AGA 3: North Korea, Missile Defense and new Challenges for Arms Control

Time: Thursday 14:00–16:00 Location: U HS 3 Parkstr. 6

Invited Talk AGA 3.1 Thu 14:00 U HS 3 Parkstr. 6

North Korean Long-Range Ballistic Missiles and US Missile Defenses — •Ted Postol — MIT, Boston

This talk explains how the North Korean liquid propellant ballistic missile program has been able to advance from its earliest days at an unprecedented rate. It will be shown that the program has received - almost certainly without the knowledge of the Russian government - large amounts of Russian rocket components and expertise, starting from the time of the catastrophic simultaneous collapse of the Soviet Union and its economy. Another feature of the North Korean program is the startling level of indigenous innovation demonstrated in North Korean ballistic missile designs, which very cleverly use rocket components that were intended for other purposes. This talk will also briefly introduce a missile defense concept that could potentially allow the US to destroy North Korean ICBM-range ballistic missiles while they are in powered flight. Unlike the current Ground-Based Missile Defense (GMD), this distinctly new defense concept can be built with existing demonstrated technologies and does not require violations of fundamental physical principles to work reliably.

AGA 3.2 Thu 15:00 U HS 3 Parkstr. 6

Now what? - Looking Back at the North Korean Missile Developments — •Markus Schiller — ST Analytics GmbH, München, Germany

Since Kim Jong Un came into power, the North Korean missile program made a great leap forward. The program culminated with the launch of the Hwasong-15 road-mobile ICBM in November 2017. More than one year later, not a single North Korean missile has been launched since then.

This presentation will look back at the events leading to the Hwasong-15 launch, and reveal some interesting parallels to the early days of the North Korean missile program.

AGA 3.3 Thu 15:30 U HS 3 Parkstr. 6

hypervelocity vehicles, missile defense and cyber warfare. new challenges for arms control — •Götz Neuneck — IFSH University of Hamburg

Nuclear arms control (N-START, INF) which was established during and implemented at the end of the Cold War is not only endangered by political mistrust but also by new military-technical developments such as Hypervelocity Vehicles, Space Capabilities, Missile Defense and Cyber Warfare. Classical nuclear arms control is based on parity of key weapon systems, offensive ballistic missiles and the verification of delivery systems. Maneuverable supersonic cruise missiles, hypervelocity gliders, anti-missile interceptors and cyberweapons can threaten the offensive oriented nuclear balance of the two superpowers or the asymmetric nuclear relationship of the dominating superpowers and the smaller nuclear weapon possessor states significantly. In the coming years, the challenge will be to define what strategic stability means between the dyadic and triadic nuclear armed forces. The presentation intend to categorize the stability challenges and develops some proposals for further arms control and disarmament frameworks based on the efficiency and impact of these new military-technical developments.