

Could Norway Trigger a Nuclear War?

Notes on the Russian Command and Control System

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Next January, Norway is planning to launch a research rocket similar to the one that caused a false alarm in the Russian strategic command and control system in 1995. An obvious concern is whether something similar, or worse, could happen with the second launch. This concern is heightened by the suspicion that Russia has a "dead-hand" system (also known as "Doomsday machine"), which could automatically launch missiles on receiving warning about attack. If this suspicion is true, then in 1995 the world barely escaped a nuclear war and the next launch could trigger it. There is little, if any, hard evidence, however, to support that suspicion.

This paper will treat the 1995 incident as a crucial case for evaluating conclusions about the presence or absence of the "dead-hand" system. The analysis demonstrates that it does not exist and that Norway can safely launch the rocket. Advance notification could improve the situation further. In the future, a regime regulating certain types of civilian launches could be created to completely remove the chance of similar incidents.

History

On January 25, 1995, Norway launched a research rocket which activated the Russian command and control system because computers mistakenly classified it as a combat missile. Reportedly, Russia was on the brink of launching a "response" to the non-existent attack. This might suggest that the Russian nuclear response system had failed. Surprisingly to many in the West, however, Yeltsin was pleased with the performance of the Strategic Rocket Forces (SRF) in this case and its Commander-in-Chief, Igor Sergeev, became the minister of defense a year later.

The recently leaked information suggests that the reason for the "mistaken identity" of the Norwegian rocket was technical. The Norwegian rocket used the first stage of an old American tactical missile "Honest John." Consequently, the boost phase speed was higher than usual for previous research launches. The rocket was also unusually large, consisting of three stages and measuring 18.4 meters long and 6 tons. Apparently, it was mistaken for an American Trident II SLBM (its length is 13.4 meters without the front section). The trajectory (to the north from Russia) was also considered "legitimate," since conceivably, a real attack could be preceded by launching a missile to the north of Russia and detonating a device with an extra powerful electromagnetic impulse to knock out communications systems. The computer systems classified it as a combat missile and flashed a warning. The system was automatically activated up to the top, including Yeltsin's "nuclear briefcase." Then, in a matter of minutes, the situation was

assessed and the alert status decreased back to normal. Reportedly, the alert did not even reach launch teams at missile bases.

Lessons

The incident tells much about the Russian command and control system:

1. The "mistaken identity" resulted not from an error but from proper functioning. Evidently, the computers are programmed to alert personnel to certain types of missiles and speed is one of the criteria, as is probably size as well. Thus, a rocket that does not have the characteristics of a combat missile is unlikely to provoke an alert.
2. Yeltsin's nuclear briefcase probably works only in passive mode, i.e. the whole system has to be put on alert before he issues the command to launch. This is consistent with other publicly available sources, which claim that the participation of the General Staff and/or the SRF is imperative. The military and designers have always been proud of the built-in checks: they view them as a precaution against reckless politicians. An interesting consequence is that the system might be able to function even in the event that the top leadership (the President) is incapacitated. This provides added reliability and removes the rationale for a "dead-hand" system.
3. There is not a "dead-hand" system, otherwise a "response" would have followed based on perceived attack. In other words, the case of the Norwegian rocket demonstrated that detection and putting the system on a higher alert status are automated, but command to launch is made by humans. Apparently, there is at least one gap in the chain of automatic response, and the gap is at the crucial link: the decision to launch.
4. The incident indirectly demonstrated that the personnel at the missile launchers are "out of the loop:" the information about the suspected attack did not reach them. This means that it is unlikely that they are able to launch weapons independently. Otherwise, they would have received information of an attack, which is vital for a response strike.

The case does not provide an answer to many other important questions, such as what exactly happens once the decision to launch is made, what precautions besides common sense exist against incorrect interpretation, etc. But even the available evidence suggests that as of January 1995 the command and control system functioned properly. The upcoming merger of the SRF and Space Forces is likely to improve the condition of the system by improving coordination of its human elements.

Recommendations

What could be the likely consequence of a new launch of the same Norwegian research rocket? They would most likely be the same: the early warning system would flash a warning, the situation would be assessed, and the alert status then decreased. To decrease the chance of mistake, it is advisable to give advance notification of the time of the launch, plus the parameters of the missile and its trajectory.

On a more general level, it is necessary to create a regime that would encompass civilian derivatives of non-strategic combat missiles. Civilian rockets that use first stages of strategic missiles are subject to various verification and notification provisions of the START I Treaty, but sub-strategic missiles could be used for civilian launches without comparable measures. Had a similar regime existed for the first stages of the "Honest John," Russia would have known beforehand exactly what to expect and the incident could have been avoided altogether.

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