AGA 2: Missiles, Missile Defense, and Disarmament

Time: Thursday 9:30–12:45 Location: A 151

Invited Talk AGA 2.1 Thu 9:30 A 151

Disarming Dynamics — •James Acton — Brookings Institution, Washington D.C.

There are about 22,000 nuclear weapons in the world spread across nine states. There is also a broad global desire to reduce that number drastically as a waypoint on the way to zero. Whether deep reductions will actually prove possible depends on whether states believe that their security will be enhanced-or at least not undermined-by the process. States' calculations in this regard depend not only on the capabilities of one another's nuclear forces but also on "strategic" conventional capabilities, power projection capabilities and the possibility of further proliferation. Moreover, they will be coloured by domestic and bureaucratic considerations. An examination of the relevant interactions between today's nine nuclear-armed states demonstrates that further significant reductions will be difficult, not least because nuclear arsenals outside the United States and Russia are already exerting a significant influence on global disarmament efforts and the problem will switch from a two-player problem to a multiplayer problem much sooner than commonly realized.

Invited Talk AGA 2.2 Thu 10:30 A 151

Why the European Missile Defense Will Fail: The Implications of New Facts Released by the US Government — •Ted Postol — Science, Technology and Global Security Working Group, MIT, USA

Roughly two years have passed since the US Department of Defense recommended the European Phased Adaptive Approach (EPAA) missile defense to President Obama. However, in spite of the initial enthusiasm for the EPAA, the DoD has now released an unclassified technical study that indicates that none of the radars in the EPAA missile defense-system are sufficiently powerful to make it workable. Correcting this problem will require vast additional expenditures for the EPAA and will still not guarantee it will ever be workable. The reason that the EPAA cannot be made to work, even if all of its radars are upgraded, is because the DoD now admits that it has not been able to demonstrate that it can reliably distinguish between warheads, decoys, and other debris a capability that the DoD acknowledges is central to the workability of both the EPAA and Ground-Based Missile Defense (GMD). Making the future of the EPAA look even more problematic is intelligence just released by the US government that shows foreign ballistic missiles are already demonstrating an ability to quickly deploy decoys and other countermeasures. This talk will review this new DoD study and explain its findings in detail.

AGA 2.3 Thu 11:30 A 151

Missile Defense in Europe - Cooperation or a New Arms Race? — •Götz Neuneck[1], Christian Alwardt[1], and Hans-Christian Gils[2] — [1]IFSH University Hamburg — [2]DLR Institut für Technische Thermodynamik, Stuttgart

The planned US missile defense architecture in Europe consists of ship-based Aegis interceptors which also might proliferate to the land. Despite serious doubts in the functionality of this Hit-to-Kill technology, the so-called "European Phased Adaptive Approach" provokes Russia and could lead to the end of nuclear disarmament and derail Russian-European relations thus making any progress in nuclear disarmament impossible. A physics-based model helps to understand the conditions under which an European BMD system could undermine the Russian deterrence arsenal. After presenting some simulation results we present some ideas how a NATO-Russian cooperation might evolve.

AGA 2.4 Thu 12:00 A 151

3rd World Missiles * The Puzzle Comes Together Assessments and Revelations in the Past 15 Years — Markus Schiller and •Robert Schmucker — Schmucker Technologie Präsident des Internationalen Förderkreises Raumfahrt (e.V.) Klenzestrasse 14 D-80469 München

For more than 25 years, North Korea is considered as the 3rd World*s leading developer, producer and supplier of ballistic missiles. This assessment was firmly established in 1998 at the latest in this year, North Korea attempted a satellite launch, and a Medium Range Ballistic Missile (Nodong/Ghauri/Shahab 3) of North Korean origin was presented in Pakistan and Iran. However, a closer look on these events should have called the North Korean capabilities into question. Doubts were voiced for the first time at the 12th Multinational Conference on Theater Missile Defense in Scotland in 1999. Nonetheless, the widespread assessment that North Koreas missile program was a sophisticated global threat became a "well known truth". The same happened with assessments of missile programs in Iran and other countries. Over the past decade, an increasing amount of information on these programs became available. This data should have increased the doubts on the common view of the mentioned missile threats, but it was widely ignored. A new research effort finally yielded decisive results in 2011. Important pieces of the puzzle are now known, and the puzzle of 3rd World ballistic missile programs eventually comes together.