Negative Brief: Greenland Radar Stations

By “Coach Vance” Trefethen

***Resolved: The United States Federal Government should substantially reform its policy towards one or more countries in Europe***

The AFF plan puts 3 additional Over The Horizon Radar (OTHR) stations at the US military base in Thule, Greenland (pronounced "Too-lee"). Greenland is a protectorate of Denmark, which controls its military defense.

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"Over the Horizon Radar" gives false alarms (and no one knows what a true alarm looks like, since it has never happened). That plus "Launch on Warning" (LOW) policy means a nuclear war could be triggered accidentally 11

OTH Radar mistakes the moon for a massive nuclear missile attack on the U.S. We're lucky to even be here today 11

Negative: Greenland Radar Stations

TOPICALITY

1. No substantial reform.

Link: Thule Airbase already has US radar stations

Lasse Sorensen 2022 (Journalist) 9 June 2022 "Faroe Islands agree to install radar to boost Arctic surveillance" (accessed 6 Nov 2022) https://www.courthousenews.com/faroe-islands-agree-to-install-radar-to-boost-arctic-surveillance/

The U.S. already has some military capacity at Thule Airbase, locally known, as Pituffik in Greenland. It is the only area in Greenland, that the American military can use relatively freely. The base also includes a radar system monitoring northern Greenlandic airspace.

Link: Arctic "Over the Horizon Radar" in Canada and Greenland is Status Quo policy

Michael Peck 2022 (*defense writer whose work has appeared in Forbes, Defense News, Foreign Policy magazine, and other publications. He holds a master's in political science*) The US and Canada are updating a Cold War-era system to keep an eye on Russian and Chinese missiles. Experts say they need to add a lot more territory too. 26 Oct 2022 (accessed 7 Nov 2022) https://www.businessinsider.com/experts-call-for-norad-territorial-expansion-to-monitor-russia-china-2022-10

"Canada and the United States have long benefited from the protection afforded by North American geography," US Secretary of Defense Lloyd Austin and Canadian Defense Minister Harjit Sajjan [said](https://www.defense.gov/News/Releases/Release/Article/2735041/joint-statement-on-norad-modernization/) in August 2021. "However, growing strategic competition, rapid advancements in technology, and ongoing changes in our climate are eroding that protection, including by exposing North America to a greater and more complex conventional missile threat." The US and Canada, which jointly run NORAD, pledged to replace the aging [North Warning Network](https://www.canada.ca/en/department-national-defence/news/2022/01/backgrounder--north-warning-system-in-service-support.html/) — a chain of air-defense radars across the far north of the US, Canada, and Greenland — with next-generation, long-range over-the-horizon radar. The countries also agreed to embrace a comprehensive "system-of-systems approach" that included a network of sensors "from the sea floor to outer space" and more integrated command-and-control systems.

Violation: Doing Status Quo policy isn't substantial reform

Status Quo is Negative territory, not Affirmative. They're not affirming the resolution.

Impact: No affirmative team means a negative ballot

If no one in the room affirms the resolution, then no matter who wins you should write Negative on the ballot.

2. Not a country in Europe

Thule Airbase is a US military facility, not a country in Europe

Even if you believe Greenland is a "country in Europe" because it's part of Denmark, the AFF plan doesn't change any policy toward that country, because Greenland doesn't control what happens within the gates of the US air base. There's a dilemma here:

1) If Thule Air Base "IS" controlled or owned by Denmark, then they need to get Denmark's permission to do things that happen there. They can't fiat that their plan takes effect, all they can do is ask Denmark for permission. This means the plan loses on solvency because they can't make it happen. But instead…  
2) If Thule Air Base is controlled entirely by the United States, and we have complete control over everything that goes on at the base, then they lose on Topicality. Denmark is not involved in the policy and there is no policy change "toward" Denmark. It's an insignificant upgrade to an existing policy on a US facility. Nothing changes in our relationship with Denmark.  
 As a parallel, imagine an Affirmative team that proposed changing the carpeting inside the US embassy in Copenhagen, Denmark. Sure, the embassy is located in a country in Europe, but the changes wouldn't be toward Denmark. The changes would be towards US facilities on US property.

If it's a change in policy towards Denmark on radar surveillance, they'll need to get Denmark's approval first

Lasse Sorensen 2022 (Journalist) 9 June 2022 "Faroe Islands agree to install radar to boost Arctic surveillance" (accessed 6 Nov 2022) https://www.courthousenews.com/faroe-islands-agree-to-install-radar-to-boost-arctic-surveillance/

The Faroe Islands are part of the Danish realm, which also includes Greenland. Only Denmark is allowed to handle foreign policies and security within the realm, leaving the Faroe Islands and Greenland partially independent. Denmark, a founding member of NATO, is also open to discussions with the U.S. and Greenland about the possibility of establishing surveillance radars on Greenlandic coasts.

Don't allow "Effects Topicality"

We know they're going to respond by saying that changing something on a US facility will probably "affect" Denmark, so that makes it topical. But "effects topicality" is abusive and you shouldn't allow that type of argument in this round. Almost everything the United States does will somehow, some day "affect" some other country. If we raise interest rates, change air pollution standards, eat more chicken, or anything else, sooner or later we could probably find evidence that eventually Denmark would be affected. If you allow Affirmative plans that use "effects topicality," you open the door to Affirmatives running any policy they want and simply ignoring the limitations of the resolution. This is abusive to Negative teams because we can't possibly prepare for an infinite number of cases of anything that might "affect" one or more countries in Europe.

Impact: Abuse justifies NEG ballot

This would be a good opportunity to teach Affirmatives not to abuse Negative teams by broadening the resolution to include just about anything. The best way to use this as a teaching opportunity would be with a Negative ballot.

INHERENCY

1. The Faroe Islands

New agreement installs radar on the Faroe Islands to cover "blind spots" for NATO in the Arctic

Lasse Sorensen 2022 (Journalist) 9 June 2022 "Faroe Islands agree to install radar to boost Arctic surveillance" (accessed 6 Nov 2022) https://www.courthousenews.com/faroe-islands-agree-to-install-radar-to-boost-arctic-surveillance/

Denmark and the Faroe Islands signed an agreement on Thursday to build a radar system that will monitor activities in the airspace between Iceland, Norway and the United Kingdom. “The radar will give an overview of the airspace and identify who operates around the unity of the realm. It will benefit our unity at a time where Europe’s security is threatened,” Denmark’s Minister of Defense Morten Bødskov said in a [press release](https://www.fmn.dk/da/nyheder/2022/danmark-og-faroerne-enige-om-opstilling-af-luftvarslingsradar/). The unity of the realm refers to the three parts of the Kingdom of Denmark - metropolitan Denmark plus two autonomous countries, the Faroe Islands and Greenland. A budget of almost $56 million is set for establishment of the radar, which has a reach of up to 400 kilometers (248 miles). It will take about five years before it is ready to use. The agreement comes just a day after Bødskov signed a deal with Iceland to [share surveillance](https://www.regeringen.dk/nyheder/2022/danmark-og-island-indgaar-aftale-om-styrket-overvaagning-i-arktis/) data with Denmark. Despite the wait for the new radar, NATO allies will most likely be pleased with the system that will cover a previous blind spot in surveillance of airspace in the North Atlantic Ocean and the Arctic region, which includes Russian territory. Surveillance data can be directly monitored in Denmark and shared with NATO.

2. Canada

US & Canada are deploying Over The Horizon Radar (OTHR) in the Arctic under Status Quo policy

Ryan Finnerty 2022 (journalist) 6 Oct 2022 " Hypersonic threats: Why Canada is doubling down on enhanced Arctic defence" (accessed 6 Nov 2022) <https://www.flightglobal.com/defence/hypersonic-threats-why-canada-is-doubling-down-on-enhanced-arctic-defence/150441.article> (brackets added)

Canada disclosed in June plans to spend nearly C[anadian dollars] $40 billion ($29.4 billion [US dollars]) over 20 years to enhance defence of its sprawling Arctic region, citing threats including those from “autocratic regimes”. Now, a top Canadian military official has elaborated to FlightGlobal about the plan, which includes modernisation of command-and-control infrastructure and acquisition of air-and-space tracking systems.  
**END QUOTE. HE GOES ON LATER IN THE CONTEXT TO WRITE QUOTE:**  
He [Royal Canadian Air Force (RCAF) Lieutenant General Alain Pelletier] notes the USA and Canada both plan to field more “over-the-horizon” radars, which will help increase the allies’ “air and space domain awareness”, allowing NORAD to better detect launches, identify and track incoming hypersonic weapons and predict impact points. The result will be “increased decision superiority” for national leaders, Pelletier says. (He also notes, however, that the speed of hypersonic weapons greatly reduces the “decision time” to respond.)

Canada is spending billions of dollars upgrading Arctic defenses, including new radar stations

Agence France Presse 2022 "Arctic a ‘strategic challenge’ for NATO" 28 Aug 2022 (accessed 6 Nov 2022) https://www.taipeitimes.com/News/world/archives/2022/08/28/2003784306

Ottawa has earmarked billions of dollars for new satellites and undersea sensors in the Arctic, and the replacement of an aging network of radar stations from Alaska to Quebec that Trudeau said will “increase our abilities to detect and indeed deter threats coming across the pole.”

3. Alaska

Link: Alaska is where the Arctic threat must be solved

Sandra Erwin 2022 (journalist) 12 May 2022 "Melting Arctic ice opens new front in strategic power competition" (accessed 6 Nov 2022) https://spacenews.com/melting-arctic-ice-opens-new-front-in-strategic-power-competition/

Clear Space Force Station is one of five major installations the U.S. military operates in Alaska. The others are Joint Base Elmendorf-Richardson, Eielson Air Force Base, Fort Wainwright and Fort Greely. In its Arctic strategy, last updated in 2019, the Defense Department described the region as a potential vector for an attack on the U.S. homeland and a part of the world where Russia and China are operating more freely. The strategy said DoD “must be able to quickly identify threats in the Arctic, respond promptly and effectively to those threats, and shape the security environment to mitigate the prospect of those threats in the future.”

And the good news: Status Quo solves. New Alaska radar currently underway

Sandra Erwin 2022 (journalist) 12 May 2022 "Melting Arctic ice opens new front in strategic power competition" (accessed 6 Nov 2022) https://spacenews.com/melting-arctic-ice-opens-new-front-in-strategic-power-competition/

At Clear Space Force Station near Fairbanks, Alaska, the U.S. Missile Defense Agency last year completed construction of a long-range discrimination radar, designed to track ballistic missiles. Space Force units will start operating the radar in 2023.

4. Greenland upgrades already done

Greenland early-warning radar was already upgraded

Malcolm Davis 2021 (senior analyst at Australian Strategic Policy Institute) 27 Oct 2021 " Can US missile-defence systems handle China’s new missiles?" (accessed 7 Nov 2022) https://www.aspistrategist.org.au/can-us-missile-defence-systems-handle-chinas-new-missiles/

US missile early warning starts with a [network](https://missilethreat.csis.org/defsys/sbirs/) of infrared satellites that can detect a launch of an ICBM and track it through its flight. At the same time, upgraded early warning [radars](https://missilethreat.csis.org/defsys/uewr/) at Beale Air Force base in California, Fylingdales in the UK and Thule in Greenland, along with the Cobra Dane phased-array radar in Alaska and a range of other sensors, give radar tracks that cue missile interceptors for a mid-course intercept.

5. Satellites

Link: No effective defense without considering the space domain and satellites

Sandra Erwin 2022 (journalist) 12 May 2022 "Melting Arctic ice opens new front in strategic power competition" (accessed 6 Nov 2022) https://spacenews.com/melting-arctic-ice-opens-new-front-in-strategic-power-competition/

Any Arctic strategy has to consider the importance of the space domain, said Mir Sadat, a nonresident fellow at the Atlantic Council’s Scowcroft Center for Strategy and Security. The United States is not doing enough to “prepare for the new frontier.” In contrast, Russia and China, by increasing their activities in the region, are positioning to one day take advantage of shorter sea lanes, Sadat said. A key goal for China and Russia is to “reach global markets or military targets faster and much more cheaply,” he said. Satellites to watch what Russia and others are doing on the ground is another critical capability that the United States might need to expand, said Scott Herman, CEO of Cognitive Space.

Link: What we really need for Arctic defense in Greenland is satellites

Sandra Erwin 2022 (journalist) 12 May 2022 "Melting Arctic ice opens new front in strategic power competition" (accessed 6 Nov 2022) https://spacenews.com/melting-arctic-ice-opens-new-front-in-strategic-power-competition/

The Department of the Air Force’s Arctic strategy also recommends greater use of space assets to support military and homeland defense efforts. “Space capabilities are tailor-made to support a region where there is sparse ground infrastructure,” Lt. Gen. William Liquori, deputy chief of space operations for strategy, plans and programs for the U.S. Space Force, said at the Wilson Center panel. “The satellite command-and-control capabilities that we have at Thule, those are there because military operations are going to happen in the Arctic,” said Liquori. “And that means we’re going to need to have satellite coverage in the Arctic.”

Status Quo Solves: We're getting the satellites in place right now

Sandra Erwin 2022 (journalist) 12 May 2022 "Melting Arctic ice opens new front in strategic power competition" (accessed 6 Nov 2022) https://spacenews.com/melting-arctic-ice-opens-new-front-in-strategic-power-competition/

To fill gaps in satellite communications coverage over the Arctic, the Air Force worked out a deal with the Norwegian Space Agency subsidiary Space Norway to launch two U.S. military communications payloads on Norwegian satellites. The payloads, developed by Northrop Grumman, will be integrated into the Arctic Satellite Broadband Mission satellites, projected to launch on a SpaceX rocket in 2023.

SOLVENCY

1. Detection isn't protection

"Detecting" that a cruise missile is coming is useless if you have no plan to defend against it.

Cruise missile defense (actually stopping the missile after the AFF's radar detects it) doesn't exist. We could buy it for $75-180 billion, but that's not in the AFF plan

Congressional Budget Office 2021. (non-partisan agency of Congress that researches policies and their budgetary costs) Feb 2021 "National Cruise Missile Defense: Issues and Alternatives" (accessed 15 Jan 2023) https://www.cbo.gov/publication/56990

Modified versions of systems that the military uses today could be purchased for homeland cruise missile defense. CBO estimates that the lowest-cost “architectures” it examined—integrated systems that comprise airborne or space-based radars, surface-to-air missiles, and fighter aircraft—would cost roughly $75 billion to $180 billion to acquire and operate for 20 years. Fielding additional regional or local defenses to protect Alaska, Hawaii, and U.S. territories would add to the cost.

We'd only need 100% detection if we were planning to put up a 100% nationwide defense against cruise missiles, which we don't currently have and isn't budgeted in the AFF plan

Congressional Budget Office 2021. (non-partisan agency of Congress that researches policies and their budgetary costs) Feb 2021 "National Cruise Missile Defense: Issues and Alternatives" (accessed 15 Jan 2023) <https://www.cbo.gov/publication/56990> (accessed 15 Jan 2023)

Similarly, decisionmakers would need to make assessments about building defenses to counter LACMs [low altitude cruise missiles] launched by Russia or China. Those nations’ potential ability to launch large numbers of LACMs could overwhelm all but high-capacity defenses. But providing high capacity over large areas would be very costly. Consequently, decisionmakers might opt to defend key targets against Russian or Chinese cruise missiles—in addition to relying on nuclear deterrence—rather than field a nationwide CMD.

2. Inadequate detection. Ground-based radar doesn't provide adequate warning against cruise missiles

They can detect but not soon enough: Ground-based radars can't detect Low Altitude Cruise Missiles (LACMs) early enough to intercept them

Congressional Budget Office (CBO) 2021. (non-partisan agency of Congress that researches policies and their budgetary costs) Feb 2021 "National Cruise Missile Defense: Issues and Alternatives" (accessed 15 Jan 2023) <https://www.cbo.gov/publication/56990> (brackets added)

CBO also found that an architecture based on AEW&C aircraft (Architecture 2) could provide an area defense with LR-SAMs and fighters, but they would be very expensive because their limited endurance and altitude mean that a larger number of aircraft would be needed to continuously fly sensor orbits, and those aircraft would be costly to operate. An architecture based on aerostats (Architecture 3) could provide enough warning time to employ LR-SAMs against inbound targets (although hundreds of LR-SAM sites would be needed unless battle management response times were very short), but not enough warning time to employ fighters. Ground-based radars could not provide a feasible area defense because they could not detect low-altitude LACMs early enough for LR-SAMs [long range surface-to-air missiles] or fighters to make their intercepts under most circumstances.

If you want cruise missile defense (CMD), land-based radar isn't the answer. You need radar mounted on aircraft or satellites.

Congressional Budget Office 2021. (non-partisan agency of Congress that researches policies and their budgetary costs) Feb 2021 "National Cruise Missile Defense: Issues and Alternatives" (accessed 15 Jan 2023) <https://www.cbo.gov/publication/56990> (brackets added)

The Congressional Budget Office was asked to examine the threat that LACMs [low altitude cruise missiles] might pose to the United States homeland and to estimate the composition and cost of illustrative cruise missile defense (CMD) “architectures” that would be analogous to the nationwide defense provided by today’s ballistic-missile defense system. CBO found that a homeland CMD would be feasible but expensive, with costs ranging from roughly $75 billion to $465 billion over 20 years to cover the contiguous United States. The lowest-cost architectures that CBO examined—integrated systems based on radars carried by high-altitude unmanned aircraft or on satellites—would cost roughly $75 billion to $180 billion. Additional regional or local defenses to protect Alaska, Hawaii, and U.S. territories would add to that cost.

Vulnerability to Russian cruise missiles can ONLY be addressed by continuous airborne surveillance (not ground-based) and even then it probably won't work

[Admiral James Winnefeld](https://www.thecipherbrief.com/experts/admiral-james-sandy-winnefeld) 2022 (served for 37 years in the United States Navy.  He retired in 2015 after serving four years as the ninth Vice Chairman of the Joint Chiefs of Staff) 14 Nov 2022 " Closing the Gap in US Cruise Missile Defenses" (accessed 15 Jan 2023) https://www.thecipherbrief.com/closing-the-gap-in-us-cruise-missile-defenses

We are vulnerable to a cruise missile attack launched either from Russian long range bombers or, more worrisome, from cruise missile carrying submarines off our coast.  Warning times will be too short for fighter aircraft to respond from anything other than a continuous airborne posture, and even then these assets need cueing and almost perfect geometry.  Better to focus on point defense systems, such as Patriot and HPM systems, stationed to defend our highest value government, economic, and military assets.

Really need satellites to detect and track cruise missiles.

Simone Fontana and Federica Di Lauro 2022. (Fontana - School of Law, Università degli Studi di Milano, Italy. DiLauro - Department of Computer Science, Università degli Studi di Milano, Italy) 15 Dec 2022 " An Overview of Sensors for Long Range Missile Defense" (accessed 15 Jan 2023) https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9781809/

Other types of threats, such as cruise missiles or HGVs, have different phases of flight but have in common the large amount of heat generated. For this reason, detection and tracking techniques for boost and terminal phases of ballistic missiles are usually applicable. However, since these weapons typically fly at much lower altitudes, it is possible that infrared sensors will need to be mounted on satellites in lower orbits. This statement is supported by the fact that the U.S. are deploying the HBTSS to defend against hypersonic gliding vehicles. Therefore, it is likely that other existing satellite networks are not suitable for this task.

4. No effective defense. Even if we detected every cruise missile with AFF's new radar, it wouldn't do any good

Russian cruise missile attack would use so many missiles that it would overwhelm any defenses

Congressional Budget Office 2021. (non-partisan agency of Congress that researches policies and their budgetary costs) Feb 2021 "National Cruise Missile Defense: Issues and Alternatives" (accessed 15 Jan 2023) <https://www.cbo.gov/publication/56990> (brackets added)

If Russia or China opted to attack with LACMs [low altitude cruise missiles], they could do so in much larger numbers than regional powers or nonstate actors. For example, a single Yasen-class guided missile submarine in the Russian Navy reportedly can carry up to 32 Kalibr (3M-14) land-attack missiles. Consequently, an attack from Russia or China could overwhelm defenses that might be sufficient against an adversary with fewer missiles.

5. Thule would be destroyed. Russia would take out Thule and its radars early in any attack

Thule air base is largely defenseless

Brett Tingley and Tyler Rogoway 2019. (journalists) last updated 1 Dec 2019 The U.S. Can’t Buy Greenland But Thule Air Base Is Set To Become More Vital Than Ever Before (accessed 6 Nov 2022) https://www.thedrive.com/the-war-zone/29541/the-u-s-cant-buy-greenland-but-thule-air-base-is-set-to-become-more-vital-than-ever-before

This could mean that one day Thule Air Base ends up reverting back to regularly supporting strategic bomber operations—a possibility that seems even more likely as of late—and hosting a permanent cadre of fighters for its protection. Outfitting the sprawling base with static anti-aircraft and anti-ballistic missile defenses is another real possibility as tensions between the U.S., its NATO allies, and Russia continues to rise throughout the region in the coming years. The fact that the base appears to be largely defenseless at this time is quite concerning, to be honest.

In case of war, Thule will be wiped out first before the real attack begins. Securing Thule requires other reforms not in AFF's plan

Iceland Ministry of Foreign Affairs 2020. " Greenland and Iceland Report of the Greenland Committee Appointed by the Minister for Foreign Affairs and International Development Co-operation" December 2020 (accessed 6 Nov 2022) https://www.government.is/library/01-Ministries/Ministry-for-Foreign-Affairs/PDF-skjol/Greenland-Iceland-excerpt.pdf

The development of new military bases, especially on Franz Josef Land, radically alters the security interests of the United States. The military base in Nagurskoye has major implications with regard to the Thule Air Base, which is a key link in the US defence chain. A worst-case scenario for the United States is a conflict in which aircraft from Nagurskoye incapacitate Thule Air Base simultaneously and other aircraft carrying long-range nuclear weapons take off westwards. In order to respond to the new scenario, the United States need to increase their preparedness at Thule, preferably to have presence in other areas in Greenland and also to have secure access to Iceland in times of volatility. Congress also has mandated US authorities to establish a new naval Arctic base.

Thule is a target for Russian air strikes

[Dr. Andreas Østhagen](https://www.wilsoncenter.org/person/dr-andreas-osthagen) & [Peter Linde](https://www.wilsoncenter.org/person/peter-wilhelm-lund-linde)(Osthagen - Senior Researcher, Fridtjof Nansen Institute and High North Center; Fulbright Fellow, Polar Institute, Wilson Center & Arctic Initiative, Belfer Center, Harvard Kennedy School. Linde - Fulbright Arctic Scholar, Visiting Scholar, Wilson Center; Chief Counsellor on Arctic Affairs, Danish Ministry of Foreign Affairs) 6 July 2022 "Why Norway and the Kingdom of Denmark should work closer together vis-à-vis the United States on security in the Arctic" (accessed 6 Nov 2022) https://www.wilsoncenter.org/blog-post/no-13-why-norway-and-kingdom-denmark-should-work-closer-together-vis-vis-united-states

In close cooperation with the Danish military, the US military presence provides security for Greenland and for the Kingdom of Denmark as a whole - as well as other NATO allies. However, in recent years, Russia has increased its capabilities at the Nagurskoye Airbase. These capabilities are primarily defensive but can also be used offensively. Thule Air Base may now be perceived as a potential target for Russian air strikes.

5. More study needed

(As of Aug. 2022) We need to study Russia's military activities in the Arctic more to make good policy. We don't want to underestimate nor overestimate the threat and make bad policies

Dr Katarzyna Zysk 2022 (Professor of International Relations and Contemporary History, Norwegian Institute for Defence Studies) August 2022 " Myths and misconceptions around Russian military intent" (accessed 7 Nov 2022) https://www.chathamhouse.org/2022/07/myths-and-misconceptions-around-russian-military-intent/myth-8-russias-military-build

What would good policy look like? Nuances such as those discussed above matter. Neither exaggerating the extent of the Russian military build-up and overreacting as a result, nor underestimating its importance and responding inadequately, will serve Arctic security and stability. The state and composition of Russian military capabilities, their geographic distribution, the underlying threat perception and patterns of military operations are variables that can, and probably will, change over time. They will be further influenced by spill-over effects from international security, economic and other global dynamics, including Russia’s policies in other regions, not least the direct and indirect consequences of the 2022 full-scale invasion of Ukraine. To avoid succumbing to disinformation and creating artificial debates and disagreements, Western actors must correctly assess the Russian military build-up – its strengths, weaknesses and the intentions behind it – in the Arctic and elsewhere.

DISADVANTAGES

1. False alarms increase risk of nuclear war

"Over the Horizon Radar" gives false alarms (and no one knows what a true alarm looks like, since it has never happened). That plus "Launch on Warning" (LOW) policy means a nuclear war could be triggered accidentally

Robin Collins & Dr. Sylvie Lemieux 2022 (Collins - co-chair of the Canadian Network to Abolish Nuclear Weapons; B.A. in political science from Carleton Univ. He is also secretary and past vice-chair of the Canadian Pugwash Group, member of the Group of 78 working group on peace and security, and secretary of the World Federalist Movement-Canada. Lemieux - PhD; Master’s degree in Globalization and International Development and a Doctorate in Conflict Studies at St. Paul’s Univ. in Ottawa) 26 July 2022 " [CNANW: CANADA CAN DO MORE AT THE NPT Review Conference](https://www.cnanw.ca/2022/07/26/cnanw-canada-can-do-more-at-the-npt/)" (accessed 6 Nov 2022) (brackets added) https://www.cnanw.ca/category/nuclear-weapons/launch-on-warning/

As early as 1960 the propriety and morality of adopting L-o-W [Lauch On Warning] was being discussed , because of the recognized danger of launching on a false warning and so starting an unintended nuclear war. In that year the Planning Board wrote that it was “essential” to avoid the possibility of launching unrecallable missiles based on a false warning. **[END QUOTE**] They stressed the importance of a “reliable bomb alarm system to provide early positive information of actual missile hits.” In 1962, Robert McNamara said that as long as he was Secretary of Defense and Jack Kennedy was President, the U.S. would never launch on warning. But the same year, the Secretary of the Air Force must have been thinking of L-o-W when he informed Kennedy that once the Minuteman missiles had been deployed in the first complex, in their “normal alert status”, all “twenty missiles will be able to be launched in thirty seconds.” [**THEY CONTINUE LATER WRITING QUOTE:**] A discussion in 1969 is on record as showing that some who were opposing “Ballistic Missile Defense” favoured L-o-W, but The White House is stated to have opposed it “on the grounds that 50% of warnings from Over-the-Horizon Radar were false”. (The validity of this position seems dubious, because no true warning of a nuclear ballistic missile attack has ever been received. Presumably the other 50% were true observations of test rocket launches.) Lawrence Lynn, of U.S. National Security Council Staff, responded that the new satellite early warning system was estimated to produce only one false alarm per year, which he evidently regarded as acceptable. Georgy Arbatov, a Soviet deterrence specialist who had joined the National Security Council, assured Council members that “neither side would wait if it received warning of an attack but instead … would simply empty its silos by launching a counter-strike at once.” That removes concern about failure of deterrence against a surprise first strike, but underlines the danger from a false warning. **[END QUOTE**] It seems probable that by 1969 L-o-W had been the military policy on both sides, for a number of years, notwithstanding the record that in 1973 Secretary of Defense Melvin Laird expressed the hope that “that kind of strategy would never be adopted by any Administration or by any Congress.” The recollections of former officers and enlisted men of Strategic Air Command (SAC) from the early 1970’s confirm that L-o-W was in effect then. [**LATER THEY CONCLUDE QUOTE**:] The policy of L-o-W is apparently still in effect both in U.S.A. and Russia, even though the Cold War is regarded as over. This seems inexcusably dangerous.

OTH Radar mistakes the moon for a massive nuclear missile attack on the U.S. We're lucky to even be here today

Gwynne Dyer 2017 (journalist) 24 Sept 2017 CYPRUS MAIL " The man who saved the world" (accessed 6 Nov 2022) https://cyprus-mail.com/2017/09/24/man-saved-world/

The satellite had spotted a rare alignment of sunlight, reflected from the cloud-tops over the US Minuteman fields, that resembled missile launch tracks to its simple-minded image-reading device. There were several similar incidents during the Cold War – a US over-the-horizon radar once reported Moonrise as a mass missile launch – but this was the only one that happened when the relevant side was in launch-on-warning mode. Given how full of bugs the missile-detection programmes of those days were, it’s remarkable that the United States and the Soviet Union got through 40 years of the Cold War unharmed.