



# NORAD Modernization: Enabling Forward Operations

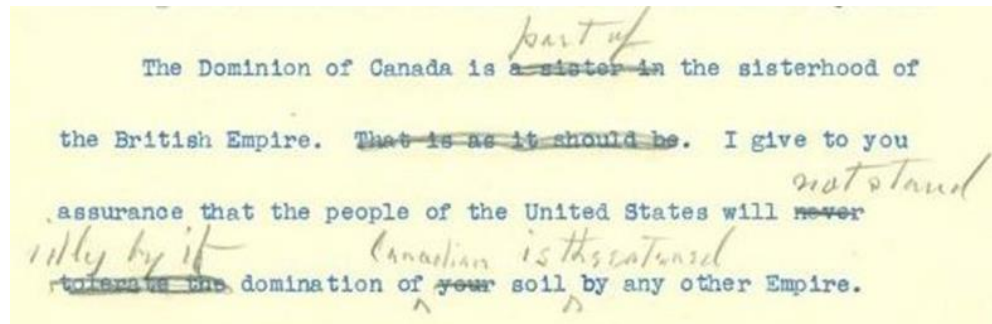


Commodore Jamie Clarke  
17 February 2021



The Dominion of Canada is part of the sisterhood of the British Empire. I give you assurance that the people of the United States will not stand idly by if domination of Canadian soil is threatened by any other empire.

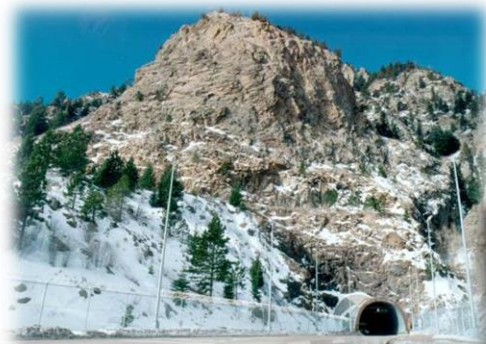
- President Franklin Delano Roosevelt

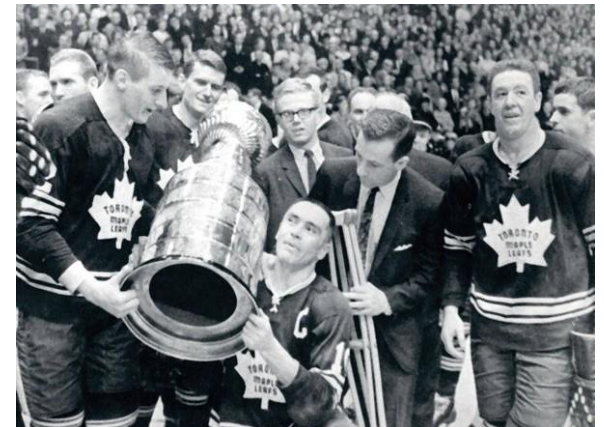
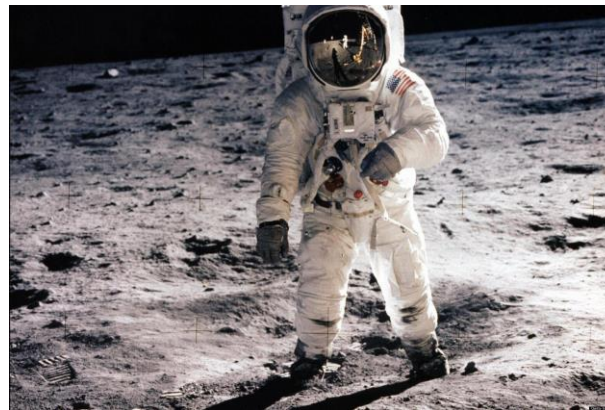
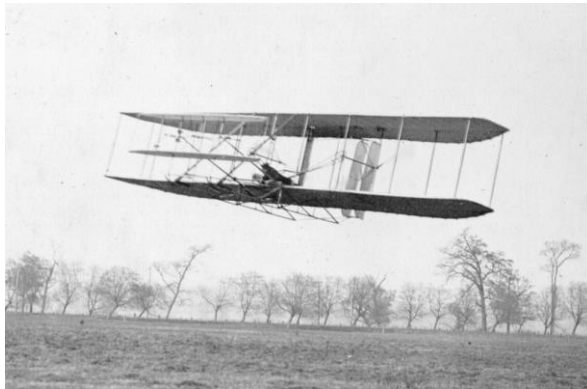
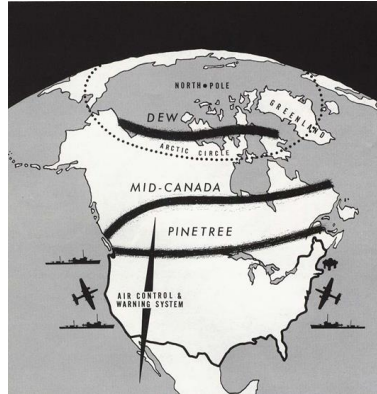


We, too, have our obligations as a good friendly neighbour, and one of these is to see that, at our own instance, our country is made as immune from attack or possible invasion as we can reasonably be expected to make it, and that, should the occasion ever arise, enemy forces should not be able to pursue their way either by land, sea or air to the United States across Canadian territory.

- Prime Minister William Lyon MacKenzie King

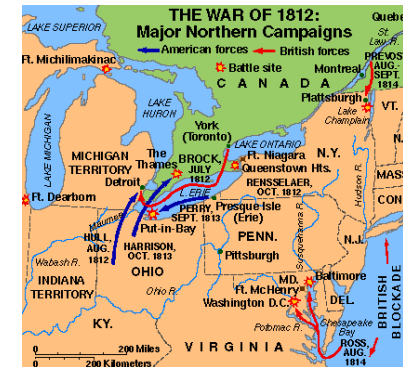








UNCLASSIFIED



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## Severodvinsk nuclear attack submarine

K-329 Severodvinsk - 4th-generation Project 885 Yasen/Graney class nuclear sub

Graney class submarines are designed to launch a variety of long-range cruise missiles. Russia plans to build at least 6 vessels of this class

Designer: Malakhit Design Bureau  
 Manufacturer: Sevmash Shipyard in the northern Russian city of Severodvinsk  
 Construction began in 1993  
 Expected to be floated out and pass sea trials in 2010

**Armament:**

- Long-range nuclear-capable cruise missiles (up to 3,100 miles or 5,000 km)
- Anti-ship cruise missiles
- Torpedoes
- Mines

Displacement: surfaced/submerged - 8,600/13,800 tons

Maximum speed (submerged) - 35 knots

Crew: 90

Advanced noise-reduction and electronic warfare equipment

Hull is made of low magnetic steel

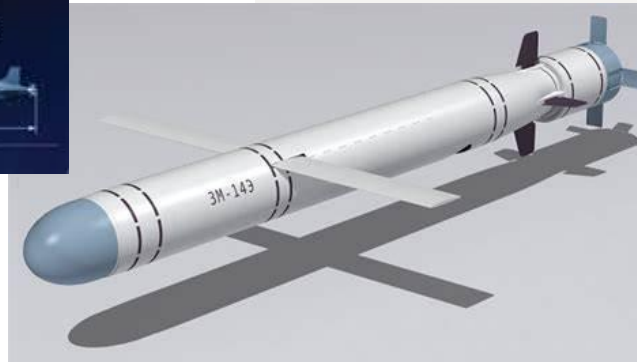
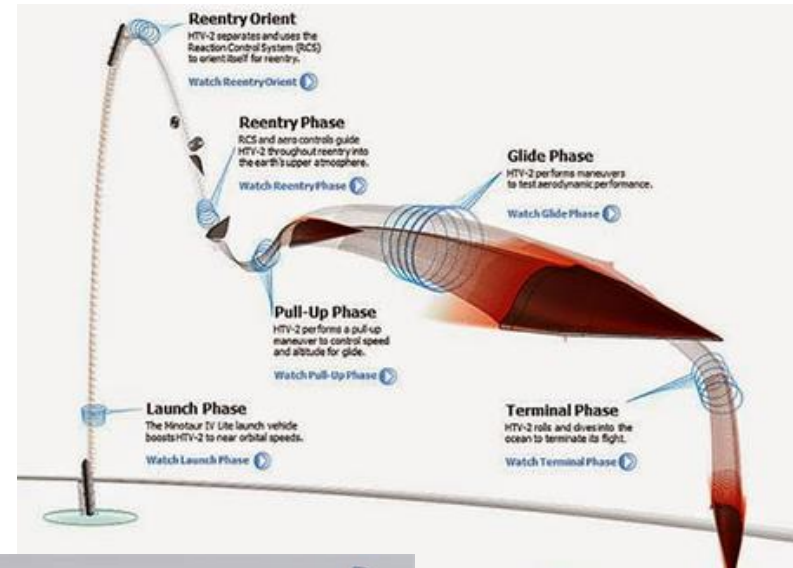
New-generation nuclear reactor

Dimensions and draught

13.5 m, 9.4 m, 119 m

Maximum depth: 600 m

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*A transition from sequential and concentrated actions to continuous and distributed ones, conducted simultaneously in all spheres of confrontation, and also in distant theatres of military operations is occurring.*

- General Valeriy Gerasimov, March 24, 2018  
 Chief of the General Staff of the Armed Services of Russia





**All-Domain Awareness**

**Information Dominance**

**Decision Superiority**







# Discussion

