

Iran's Air Force: Frustrations of a Former Power

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Top Secret

An Intelligence Assessment

NGA Review Complete

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NESA 84-10262C September 1984

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Iran's Air Force: Frustrations of a Former Power

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An Intelligence Assessment

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This paper was prepared by	25 X 1
Office of Near Eastern and South	
Asian Analysis, with a contribution by	25 X 1
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	Iran's Air Force: Frustrations of a Former Power		25 X 1
Key Judgments information available is of 17 August 1984 vas used in this report.	The Iranian Air Force—formerly the supremacy in the Persian Gulf—no lo effective offensive operations and doe the Iranian ground forces. Its lack of ing equipment, heavy combat losses, of morale, and dissension between pilots	onger has the resources to carry out s not provide effective air support for effectiveness is caused by deteriorat- excessive political control, low pilot	
	In our judgment, the Iranian Air Force combat capability during the coming factor in the war. Although it will con armed tankers and lightly defended to we believe that the Air Force lacks the attacks against either.	months and will remain only a minor ntinue to have the ability to raid un- argets inside Iraq or the Gulf states,	25X1
	Between 65 and 80 fighter aircraft ar 400 under the Shah. Nearly 200 fight most that many are grounded because maintenance needs. Restrictions on the parts have played a key role in handic aircraft operational.	ters have been lost in combat, and al- c of shortages of spare parts and other ne sale or transfer of US-made spare	25X1
	anciari operational.		25X1
	Iran has been unable to find a supplied with Libya and China have fallen threaircraft could be found, we judge it we before Iran could field an effective air the West improve dramatically, the A turn to China, North Korea, or Libya be less advanced than those of Iraq and the Soviets suggests that they will not	ough. Even if a source of fighter rould take at least three to five years force. Unless Tehran's relations with air Force probably will be forced to for Soviet-designed aircraft that will nd Saudi Arabia. Iran's suspicion of	
	Moreover, the Air Force suffers from weapons. Few of Iran's most advanced operational,	d air-to-air missile, the Phoenix, are	25X1
	handicapped by ineffective antiship w	an attacks on Gulf shipping have been eapons,	25X1 25X1 25X1
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	The clerical regime distrusts the Air Force more than the Army or Navy,	
	in part because it was the Shah's favorite service and because most pilots	
	are well educated, US-trained, and have middle- or upper-class back-	•
	grounds. Political leaders control the Air Force by attaching "political	25 X 1
	advisers" to airbases, by bribing key officers with consumer goods, and by playing on the rivalry between officers and technicians.	
	playing on the rivally between officers and technicians.	25 X 1
	For their part, most Air Force pilots are suspicious of the regime.	
	they are motivated to fight primarily by material	25 X 1
	incentives and fear.	
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		25X1
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	The decline in Iran's offensive capability reduces the threat that Tehran will expand the air war in the Gulf and thereby endanger US ships or per-	
	sonnel. Although we cannot rule out the possibility of suicide missions	
	against US ships by Revolutionary Guard pilots, US fighter aircraft would	
	have a significant advantage in any air clash.	25 X 1
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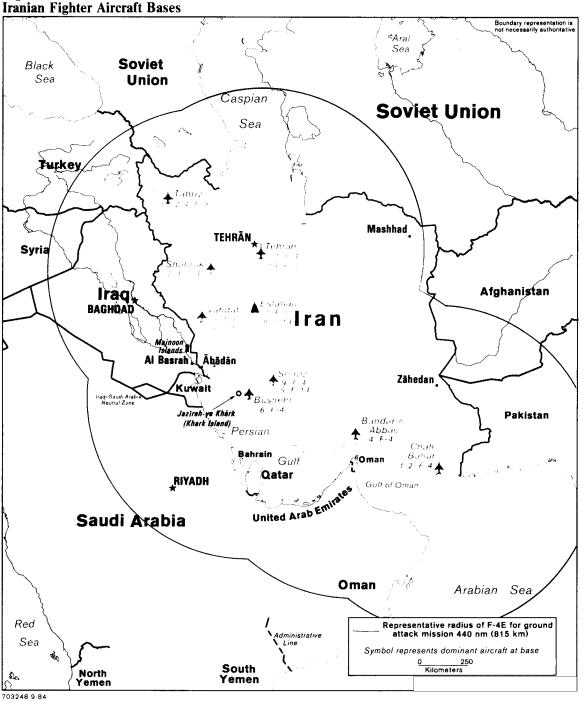
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Figure 1 Iranian Fighter Aircraft Bases



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Iran's Air Force: Frustrations of a Former Power	25X1
With some 475 combat aircraft and over 400 qualified fighter pilots, the Iranian Air Force was one of the largest in the Middle East before the Iranian revolution in 1979. The Khomeini regime moved quickly to establish firm control over the armed forces through a sweeping purge of the officer corps. Suspects were killed or jailed and replaced with officers who proclaimed their loyalty to the Islamic republic. Iranian Air Force personnel were particularly suspect because this was the Shah's favorite service and most Air Force officers were well educated and trained by the United States. Wartime Role of the Air Force Although Iranian pilots initially displayed consider-	We believe that increased Iraqi attacks on Iranian shipping and more effective Iraqi attacks on Iranian ground forces early this year prompted the newly appointed Iranian commander, Col. Hushang Sediq, to step up raids against Iraq.
able aggressiveness, the Iranian Air Force never has been a significant factor in the war with Iraq, in our judgment. Fighter-bombers frequently attacked economic targets and cities inside Iraq during the first year of the war but did not destroy any important facilities. Attrition of aircraft and pilots and frustration over the limited impact of operations subsequently led the Air Force to restrict combat sorties largely to territorial defense.	Further Iranian aircraft losses during the next two months prompted Colonel Sediq to halt all missions inside Iraq,
Since the first year of the war, Iran has confined its offensive air operations to feeble counterattacks.	In our judgment, the 25X1 Iranians were stunned by the loss of their operational fighters during such a short period of time, with so little effect on the work
though air defense missions continue on a regular basis near major strategic targets inside Iran, these have not prevented periodic Iraqi airstrikes against economic targets and population centers. **Operations Inside Iraq.** In our judgment, Tehran does not want to risk further losses of scarce fighter aircraft by attacking heavily defended strategic targets in Iraq.**	25X1 The serious limitations on Iran's ability to trade blows 25X1 with the Iraqi Air Force were again demonstrated this past summer. Iran briefly resumed attacks inside Iraq 25X1 in June In our 25X1 judgment, Tehran's quick acceptance of a subsequent UN-sponsored cease-fire covering attacks on population centers is further evidence that the regime hopes 25X1 to husband its limited air assets. We expect Iran will refrain from airstrikes inside Iraq unless Baghdad resumes massive attacks on Iranian cities. 25X1
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Support of Ground Troops.	guns, and HAWK surface-to-air missile batteries. Air	25X1
	defense is poor, however, in part because of inade-	
	quate training, Early	25 X 1
	warning radars often cannot determine the height or identity of incoming aircraft,	25 X 1
	suggesting that coverage is ineffective.	25 X 1
		25 X 1
	The Air Force has committed a large proportion of its limited resources to protecting the oil facilities on Khark Island and shipping in the northern Gulf.	
	Khark Island and shipping in the northern Guir.	25X1
		20,77
	Still, during the past two years the Iraqis have hit merchant ships at will and expanded their attacks to tankers—including at	25 X 1
	least one loading at Khark Island—with no significant	25 X 1
	loss of aircraft.	25X1
Ground forces are often disappointed		
with resupply and transport support, but shortcomings		25X1
in this area appear to be caused more by poor ground		25X1
force planning and coordination than by Air Force inefficiency. Refueling tankers—a dozen KC-707 and	Shipping Attacks. Repeated Iraqi attacks on oil tankers near Khark Island last spring prompted Tehran to	
KC-747 aircraft—have been particularly important to	escalate the conflict by striking at tankers calling at	25X1
the Air Force's combat air patrol mission.	Arab oil terminals. In our judgment, Iran hoped that	25 X 1
F-14s fly four- to six-hour patrol missions requiring	this tactic would cause Iraq's Arab allies to press Baghdad to stop its tanker attacks.	25 X 1
two or three airborne refuelings.	a substitution of the subs	25 X 1
Air Defense.	These strikes were often ineffective, however,	25 X 1
	once again demonstrating the Iranians' operational and equipment shortcomings.	25 X 1
	and equipment shorteenings.	25X1
	In our judgment, the Air Force is especially handi-	
	capped by its lack of effective antiship weapons. Iran has used television-guided air-to-ground missiles, but these are designed primarily for land targets and have	25 X 1
	been only marginally effective against tankers,	25 X 1
	Iran's inability to inflict crippling damage on a moving ship without using	25X1
	origining during on a moving simp without using	
Iraq's preference for soft targets such as population centers and merchant ships has left Iran's nine airbases with no significant war damage. The bases are defended primarily by Oerlikon 35-mm antiaircraft guns, lighter Soviet and North Korean air defense		25 X 1

		25X1
precision-guided weapons is illustrated by its attack on a tanker in the lower Gulf on 10 June. An Iranian F-4 dropped nine bombs, none of which hit the target, The aircraft made a final pass firing rockets (probably 2.75 inch) along the bow. Only one of these hit the ship, causing light damage to the deck. Status of the Air Force	be as high as 120, but we believe that many of these lack the equipment or weapons for combat operations. We estimate nearly 200 aircraft have been lost in combat since 1980—including at least 10 so far this year—and another 150 are grounded because of a shortage of spare parts or other maintenance needs. Iran's fleet of operational transport aircraft also has dwindled, although not as seriously as its fighter.	25X1 25X1
Inventory. We estimate Iran has between 65 and 80 operational fighter aircraft, down from a prerevolution total of over 400. Iran's operational aircraft include 35 to 40 F-4s, 20 to 25 F-5s, and 10 to 15 F-14 fighter aircraft. Although Iran has some 50,000 personnel in the Air Force, we estimate there are fewer than 150 fully qualified fighter pilots. at least 64 operational fighters at Iran's nine airbases. the number of operational fighter aircraft could	dwindled, although not as seriously as its fighter aircraft force. only 38 of Iran's prewar inventory of 60 C-130 aircraft are operational eight 707s, 28 to 37 C-130s, 12 F-27s, 14 Falcon 20s, and two P-3s are operational, some 30 less transport aircraft than were in Iran's inventory at the beginning of the war. Top Secret	25X1 25X1 25X1 25X1
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Iran's Available Fighter Aircraft

	September 1980		Wartime Losses	July 1984	
	Inventory	Operational		Inventory	Operational
Total	446	233	196	230	70
F-4	195	98	100	80	35
F-5	175	105	90	80	20
F-14	76	30	6	70	15

Note: Estimates of wartime losses and operational readiness of F-4s and F-5s probably are accurate to within (±) 10 aircraft. Operational readiness rates for September 1980 were estimated at 50 percent for F-4s, 60 percent for F-5s, and 40 percent for F-14s.

Munitions. The Air Force also suffers from a severe shortage of operational advanced munitions. At Bandar-e Abbas, for example, only six of 13 aircraft assigned to the base are fully armed with two AIM-7s and two AIM-9s each—and less than 30 AIM-7s and 30 AIM-9s are in stock.

heat-seeking sensors—critical for missile guidance—are functioning improperly on the AIM-9 missiles.

Many of Iran's AIM-54 Phoenix air-to-air missiles are only marginally operational because of improper storage, poor maintenance, and a lack of spare parts,

only 29 advanced Phoenix missiles out of an inventory of 100 are operational;

		there is a shortage
of coolan	t without which the	Phoenix missiles cannot
operate.		Iranian technicians
cannot re	pair the missiles' de	efective firing and guid-
ance unit	as.	

Logistics and Maintenance.

more than 150 fighter aircraft—two-thirds of Iran's inventory—are nonoperational because of improper maintenance or a shortage of parts. Most of these aircraft have been cannibalized and are strewn around Iranian airfields.

the Iranians have nearly exhausted the spare parts available on cannibalized aircraft.

Spare parts shortages run the gamut from tires to advanced avionics and weapons components.

avionics, engine components, flight control systems, and radar systems were the most critical shortages.

shortages of navigation equipment and air-to-air missile components were the most debilitating.

electronic warfare equipment aboard F-4s is in such a state of disrepair that Air Force headquarters has ordered it removed.

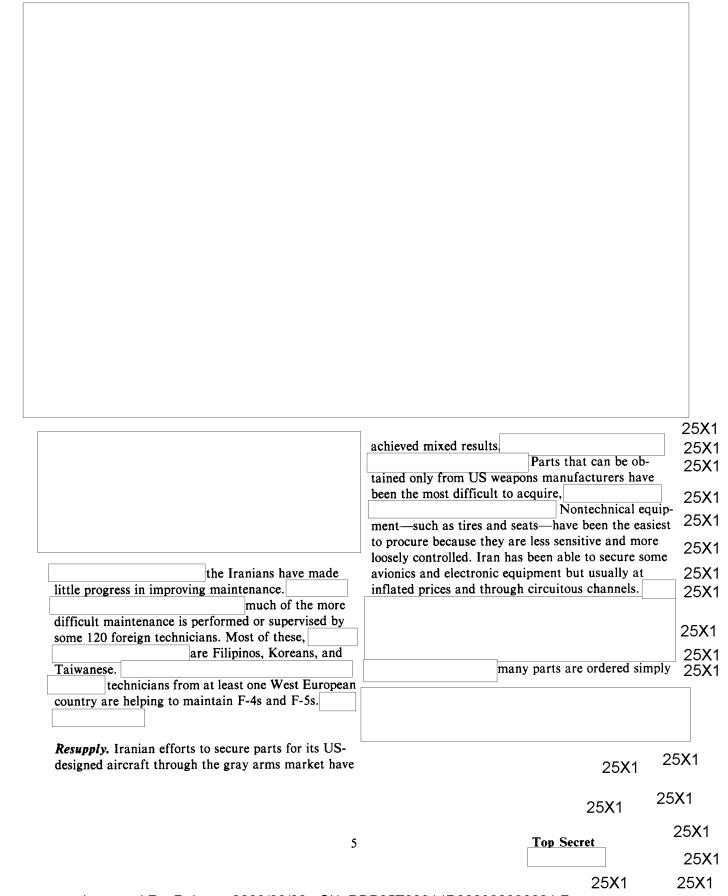
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	Tehran believes that pro-US feeling among pilots is so strong that it cannot count	25 X 1
	on them to engage US forces,	25 X 1
	at least	20/(1
	during one recent period, fighter aircraft flying defen- sive patrols were not permitted to fly closer than 65	25X1
	kilometers to major Iranian cities because, the regime feared a possible coup	25X1
	attempt.	25 X 1
	Maintaining Political Control As many as 85 percent of Air Force officers are	25 X 1
	opposed to the Khomeini regime,	25X1
	US-trained pilots still have not subscribed to the regime's ideology and are uncomfortable with the political and religious conditions attached to assignments and promotions. Personnel killed or wounded in the first two years of the war normally were replaced	25X1
	by those considered by Tehran as religiously fit rather than professionally competent,	25 X 1
		25 X 1
by contacting companies listed in the Swiss defense publication Interavia. because they can be obtained only from the United States, parts for the F-14 aircraft were almost impossible to obtain. Parts for	The clerics have ordered many of the best qualified combat pilots to take administrative positions and were prepared to remove some 300 officers (pilots and nonpilots) from the service in 1983 because they were suspect. Intervention by Iran's Joint Military Staff saved about half the latter group of officers,	25X1 25X1 25X1 25X1
aircraft that have both civilian and military missions such as Boeing 707 and 747 aircraft have been purchased by changing military registrations to civilian ones,	morale problems have affected maintenance of combat aircraft. Air Force ground personnel have sabotaged Iranian fighter aircraft, causing an F-5 to	25X1 25X1 25X1 25X1
Because of restrictions on military sales to Iran, Iran	crash in mid-1982 and forcing several F-14s to make emergency landings. Pilots have complained of engine	25X1
Aircraft Industries has been trying without much success to manufacture engine parts for F-4 aircraft,	and radar malfunctions, landing gear problems, and misfiring weapons. In our judgment, much of the	25X1
Swiss and	intentional sabotage is caused by the intense rivalry	25 X 1
Filipino technicians have assisted on this project.	between ground technicians (called homofars) and pilots, which predates the revolution. The homofars	25 X 1
Reliability and Morale. In our opinion, Tehran is justifiably concerned over Air Force loyalty to the clerical regime. Most of Iran's combat pilots are US	are jealous of the pilots' privileged positions and disappointed with their own lack of promotions. Some pilots have become so anxious about the safety of their aircraft that they have sought to be grounded for	25X1
trained. In June 1981 and again in May 1983, Air	medical reasons.	25 X 1
Force officers were arrested for conspiring to bomb Ayatollah Khomeini's home,		25 X 1
		25 X 1

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Those pilots who continue their operational duties	with air operations. ³ Base commanders elsewhere have	25 X 1
often are motivated by financial considerations rather than by loyalty to the regime or professional pride,	no authority over promotions, job assignments, or dismissals; and political leaders in Tehran plan all air	25X1
	combat missions.	25X1
Many stay on to be eligible for a pension. Some homofars with special skills have been retained against their will because they cannot be replaced. Others are said to stay because of the poor civilian job	the regime also is trying to maintain control of the Air Force by buying the loyalty of service personnel. Both officers and	25 X 1
market.	Revolutionary Guards receive gifts of land, scarce consumer goods, fuel, and low-cost housing. Pilots	25 X 1
the malaise has even affected Air Force headquarters, where poor working	believe that the Revolutionary Guard receives first priority on some consumer goods but that pilots	25X1
conditions, lack of promotions, and inadequate pay increases are the biggest complaints. Dedicated pro-	receive the greater share. Most pilots still oppose the regime,	25X1
fessional officers look forward to the end of the war because they believe that only then can the Air Force		25X1
be rebuilt. We have no evidence, however, that this hope has prompted disenchanted officers to organize	Air Force personnel, in our view, also benefit from political rivalries within the regime. President Kha-	25X1
clandestine "peace" groups or to put pressure on the Air Force command to alter administrative policies.	menei and Assembly Speaker Rafsanjani are competing to expand their influence and attract followers within the Iranian Air Force	25 X 1
Most consisting staff and command positions are as	Khamenei has pushed for	25 X 1
Most sensitive staff and command positions are assigned to those who have convinced the clerics that	increased benefits for the officer corps, while Rafsan- jani emphasizes benefits for enlisted men and non-	25X1
they back the regime and have strong religious credentials.	commissioned officers.	25 X 1
Air Force Commander Colonel Sediq, the Chief of Staff, the Chief of Operations, and the command-	Pilot Training. Although Iran's pilot-to-combat aircraft ratio of over 1-to-1 is nearly the same as before	25 X 1
ers of most tactical airbases and air defense groups actively support the regime.	the revolution, we estimate the Air Force faces a shortage of experienced pilots who are trained for a	25X1
however, some senior officers pretend to be fundamentalists to gain or keep their positions. Those	full range of combat missions. In our judgment, the clerical regime purged more than a third of the 400	25X1
whose loyalties are suspect.	fully qualified active fighter pilots in the Shah's Air	25 X 1
include less important staff officers, the commander of a unit at Vahdati Airbase,	Force before the war with Iraq, and at least another third were killed during the first two years of war.	25 X 1
the commander of an air defense unit at Khark	Perhaps another 20 to 30 have been killed or have	25 X 1
Island, and all US-trained flight instructors.	defected since then.	25 X 1
		25X1
At each level of the Air Force command structure, a mullah acts as a political and religious adviser to the		25X1
commanding officer, Each airbase has a Revolutionary Society Center	³ Shiraz is the primary base for Iran's remaining advanced F-14	25 X 1
headed by a mullah and about one regime adviser for every 100 Air Force personnel,	aircraft whose air defense and airborne control missions are essential for defending Iranian cities and other strategic targets.	25 X 1
Junior Air Force personnel consider the mullahs to be the real authorities on the bases	The Air Force may have convinced the mullahs that any mistake caused by political interference there would be very costly.	25 X 1
with the exception of Shiraz Airbase, where mullahs do not interfere		25 X 1
munans do not interiere		25 X 1
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	attacks using small trainer aircraft. With little training, these pilots could fly helicopters or fixed-wing aircraft laden with explosives into ships in the Gulf or oil facilities on the Arabian Peninsula. Eventually they may be competent to strafe targets or drop munitions from low altitudes. Although these are high-risk tactics, in our judgment, they would disrupt shipping and force regional states to a high state of alert.	2
The Air Force established a new flight training school in January 1983, with the ground phase, including electronic warfare training, conducted at Tehran/Mehrabad Airbase and the flight phase at Isfahan,		2
The		2
Air Force has graduated at least 16 new fighter pilots,		2
Early last year the Iranians began pressing Libya,		2
Syria, and India for training assistance.		2
Syria and India accepted a small number of students.		25 25 25 25
the students sent abroad may be learning about the capabilities of Iraqi aircraft or receiving only		25
basic flight instruction.		2
		2
	Prospects In our judgment, the Iranian Air Force cannot play a greater role in the war with Iraq nor a decisive role	
Libya accepted at least eight Iranian pilot trainees late last year.	against any other likely opponent unless it obtains new fighter aircraft and munitions and revives the morale of its pilots. Iraq's renewed attacks on Iranian	2
Iran is continuing to train	shipping have dramatically reminded the clerical	2
Revolutionary Guard personnel to fly military trainer aircraft, helicopters, and civilian aircraft.	leaders in Tehran of the importance of airpower to protect Iranian interests in the Persian Gulf. But	2
their flying skills are substantially below the level needed to fly combat missions in	Tehran's continuing suspicions of the political reliability of the Air Force will complicate plans to rebuild	2
modern fighter aircraft during the coming year. We cannot, however, rule out their participation in suicide	Iran's airpower.	25

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We believe Iran's clerical leaders would be satisfied with a force much smaller than that of the Shah—perhaps no more than 150 fighter aircraft. Efforts to obtain such aircraft from North Korea, China, Libya, or other arms suppliers are likely to continue, but Iran's suspicions of the Soviets suggest that they will not be asked to supply aircraft directly. Unless relations between Iran and the West dramatically improve, North Korea and China will remain the most likely sources of fighter aircraft for Iran.

Iran's total reliance on US-made aircraft up to now will handicap its efforts to rebuild its air combat capability using Soviet-designed aircraft. Building up a new inventory of spare parts, training pilots, retraining technicians, and developing new air tactics will take at least several years. In any event, the Air Force most likely could obtain only older model Soviet-type fighters, at least a generation behind those of Iraq and Saudi Arabia. Such a small, outdated force would not pose a major threat to Iran's regional opponents during the remainder of the decade.

Impact on the War With Iraq. The Iranian Air Force's reduced combat capability, in our judgment, has been a key factor in allowing the Iraqis to regain the initiative in the war. The Air Force is incapable of preventing Iraqi attacks on ships or population centers and, in our estimate, will be able to play a minor role at best in future Iranian offensives. During the coming year, the Air Force will continue to concentrate resources on defending against Iraqi airstrikes.

Capability Against the Arabian Peninsula. In our judgment, the Iranian Air Force also lacks the capability to carry out sustained air attacks against the

Arab Gulf states.	
	Iran's

shortage of operational aircraft at or near Gulf bases, its probable inability to achieve surprise, and Tehran's desire to deny outside powers an excuse for military intervention argue against large-scale Iranian offensive air operations. The Air Force retains the capability to attack individual economic targets on the Peninsula but only if it is willing to accept the risk of heavy

aircraft losses. Three years ago, Iranian aircraft destroyed a Kuwaiti oil-gathering facility and could repeat this success in an isolated attack.

Unarmed tankers will remain a likely retaliatory target for the Iranians, especially in the southern Gulf outside the Saudi and Iraqi air defense zones. The Iranians have demonstrated a capability to locate and damage a preselected ship and to return safely to base. We estimate the Iranians have enough aircraft and munitions to increase the frequency of these attacks for a short period which could disrupt tanker activity.

Iran is attempting to modify naval
Standard antiship missiles as replacements for Maverick missiles. The plan suggests that the Air Force recognizes the need for more appropriate weapons, but early tests have not been encouraging. If technical problems are solved—in our judgment, an unlikely prospect—the Iranians would have a much greater capability for damaging or sinking tankers.

Implications for the United States. The decline in Iran's offensive air capability reduces but does not eliminate the threat that Iran might expand the air war in the Gulf.

We also believe that the Khomeini regime will go out of its way to avoid bombing Soviet arms carriers transporting military equipment for Iraq. Nevertheless, Iran's ability to launch occasional raids against ships or economic targets could result in the loss of US-owned commercial ships or US personnel.

Tehran probably would use its Revolutionary Guard pilots to carry out suicide attacks or raids against US ships. "volunteer pilots" are being trained for these missions. The greatest threat to ships from the regular Air Force would be Maverick air-to-surface missiles launched by F-4 aircraft. Because of its limited destructive power, however, the missile probably could not cripple a US warship without a direct hit on the ammunition magazine or engineroom.

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US fighter aircraft, in particular carrier-based F-14s, would enjoy an overwhelming advantage in air-to-air clashes. US F-14s have more advanced IFF equipment and better maintained air-to-air missiles than do the Iranian F-14s.

the Air Force has carefully selected four to six politically reliable pilots to fly

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selected four to six politically reliable pilots to fly against US forces, suggesting that there are few professionally trained pilots who can be trusted in a clash with US forces.

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