

US/Sov, JW  
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Department of the Navy  
DON/AA DRMD  
Date: ~~Rev 2015~~ Authority: EO 13526  
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MDR 2015 -M- 12997

# NET ASSESSMENT OF THE UNITED STATES AND SOVIET NAVIES (U)

## NA-77

DECLASSIFIED IN FULL  
Authority: EO 13526  
Chief, Records & Declass Div, WHS  
Date: DEC 15 2015

VOLUME I

330-80-0017, box 83 USSR 560, 1977

~~Classified by CNO (OP-090), Exempt from General Declassification Schedule of Executive Order 11652, Exemption Category 2.~~

~~Declassify on 31 December 2007~~

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Sec Det Cont Nr. X-1186



15-02-1603

9-10-17097

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# I. INTRODUCTION

(U) The Navy Net Assessment is a relatively new element of the Navy program planning process. It provides a broad perspective for the Navy program decision makers, and has proven particularly valuable as a means of communicating with persons outside the Department of Defense who are concerned with, or interested in, the defense budget, especially those in the executive and congressional branches. Its value stems particularly from the uncomplicated and explicit nature of its presentations.

(C) Before presenting the details of the Navy Net Assessment, it is important to understand the philosophy on which it is based. As may be seen in Figure 1, the art of estimating the naval balance is very difficult and very uncertain. It is not just a matter of comparing force levels. The real question is which navy can carry out its mission successfully in the face of determined opposi-

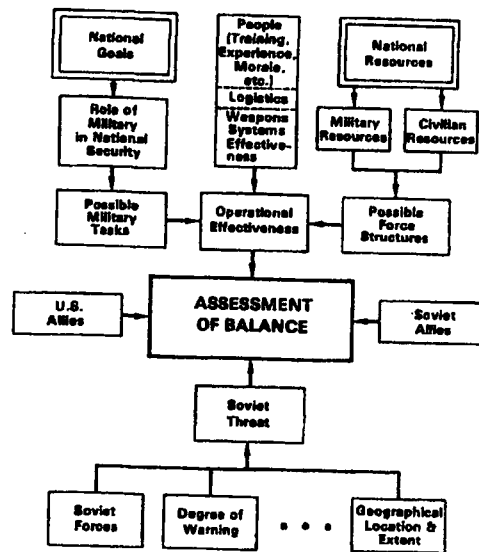


Figure 1. (U) ELEMENTS OF THE NAVAL BALANCE

tion by the other. For example, in a NATO war, a major function of the U.S. Navy would be to ensure the resupply of NATO and other allied nations. The corresponding function of the Soviet Navy would be to interrupt the sea lines

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of communication (SLOC). The very nature of such warfare makes it much easier to interrupt the SLOC than to prevent someone from interrupting them. Thus, even if the two navies had identical forces, the balance, in that case, would be very much in favor of the Soviet Navy.

(U) In order to examine how one might go about estimating the naval balance, consider the range of available analytical approaches, in order of increasing complexity:

- One could compare the force levels of the two navies; but, as already indicated, this would be of very little utility.
- One could compare the force levels as a function of time. This approach is also of little utility for estimating the naval balance; however, it is an excellent vehicle for identifying important trends that could affect the naval balance. (This type of analysis comprises a major portion of the Navy Net Assessment.)
- One could carry out battle analysis. This approach may provide an estimate of the relative capability of the specific ships involved; however, it too is of little utility in estimating the overall naval balance.
- In order to estimate the naval balance, it is necessary to go the last step in complexity, to campaign analysis. Here, an entire campaign is examined considering each navy's objectives, its strategy and tactics, its entire order of battle, and other pertinent factors. The objective in such analysis would be to estimate who wins and hence has the advantage in naval balance.

(U) Campaign analysis is the only analytical means available to estimate the naval balance. [The Navy Net Assessment draws on the results of just such analyses as a part of the basis for its assessment of the naval balance (Appendix 1).] However, it is important to recognize one fundamental characteristic of campaign analysis; there is considerable uncertainty in the results. Three major sources of uncertainty are:

- One cannot define "winning," which makes it difficult to say with confidence that one side has won.
- The analysis requires hundreds of inputs, most of which have errors of 5 to 20 percent; and there are a few that are not much better than educated guesses.
- There is always considerable debate over a number of strategic and tactical assumptions that must be made at the outset of the analysis, and each of these assumptions has a major impact on the final results.

(U) These major uncertainties lead to the conclusion that any estimate of the naval balance is really a guess. It can be a highly educated guess, but it is still a guess. Although that may sound grim, it really is not. The real issue is not the balance today; it is the fact that the balance has been shifting rapidly and that if the trends that brought about that shift are not reversed, or at least stopped, the balance may favor the Soviet Navy decisively in another 10 or 15 or 20 years.

(U) For this reason, the Navy Net Assessment concentrates on trends only. It examines gross parameters, such as the

number of standoff offensive systems or the number of defensive systems, and searches for trends that can affect the naval balance. The goal is to determine those areas in which a relative weakness exists or in which a relative weakness may be developing. The Navy Net Assessment does not attempt to assess how these weaknesses should be overcome. Such detailed analyses of effectiveness and cost are left to the Navy's warfare area planning groups.

(U) The Navy Net Assessment addresses only the general purpose naval forces of the United States and the USSR. The strategic ballistic missile submarine forces of both sides have been excluded because they are an integral part of the total national strategic nuclear deterrent force and thus cannot be assessed meaningfully in isolation. Further, since this net assessment examines the balance between the Soviet and U.S. navies, it considers only those capabilities used by the two navies in facing each other. As a result, it does not examine some major U.S. naval capabilities that are used in carrying out a number of important functions required to support U.S. national strategy (e.g., the strike and amphibious operations conducted during the Korean and Vietnam conflicts).

(U) Since the goal in developing this broad overview is not only to provide the initial briefing of the Navy program decision process but also to provide

the basis for briefing other high level management groups involved in, or interested in, the defense budget decision process, the Navy Net Assessment uses jointly agreed data wherever possible. The data used for the Soviet Navy are from the 27 October 1976 draft of the *Defense Intelligence Projections for Planning* (DIPP) and the data used for the U.S. Navy are from the October 1976 *Five Year Defense Plan* (FYDP).

(U) The Navy Net Assessment has undergone a major reorganization since last year and now consists of nine basic parts:

- an examination of the growing Soviet naval threat;
- a brief historical perspective on the evolution of the two navies, why they differed in the past, and how their missions may be changing;
- a comparison of the forces of the two navies;
- a review of other elements that are important to naval capability;
- an examination of trends in Soviet projection forces;
- a comparison of the potential reinforcement available to each navy;
- an examination of other considerations important to assessing the naval balance;
- a review of the impact of 1976 on the results presented in last year's Navy Net Assessment, *NA-75*; and finally,
- the findings and conclusions.

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## II. THE GROWING SOVIET NAVAL THREAT

(U) The number of submarines in the Soviet Navy is decreasing, the number of attack aircraft is decreasing, the number of principal surface combatants is decreasing; and yet, the U.S. Navy continues to talk about the growing Soviet naval threat. This chapter addresses that paradox. It examines the size of the Soviet Navy, its changing characteristics, its increasing deployments throughout the oceans of the world, and finally, OKEAN-75 – the Soviet demonstration that it has arrived as a world-wide naval power.

### SIZE

(S) Although the Soviet Navy has been decreasing in numbers, the USSR has still been building naval ships aggressively. This aggressive Soviet shipbuilding program is reflected in the 1976 force levels shown in Figure 2 in terms of numbers of ships and displacement ton-

nage. The corresponding figures for the U.S. Navy are shown as a reference for comparison. Despite its decreasing numbers, the Soviet Navy is still very large; it has more than a 5-to-1 advantage in numbers over its U.S. counterpart although the U.S. Navy has about a 20 percent advantage in displacement tonnage. In addition, the figure indicates that considerable asymmetry exists between the two navies. The United States dominates in aircraft carriers. However, the Soviet Navy has a vastly greater number of minor surface combatants and mine warfare ships and many more auxiliaries.

(S) It is frequently argued that comparisons of numbers of ships, such as that on the left in Figure 2, give a misleading impression of the naval balance because they include ships with displacements of less than 1000 tons; some even argue for a limit of 3000 tons. Figure 3 attempts to show how pointless these

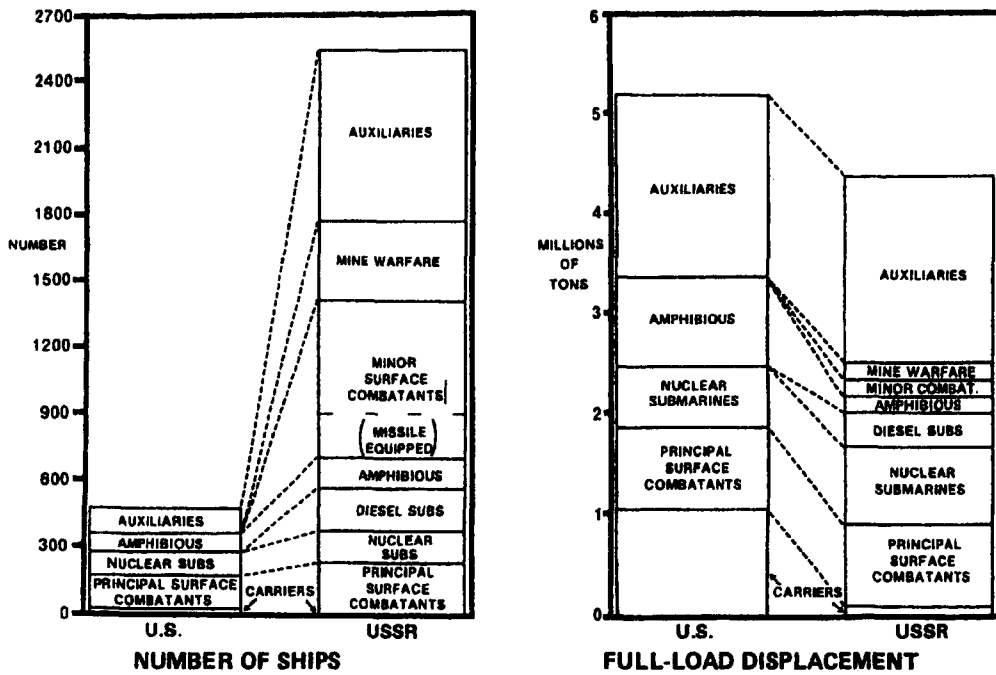


Figure 2. (S) U.S. AND USSR ACTIVE FLEETS-1976 (U)

arguments are. The left-most pair of columns compares the total numbers of ships in each navy, regardless of size. The other pairs of columns compare the numbers of ships that exceed the indicated displacement tonnages. By selecting the appropriate cutoff tonnage, it is possible to get any balance one prefers - from 5 to 1 in favor of the Soviet Navy to 7 to 1 in favor of the U.S. Navy.

(U) Figure 3 reemphasizes the point that comparisons of numbers of ships are of essentially no utility in estimating the naval balance itself. In spite of this, there continues to be considerable debate over what the correct cutoff tonnage should be.

(S) Quite aside from considerations of this type, it would be very dangerous to ignore the threat of ships that displace less than 3000 tons, or even 1000 tons. The NANUCHKA class, Soviet guided-missile patrol boat (Figure 4) illustrates how misleading this selectivity can be. The NANUCHKA displaces only about 945 tons; yet, it carries six SS-N-9 antiship missiles, an SA-N-4 surface-to-air missile system, and a twin 57mm dual-purpose gun. Certainly, one could not ignore the threat of two or three of these boats operating together in the Norwegian Sea, the eastern Mediterranean, the Sea of Japan, or perhaps even in other areas such as the Gulf of Aden or parts of the Arabian Sea if they were based in Berbera in Somalia.

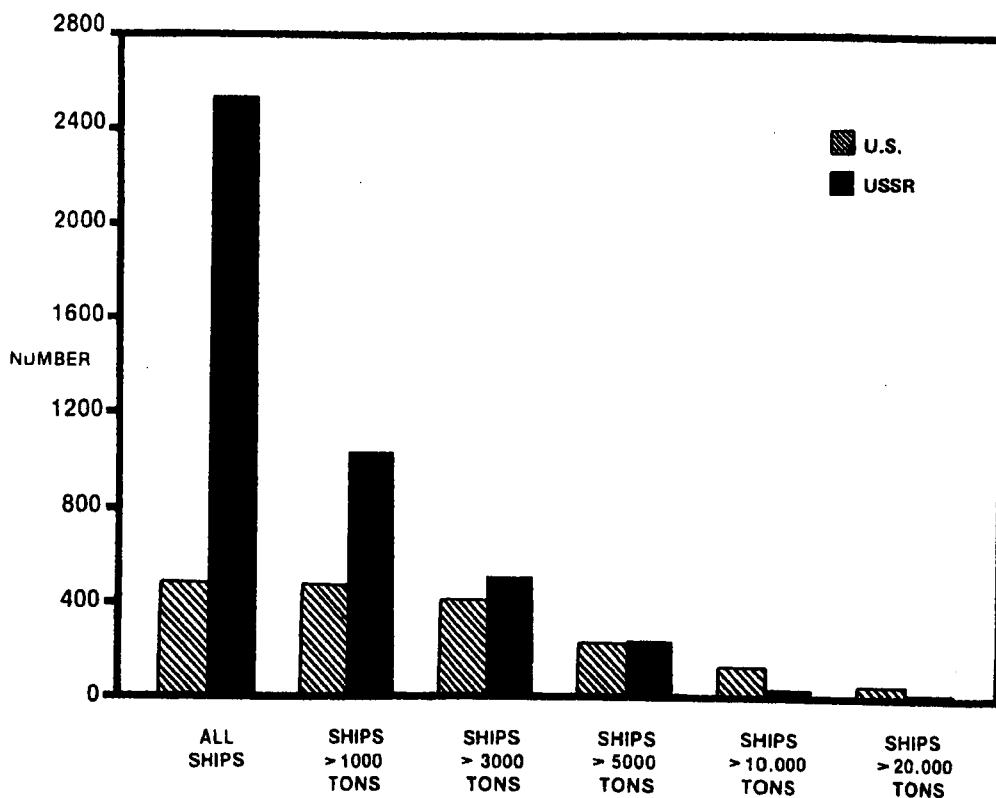


Figure 3. (S) U.S. AND USSR ACTIVE FLEETS-1976 (U)

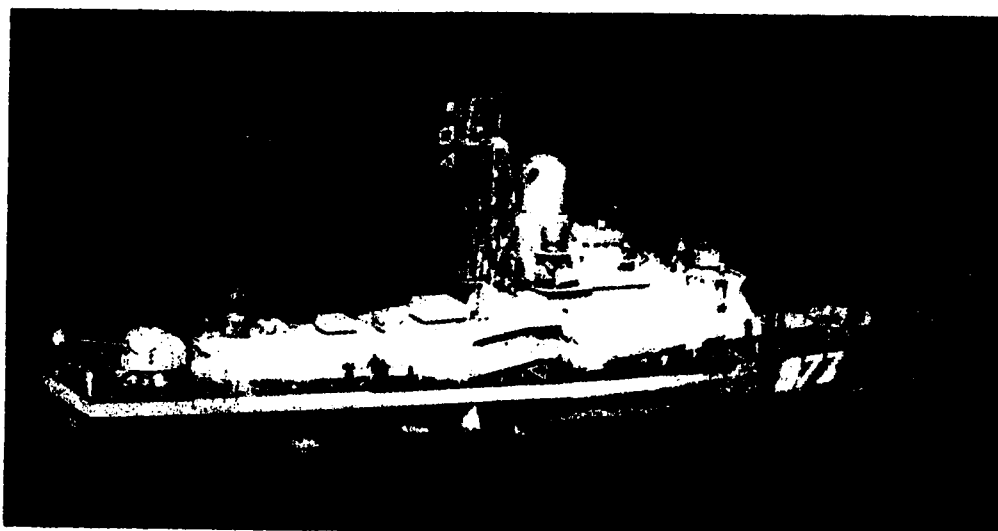


Figure 4. (U) SOVIET NANUCHKA CLASS GUIDED-MISSILE PATROL BOAT

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## CHANGING CHARACTERISTICS

(S) Let us return to the question of the growing Soviet naval threat. Although the numbers of submarines, attack aircraft, and surface ships in the Soviet Navy are decreasing, impressive changes are taking place in the characteristics of these forces. Figure 5 shows the force mix trends in the Soviet principal surface combatant force from 1968 to 1985. Throughout the period, the numbers of gun frigates, gun destroyers, and gun cruisers decrease, and the numbers of larger and more sophisticated missile frigates, missile destroyers, missile cruisers, and missile carriers increase markedly.

(S) In addition, the Soviet Navy has deployed the first of its new KIEV class aircraft carriers (Figure 6). Not only can this ship carry up to 31 V/STOL (vertical/short takeoff and landing) aircraft, but it carries considerable additional armament as well. In the bow area, for example, it carries eight SS-N-12 antiship cruise missile launcher tubes and has an estimated 16 missile reloads. It is clear that the nature of the Soviet surface combatant force is changing; it is becoming a force of bigger

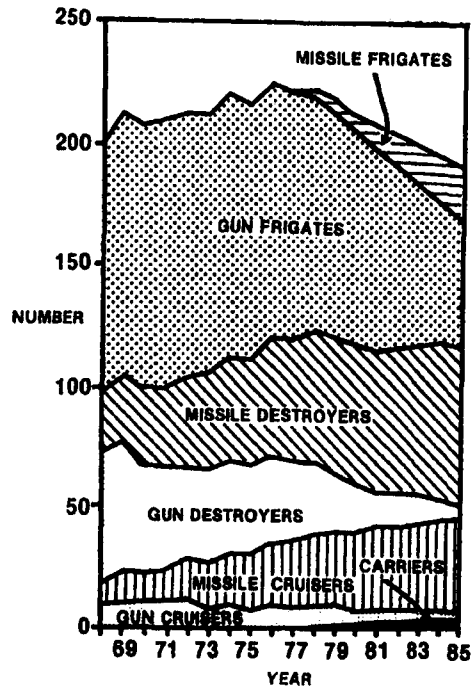


Figure 5. (S) SOVIET PRINCIPAL SURFACE COMBATANTS (U)

ships, seagoing ships, and offensively oriented ships.

(S) Figure 7 shows the changing characteristics of the Soviet submarine force. The numbers of diesel-powered attack submarines (SS or SSG) decrease, and the numbers of larger and more



Figure 6. (U) SOVIET AIRCRAFT CARRIER KIEV



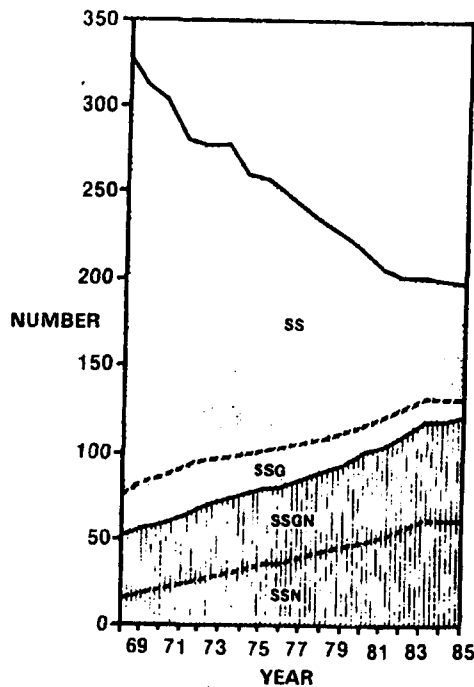


Figure 7. (S) SOVIET GENERAL PURPOSE SUBMARINES (U)

sophisticated nuclear-powered attack submarines (SSN or SSGN) increase. While the Soviet submarine fleet is decreasing in size, it is increasing in capability; and it continues to be large. By 1985, it will still be twice the size of its U.S. counterpart and will have about 25 percent more nuclear submarines.

(S) Figure 8 shows the number and types of long-range attack aircraft in the Soviet Naval Aviation force, the SNA. Although the number of long-range attack aircraft decreases steadily, the number equipped with air-to-surface missiles (ASMs) remains essentially constant. Figure 9 shows the composition of that segment of the force. As the older BADGER aircraft are retired, they are being replaced by new, longer-range, supersonic BACKFIRE bombers. By

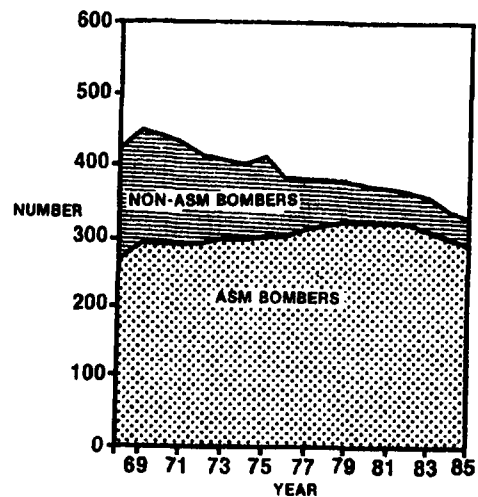


Figure 8. (S) SNA LONG-RANGE ATTACK AIRCRAFT (U)

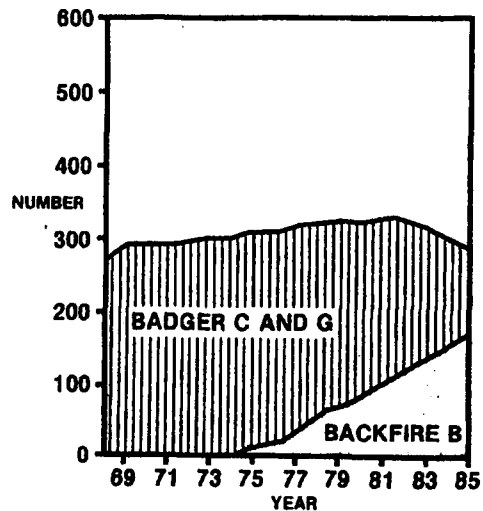


Figure 9. (S) SNA ASM BOMBERS (U)

1985, about half of the entire force is composed of BACKFIRE bombers, and the overall capability of that force is probably greater than that of the earlier, larger force.

## INCREASING DEPLOYMENTS

(S) Another facet of the growing Soviet naval threat began sometime around 1960, when the USSR started to deploy its navy out of home waters and into the oceans of the world. Since that time, the Soviet leadership has come to a full appreciation that a powerful navy is an essential element of global power (Appendix 2). It has worked steadily to improve its capability to sustain naval forces on out-of-area deployment and to increase the number of port facilities open to its naval forces. It has met with some notable failures; but, on the whole, it has been successful and continues to pursue its worldwide goals.

(U) Although the impact of forward-deployed naval forces cannot be measured directly, an examination of trends in the levels of forward-deployed forces can indicate the capability and motivation to maintain such deployments and, perhaps, the willingness to use those deployed forces in situations short of actual warfare.

(S) Figure 10 shows the out-of-area deployments of Soviet naval combatants from 1965 through 1976, expressed in thousands of ship-days per year. As a reference for comparison, the corresponding data are shown for the U.S. Navy. Out-of-area deployments exclude those in operating areas contiguous to the coast of either nation (including Hawaii and Alaska for the United States). During the period examined, the Soviet Navy increased its out-of-area deployments from less than 3400 combatant ship-days per year to

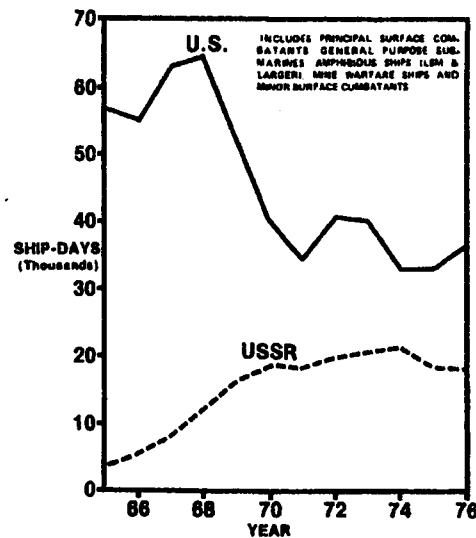


Figure 10. (S) TOTAL COMBATANT OUT-OF-AREA DEPLOYMENTS (U)

about 20,000. During the same period, U.S. figures fell from almost 60,000 combatant ship-days per year to about 35,000.

(S) During this period the U.S. Navy has maintained a relatively constant fraction (about 30 percent) of its forces on forward deployment, while the percentage of Soviet naval forces on forward deployment has risen from about 2 percent in 1965 to about 15 percent in 1976. Thus, the U.S. Navy has had a consistent policy throughout the period, and the decrease in deployments merely reflects decreased force levels. On the other hand, the increase in Soviet naval deployments reflects a change both in policy and in capability.

(S) An equally important point about these Soviet forward deployments is that they have been truly global in scope, as illustrated in Figure 11, which shows the average forward deployments

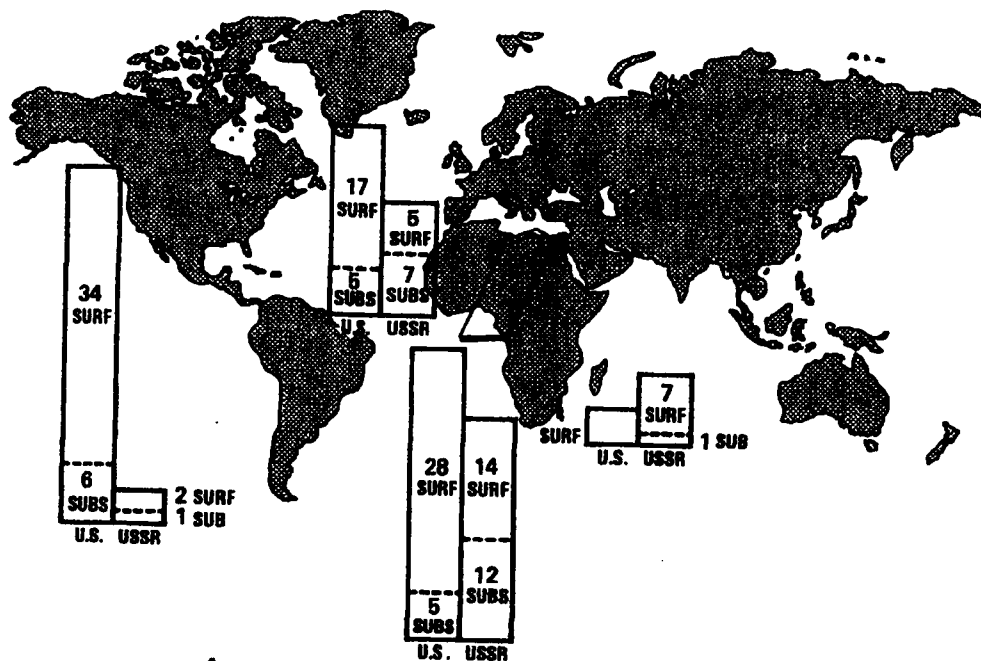


Figure 11. (S) AVERAGE CY 76 COMBATANT OUT-OF-AREA DEPLOYMENTS (U)

of each navy during calendar year 1976. U.S. forward deployment levels were greater in the Mediterranean Sea and in the Atlantic Ocean, while Soviet levels were greater in the Indian Ocean. However, U.S. levels dominated in the Pacific Ocean.

(S) Although its total out-of-area deployment levels are considerably lower than those of the United States, the USSR realizes several advantages from the surge patterns that are characteristic of its deployments. The Soviet Navy maintains skeletal forces on station and augments them with additional forces when specific military or political needs arise. In this way, the Soviet Union achieves the maximum value from its forces by concentrating a convincing level of naval strength where and when it is most needed, without degrading the impact of their presence by making it a predictable routine. The presence of

these forces has enhanced Soviet influence abroad. Additionally, it is eminently clear from ways in which the Soviet Union uses its deployed naval forces that this support of political objectives is an important and explicitly planned goal rather than a by-product of overseas deployment.

#### OKEAN-75

(S) The success of Soviet efforts to achieve full status as a global naval power was clearly demonstrated in OKEAN-75, a Soviet naval exercise that covered the North Atlantic Ocean and parts of the Mediterranean, North, and Barents seas, the Pacific and Indian oceans, and the coastal waters off western Africa (Figure 12). It involved more than 200 ships and submarines, and 700 aircraft sorties, including a number by the new BACKFIRE aircraft.

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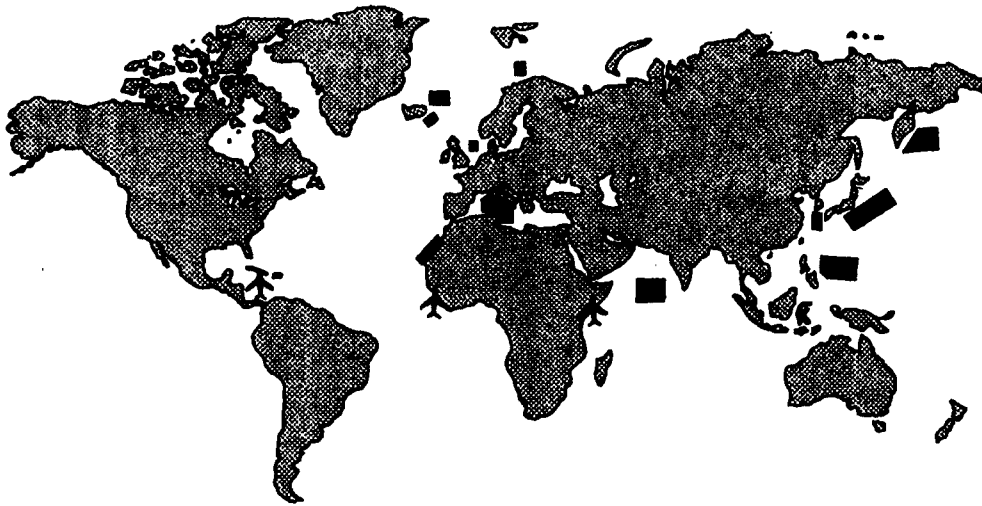


Figure 12 (S) OKEAN-75 EXERCISE AREAS (U)

In addition, aircraft were deployed to client airfields in Somalia, Guinea, and Cuba.

(S) OKEAN-75 seemed to be based on a "real-world" scenario, i.e., a period of rising tension, deployment of additional forces, coordinated efforts devoted to location and surveillance of threat forces, and a final strike phase. The exercise was coordinated in Moscow, but each of the six widely separated exercise groups was assigned a distinct role.

(S) In a number of ways, OKEAN-75 was indicative of the evolving missions of the Soviet Navy. Not only did it practice anticarrier warfare, antisubmarine warfare, and amphibious operations, but for the first time, the USSR showed an interest in carrying out strikes against Western convoys and, perhaps, in protecting its own merchant ships in foreign waters.

(S) OKEAN-75 demonstrated the remarkable capability of the Soviet Navy in worldwide surveillance, command and control, coordination, and effective use of naval forces on a scale and geographic scope never seen before in the history of naval development.

#### SUMMARY

(S) Let us return one last time to the question of the growing Soviet naval threat. It is true that the Soviet Navy is decreasing in numbers. It is replacing its *vast* number of relatively ineffective, small, short-range, coastal-defense-oriented platforms with a *large* number of more sophisticated, offensively oriented, seagoing platforms. The Soviet forces-in-being are undergoing such fundamental increases in unit size, range, sophistication, and capability that the overall force capability is increasing

enormously despite the decrease in numbers.

(S) The Soviet Union continues to have a big navy; a navy that is growing in capability; a navy that has a remarkably effective surveillance and command,

control, and communications system; a navy that has emerged as an important instrument of Soviet policy. In brief, the Soviet Navy has completed the transition from a coastal defense force to a first-rate, worldwide, naval power – and it continues to improve.

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