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**The Soviet Aircraft Carrier:
Torpedoed by *Perestroika*?**

An Intelligence Assessment

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The Soviet Aircraft Carrier: Torpedoed by *Perestroyka*?

An Intelligence Assessment

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The Soviet Aircraft Carrier: Torpedoed by *Perestroika*?

Key Judgments

*Information available
as of 15 September 1990
was used in this report.*

The Soviet aircraft carrier construction program, an integral part of the "blue water" Navy advocated by former Naval chief Admiral Gorshkov, is in trouble. It has become a lightning rod for criticism in the debate over the naval implications of Gorbachev's desire to cut defense spending and implement "defensive doctrine."

Influential civilian critics argue that aircraft carriers are inconsistent with defensive doctrine because they are best suited for operations at great distances from Soviet territory, especially in attacking land targets. The critics also contend that such ships are inordinately expensive. Even in the Soviet military, carriers are being criticized, especially by Army officers who would prefer to sacrifice them to gain additional resources for ground forces.

A Tbilisi-class aircraft carrier is on sea trials; another Tbilisi and an Ul'yanovsk-class unit are under construction. Statements by Soviet naval officers, past construction practices, and recent investment in carrier-related facilities indicate that the Navy's goal is to continue carrier construction well into the next century. The Navy, however, is hard pressed to protect the carrier program in the midst of changes in Soviet naval strategy. For Gorshkov, the carriers were to be primarily a means of extending the Navy's operating areas. Under his successor, Admiral Chernavin, the Navy's emphasis has focused increasingly on operations closer to the Soviet Union. The challenge facing Chernavin is to repackage the procarrier argument to persuade decisionmakers that carriers are necessary even for tasks generally accepted as "defensive."

We judge that the Navy's efforts to maintain a long-term carrier building program will fail. [



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[] It is, moreover, increasingly possible that the force will be reduced further as some existing carriers are scrapped, retired, or sold to foreign navies. If the Navy is forced to accept such cutbacks, the most vulnerable ships probably are the Kiev-class units. One hope for the carriers, in view of the troubled relationship between President Gorbachev and the Soviet armed forces, would be a decision by him to buy off an increasingly alienated military. Part of the Navy's goal in any such deal most likely would be the retention of the existing carriers and the construction of additional units.

Curtailments in the carrier force, as one part of a broader cutback in naval general purpose forces, would impair the Soviet Navy's ability to conduct wartime operations at significant distances from its territory. This would have particularly serious consequences for the Navy's ability to defend the homeland by attacking Western aircraft carriers and cruise-missile-equipped ships before they reached a position from which they could strike Soviet territory. As Soviet naval strategy evolves in the 1990s, the carriers' primary role probably will be confined to providing air defense for surface ships operating in sea areas close to Soviet territory. []

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Scope Note

This paper examines the Soviet aircraft carrier program in light of recent developments concerning the application of the concepts of "defensive doctrine" and "reasonable sufficiency" to the Navy. It is not intended to be a detailed assessment of the capabilities of the ships or their associated airwings.]



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The Soviet Aircraft Carrier: Torpedoed by *Perestroika*?

Gorshkov's Carrier

A key aspect of Soviet naval development under Admiral Gorshkov, Commander in Chief of the Navy from 1955 to 1985, was his drive to supplement the core of the Navy—submarines and land-based aviation—with major surface ships. Gorshkov believed that the protection of Soviet interests—both in peace and war—required surface ship operations in areas such as the southern Norwegian Sea, the Mediterranean, and the northwest Pacific Ocean, which were outside the cover of land-based air defense aircraft. Gorshkov's ambitions were reflected in his writings and in major naval exercises. Such exercises, although indicating that operations at the greatest distance from Soviet territory would continue to be conducted primarily by submarines and land-based aircraft, suggested a commensurate extension of surface ship operations. Gorshkov favored the construction of aviation-capable ships to enhance the viability of surface ship formations in such expanded combat operations.

Soviet Carrier Development

Gorshkov's plan to construct aircraft carriers was from the outset controversial within the Soviet Union and even within the Navy.¹



In bringing aviation to sea, Gorshkov did not simply copy US Navy aircraft carriers and fleet operations. US carriers generally are large, have a flight deck

running the length of the ship, and use catapults to launch high-performance aircraft and arresting gear to recover them. They carry only a limited self-defense armament of anti-aircraft weapons and generally operate as part of large task forces. The Soviets probably judged that constructing large carriers and attempting complex task force operations immediately would be risky—and very costly. They embarked instead on an evolutionary approach (see figure 1) beginning with the construction of two Moskva-class helicopter cruisers in the 1960s. As hybrid units with a cruiser configuration forward and a helicopter deck aft, the Moskvass were intended primarily for anti-submarine warfare (ASW) operations

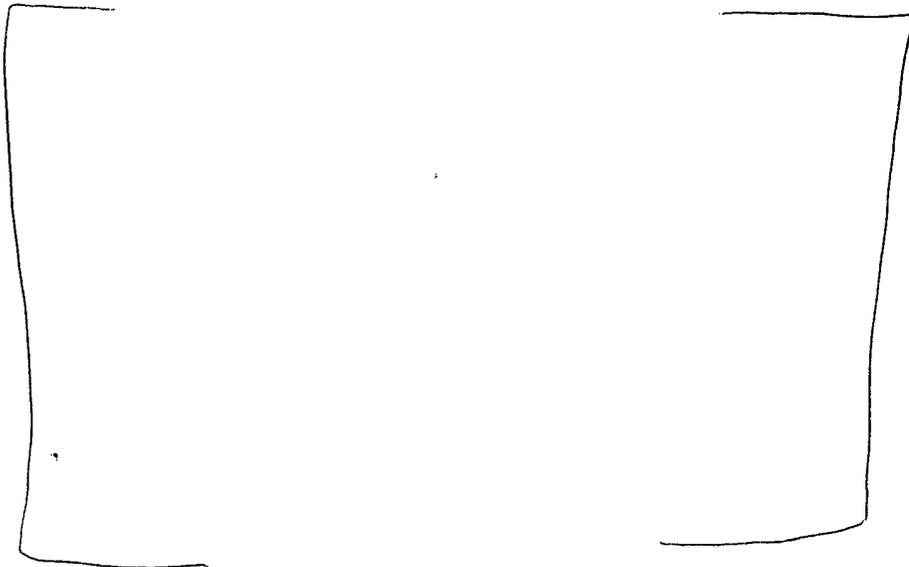
The next step came in the 1970s with the construction of the Kiev-class ships, the first Soviet vessels designed to carry fixed-wing aircraft. The Kievs carry Yak-38 Forger vertical/short takeoff and landing (V/STOL) aircraft, as well as helicopters. Like the Moskvass, they are hybrid units; the forward portion of the ship is devoted to antiship, ASW, and surface-to-air missiles. The Kiev-class carriers' ability to provide air cover for surface ships is limited by the Forger's mediocre performance—subsonic, lack of air intercept radar, restricted range and endurance, and the small number—some dozen—of them in the airwing. Four ships of this class were produced (Kiev, Minsk, Novorossiysk, and Baku).

Construction of the Kiev-class carriers was followed by that of the Tbilisi class² (see figure 2) whose primary feature is the ability to launch high-performance aircraft using a "ski-jump" ramp on the bow. (See figure 3.) Unlike the Moskvass and Kievs, the

¹ The Tbilisi, originally named the Brezhnev, will be renamed again according to a recent TASS announcement. This change reportedly stemmed from military disgust with the antagonism toward military service prevalent in many of the republics. The new name has not been announced.

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Figure 1
Bringing Aviation to Sea



Characteristics	Moskva	Kiev ^a	Tbilisi	U'lyanovsk
Displacement (tons full load displacement)	17,000	37,000	64,000-68,000	70,000-75,000
Major shipboard weapons	SA-N-3 SAMS SUW-N-1 ASW rockets	SA-N-3/SA-N-4 SAMS SUW-N-1 ASW rockets SS-N-12 antiship missiles	SA-NX-9 SAMS SS-N-19 antiship missiles	Unknown
Airwing	14 to 16 helicopters	12 to 13 Yak-38 Forgers 14 to 17 helicopters	20 to 24 Flankers 6 helicopters	Unknown

^aSome differences in shipboard weapons of later units of class.

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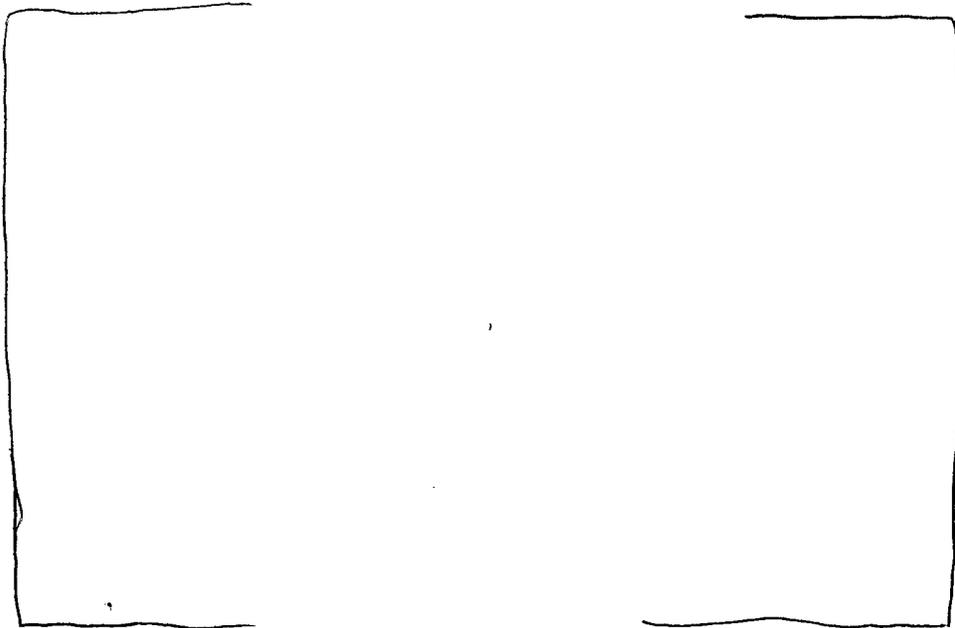
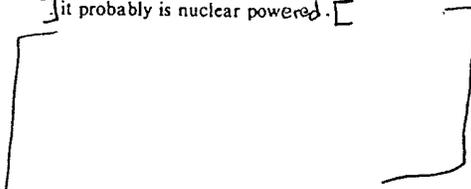


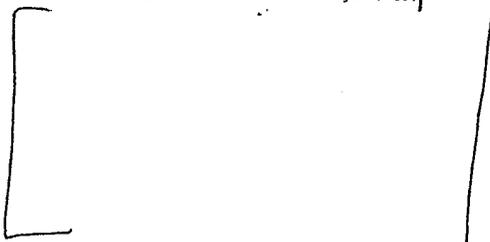
Figure 2. Three generations of Soviet aviation-capable ships.

Tbilisi and its sister ship Varyag (formerly Riga) are designed to allow use of the entire deck for aircraft operations. They continue, however, the hybrid tradition in possessing a substantial integral weapons capability, especially a battery of antiship missiles mounted forward in a flush deck configuration.

Following the Varyag's launch, the Soviets began construction of the Ul'yanovsk. It is somewhat larger than the Tbilisi-class ships, and [] it probably is nuclear powered. []



The Soviet Navy's goal apparently is to continue the carrier program into the 1990s by laying down another unit, following the launch of the Ul'yanovsk []



The impression given by shipyard and test facility activity is that the Soviet aircraft carrier program is proceeding as Gorshkov would have wanted. Each

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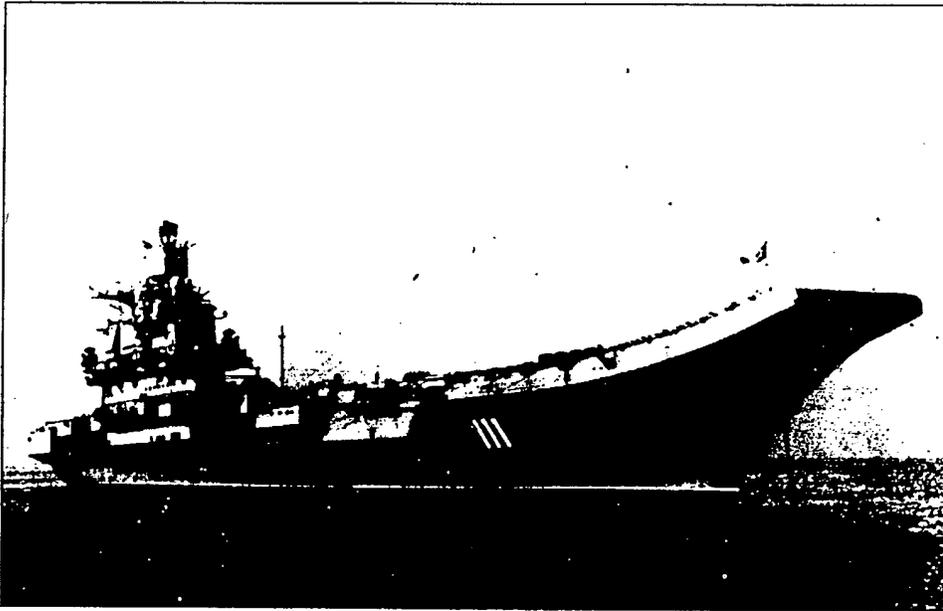


Figure 3. The Tbilisi at anchor in the Black Sea.

new class is drawing on the experience of the previous one to progressively improve the Navy's ability to bring high-performance aircraft to sea. In terms of Gorshkov's vision of Soviet naval strategy, this would support the gradual expansion of Soviet sea control operations in the 1990s as envisaged by Intelligence Community estimates of Soviet intentions published in the early and mid-1980s. According to these estimates, the air cover provided from the carriers would have supported surface force operations deeper into the Norwegian Sea and the Northwest Pacific Basin than had previously been practical. The carriers probably would have operated as the key part of large task groups, including cruisers, destroyers, and direct-support submarine

Deepening Controversy

Other evidence indicates that, despite the shipyard and test facility activity, the carrier program is in trouble. The Gorshkov naval strategy, with its emphasis on operations at relatively great distances from

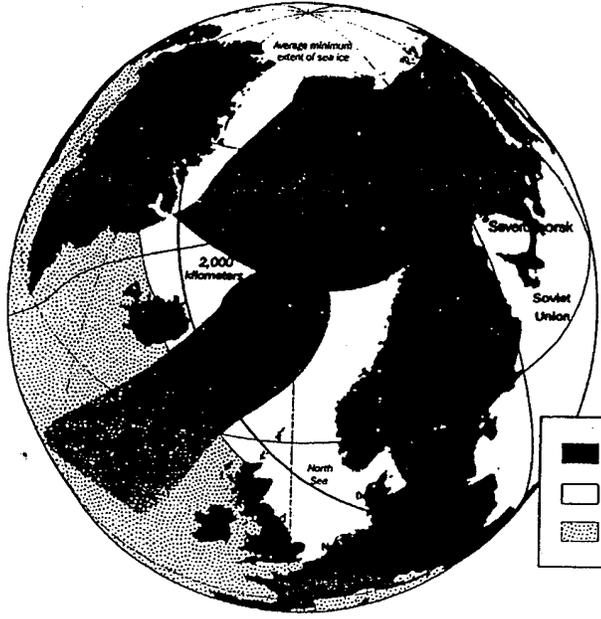
Soviet territory, is changing under Admiral Chernavin, who replaced him in 1985. For example, Soviet naval exercises since 1985 have been generally close to Soviet territory—the Seas of Japan and Okhotsk, the Barents Sea, and the Norwegian Sea north of the Lofoten–Jan Mayen line. (See figure 4.) Meanwhile, under the pressure of President Gorbachev's interlocking requirements to cut defense spending, improve relations with the West, and implement a military doctrine based on war prevention rather than war fighting, the carrier program has come under intense criticism. Influential critics of Soviet military programs—especially civilian academics—have singled out aircraft carriers as being too expensive, inherently oriented to offensive operations, and of questionable military value.

The tempo of civilian criticism of the program picked up substantially in the latter part of 1989, probably in connection with consideration by the Congress of

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Figure 4
Soviet Exercises and Naval Strategy



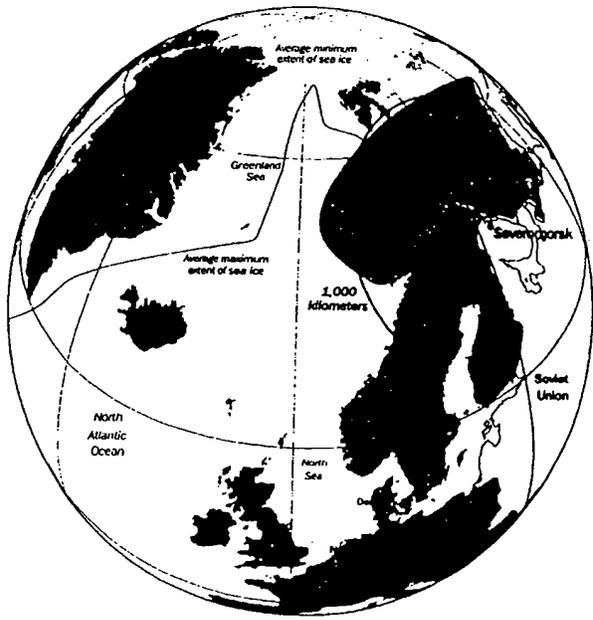
Gorshkov Period

Exercises during the Gorshkov period indicated that a key aspect of Soviet naval strategy was the gradual expansion of "sea control" and "sea denial" zones. The July 1985 exercise, which involved significant operations beyond the Greenland-Iceland-United Kingdom Gap, supported this interpretation of ambitious Soviet goals.

- Sea control : major operations by surface ships, submarines, and aircraft.
- Sea denial : submarine and aircraft operations.
- Less intensive sea denial : small-scale activity, almost exclusively by submarines.

Chemavin Period

Soviet naval exercises since 1985 have been conducted much closer to Soviet territory. This practice, together with Soviet statements, suggests that under defensive doctrine the Navy has been forced to adopt less ambitious goals -- perhaps significant "sea denial" operations extending at most 1,000 kilometers from Soviet territory.



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People's Deputies and the Supreme Soviet of military budget decisions associated with the 13th Five-Year Plan (1991-95). Georgiy Arbatov, the influential head of the Institute for the USA and Canada (IUSAC), for example, made two sharp attacks on the carrier program in December 1989. During a Moscow television discussion, he suggested that the expense of the carrier program probably exceeded the amount spent annually on Soviet health care.³ Subsequently, in a speech to the Congress of People's Deputies, he criticized Chernavin by name for spending money on the carrier program that would be better used to solve housing and other day-to-day problems facing Soviet naval personnel.

Another major attack on the carrier program was contained in a December 1989 *Novoye vremya* article by Andrey Kortunov.

The article charged that the program exemplifies an outdated "symmetrical response" concept that required the USSR to have the same type of weapon systems as the United States, regardless of cost or military effectiveness. From the standpoint of military effectiveness, the authors claimed that carriers, despite their expense, are extremely vulnerable to modern weapons, especially the nuclear weapons that they claim would almost certainly be used in a war with the West. They suggested that, as part of the process of converting the defense industry to supporting the civilian economy, shipyards used for carrier construction should be used for producing sorely needed merchant ships.

Kortunov and Malashenko, in addition to arguing against future construction, suggested that the Supreme Soviet should consider scrapping carriers already completed or nearing completion.

It reported that the Soviet Navy viewed this article as so potentially damaging that, despite the atmosphere of *glasnost*, it invoked national security arguments to delay its publication and tone down some of the criticism.

³ We estimate that the Tbilisi, together with an airwing of 20 Flankers, costs well over 1 billion rubles, approximating the amount allocated for health care in the 1988 all-union budget. Most health care financing, however, is at republic and local levels.

The carrier debate has continued in 1990, becoming increasingly bitter and personal. Arbatov, in a May 1990 *Ogonyek* article, attacked Marshal Akhromeyev for his involvement in a series of bad decisions, including the invasion of Afghanistan, the deployment of SS-20s, and "the construction of aircraft carriers and other ruinous programs." A senior military officer, however, argued in a June 1990 article that Arbatov himself was partly to blame if any mistakes had been made in connection with the carrier program. The article noted that, at the time the decision to construct Tbilisi-class ships was made in the mid-1970s, all of the current military leaders were serving far from Moscow but that Arbatov was already an influential figure in the capital.

Arbatov resumed his attacks on aircraft carriers in a television documentary broadcast in June 1990. He castigated the carrier program as another example of the Soviet military's habit of blindly imitating Western military developments regardless of their relevance to Soviet requirements and their implications for the economy:

... I have very great doubts about the need for the mission that these so-called aircraft-carrying heavy cruisers must fulfill. After all, must we always try to match the level, have the maximum that the other side has? If the Americans start leaping from the roofs of skyscrapers should we follow them? The Americans would be very happy to see us sink just as much money. We would ruin ourselves completely.

Arbatov claimed that the carrier would be extremely vulnerable to modern weapons and would have a wartime life expectancy of "some 30 to 35 minutes"—presumably in a nuclear war

Although civilians are the most prominent critics of the carrier program, it also has come under fire from elements of the Soviet military

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Even among orthodox officers, constraints on defense spending have encouraged senior Army officers to look on carriers and other major surface ship programs with a jaundiced eye and to suggest that such programs should absorb a large part of the cutbacks required of the Soviet military.

The Army criticism tends to be indirect, often taking the form of contemporary lessons to be learned from history. Army General Lobov, for example, in a February 1990 article supposedly concerned with the prewar military theorist, General Svechin criticized Stalin's decision in 1937 to begin a major surface ship construction program. Lobov argued that wartime experience subsequently showed that this program wasted resources that would better have been spent on the Army and on a Navy composed primarily of smaller units. Lobov stressed that the experience also was relevant to today's concerns.

Carrier Defenders Respond

In face of civilian and military criticism, the Navy is attempting to justify the carriers by placing them in the context of defensive doctrine. Supporters of the carrier program argue, for example, that the ships will be defensive because they will carry fighters and that fighters are inherently defensive aircraft. US carriers, on the other hand, are offensive, partly because they also carry "attack aircraft" or fighter-bombers.

... when people ask today whether the construction of aircraft-carrying ships contravenes our defensive doctrine, I reply—no. We see their main role as platforms for fighter aircraft able to provide long-range cover for our vessels when shore-based fighters are unable to help. This defensive function is enshrined in the new aircraft carrier Tbilisi.

Soviet naval spokesmen also have suggested that, consistent with the recent trend in Soviet naval exercises, the new carriers would operate closer to Soviet

territory than envisaged by Gorshkov. The leadership, however, has not been very precise about this, probably to avoid being locked into a wartime deployment scheme that would restrict the carriers to operations so close to Soviet territory as to offer little if any advantage over land-based aircraft. Chernavin noted, for example:

... what does defensive mean? Certain people have a simplistic and primitive understanding of this. They think that since we have adopted this doctrine, we should be purely passive, defend ourselves, and, in the event of conflict, retreat deep into our territory. Yet modern warfare—be it on land, sea, or in the air—is, above all, fluid. How can a warship fight today if it "sits in the trenches?" A surface ship's mission is, if necessary, to inflict missile strikes on the enemy without waiting for them to enter our territorial waters.

In defining the role of the carriers in naval defensive strategy, carrier advocates have emphasized the protection of other naval forces operating close to Soviet territory.

Another potential mission is the protection of Soviet territory against Western aircraft and cruise missiles. Some carrier advocates have included this among the ships' missions, but it has not been stressed. The Navy may fear that associating aircraft carriers with such a mission raises the danger of losing operational control of the ships to Air Defense Forces authorities. Admiral Chernavin has focused on the carriers' role in

¹ *Pravda*, 19 October 1989

² *Pravda*, 19 October 1989

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supporting other naval forces but conspicuously failed to include homeland air defense in some key statements justifying the carrier program.

Although the thrust of current Soviet defensive doctrine is on the need to bring a war to an early political solution, the Soviet military seeks to maintain the capability for prolonged operations that would include forward movement. For the Soviet Navy, such operations could include the expansion of sea control operations into the Norwegian Sea and the northwest Pacific. The naval leadership probably believes that an aircraft carrier force would be necessary to keep alive the possibility of such an expansion.

The Navy is exploiting the atmosphere of *glasnost* in its effort to sell the ships to the Soviet public and the political leadership. In an unprecedented move, a Soviet journalist reported on an extensive tour of the Tbilisi. In a classic bit of Western-style public relations puffery, he exclaimed over the ship's characteristics—16 kilometers of passageways, 3,000 compartments, a 15-ton anchor, and even a grand piano in the wardroom. The article concluded with sarcastic criticism of those advocating shipyard conversion:

Do we need such expensive ships? The answer to that is clear: as long as new bombers take off from US airfields, as long as new aircraft carriers and ASW cruisers are built, and as long as NATO missiles are targeted on our country it is too soon to switch over to building just snow-white liners.⁶

The sea trials of the Tbilisi also have been accorded unprecedented publicity, including widespread television and photo coverage of flight operations. The initial sea trials in late 1989 were uncharacteristically ambitious and probably were accelerated to convince decisionmakers drafting the 13th Five-Year Plan that the program was making significant progress

⁶ *Pravda*, 19 October 1985

Cutbacks in Naval Forces Under Gorbachev

The prospects for the carrier program have grown darker amid indications of cutbacks in other surface ship programs. Construction of a fifth Kirov-class nuclear-powered cruiser, begun at the Baltic shipyard in Leningrad in mid-1989, was halted later in the year, and a merchant ship was begun in its place. The Kirov program, according to [] had been another Gorshkov favorite that had been pushed through against the advice of the Main Naval Staff and General Staff. According to Admiral Kapitanets, the original concept of operations had been that two Kirovs would operate with each carrier as part of powerful task forces.

Prior to the Kirov cancellation, the only clear indications that Gorbachev's program of unilateral cutbacks had affected the size of the Navy had been personnel reductions and the accelerated retirement of older units. The Kirov decision, however, confirmed that Gorbachev's resource constraints, especially the policy of converting shipyard resources to civilian production, are cutting into the Navy's new construction programs. It also indicated that a program's momentum in the form of sunk costs is not enough to ensure its continuation.

Since the Kirov cancellation, there have been additional indications of cutbacks in naval surface ship procurement. The launch of the fourth Slava-class cruiser, Admiral Lobov, was followed by an August 1990 announcement that the shipyard, traditionally a major producer of cruisers, would henceforth shift its production to commercial ships []

The changes in new construction, which affect the future of the Navy, have been accompanied by changes in current order of battle—the accelerated scrapping of older units, primarily surface combatants and submarines built in the 1950s and 1960s. During

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1989, some 50 diesel submarines and major surface combatants were eliminated. Scrapping activity is continuing at a high rate and, for the first time, involves nuclear submarines.

The combination of a constrained construction rate and an accelerated retirement of older units will lead to a much smaller force of major surface combatants by the turn of the century than we had previously judged likely. Soviet exercises of the mid-1980s indicated that the Soviets expected that their ambitious naval operations of the future would involve large task force organizations, for example, the 14-ship battle group—six cruisers, seven destroyers, and a frigate—that took part in a 1984 exercise in the Norwegian Sea. The absence of such large formations in more recent Soviet exercises is another indication that Soviet Navy planning for blue-water operations has been scaled back as part of the overall naval retrenchment.

Outlook for the Carrier Force

[] reports that General Moiseyev, Chief of the General Staff, after noting that the Soviets did not have "aircraft carriers" but "heavy aviation-carrying cruisers" (TAKR), stated in March 1990 that the Soviets would "finish those TAKR already laid down but no more." (See inset.) One possible interpretation is that Moiseyev was making allowances for any carrier for which any long leadtime items had been ordered and that therefore at least one additional ship could be constructed. We believe this interpretation is doubtful in view of the generally understood meaning of the term "laid down" as indicating a ship whose construction has begun on a building ways. Although Moiseyev did not specifically identify the ships involved, the implication of his statement was that the third large carrier—Ul'yanovsk—would be the last carrier built. Assuming a continuation of Gorbachev's policy of resource constraints, therefore, Moiseyev's statement indicates that Chernavin has lost the battle to justify future carrier construction. The program most likely will end with the Ul'yanovsk, probably as part of a general cutback in Soviet surface forces.

A related question is what will be the fate of those carriers already completed or under construction. As the Kortunov/Malashenko article in *Novoye vremya* indicated, the carrier debate had expanded by late 1989 beyond the issue of future carrier construction to include the fate of those already in existence. A February 1990 article by Georgiy Sturua of the Institute of World Economics and International Relations (MEMO) confirmed this expansion. After raising the question of whether to go on building Tbilisi-class ships, Sturua urged that "secondly, we should analyze whether it is expedient militarily and economically" to make the Tbilisi and the Riga a regular part of the Navy.

If forced to sacrifice some of its carrier force, the Soviet naval leadership would almost certainly prefer to part with Kiev-class units and retain the newer units. There recently have been reports that the sale of Soviet aircraft carriers has been discussed with the Indians and the Chinese. []

[] the Soviets offered to sell the Baku to India for a combination of food and rupees. Soviet naval spokesmen vigorously denied that there is any truth to this report [] the Chinese are rumored to have asked the Soviets about the possibility of acquiring an aircraft carrier and V/STOL aircraft. []

One hope for the carriers, in view of the troubled relationship between President Gorbachev and the Soviet armed forces, would be a decision by him to buy off an increasingly alienated military. Although the Navy's highest priority in such a situation probably would be to restore the cuts made in its submarine programs, another of Chernavin's goals in any such deal most likely would be the retention of existing aircraft carriers and the construction of

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When Is a Cruiser an Aircraft Carrier?

In official Soviet naval terminology, Kiev- and Tbilisi-class units fall under the general heading of an "aircraft-carrying ship" (avianesushchiy korabl). Soviet spokesmen emphatically deny, however, that any of these ships is an "aircraft carrier" (avianosets), the term the Soviets apply to US ships such as the Nimitz. The Kiev was initially categorized by the Soviets as an "antisubmarine warfare cruiser" (protivolodochnyy kreysler) but was later recategorized as a "heavy aircraft-carrying cruiser" (tyazhelyy avianesushchiy kreysler or TAKR). The Tbilisi has the same designation.

The Soviets, however, have trouble explaining why Kiev- and Tbilisi-class ships are not aircraft carriers. Soviet naval officers commonly refer to them as aircraft carriers when talking among themselves, and even Soviets who should know better—like Admiral Chernavin—sometimes slip in public discussions. In a Pravda interview, Chernavin referred to the Tbilisi several times as an aircraft carrier (avianosets) and was subsequently embarrassed by the publication of a retraction, which noted in boldface print that the Tbilisi was a heavy aircraft-carrying cruiser. A similar retraction was published following Krasnaya zvezda's description of the Tbilisi as an aircraft carrier during coverage of the ship's sea trials.

Why do the Soviets avoid categorizing these ships as aircraft carriers? We speculate that part of the explanation lies in the Montreux Convention, which

regulates the movement of ships through the Turkish Straits. The applicability of the Convention to aircraft carriers is subject to varying interpretations. One view is that it prohibits their movement. The Soviets contend that the Convention allows the movement of aircraft carriers belonging to Black Sea littoral states, but they may have decided to avoid the issue, rather than meet it head on.

A second factor probably is the Soviet tradition of associating "aircraft carriers"—the classic power projection weapon of the US Navy—with Western aggressive intentions, both against the Soviet Union and in Third World operations. Colonel General Chervov of the General Staff, for example, stated in October 1989, "The US Navy and its structure are offensive. Can one really, for example, consider carrier forces defensive? They are, first of all, an offensive means." Finally, the Soviets may feel justified in calling their ships "cruisers" because many features of their design—substantial shipboard weapons capability—and operation—with relatively few escorts—are traditionally associated with cruisers, rather than with US-style aircraft carriers

additional ones. If, however, construction ends with the Ul'yanovsk and all the older ships are kept in service, the Soviet Navy would have only a seven-carrier force—four Kievs, two Tbilisis, and one Ul'yanovsk—in the late 1990s. The role and capability of those ships will depend on the nature of their embarked airwings and their onboard armament.

Airwing Composition. Although Soviet aircraft carriers, unlike their Western counterparts, possess a variety of armaments, their primary weapon system is

the embarked airwing. The airwing composition, therefore, is a key indicator of the ships' likely wartime role. Soviet development of carrier-based aviation is proceeding on two paths concurrently. The Soviets are developing V/STOL aircraft as follow-ons to the Forgers, which have been in service with the Kievs since the mid-1970s.¹ They also are developing

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conventional takeoff and landing (CTOL) aircraft, using either a catapult or a ski-jump ramp. We judge that the Soviets intend to deploy both types of aircraft with their carriers in the 1990s and that the major role of these aircraft will be air defense.

The Kiev airwings, now composed of about 12 Forgers and 16 helicopters, probably will be reequipped with the Yak-41 Fulmar, an advanced V/STOL, beginning in the mid-1990s. We anticipate that the Fulmar will be a significant advance over the Forger—especially in possessing supersonic speed and an air intercept radar. We estimate that a typical Kiev airwing would include some 15 of these aircraft, in addition to helicopters. An alternative, although a less likely possibility, is that the Kiev-class will be extensively modified to accommodate CTOL aircraft.

We are uncertain about the future Tbilisi airwing. Three aircraft—Su-27 Flanker, MiG-29 Fulcrum, and Su-25 Frogfoot—have operated with the ship in its sea trials. Soviet statements have been vague or contradictory as to which aircraft will ultimately be chosen, suggesting that a final choice has not yet been made. We believe that Flanker and Fulcrum are the real candidates (see figure 5). We judge that the Flanker, on the basis of its performance characteristics, is the candidate the Navy would prefer. The Flanker, for example, has a combat radius of some 1,100 to 1,500 kilometers, as compared with some 600 to 700 kilometers for the Fulcrum. Soviet writings, however, have discussed the possibility of a mixed airwing, and so we cannot rule out the possibility that the ship will carry both Flankers and Fulcrums.

Each Tbilisi airwing probably would consist of two squadrons, each with 10 to 12 Flanker fighters, as well as perhaps six helicopters. The Flanker—an air superiority fighter with a speed of Mach 2.3 plus—would provide the Soviet Navy with its first sea-based high-performance aircraft. These aircraft will be launched by use of a ski jump and retrieved with the use of arrestor wires. Soviet press statements have credited Tbilisi with a capability to carry 60 aircraft, but we think this unlikely. Our judgment of 20 to 24

Flankers assumes a continuation of the Soviet practice of not storing aircraft topside—as indicated by the apparently small number of aircraft tiedowns on the flight deck. Even if the Soviets were to store aircraft on the flight deck, the number carried probably would be no more than about 50, including helicopters. The Ul'yansovsk airwing will probably be slightly larger than that of the Tbilisi.

Antiship/Land-Attack Capability. Although the primary focus of Soviet carrier airwings probably will be on fighter aircraft designed for air defense operations, we do not rule out the possibility of fighter-bomber type operations against ships or targets on shore. The Frogfoot aircraft identified with the carrier is a trainer variant of the standard fighter-bomber. This suggests that the Soviet Navy's current intention is to adopt the Frogfoot as part of its carrier training program rather than as a carrier-based combat aircraft. Nevertheless, the use of any version of the Frogfoot illustrates the potential for future fighter-bomber operations, and weakens the Navy's argument that the ship is defensive because it will carry only fighter aircraft. Despite the Navy's public emphasis on the defensive nature of the carrier

emphasized that an aircraft carrier is by its very nature a very flexible platform in that the composition of the airwing can be modified in accordance with the required missions.

Flanker and Fulcrum aircraft in service with the Soviet Air Forces already have a secondary ground attack role, including delivery of nuclear weapons, and this capability probably is retained on naval versions. The capability to conduct such attacks probably will improve as a result of weapon systems' upgrades

Other options open to the Soviets if they decide to improve the ship's

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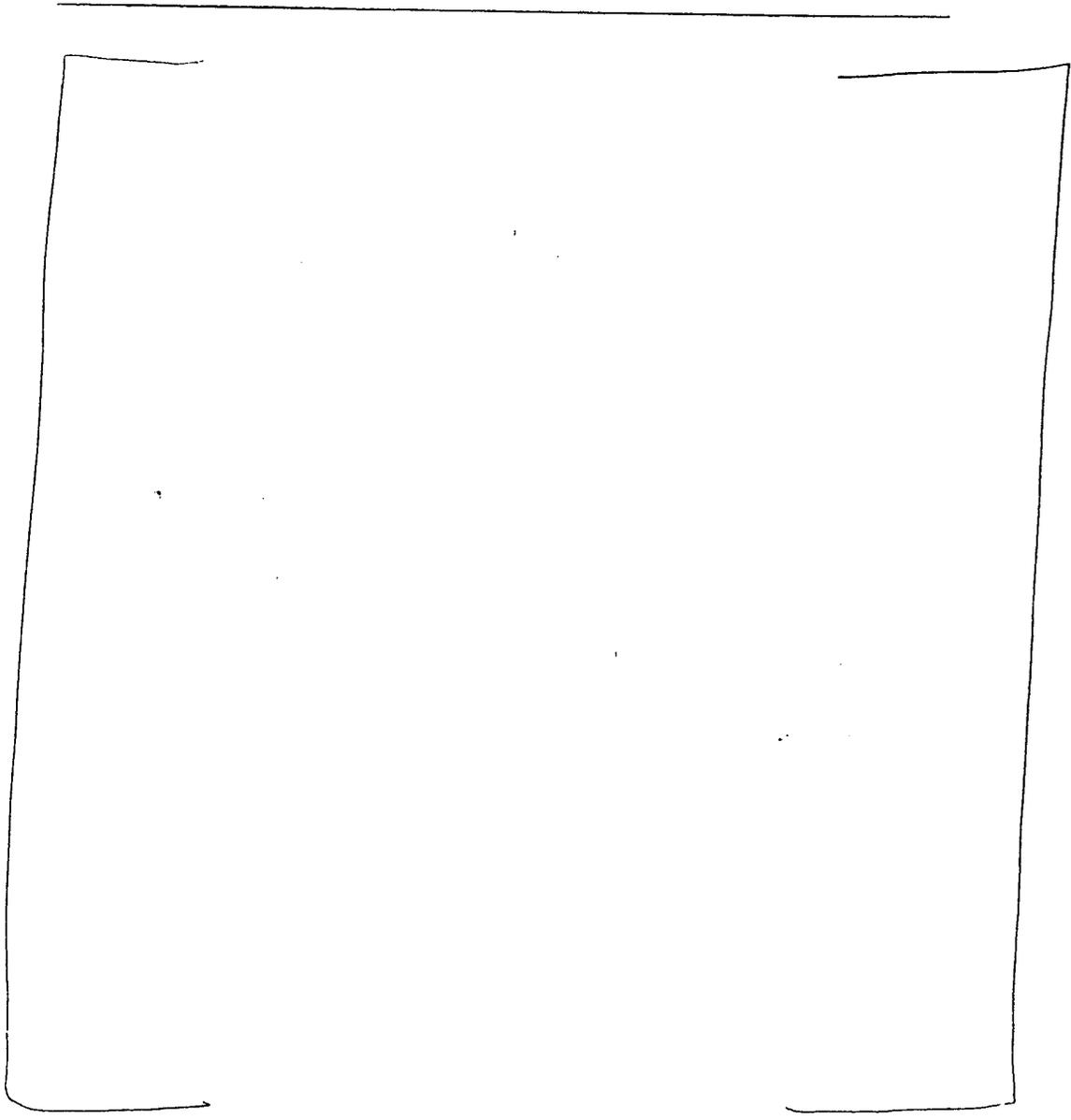


Figure 5. The Fulcrum and the Hunker aboard the Ubliss

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land-attack capability would be to deploy land-attack cruise missiles such as the 2,500-kilometer-range SS-N-21 on surface ships. The Tbilisi might be reconfigured to carry such weapons, possibly in a multipurpose vertical launch system similar to that in service with US surface ships.

The Soviet carrier force of the 1990s—whatever its size and mission—will possess a significant inherent antiship capability in its onboard missile systems.

We cannot determine at this stage whether the Ul'yanovsk will have an integral antiship missile system, but it seems likely, in view of Soviet past practice.

Implications for Soviet Naval Strategy

Constraints on aircraft carriers probably will be part of a sweeping set of changes in Soviet naval forces and strategy in the 1990s.⁴ Traditional Soviet naval missions are being reassessed under the pressures of "reasonable sufficiency" and defensive doctrine. Some missions, such as anti-SSBN operations and the interdiction of Western sea lines of communication, may be abandoned entirely, while others, such as the supporting of ground forces operations through amphibious landings, probably will be severely curtailed. The role of the Navy in defending the Soviet homeland against attacks by enemy aircraft carriers, SLCM units, and amphibious assault is still considered legitimate but is envisaged by critics as requiring operations relatively close to Soviet territory. This conflicts with the Gorshkov desire to build a Navy, including aircraft carriers, capable of attacking enemy units well before they reached a position from which they could strike Soviet territory.

The prospects for Soviet naval missions, therefore, appear to favor an even greater emphasis on command of the sea in contiguous waters. The acid test of any such radical changes in naval missions, that is, in "intentions," is whether they are reflected in changes in forces, that is, in "capabilities." Constraints in the carrier force, traditionally considered a key element of the forward deployment of naval forces, would be a setback to the Navy's desire to retain the option of conducting more ambitious goals, especially those requiring control of areas such as the Norwegian Sea and the northwest Pacific. Under the Soviet naval strategy that is evolving under the pressure of Gorbachev's reforms, the primary role of the Soviet aircraft carrier force probably will be to provide air defense support to surface forces operating in sea areas close to Soviet territory—especially the Barents and the Sea of Okhotsk. The only naval mission that apparently receives wide support from military and civilians alike is the strategic strike role and the resulting need to protect the SSBNs from enemy ASW efforts. The primary purpose of operations by Soviet naval general purpose forces—including the carriers—therefore is likely to be to support that mission rather than taking on the broader responsibilities envisaged by Gorshkov.

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