

**The U.S. Nuclear Launch Decision Process
(on warning of incoming Russian missile)**Acronyms

ANMCC	Alternate National Military Command Center
BMEWS	Ballistic Missile Early Warning System
CJSC	Chairman of the Joint Chiefs of Staff
CONUS	Continental United States
EAM	Emergency Action Message
ICBM	Intercontinental Ballistic Missile
NMCC	National Military Command Center, Pentagon
NAOC	National Airborne Operations Center
NORAD	North American Aerospace Defense Command
POTUS	President of the United States
SLBM	Submarine-Launched Ballistic Missiles
SSBN	Strategic Ballistic Missile Submarine
STRATCOM	U.S. Strategic Command
VCJCS	Vice Chairman of the Joint Chiefs of Staff

Timeline

H	Russian missile launch
H+1 min	<p>U.S. infra-red satellite detects hot plume from Russian ballistic missile during the 4-7 minute long boost phase of flight. Satellites instantly transmit the detection data to early warning teams at NORAD, STRATCOM, NMCC, ANMCC, and other facilities.</p> <p>Russian stealthy cruise missiles launched from stealthy submarines patrolling off the U.S. coasts likely elude detection throughout their flight to targets.</p>
H+4 min	<p>NORAD and STRATCOM early-warning teams must report initial confidence (no, medium or high) of nuclear missile threat to North America.</p> <p>NORAD and STRATCOM Commanders are notified and briefed on the apparent threat.</p>
H+4 to +9 min	If confidence is medium or high, POTUS is notified and reachable advisors are dialed into teleconference or video conference. ¹
H+9 to +10 min	STRATCOM Commander briefs POTUS on the threat and response options along with their consequences (mainly civilian casualties in Russia), and makes recommendation. ²

¹ NORAD's superior is the Secretary of Defense, whom the NMCC may contact in an emergency to ask for approval to notify POTUS and initiate an emergency conference. If the defense secretary is not available, the NMCC may go directly to POTUS (or the designated White House point of contact/interlocutor such as the National Security Advisor). This traditional arrangement, however, may cede the lead to STRATCOM, who shares this notification responsibility and may initiate the emergency conference ahead of the NMCC.

² The NORAD Commander may, in some circumstances depending upon STRATCOM Commander availability and POTUS preference, brief the threat to POTUS, but STRATCOM always briefs POTUS on strategic nuclear response options. Over time STRATCOM became more central on the front end (assessing attack indications and notifying POTUS). Depending on the head of STRATCOM's personal rapport with POTUS, this interaction may begin with a direct phone call from STRATCOM to POTUS, even over irregular channels (e.g. a call to POTUS's cell phone) instead of through the formal emergency conference process).

H+10 to +15 min	BMEWS ground radars detect missiles in mid-flight. Early warning teams confirm attack underway and computers update predictions of impact areas and targets.
H+10 to +17 min	POTUS is updated by briefers, deliberates and may confer with other advisors. ³
H+17 to +17.5 min	POTUS informs Pentagon War Room (the emergency actions center of the NMCC, which has been monitoring the conference since its beginning) of the response option to be executed. NMCC challenges POTUS to authenticate their identity using "Gold Codes." ⁴
H+18 to +20 min	War Room (NMCC or alternate) formats and transmits launch order (1/2 length of a Tweet!) directly to SSBNs, ICBMs, and bombers (as well as entire chain of nuclear command). Order contains time of launch, option to execute, unlock codes, and special authentication codes. ⁵
H+20 to +22 min	ICBM, SSBN, and bomber crews authenticate message using special authentication codes in their possession. ICBM crews target missiles in accordance with chosen war plan, unlock (enable) missiles selected for launch, and transmit launch signals.

³ The CJSC or VCJCS (along with 10 other senior advisors/commanders including regional military commanders, Secretary of Defense, Secretary of State and National Security Advisor) would be tied into the emergency conference if they get on the line in time. Sometimes they fail to do so during real-world situations and exercises. In any case, they only listen passively unless POTUS solicits their views and recommendations.

⁴ The main function of this J-3 emergency action center at the NMCC is to translate POTUS's decision into a recognizable launch order and quickly transmit it to the executing commanders of the delivery vehicles – submarine, bomber, and land-based missile crews. The center exists almost exclusively to support POTUS in EAM dissemination – a kind of boutique nuclear EAM transmission shop. The launch order formatted there passes through the JCS without direct CJCS involvement. If the NMCC is disabled, the ANMCC near Ft. Ritchie and Camp David, Maryland (if fully generated) is technically in line to become the primary backup for EAM dissemination, followed by the E-4 NAOC “Doomsday Plane” kept on alert near Washington or trailing behind POTUS on trips, but STRATCOM Headquarters near Omaha is always on high alert and better equipped and prepared to perform this function, and thus likely would assume this role if the Pentagon War Room is disabled.

⁵ In this scenario STRATCOM has ceded the lead to NMCC, and is essentially on the receiving end of the order, just like the executing commanders. Its main role at this point is re-transmitting NMCC orders after the NMCC's initial EAM dissemination. (The author is personally aware of an exercise in which STRATCOM mistakenly retransmitted an exercise launch order as a real launch order!)

H+22 to +27 min	ICBMs instantly fire out of silos over pre-programmed 5-minute fly-out salvo.
H+27 to +30 min	Incoming Russian warheads begin to detonate on CONUS.
H+35 to +40 min	U.S. SLBM launches begin; 1 every 15 seconds for each SSBN.
H+50 to +60 min	U.S. ICBM and SLBM warheads strike Russian targets.
H+8 hrs to +12 hrs	CONUS-based U.S. bombers begin firing cruise missiles or dropping bombs.