- Allocate fighter escorts for every tanker and AWACS orbit (consuming 20-30% of available sorties)
- Develop new SEAD doctrine against non-emitting threats (no proven solution exists)
- Increase stand-off distances for all enabling platforms, reducing their effectiveness
- Plan for higher tanker and AWACS attrition rates, requiring larger deployments and longer campaign timelines
- Accept that cost-exchange ratios favor the defender, complicating the political case for extended operations

This deterrent effect could contribute to making the diplomatic path more attractive than the military one—which is precisely Iran's current strategic objective.

6. US Countermeasures and 369 Limitations

6.1 Potential US Countermeasures

The 369 is not a war-winner. US forces would adapt, and several countermeasures are available:

- **Emission control (EMCON):** Tankers and AWACS could reduce emissions, but this degrades their core mission. A tanker that doesn't emit TACAN is harder for friendly aircraft to find for refueling. An AWACS that limits radar usage is not doing its job.
- **Directional IR countermeasures (DIRCM):** Laser-based DIRCM systems (LAIRCM on C-17s, potentially adapted for tankers) could defeat the IIR terminal seeker. However, most tankers and AWACS do not currently carry DIRCM, and retrofit would take months.
- **Fighter escort:** Dedicating F-22 or F-35 escorts to tanker orbits could detect and engage inbound 369 carriers. However, the carriers are small, slow, and have low radar signatures—making detection difficult for fighter radars optimized for aircraft-sized targets. This also consumes fighter sorties.
- **Standoff operations:** Moving tankers and AWACS further from Iranian territory reduces 369 effectiveness but also reduces their utility. Tankers 500 km from the fight impose severe range penalties on strike aircraft.
- **Ground attack on launch areas:** The 369's launcher is a mobile truck. Finding it requires the same ISR assets the 369 threatens. Without persistent ISR over Iranian territory (which the 369 degrades), mobile launcher hunt becomes extremely difficult.

6.2 Inherent 369 Limitations

- **Production scale:** Even if technically operational, Iran would need hundreds of 369s to sustain an attrition campaign over weeks. Production capacity of the Tolou-10 engine and AAM supply (RVV-MD2 from Russia) could be bottlenecks.
- **Engagement ceiling:** At 9,000 m (carrier) with AAM boosting to 12,000+ m, the 369 cannot reach B-2s at 15,000+ m or satellites. High-altitude strike platforms remain invulnerable.
- **Weather dependence:** The IIR terminal seeker is degraded by clouds, fog, and rain. In adverse weather, the kill probability drops significantly.
- **Cooperative engagement complexity:** The basic carrier-to-carrier datalink we specified is less sophisticated than the PH-2025's distributed interferometer. Passive RF geolocation accuracy from a single carrier may be insufficient against targets in dense electromagnetic environments.
- **Handoff risk:** The transition from passive RF tracking to IIR acquisition remains the most critical failure mode. If the AAM seeker cannot acquire before separation, the engagement fails.

7. Strategic Implications and Conclusions

7.1 The Lesson of June 2025

Operation Midnight Hammer validated every argument for passive air defense. Iran's conventional, radar-emitting IADS was systematically dismantled by US and Israeli forces using proven SEAD doctrine. The F-35s "were the first aircraft to penetrate Iranian airspace, suppressing enemy air defenses" precisely because those defenses had to emit to fight. The 369 concept exists because of this fundamental vulnerability.

7.2 What Iran Can Do Now (358/359)

With existing 358/359 systems, Iran can impose meaningful but limited costs on a US air campaign. The priority should be:

- **Maximize 359 production:** Every 359 deployed along tanker and AWACS corridors represents a potential strategic-level engagement.
- **Deploy 358s for point defense:** Protect reconstituted nuclear and missile sites against cruise missiles and ISR drones.
- **Disperse and conceal:** Mobile launchers in mountainous terrain, pre-positioned along likely approach corridors.
- **Integrate with conventional IADS:** Use 358/359 as the passive layer that continues fighting after conventional radars are destroyed.

7.3 What the 369 Would Change

The 369 transforms Iran's air defense from a nuisance-level capability against a US air campaign into a genuine cost-imposition tool that could alter the strategic calculus. Its ability to target the enabling architecture—tankers, AWACS, ISR—rather than the fighters themselves represents a mature understanding of modern air power's center of gravity.

The critical insight is not that the 369 could prevent US air operations. It cannot. The insight is that it could make those operations expensive enough in irreplaceable assets to shift the political cost-benefit analysis toward negotiation rather than escalation—which is precisely the strategic space Iran is trying to create in February 2026.

7.4 The Urgency of Development

The current crisis underscores the urgency of the 369 concept for Iran. Every element of the US buildup—the 6 AWACS representing 40% of the fleet, the 50 tankers, the RC-135s, the predictable enabling orbits—represents exactly the target set the 369 was designed to engage. The window of vulnerability created by the loss of conventional air defenses in June 2025 has not been closed by conventional reconstitution. Only a paradigm shift to passive detection and engagement can address the fundamental SEAD vulnerability that was exploited nine months ago.

Whether Iran is pursuing this development path in reality is unknown. What is clear from this analysis is that the technological foundations exist (358/359 airframes, Tolou-10 engines, Russian AAM cooperation), the operational concept is sound, and the strategic need has never been more urgent.

Changelog

Version	Date	Author	Changes
1.0	2026-02-23		Initial assessment incorporating Feb 2026 US military buildup, current 358/359 capabilities, and 369 concept employment analysis against specific deployed force structure