



North Korean missile may not fail

By CK Wong 2006.07.04

<http://www.ck-wong.ca/Technologies/north%20korean%20missile%20may%20not%20fail%2020060704.pdf>

Introduction

According to CNN, the U.S. officials said the North Korea tested the Taepodong-2 missile failed after about 40 seconds. The Taepodong-2 is believed to have the range to reach the U.S. west coast. The observation may be inaccurate. This article will explore some other possibilities.

Smoke and Mirror

North Korea chooses to test the missile on July 4 is definitely has some political agenda. However, the may point may not be related to the American's 4th of July celebration. The earlier the timetable the better. It gives North Korea a stronger position on the negotiation table.

Naturally, if the missile failed, North Korea would not make any public announcement or disclose the reason. However, we should examine the fact closer to demystify the smoke and mirror which set up not just by North Korea but also by the American. The announcement of a failed missile test will pacify the neighbor and this is exactly what the American would like to do to weaken the North Korea bargaining position.

However, let's not discuss the political smoke and mirror but drill on what could happen other than the obvious.

The Threat

The Taepodong-2 is believed to have the range of an Inter-Continental Ballistic Missile (ICBM). It could be launch from the Korean Peninsular and hits the West Coast of the California or at least Alaska. If it carries any nuclear warheads, which is believed to be ready, the American will have a higher nuclear thread. American would have to prepare for the situation to accelerate the denuclearization of North Korea through diplomatic negotiation or through other alternatives that could be disposed by the American.

It is understandable why American wants to down play the success, if any, so that the peaceful negotiation can be used to avoid another expensive military action which could be the last straw on the American's deficit.

How to test the ICBM?

ICBM is a projectile weapon. This means it uses a projectile to reach the target. To maximize the distance, the high point will be above the atmosphere which is about 600 kilometer above ground. Because the trajectory is high and far, the lift off requires huge speed. This is just like the take off of the space shuttle. To test the ICBM, it has to find out the performance at lift off, the controllability during the flight path and the detonation

at the target. The most difficult part is always at the first step because the lift off must reach the initial speed to the space within a predetermined time at a specific direction. The control and response have to be at a very high precision. A small deviation of speed will cut the reach short and a mis-aimed direction will make it fails to reach the target or used to much fuel to correct it during the flight path.

To measure the accuracy, a lot of telemetry has to be record and validated. The critical moment of the data will be within the first minute before it reaches the space. Due to the vast amount of data, radio telemetry may not be a suitable solution. It would be better to replace the warhead with the data recorder to provide the full high precision data for the first minute. To retrieve these data, you would not want to recover it in the middle of the Pacific Ocean. It would be better be as close the North Korea as possible because every spy machine is training to this ICBM to sniff the data of the ICBM.

There is a possibility that the missile mission was aborted as planned after 40 seconds to recover the telemetry rather than failure.

Whether this is the situation, only time can tell. We may not judge from any announcement from North Korea.

Resource

[1] U.S. officials: North Korea tests long-range missile, CNN.com, 2006.07.04, <http://www.cnn.com/2006/WORLD/asiapcf/07/04/korea.missile/index.html>