### Posture/hardware changes (“de-mate”)

#### De-mate = operational NFU

Tannenwald, 2019 (Nina, Texas National Security Review, 8-1-2019, "It’s Time for a U.S. No-First-Use Nuclear Policy," <https://tnsr.org/roundtable/its-time-for-a-u-s-no-first-use-nuclear-policy/>, DoA 6/3/2023, DVOG)

As Kingston Reif and Daryl Kimball of the Arms Control Association have argued, “**a clear U.S. no-first-use policy would reduce the risk of Russian or Chinese nuclear miscalculation during a crisis by alleviating concerns about a devastating U.S. nuclear first-strike.”****[24](https://tnsr.org/roundtable/its-time-for-a-u-s-no-first-use-nuclear-policy/%22%20%5Cl%20%22_ftn24)** This would mean that the United States would rely on nuclear weapons only to deter nuclear attacks. **Adopting this approach would involve more than “cheap talk,” for it would require meaningful doctrinal and operational changes**.**[25](https://tnsr.org/roundtable/its-time-for-a-u-s-no-first-use-nuclear-policy/%22%20%5Cl%20%22_ftn25)** Specifically**, it would allow the United States to adopt a less threatening nuclear posture. It would eliminate first-strike postures, preemptive capabilities, and other types of destabilizing warfighting strategies. It would emphasize restraint in targeting, launch-on-warning, alert levels of deployed systems, procurement, and modernization plans. In other words, it would help shape the physical qualities of nuclear forces in a way that renders them unsuitable for missions other than deterrence of nuclear attacks**.**[26](https://tnsr.org/roundtable/its-time-for-a-u-s-no-first-use-nuclear-policy/%22%20%5Cl%20%22_ftn26)**

#### De-mate = NFU implementation, China proves

Tannenwald, 2019 (Nina, Texas National Security Review, 8-1-2019, "It’s Time for a U.S. No-First-Use Nuclear Policy," <https://tnsr.org/roundtable/its-time-for-a-u-s-no-first-use-nuclear-policy/>, DoA 6/3/2023, DVOG)

**The United States ought to unilaterally adopt an NFU policy**, and ask other nuclear-armed states to do the same. This would constitute the formal adoption of what is already essentially de facto U.S. policy.**[33](https://tnsr.org/roundtable/its-time-for-a-u-s-no-first-use-nuclear-policy/%22%20%5Cl%20%22_ftn33)** A U.S. NFU policy would create political space for Russia to follow suit: For Russia to consider NFU, its concerns about U.S. ballistic missile defenses, imbalances in conventional forces, and issues of NATO enlargement would need to be addressed. The United States would also need to tackle the issue of extended deterrence with its allies and move toward conventional extended deterrence.**[34](https://tnsr.org/roundtable/its-time-for-a-u-s-no-first-use-nuclear-policy/%22%20%5Cl%20%22_ftn34)** India and Pakistan would need a *modus vivendi* on Kashmir, while the United States and North Korea would need to sign a non-aggression pact. In fact, the United States could actually negotiate a mutual NFU agreement with North Korea. The United States is extremely unlikely to use nuclear weapons first on North Korea, therefore an agreement that provided a basis for imposing some restraint on the North Korean arsenal would be in America’s interest.**[35](https://tnsr.org/roundtable/its-time-for-a-u-s-no-first-use-nuclear-policy/%22%20%5Cl%20%22_ftn35)**

**Doctrinal and operational changes would need to follow such a declaration. China’s restrained nuclear arsenal provides the best example of an NFU pledge implemented in practice. Unlike the United States and Russia, China keeps its warheads and missiles separated. It has not developed precision-strike nuclear war-fighting capabilities, such as tactical nuclear weapons, and it does not keep its forces on “launch-on-warning” alert. China has also invested heavily in conventional military modernization so that it would not have to consider nuclear escalation in a conventional war**.**[36](https://tnsr.org/roundtable/its-time-for-a-u-s-no-first-use-nuclear-policy/%22%20%5Cl%20%22_ftn36)** **India, too, keeps its warheads and missiles separate** in support of its NFU pledge, though some analysts argue that India’s NFU policy does not run especially deep and that it “is neither a stable nor a reliable predictor of how the Indian military and political leadership might actually use nuclear weapons.”**[37](https://tnsr.org/roundtable/its-time-for-a-u-s-no-first-use-nuclear-policy/%22%20%5Cl%20%22_ftn37)** Nevertheless**, both countries’ operational postures reflect (to some degree) their NFU policies.****[38](https://tnsr.org/roundtable/its-time-for-a-u-s-no-first-use-nuclear-policy/%22%20%5Cl%20%22_ftn38) The United States and the other nuclear powers should move in this direction.**

#### Operational NFU includes de-alert and de-mate.

Blair, research scholar in the Program on Science and Global Security at Princeton University and co-founder of the Global Zero movement, 2018 (Bruce G., with Jessica Sleight and Claire Foley, “The End of Nuclear Warfighting: Moving to a Deterrence-Only Posture an alternative u.s. nuclear posture review”, Global Zero, <https://www.globalzero.org/wp-content/uploads/2018/09/ANPR-Final.pdf>, DoA 6/3/2023, DVOG)

**NFU is often dismissed as empty rhetoric** that could easily be overturned if the parties changed their minds. But **the operating systems of nuclear postures can be modified in ways that show a genuine commitment to the policy. To reinforce the credibility of a U.S. pledge not to strike first and assure adversaries that such a strike would not negate their ability to respond, the United States could greatly reduce the number of warheads on launch-ready alert. The number should be kept well below the threshold at which a sudden decapitating strike is possible; about 270 warheads pose such a first-strike threat to Russia. The U.S. delivery vehicles carrying the deployed warheads—submarines only, after the elimination of silo-based missiles—could incorporate this principle by adopting a “modified alert” posture that requires 24–72 hours of preparations to reach launch-ready status.** Russia would be called upon to return to its pre-1993 commitment to NFU and adopt comparable confidence building measures that align operations with it. China already keeps its strategic forces at a low level of readiness in keeping with its longstanding NFU pledge.

#### No first use backed by operational changes in posture is most credible

Holdren, Research Professor in Harvard University's Kennedy School of Government and Co-Director of the Science, Technology, and Public Policy Program, 2020 (John P. Holdren (2020) The overwhelming case for no first use, Bulletin of the Atomic Scientists, 76:1, 3-7, DOI: 10.1080/00963402.2019.1701277, DoA 6/3/2023, DVOG)

Against the argument that, outside the peace movement and countries that don’t matter, no one would give the United States any credit for a nofirst-use declaration

This argument ignores the transformation a US no first use declaration, backed up by changes in posture, would bring to the moral standing of the United States in the global discussion about both nonproliferation and reducing the role of nuclear weapons in the policies of countries that have them. It also ignores the statements in favor of the United States taking a no-first-use position that have been made by many experienced statesmen, nuclear-weapon experts, and retired military leaders from countries that do matter.

#### Operational NFU means posture change

Bulletin of the Atomic Scientists, 2016 (Bulletin Staff, 8-19-2016, "Why Obama should declare a no-first-use policy for nuclear weapons," Bulletin of the Atomic Scientists, <https://thebulletin.org/2016/08/why-obama-should-declare-a-no-first-use-policy-for-nuclear-weapons/>, DoA 6/3/2023, DVOG)

Were Washington to set a more restrained example by taking a firm stand against first-use policies, such a scenario would be less likely to develop. Any nuclear power that makes a no-first-use declaration avoids the need for forward deployment, launch-on-warning postures, and pre-delegation of authority to battlefield commanders, thereby significantly dampening the prospects of accidental and unauthorized use. A no-first-use policy also counteracts crisis instability in that it reduces the pressure on decision makers to “use or lose” their nuclear weapons. Thus where a first-use posture can heighten the dangers of a crisis between nuclear adversaries, a no-first-use posture can help to defuse them.

### De-Alert Good/Bad

Concerns—not a lot of authors/ev post Ukraine, eliminating ICBMs gets affs all the advantage ground while guaranteeing better assurance/deterrence/conventional shift ground for neg, maybe this should be a CP to eliminate ICBMs?

#### De-Alert Good

Von Hippel, co-founder of the Program on Science and Global Security at Princeton University’s School of Public and International Affairs, 2021 (Frank, 6-22-2021, "Biden should end the launch-on-warning option," Bulletin of the Atomic Scientists, <https://thebulletin.org/2021/06/biden-should-end-the-launch-on-warning-option/>, DoA 6/2/2023, DVOG)

Both Presidents George W. **Bush and** Barack **Obama came into office proposing to take US intercontinental ballistic missiles (ICBMs) off their “hair-trigger alert” status, which keeps them ready at all times to launch within minutes**. The time is so short for a president to have to decide to launch in response to Strategic Command’s assessment of an incoming attack that President Bush [reportedly complained](https://www.tandfonline.com/doi/full/10.1080/00963402.2019.1701279) it might not even be enough time for him to get off the “crapper.”

**While in office, Bush failed to act on his concerns. President Obama pursued the issue but retreated in the face of opposition from Strategic Command**. The most he could get in the [2013 Nuclear Employment Strategy of the United States](https://fas.org/wp-content/uploads/2013/06/NukeEmploymentGuidance_DODbrief061213.pdf) was a promise to look into the matter:

Recognizing the significantly diminished possibility of a disarming surprise nuclear attack, the guidance directs [the Defense Department] to examine further options to reduce the role of Launch Under Attack plays in US planning, while retaining the ability to Launch Under Attack if directed.

**Strategic Command prefers to use the term “launch under attack” because a launch would only occur if there were high confidence in the warning that an actual attack was on its way.** Strategic Command has never explained how high such confidence would need to be for a decision capable of causing directly and indirectly the deaths of at least a hundred million humans.

**Launch on warning is controversial for two reasons: First, history has shown that false warnings do occur due to equipment failure and human error, and today there is the additional danger of hackers. Second, a launch-on-warning posture is indistinguishable from being constantly poised to mount a first strike, which pressures Russia and China to put their missiles on hair trigger as well. The United States would be on the receiving end for any mistaken launch one of them makes.**

President Biden has indicated he does not support first use of US nuclear weapons. He should end the launch-on-warning option and the danger it entails of an unintended nuclear Armageddon. He could order Strategic Command to plan the US nuclear posture on the assumption that he will not launch on warning. US nuclear planners would have to assume a delayed response and revise their contingency plans accordingly.

#### Dealert good first step

Von Hippel, co-founder of the Program on Science and Global Security at Princeton University’s School of Public and International Affairs, 2021 (Frank, 6-22-2021, "Biden should end the launch-on-warning option," Bulletin of the Atomic Scientists, <https://thebulletin.org/2021/06/biden-should-end-the-launch-on-warning-option/>, DoA 6/2/2023, DVOG)

**A possible first step: Don’t rely on launch on warning. A first step to reduce the danger of mistaken launch on warning would be for President Biden to order Strategic Command to plan the US nuclear posture on the basis of the assumption that he would *not* launch on warning. Launch on warning would still be physically possible, with whatever deterrence benefits that would stem therefrom, but US nuclear planners would have to assume a delayed response and revise their contingency plans accordingly**.

I have been told by former insiders that, **if it were given such instructions, Strategic Command could be much less reluctant to give up the ICBM force.** Former Secretary of Defense Perry has been [recommending doing s](https://www.washingtonpost.com/opinions/2020/11/17/how-biden-administration-could-create-win-win-situation-nuclear-policy/)o for some years. **The total number of deployed warheads could be maintained by deploying an additional 400 warheads to US ballistic-missile submarines whose missiles are designed to carry up to eight warheads each but, due to** New Strategic Arms Reduction Treaty (**New START**) limits, currently **carry about half that number** on average.

The Defense Department’s [2013 Nuclear Employment Strategy of the United States](https://fas.org/wp-content/uploads/2013/06/NukeEmploymentGuidance_DODbrief061213.pdf) stated, however, that the United States could “maintain a strong and credible strategic deterrent while safely pursuing up to a one-third reduction in deployed nuclear weapons from the level established in the New START Treaty.”

Of course, Strategic Command and Congress would prefer that such a reduction be done bilaterally with Russia.

In short, **Strategic Command could get rid of launch on warning and the ICBMs at the same time. Eliminating launch on warning would significantly reduce the probability of blundering into a civilization-ending nuclear war by mistake. To err is human. To start a nuclear war would be unforgivable**.

#### Launch on warning/launch on attack bad

Montoya and Kemp, Laboratory for Nuclear Security and Policy at MIT, 2023 (Natalie and R. Scott, March 17, "Launch Under Attack: A Sword of Damocles," War on the Rocks, <https://warontherocks.com/2023/03/launch-under-attack-a-sword-of-damocles/>, DoA 6/3/2023, DVOG)

On Jan. 10, 1984, a guidance computer in a U.S. Minuteman-III missile suffered a glitch. As a result, operators in the nearby command center received a message that the missile, aimed at Russia, was entering its launch sequence all on its own. It carried three nuclear warheads. Security forces scrambled to [park a truck on top of the silo lid](https://www.washingtonpost.com/archive/politics/1987/10/29/vehicle-parked-on-silo-after-launch-signal/14c77303-74e2-47bb-8d90-30307e2983bd/) in an attempt to prevent the missile from launching. While the officer in charge later disclaimed that there was a real risk, the truck-parking procedure was in place because the risk of inadvertent launch was understood to be nonzero. This begs the question: Are Russian missiles guaranteed never to launch themselves? Are their missileers perfectly reliable? If the answer is no, then why does the United States maintain a policy that risks starting a nuclear war in the event something goes wrong?

Since the 1960s, **the United States has deployed nuclear-tipped ballistic missiles in concrete silos. Barring an almost direct hit, the silo is designed to protect the missile from the crushing overpressure of nuclear explosions so that it can be used for retaliation. In addition to this physical protection, the United States maintains a posture it calls “launch under attack,” a doctrine that permits U.S. missiles to be loosed from their shelters after “**[**multiple, independent sensors**](https://2009-2017.state.gov/t/avc/rls/250644.htm)**” detect an incoming attack from an adversary. The notional purpose of this policy is to provide extra assurance that U.S. silo-based missiles will not be destroyed, silo protections notwithstanding.**

**Launch under attack proponents argue that this posture**[**improves strategic stability**](https://media.defense.gov/2018/Feb/02/2001872886/-1/-1/1/2018-NUCLEAR-POSTURE-REVIEW-FINAL-REPORT.PDF)**. We argue it does the opposite. A better description of the policy would be “launch on warning.” While multiple sensors are used, those sensors cannot discern whether the warheads on incoming missiles are armed. Because the posture forces a decision before these missiles land, it leaves the president somewhere between zero and 20 minutes to guess at whether the electronic warning messages received constitute an actual attack. This is scant time and an imperfect basis for definitively committing to a civilization-ending nuclear war.**

Such a gamble might be deemed necessary if the United States were at risk of losing its weapons from a first strike — a nuclear Pearl Harbor, as the policy’s [proponents like to say](https://warontherocks.com/2018/06/bolt-out-of-the-blue-nuclear-attack-warning-in-the-era-of-information-and-cyber-warfare/) — but this is not a reality. We argue from published data about missile accuracies and silo hardness that silos will work, and U.S. missiles will survive. In fact, because of a technical twist, the U.S. deterrent force may be stronger after the attack than before it, when measured as weapons available per target. This implies that launch under attack does not provide any additional deterrent against a first strike.

At the same time, **there are many**[**historical examples**](https://nsarchive.gwu.edu/briefing-book/nuclear-vault/2020-03-16/false-warnings-soviet-missile-attacks-during-1979-80-led-alert-actions-us-strategic-forces)**of early-warning systems generating false alarms or computer-generated messages pretending to be actual warnings. When combined with a launch-on-warning posture, these glitches create real risks of accidental war**. It is thus not surprising that four-star generals George Lee Butler, Eugene E. Habiger, and James Cartwright — all of whom served as commander of U.S. Strategic Command — have argued forcefully that the United States should abandon its launch under attack policy. Both Presidents George W. Bush and Barack Obama [called for severely reducing or eliminating the capacity](https://www.ucsusa.org/resources/leaders-urge-taking-weapons-hair-trigger-alert), stating that it created unacceptable risks. As a candidate, [President Bush also argued](http://www.nuclearfiles.org/menu/library/correspondence/bush-george/corr_bush_2000-05-23.htm) that the United States should not wait for Russia to reciprocate “because it is in our best interest and the best interest of the world” to act unilaterally. However, U.S. policy remains unchanged.

President Joe **Biden’s**[**2022 Nuclear Posture Review**](https://media.defense.gov/2022/Oct/27/2003103845/-1/-1/1/2022-NATIONAL-DEFENSE-STRATEGY-NPR-MDR.PDF)**released in October maintains the status quo, but it also confesses that the policy is not needed, stating: “…while the United States maintains the capability to launch nuclear forces under conditions of an ongoing nuclear attack, it does not rely on a launch-under-attack policy to ensure a credible response. Rather, U.S. nuclear forces are postured to withstand an initial attack.”** Our simulations support this finding. **Even under the most pessimistic assumptions, about 100-200 missiles are expected to survive in their silos — more than enough to inflict severe damage on an adversary**.

Silo Survivability Simulations

The scenarios investigated in our work were based on the assertion made in the [2018 Nuclear Posture Review](https://media.defense.gov/2018/Feb/02/2001872886/-1/-1/1/2018-NUCLEAR-POSTURE-REVIEW-FINAL-REPORT.PDF) that “**To destroy U.S. ICBMs [silo-based missiles] on the ground, an adversary would need to launch a precisely coordinated attack with hundreds of high-yield and accurate warheads. This is an insurmountable challenge for any potential adversary today, with the exception of Russia.”**

Following this view, we developed four attack scenarios in which Russia targets each of the 400 U.S. silos with one warhead, two warheads, three warheads, and finally all of its deployed ballistic missiles (in silos, on road-mobile launchers, and on submarines). We used [probabilistic computer simulations](https://dspace.mit.edu/handle/1721.1/139236) of missile accuracy and blast effects to estimate the number of silos that would survive the attack, and ran 10,000 simulations for each attack scenario. (Details of missile accuracy and warhead yields are available in [supplemental information](https://web.mit.edu/ngm/www/LUA_Paper_Experimental_Supplement_1.10.23.pdf)). Most Russian ballistic missiles carry multiple warheads on independently targeted reentry vehicles, which imposes constraints on a Russian attack because there is a physical limit to how far apart the individual warheads carried by the same missile can be targeted. Our simulations target the individual warheads to optimize their performance.

The findings for each of the four attack profiles are shown in Figure 1. In each case, we assumed unrealistically high performance for Russia’s weapons. Our findings therefore overestimated the damage Russia could do to U.S. nuclear forces. Specifically, our calculations assumed Russian missiles would suffer no launch failures, duds, navigation errors, flight-control errors, or any other failure that would prevent them from reaching their targets. We also assumed zero fratricide, which is to say Russia’s nuclear detonations would not disrupt other incoming Russian warheads. The smallest attack left the United States with 205 ± 9 missiles, which is just over half of the existing force. The largest attack left 102 ± 9 missiles. In addition to these silo-based missiles, the United States would still retain [about 1,000 nuclear warheads deployed on submarine-based missiles](https://www.tandfonline.com/doi/full/10.1080/00963402.2022.2156686?src=recsys), and hundreds more to be delivered by bombers.

Under the brinkmanship construct, **the ability to deter Russia’s first strike rests on its assessment of both the probability that the United States would decide to retaliate as well as the damage inflicted by that retaliation. With respect to a decision to retaliate, adding launch under attack would not change anything. If the attack were genuine, the United States would respond. Launch under attack *does* make a decision to use weapons more probable, but only for the subset of cases where the early warning system gave a false alarm — exactly those cases where such a decision would be in error**.

**That leaves the question of whether the retaliation that the United States could inflict after riding out an attack is comparable to that under launch under attack. Leaving aside U.S. submarines, the number of silo-based missiles remaining would in all cases be sufficient to execute the planned catastrophic damage to Russia**’s war-making ability.

First, consider the case where the United States launched all of its silo-based missiles on warning of an incoming, large-scale attack. The Russian arsenal accounts for 138 [“counterforce” targets](https://www.tandfonline.com/doi/full/10.1080/00963402.2022.2038907?src=recsys) (126 silos, seven mobile missile bases, three nuclear bomber bases, and two nuclear missile submarine bases). To compensate for imperfect accuracy and reliability, each aim point would likely be covered by multiple warheads, as evidenced by [declassified Cold War plans](https://nsarchive2.gwu.edu/NSAEBB/NSAEBB56/BerlinC1.pdf). Geographically large targets, like bases, often have multiple aim points. Assuming two warheads per aim point, and that bases have two aim points each while silos have just one, the counterforce targets alone require 300 of the 400 available U.S. silo-based missiles. This would leave 100 weapons for the remaining non-missile counterforce targets, leadership targets, and strategic elements of Russia’s war-making capability such as industry.

Now **consider the case after an all-out Russian attack in which the United States did not launch its missile on warning. The 300 counter-missile targets are no longer meaningful targets**, since Russia used those weapons in its attack. The other types of targets remain, but **now the United States can be expected to have, in the worst case, 102 warheads for these targets where the initial plan designated 100. The situation for the United States is nearly the same regardless of whether the land-based missiles were launched on warning of an incoming attack or not. The remaining U.S. land-based missile force would therefore be adequate to perform its original mission. Moreover, the hundreds of additional submarine- and bomber-based weapons would continue to provide an excellent deterrent against other adversaries or any rebuilt Russian force**.

The Counterargument

Given these findings — which we assume are known to military planners — as well as longstanding criticism from former presidents and Strategic Command commanders, the perpetuation of the launch under attack option is curious. The last five Nuclear Posture Reviews have defended the policy using largely identical language:

From the [2002 Nuclear Posture Review](https://uploads.fas.org/media/Excerpts-of-Classified-Nuclear-Posture-Review.pdf): “U.S. forces are not on ‘hair trigger’ alert and rigorous safeguards exist to ensure the highest levels of nuclear weapons safety, security, reliability, and command and control. Multiple, stringent procedural and technical safeguards are in place to guard against U.S. accidental and unauthorized launch. ”

20 years later, the [2022 Nuclear Posture Review](https://media.defense.gov/2022/Oct/27/2003103845/-1/-1/1/2022-NATIONAL-DEFENSE-STRATEGY-NPR-MDR.PDF) provides basically the same defense: “U.S. intercontinental ballistic missiles (ICBMs) are not on ‘hair trigger’ alert. These forces are on day-to-day alert, a posture that contributes to strategic stability. Forces on day-to-day alert are subject to multiple layers of control, and the United States maintains rigorous procedural and technical safeguards to prevent misinformed, accidental, or unauthorized launch.”

Unfortunately, these defenses are naive to the kinds of failures that can emerge in complex systems.

**The United States uses “dual phenomenology” to assess missile launches prior to launching a retaliatory strike. As the name suggests, it depends on two independent sensor systems to provide warning of incoming ballistic missiles: The**[**Space Based-Infrared System satellites**](https://www.lockheedmartin.com/en-us/products/sbirs.html)**detect missile launches, and the**[**Upgraded Early Warning Radars**](https://www.spaceforce.mil/About-Us/Fact-Sheets/Article/2197738/upgraded-early-warning-radars/)**track incoming missiles. To fulfill the requirements of dual phenomenology, an incoming missile must be detected by both satellite and radar. While this is a useful safeguard, it does not provide any assurance that the incoming missile carries a nuclear weapon or that those weapons are armed**. For instance, missile flight tests are conducted unarmed, and Russia has [conducted flight tests from Dombarovsky](https://thediplomat.com/2018/12/russia-conducts-successful-flight-test-of-avangard-hypersonic-glide-vehicle/), which also hosts some of Russia’s silo-based missile forces. An accidental launch from that field may be an unarmed missile. There are other scenarios as well.

**Once sensor information is received and evaluated, the alert is advanced up the chain of command through multiple “conferences” until it reaches the president. These conferences are intended to avoid mistakes. However, the whole process leaves**[**only a few minutes to make critical decisions**](https://calhoun.nps.edu/handle/10945/21501)**. The president would have at most 20 minutes for incoming land-based missiles and as little as zero minutes for Russian submarine-based missiles based near the United States to decide whether to retaliate. Particularly for Russia’s submarine-based missiles, this timeline is extremely tight, which puts immense pressure on all involved** — all without knowing the intent, character, or payload of the incoming missiles. Even if these procedures constitute “rigorous procedural and technical safeguards,” the fact remains that sensors provide unacceptably incomplete information on which to base nuclear war.

**Perhaps the biggest risk**[**arises from nonrandom errors**](https://nsarchive.gwu.edu/briefing-book/nuclear-vault/2020-03-16/false-warnings-soviet-missile-attacks-during-1979-80-led-alert-actions-us-strategic-forces), like the one that occurred on Nov. 9, 1979, when North American Aerospace Defense Command received sensor warnings of incoming missiles. The early-warning system showed 250 and then 2,200 missiles incoming from the Soviet Union. **The problem was not a technical malfunction: Rather, a training tape was accidentally left in place, and it simulated the information needed to confirm that the launches were authentic.**

**In addition to human error, there may be common-mode technical failures in electronics or software. Depending on where these occur, they may give the appearance of detections confirmed by redundant sensor systems**. For example, on June 3, 1980, a circuit chip failure caused North American Aerospace Defense Command screens to display 200 incoming missiles rather than 000. A similar glitch was responsible for triggering the apparent self-launch of a U.S. missile mentioned at the start of this article.

**The only way to be confident that the United States is being attacked with a nuclear weapon is to wait until sensors detect an actual detonation. Unpleasant as that may seem, it bears remembering that whether the United States launches its retaliation before or after the detonation does not change the number of detonations over U.S. soil. Launch under attack cannot reduce U.S. causalities, but it could increase them by unintentionally initiating a nuclear war that didn’t exist. With the stakes so high and missile survivability already adequate, it would be prudent to wait until detonations are confirmed.**

A Technical Imperative?

Prior to his becoming Secretary of Defense in 2017, [Marine Corps Gen. James Mattis argued](https://www.ucsusa.org/sites/default/files/2020-06/rethinking-land-based-nuclear-missiles.pdf) that the silo-based missiles were not needed because U.S. submarines were undetectable and would therefore always be capable of retaliation. **Proponents of launch under attack now argue that**[**advances in technology**](https://issuu.com/csbaonline/docs/csba_new_era_undersea_warfare_repor?e=15123547/10966511)**could make the**[**submarines at sea**](https://www.tandfonline.com/doi/full/10.1080/00963402.2016.1194060)[**vulnerable to attack**](https://direct.mit.edu/isec/article/41/4/9/12158/The-New-Era-of-Counterforce-Technological-Change)**. While it is true that vulnerable submarines could undermine America’s retaliatory capability, we have shown here that retaliation does not need to hinge on the availability of submarines: Plenty of silo-based missiles will survive. Moreover, there is no evidence that submarines are becoming vulnerable, but if they did, and if Russian forces improved to such a point that enough U.S. silo-based missiles were genuinely at risk, then the Lunch Under Attack policy could always be reinstated.**

By contrast, the technical landscape that is actually emerging today suggests **it might be time to look beyond Launch Under Attack, because it provides insufficient protection. Increasingly, U.S. adversaries are fielding delivery vehicles that are**[**undetectable by the current suite of sensors**](https://www.govinfo.gov/content/pkg/CRPT-117hrpt118/html/CRPT-117hrpt118.htm)**, namely cruise missiles and hypersonic vehicles. Without the ability to detect and track all possible delivery vehicles, assured retaliation will require the use of other sources of intelligence beyond the sensors used for dual phenomenology. Thus, the logic of launch on warning, and the technical systems propping up that policy, provides a veil of strong protection but actually falls short of what is now needed.**

Similarly, **over-reliance on this system leaves the United States under-prepared for detection failures**. For example, anti-satellite weapons, including simple ground-based lasers, could disable early-warning satellites. Without satellite detection, the requirements of dual phenomenology could not be fulfilled. It is unclear what would happen at this point. Would the launch under attack policy degenerate to a one-phenomenon launch policy? In that situation, it would take longer for incoming missiles to come within range of the radars, so decision makers would have even less time to evaluate missile threats, on top of needing to assess whether the blinded sensors were caused by a technical malfunction, a hostile act by the attacker, or a third party aiming to introduce confusion. **Instead of holding fast to the idea of immediate launch, it is far sounder to build a nuclear capability that can survive a first strike and for which decision-makers are not pressed to make decisions with incomplete information. Fortunately, that condition already exists today, and such a launch policy should be implemented now.**

Bottom Line

**The United States currently maintains the option to launch under attack so that in the event of first strike by Russia, U.S. silo-based missiles could be launched before they are be destroyed. However, our simulations find that 100-200 silo-based missiles would survive, which would likely leave the United States with more warheads per retaliatory target than before the Russian strike. As such, the United States would suffer no meaningful loss of capability and should update its policy to eliminate the Launch Under Attack option in order to reduce risks of accidental nuclear war caused by technical glitches, human error, or cyber-attack. Revising this policy does not lock the United States into any particular posture: If technologies change, the policy could be reinstated. In the meantime, the United States should strive to deploy a more robust, less provocative, and less dangerous system that is better tuned to emerging threats. There has not yet been a false alarm that prompted an actual nuclear launch, but there’s no need to bet the entire world on the hope it will never happen.**

#### De-Alert bad

Hersman, CSIS Director of the Project on Nuclear Issues, 2017 (Rebecca Hersman, 12-14-2017, "Bad Idea: De-Alert U.S. ICBMs," Defense360, <https://defense360.csis.org/bad-idea-de-alert-u-s-icbms/>, DoA 6/2/2023, DVOG)

**Proponents of de-alerting** nuclear weapons—that is, removing ground-based ICBMs from a status at which they can be launched in a matter of minutes—**make a number of arguments centered around reducing nuclear risk, especially the risk of accidental or inadvertent launch**. They envision [a number of scenarios](http://www.ucsusa.org/nuclear-weapons/hair-trigger-alert#.WiIMjbT80fE) that could result in the United States launching its missiles erroneously: a satellite receives a false warning of an attack or hackers “spoof” an incoming missile, and use-or-lose pressures emanating from putting nuclear weapons on “hair trigger alert” force leaders to escalate to full-scale retaliation. Some, like [Global Zero](https://www.globalzero.org/files/global_zero_commission_on_nuclear_risk_reduction_report_0.pdf), claim that the cyber threat “is reason enough to remove nuclear missiles from launch-ready alert.” The solution, they contend, is staring us in the face: take the weapons off high alert and de-mate warheads from our missiles. Further, they argue that this unilateral action would spur Russia or other adversaries to do the same, triggering a global reduction in nuclear risk.

To a degree, they’re right. These risks do exist, and we need to think long and hard about solutions to each of them. However**, de-alerting is more of a solution in search of a problem, as the policy prescription does not fit the symptoms. Three main areas of concern emerge out of the debate over de-alerting. First, the threat of cyber attack would not disappear if we were to de-alert our nuclear weapons. Second, the decision makers contemplating whether or not to launch a nuclear strike would not be able to make a “better” decision in the event of a nuclear strike if the ICBMs were de-alerted. Third, de-alerting may embolden adversaries rather than pacify them, as it could provide the opportunity for a decapitation strike against the United States. We need to recognize calls for de-alerting as what they really are: a means to reduce the utility of the U.S. missile force and implement a de facto No-First Use (NFU) policy.** Shifting the argument away from alert status and centering it on the effects of such a policy will further dialogue on the issue and get to the core of proponents’ concerns.

Like many other hot-button defense issues, **those in favor of de-alerting nuclear forces point to the threat of cyber attacks on the nuclear arsenal.** They rightly worry about this, as we do need to be concerned about cyber attacks on all elements of our nuclear force. Hackers have made advances that could disrupt our core conventional and nuclear command and control systems and pose a critical national security risk that needs to be addressed as rapidly as possible. But the threats of cyberattack do not necessitate de-alerting, as cyberattacks against command and control would remain a threat in any nuclear scenario, alert or de-alert.

**Instead of fundamentally changing U.S. nuclear posture because of these threats, we should push for baking in greater resilience and cybersecurity measures. These measures will be even more important as the United States begins its**[**$1.2 trillion nuclear modernization program**](https://www.cbo.gov/publication/53211)**. Modernization may introduce more complex systems for nuclear command and control and new vectors for attacks and, consequently, must come with investments in more robust cyber defenses**.

There are general steps that should be taken to secure any critical U.S. government system, but especially those responsible for nuclear command and control. As outlined in the [Defense Science Board](https://www.acq.osd.mil/dsb/reports/2010s/DSB-CyberDeterrenceReport_02-28-17_Final.pdf) Task Force on Cyber Deterrence, **there are a number of steps the United States can take to hedge against cyber threats to critical nuclear systems. Establishing a “thin line” of strategic offensive systems—conventional, nuclear, and cyber options—to respond in crisis scenarios would do much more to reduce the risk posed by cyber threats, as it would ensure a capable and ready infrastructure to respond** after a crippling attack. Efforts to improve cyber attribution may also enhance deterrence against actors who believe they can attack our systems without any risk of being held accountable for their actions. Finally, **we can tailor our cyber response to specific adversaries and establish more rungs—diplomatic measures, economic sanctions, etc.—in the escalation ladder for responding to cyber attacks, clearly demonstrating to our enemies that they will be punished for meddling with our strategic capabilities**. Each of these measures would improve our overall response to cyber threats without adjusting our nuclear posture in a manner that would make us more vulnerable to attack.

In the event of a nuclear attack, **the current alert posture would provide a known amount of decision time while still maintaining the option of response. Because ICBM controllers are well-trained on executing launch orders, decision makers know exactly how long they have until the last possible moments to issue such an order. Weapons on alert provide decision makers the most possible time for discussion in the event of a first strike because they are ready to launch at a moment’s notice. Furthermore, if weapons are de-alerted, the time it would take to put the weapons back on alert could cause them to be eliminated by an adversary’s first strike**. The process of putting them back on alert would take hours at a minimum, making the proposition that we could respond in this scenario dubious at best. **De-alerting does not allow the president to make a “better decision”; it increases the possibility of the ICBM leg of the triad being knocked out before launch.**

**De-mating nuclear warheads from their ICBMs could place the U.S. nuclear arsenal at significant risk and perhaps even invite a first strike from adversaries.** Current procedure requires warheads be placed at central facilities at each ICBM base; a hypothetical de-alert would isolate the warheads in these facilities, which in turn would require much fewer enemy missiles to eliminate. Currently, **the U.S. inventory of 400 missiles is deployed across the sprawling fields of the American Midwest, requiring adversaries to commit to a massive strike if they hope to render the U.S. incapable of massive and rapid retaliation. Combined with the nuclear submarine force and strategic bombers, this disincentivizes a first strike from adversaries as the likelihood that the entire U.S. arsenal would be destroyed is minimal.**

**However, if the warheads were de-alerted, de-mated, and put into secure storage facilities at each of the three ICBM bases in the Midwest, the number of warheads required to eliminate the U.S. ICBM force drops significantly. This frees up the rest of the adversary’s nuclear arsenal to target U.S. bomber bases and strategic submarines. This shift may change the adversary’s calculus and create an overwhelming incentive for the adversary to attempt a first strike on our nuclear arsenal. Ultimately this undermines the deterrent value of our nuclear force across the board, which has widespread geopolitical implications**. If an adversary perceives that the United States does not have the capability to quickly and immediately respond to a nuclear attack, it may decide to behave more aggressively towards both the U.S. and its allies. There would be little incentive for adversaries to reciprocate our posture in this instance and, even if publicly they did so, the inability to verify that they have de-alerted their forces means the risk of first strike would remain.

**Removing our arsenal from alert status does not reduce its vulnerability to cyber attacks, nor does it allow for more thoughtful decision making during a crisis. The practical effect of de-alerting is to diminish the role of the ICBM leg of the nuclear triad to the point of irrelevance.** By eliminating the ICBMs as a rapid response force, **de-alert proponents are essentially arguing for a nuclear posture that is less responsive, more defensive, and more closely resembles a dyad with bombers and nuclear submarines.**

It’s important to call a spade a spade. If we are going to have a debate whether we need a triad for deterrence, let’s have it. In a time of rising nuclear modernization costs, the argument to spend less on our ICBMs is appealing and enjoys the support of many in the nuclear community. But let’s have that discussion, not one that attempts to backdoor a way to a nuclear dyad. **To argue that de-alerting nuclear weapons allows us to maintain our current posture, only with less risk, is disingenuous and distorts the argument away from the true goal of its proponents. De-alerting is an arms control placebo: it may put your mind at ease, but it does not cure the symptoms.**