



The Cuban Missile Crisis: A nuclear order of battle, October and November 1962

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Abstract

This year marks the 50th anniversary of the Cuban Missile Crisis, when the United States and the Soviet Union walked back from the brink of a nuclear war. In this issue of *Nuclear Notebook*, the authors analyze the order of battle of nuclear forces that were available to military and civilian officials in both the United States and the Soviet Union in October and November of 1962. This detail, they point out, has remained widely overlooked by authors, experts, and researchers over the past five decades. Once these nuclear forces are defined, the authors write, the true nature of the crisis was even more serious and dangerous than previously thought.

Keywords

battle, Cuba, Cuban Missile Crisis, global forces, local forces, NATO, nuclear order, nuclear weapons, regional forces, Soviet Union, United States

There is little argument that October 1962—the Cuban Missile Crisis—marked the closest the world has come to nuclear war. Today, 50 years later, volumes have been written about the crisis. Even so, in the tens of thousands of pages that interpret and analyze this conflict, there are essential details missing—specifically, a comprehensive nuclear order of battle. That is, there still remains to be a full accounting of the numbers and types of US and Soviet nuclear weapons that were operational, some of which were on high levels of alert and could have been readily used, from mid-October to

November 20, 1962, when the naval blockade of Cuba ultimately ended.

Depending on their range, yield, location, and delivery mode, the types of nuclear weapons varied. Most writings on the crisis, however, describe certain weapon types and leave others out. The tally, therefore, remains incomplete.

To accurately assess how close the world actually came to nuclear war, it is paramount to analyze the order of battle of nuclear forces that were available to military and civilian officials in both the United States and the Soviet Union during the Cuban Missile Crisis in October and November of 1962.

Examining in detail the status of each weapon system shows the true nature of the crisis—and that it was even more serious and dangerous than previously thought.

Nuclear order of battle

At the peak of the crisis, the United States had some 3,500 nuclear weapons ready to be used on command, while the Soviet Union had perhaps between 300 and 500. But such high numbers, to some degree, are insignificant: that is, even the use of a half-dozen by either side would have been catastrophic—and no doubt would not have ended there.

While it is evident that US President John F. Kennedy and Soviet Premier Nikita Khrushchev had no intention of starting a nuclear war, and did everything they could to prevent one, events could have occurred that they and their advisers would not have foreseen or controlled. That is to say that, as the crisis unfolded, there was a distinct possibility that weapons could be launched by mistake, miscalculation, or misjudgment. One of the more likely scenarios of how a war might have started, however, involves the Soviet use of one or several nuclear weapons to attack American armed forces invading Cuba. Once one nuclear weapon had been used, it is difficult to say where it might have ended. The fear of inadvertent escalation, with events spinning out of control, was clearly a key factor in the efforts to resolve the crisis, especially on the Soviet side.

The only way to calculate the likelihood of a full-scale nuclear war in October 1962 is to construct the nuclear order of battle, which can be broken

down into three categories: the local forces, which were the Soviet and US nuclear weapons in and around Cuba that could have been deployed in a local nuclear war; the regional forces, which were the US tactical weapons in Europe that could hit targets in the Soviet Union and the Soviet weapons in the western USSR that were aimed at European targets, both of which could have been used in a regional war;¹ and the global forces, which were to be used in a global nuclear war and included the US strategic nuclear weapons—intercontinental ballistic missiles (ICBM), submarine-launched ballistic missiles (SLBM), and long-range bombers—that could reach the Soviet Union as well as the Soviet strategic nuclear weapons that could reach the United States.

Local forces

The likeliest scenario of nuclear weapon use initiated in or around Cuba would have involved the Soviet Union using tactical nuclear weapons to attack and repel American forces during an invasion of Cuba. If American soldiers were killed, as they surely would have been, the United States would have had to retaliate—and, more than likely, the Soviets would have responded.

Unbeknownst to the United States, there were 158 Soviet nuclear warheads of five types already in Cuba by the time the military blockade, or quarantine, was imposed on October 24 (see Table 1). Of these weapons, only about 95 to 100 warheads were readily available for use, as no SS-5 missiles, which were intermediate-range ballistic missiles (IRBM), had arrived; by October 28, only some six to eight SS-4 missiles, medium-range

Table 1. Estimated nuclear order of battle during cuban missile crisis, October—November 1962

LOCAL FORCES IN AND AROUND CUBA				
COUNTRY	TYPE	NUMBER	OPERATIONAL	NUMBER OF OPERATIONAL WARHEADS
SOVIET UNION	SS-4 MRBMs	42	6–8	6–8
	SS-5 IRBMs	32	NONE AVAILABLE, NEVER ARRIVED	0
	FROG SRBMs	12	READY	12
	FKR-1 LACMs	80	READY	80
	IL-28 GRAVITY BOMB	6	AIRPLANES STILL IN CRATES	0
TOTAL				~95–100
US DEFENSE SYSTEMS ¹	NIKE HERCULES SAMs	?		?
	BOMARC, LONG-RANGE ANTI-AIRCRAFT MISSILES	?		?
REGIONAL FORCES IN EUROPE				
COUNTRY	TYPE	NUMBER	OPERATIONAL	NUMBER OF WARHEADS
US AND NATO FORCES				
ITALY	JUPITER IRBMs	30	YES	6–8
GERMANY	MACE CRUISE MISSILES	90	YES	0
US/NATO BASES	AIRCRAFT BOMBS ²	~300	YES	~300
TURKEY	JUPITER IRBMs	15	YES	15
UNITED KINGDOM	THOR IRBMs	60	YES	60
TOTAL				450–500
SOVIET AND WARSAW PACT FORCES				
SOVIET UNION	SS-4 MRBMs	528	YES	528
	SS-5 IRBMs	28	YES	28
	AIRCRAFT	? ³	YES	?
TOTAL				~550
GLOBAL FORCES				
COUNTRY/COMMAND	TYPE	NUMBER	OPERATIONAL STATUS	NUMBER OF OPERATIONAL WARHEADS
SOVIET UNION	SS-6 ICBMs	6	YES	6
	SS-7 ICBMs	36	YES	36
	TOTAL			42
	TU-95 BEAR BOMBERS	100	YES	270
	3M BISON BOMBERS	60	YES	
	TOTAL	160		
BOMBER-DELIVERED WEAPONS				
US STRATEGIC AIR COMMAND	ATLAS D/E/F ICBMs	121	YES	121
	TITAN I ICBMs	53	YES	53
	MINUTEMAN IA ICBMs	8	YES	8
	TOTAL			182
	B-47 BOMBERS	880	YES	2,952
	B-52 BOMBERS	639	YES	
	B-58 BOMBERS	76	YES	
TOTAL				1,595
BOMBER-DELIVERED WEAPONS				

(Continued)

Table 1. Continued

COUNTRY/COMMAND	TYPE	NUMBER	OPERATIONAL STATUS	NUMBER OF OPERATIONAL WARHEADS
ATLANTIC COMMAND	SLBMs	112 ⁴		112
PACIFIC COMMAND ⁵	MACE CRUISE MISSILE	16	YES	16
	REGULUS CRUISE MISSILE	4	YES	4
TOTAL				~220
EUROPEAN COMMAND ⁶				~250
GRAND TOTAL				~3,500

ICBM = intercontinental ballistic missiles

MRBM = medium-range ballistic missiles

IRBM = intermediate-range ballistic missiles

SAM = surface-to-air missiles

LACM = land-attack cruise missiles

SRBM = short-range ballistic missiles

¹ Within the interceptor squadrons, there were more than 1,000 aircraft on alert.

² On Quick Reaction Alert, or QRA, and alert aircraft based in Germany, Italy, Greece, Netherlands, Turkey, and the United Kingdom and on Sixth Fleet aircraft carriers in the Mediterranean.

³ The number and type unknown; however, there is a possibility that there were Tu-16, Tu-22, or MiG-21 aircraft based in the western Soviet Union or Warsaw Pact countries.

⁴ These were deployed on seven nuclear-powered ballistic missile submarines.

⁵ Mace cruise missiles were on Okinawa, and Regulus cruise missiles were aboard submarines. There were three aircraft carriers—the *Oriskany*, the *Bon Homme Richard*, and the *Kitty Hawk*—in the western Pacific. Each of the three aircraft carriers had an estimated 40 nuclear weapons aboard for its Air Wing. Several dozen other aircraft were readied at US bases in Allied countries.

⁶ Many of the regional forces used were linked to European Command's war plan. Each of the two aircraft carriers—the *Franklin D. Roosevelt* and the *Enterprise*—in the Mediterranean had an estimated 40 nuclear weapons aboard its aircraft. Dozens of other aircraft were readied at US bases in NATO countries.

ballistic missiles (MRBM), had reached operational status, and the IL-28 nuclear-capable bombers were still in their crates. The most prolific and dangerous of the nuclear weapons available were the 80 warheads for two regiments of land-attack cruise missiles, the FKR-1 Meteor. Had there been a US invasion, these missiles would have been launched against the US Naval Base at Guantanamo and at amphibious forces storming the Cuban beaches.

What still remains unknown, and deserves further research, is America's shifting plans for its nuclear weapons during an invasion of Cuba: that is, as the operational plan was initially devised, the Joint Chiefs of Staff considered the use of US nuclear weapons, but, by October 31, they decided against such use in invasion operations.

Furthermore, there is continuing disagreement about the Soviet command and whether General Issa Pliyev, who directed Soviet Forces in Cuba, ever had the authority to order the use of either the short-range FROG missile

("Free Rocket Over Ground," also called "Luna"), or the FKR-1 missiles. As scholar Steven Zaloga concludes:

Although there has been some debate over whether the local commanders were given launch authority in advance by the Soviet government, recent documents released in Russia make it clear that Moscow informed the commander of the Group of Forces in Cuba that the nuclear warheads on the FKR, Luna tactical rockets, and IL-28 jet bombers were not to be employed without specific authorization from the Kremlin. However, the evidence would suggest that Moscow did not have any actual negative technical control over the weapons, and that the local commanders could have used them without permission had war broken out, assuming the assent of the custody units. (2002: 87)

Further, Zaloga writes, no evidence exists that the Soviet Union ever deployed the tactical nuclear weapons for deterrence purposes.

There were no known plans to disclose the presence of these units, and their existence was not revealed until the early 1990s, after the collapse of the Soviet Union. They were deployed to fight had the United States

invaded Cuba, and U.S. intelligence at the time was not aware of them. (2002: 85–86)

For the United States, there would not have been a situation more dire than if the Soviets had directed SS-4s on US cities. According to Soviet major general Igor Statsenko, commander of the Soviet missile troops in Cuba, there were only six to eight missiles operational on October 28, when the dismantlement order from Moscow arrived. Still, 50 years later, it is unknown how ready they were or whether they were specifically targeted at US cities. Places along the eastern seaboard, as far north as Washington, DC, were within the missiles' 1,300-mile range—as were New Orleans, Houston, and Dallas to the west and Cincinnati to the northwest. Even with its poor accuracy, a one-megaton detonation in or around those US cities would have caused hundreds of thousands of deaths.

Regional forces

For both the United States and the Soviet Union, their respective nuclear weapon systems were available in and around Europe and could have been employed if escalation had occurred; specifically, medium-range and intermediate-range missiles and fighter bombers made up US and NATO and Soviet regional forces in the European theater. If a nuclear exchange had been confined to Europe and the western part of the Soviet Union, the numbers of weapons would have been approximately equal—but such geographic convenience was an unlikely scenario at the time since Atlantic Command and European Command forces were part of the Single Integrated Operational Plan, or

SIOP, as it was known, which coordinated the nuclear-targeting plans of all commands to avoid duplicative attacks. It is instructive, nevertheless, to estimate Europe's possible role in the crisis.

US and NATO weapons facing east. In 1962, the United States had approximately 4,375 nuclear weapons deployed in Europe. Most were tactical nuclear weapons—155-millimeter and 203-millimeter artillery shells, Nike Hercules surface-to-air missiles, land mines, and short-range missiles—intended for the nuclear battlefield. But roughly 10 percent or so, about 450 nuclear weapons, were deployed on ballistic missiles (Thor and Jupiter), cruise missiles (Matador and Mace), and bombs for Air Force fighter bombers at US and NATO bases and Navy carrier-based planes within range to hit targets in the Soviet Union. The US and NATO fighter bombers had a supply of nuclear bombs deployed at bases in Germany, Italy, Greece, Turkey, the United Kingdom, and the Netherlands, as well as aboard US Sixth Fleet aircraft carriers.

Soviet weapons facing west. At the same time, in 1962, the Soviet Union had over 550 SS-4 MRBMs and SS-5 IRBMs. Many were likely aimed at European targets, with a portion pointed at US bases and US allies in the Pacific region. Soviet fighter bombers based near the western border of the Soviet Union may have had missions to hit targets in Western Europe.

Overall, the United States had approximately 500 nuclear weapons at its disposal to attack targets in the

western Soviet Union—and, with its 550 nuclear weapons, the Soviet Union had a slightly larger arsenal to hit European targets.

Global forces

If nuclear weapons had been used in or around Cuba—or launched from Cuba—the possibility of escalation would have been exceedingly high: The regional use was likely and the use of strategic weapons was a serious possibility. In the words of President Kennedy in his October 22 address to the nation, “It shall be the policy of this nation to regard any nuclear missile launched from Cuba against any nation in the Western Hemisphere as an attack by the Soviet Union on the United States, requiring a full retaliatory response upon the Soviet Union.”²

US strategic forces were many times larger and more reliable than Soviet strategic forces in October and November 1962. For example, in October, the United States had, at its disposal for a large-scale attack on the Soviet Union, over 3,500 “fully generated” nuclear weapons, with a combined yield of approximately 6,300 megatons. At peak alert on November 4, the US Strategic Air Command forces that were ready for employment in retaliatory attacks included 1,479 bombers, 182 ballistic missiles, 2,952 total nuclear weapons, and 1,003 refueling tankers.

The Soviet Union had approximately 42 ICBMs capable of reaching the United States, no SLBMs, a long-range bomber force of 150 Bear and Bison bombers that would have had to face a formidable US-Canadian air-defense system of fighter interceptors with nuclear air-to-air missiles, and BOMARC (Boeing Michigan

Aeronautical Research Center) and Nike Hercules surface-to-air missiles. Soviet general Anatoly Gribkov stated that Khrushchev and his military advisers knew “that US strategic nuclear forces outnumbered ours by approximately 17 to 1 in 1962” (Gribkov and Smith, 1994: 10–11).

New understanding 50 years later

The Cuban Missile Crisis unfolded in the early stage of the arms race, when each side’s forces were still relatively immature. The forces on the US side were configured for either deterrence or war, with safety a secondary objective. There was not yet the inherent strategic coupling of forces that would occur when US and Soviet forces attained rough levels of parity in the late 1970s.³ At this later, more dangerous stage, something either accidental or deliberate may have triggered higher stages of alert and a cascading effect may have been devastating. And such measures would simply have been responsive actions—and, under the conditions, seen as logical, prudent, and conservative.

Editor’s note

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Notes

1. British and French weapons are excluded.
2. Emphasis added by the authors.

3. The term “coupling” was used by Paul Bracken and is discussed in his book, *The Command and Control of Nuclear Forces* (1983).

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