

AGA 2: Missiles and Missile Defense - Rockets in North Korea, US and China

Zeit: Donnerstag 9:00–13:00

Raum: S Aula

Hauptvortrag AGA 2.1 Do 9:00 S Aula
Things Changed - Or Did They? An Update on Recent Rocket Developments in North Korea — ●MARKUS SCHILLER — ST Analytics GmbH, München, Germany

As of December 2016, North Korea launched the unprecedented number of 25 large missiles and rockets in 2016 alone. Among these were missile types that were known before but never launched (the Musudan), or that were completely unknown before (the Scud ER). Combined with media events that showed static engine tests, warhead heat shield tests, or mock-ups of nuclear warheads, the threat situation emanating from North Korea seems to have changed significantly in 2016. This presentation gives a brief overview about the recent events and offers to shed some light on their actual meaning.

This presentation is planned in combination with a follow-up presentation by Robert H. Schmucker that will deal with the technical details.

Hauptvortrag AGA 2.2 Do 9:50 S Aula
Ein nüchterner Blick auf die Raketensupermacht Nordkorea — ●ROBERT SCHMUCKER — Schmucker Technologie, Klenzestraße 14, D-80469 München

Mit der Machtübernahme in Nordkorea durch Kim Jong-uns haben sich Raketenerprobungen massiv verstärkt. Neben den bis dahin bereits bekannten Raketentypen, die praktisch alle auf Scud-Technologie basieren, wurden neue Raketenwaffen erkennbar, die man entweder auf Paraden zeigte oder in Versuchsserien erprobte.

Neben den Modellen zweier Interkontinentalraketen sind wegen einer Reihe von Abschüssen zwei mobile, landgestützte Systeme (Kurzstreckenrakete ER-Scud, Mittelstreckenrakete Musudan) und eine U-Boot-Rakete von Interesse:

Die beiden ersten Typen lassen sich problemlos hinsichtlich Technik und Herkunft analysieren; die bisherigen Darstellungen der U-Boot-Rakete zeigen die wahre Lage Nordkoreas auf diesem Gebiet klar auf. Zusammen mit diesen Erkenntnissen und der Analyse der anderen Geräte kann man damit die wirklichen Fähigkeiten Nordkoreas beschreiben und so die zukünftig zu erwartenden Entwicklungen abschätzen.

20 min. break

Hauptvortrag AGA 2.3 Do 11:00 S Aula
Is the United States Trying to Aim Its National Missile Defense at China? — ●THEODORE A. POSTOL — Massachusetts Institute of Technology

The United States has been pressing South Korea to accept the THAAD ballistic missile defense, supposedly to address the ballistic missile threat to South Korea from North Korea. However, it will be shown that the THAAD missile defense is very susceptible to simple countermeasures that are well within the technical capacity of North

Korea to implement and that THAAD will not be capable of providing useful levels of defense for South Korea. On the other hand, THAAD has a very powerful radar known as the AN/TPY-2 which is much more powerful than what is needed for such a defense. The radar is also designed and equipped with communications systems to send tracking data directly to the US National Missile Defense. As such, these capabilities could be used to cue the new US Long-Range Discrimination Radar (LRDR) currently under construction in Clear, Alaska, to locations where Chinese ICBMs will rise over the radar horizon of the curved earth. Such cueing information would substantially increase the time available for the LRDR to observe Chinese ICBM-payloads in an effort to differentiate between Chinese warheads and decoys. The cueing information could also be used by the US National Missile Defense to launch interceptors more quickly, theoretically increasing its capacity to use shoot-look-shoot tactics against Chinese warheads. This expansion of US National Missile Defense sensors by the US government and the lack of real defensive capacity to defend South Korea from the North create the appearance that the real US objective is to aim the US National Missile Defense against China rather than to defend South Korea. These technical facts help to explain why the US attempt to place a THAAD radar in South Korea has caused concern in China. They are also much like circumstances in Europe, where the US-NATO European Phased Adaptive Approach (EPAA) continues to move forward in spite of the Iran Nuclear Deal, which has eliminated the alleged nuclear threat to Europe from Iran.

Hauptvortrag AGA 2.4 Do 12:00 S Aula
The Aegis Missile Defense System and Future Nuclear Arms Reductions — ●GEORGE N. LEWIS — Judith Reppy Institute for Peace and Conflict Studies Cornell University

Planned future development of the U.S. Navy's Aegis missile defense system, in particular the deployment of large numbers of the next generation SM-3 Block IIA interceptors, could severely and adversely affect future efforts to reduce nuclear arsenals. Current Aegis Block I interceptors, while in principle capable of intercepting ICBMs, cannot cover a large enough area to serve as the basis for a defense of U.S. territory. However, under current plans, the number of advanced capability Aegis missile defense ships is about to begin to increase rapidly. Similarly, the number of much more capable Block IIA interceptors, scheduled for first deployment in 2018, will similarly begin a rapid increase in the early 2020s. These Block IIA interceptors could cover the entire continental United States from a few off-shore locations. By the mid- to late-2030s there could be 400-600 or more Block IIAs (or successors) deployed, mostly on about 80 BMD ships. At that point, the number of US strategic-capable interceptors, including ground-based systems, could be comparable to the number of survivable Russian ICBM/SLBM warheads and larger than the number of Chinese warheads. This talk considers the potential effects of these deployments on future nuclear reductions, and possible steps to mitigate those effects