

## AGA 2: Missile Defense and Threat Analysis

Zeit: Mittwoch 16:30–19:00

Raum: VMP 9 HS

**Hauptvortrag** AGA 2.1 Mi 16:30 VMP 9 HS  
**Missile Defense in and for Europe: Inmature Technology and Counterproductive Reactions** — ●GÖTZ NEUNECK — IFSH, Beim Schlump 83; 20144 Hamburg

Political statements are concluding that ballistic missile defense is "technically feasible". They are also recognizing that a "substantial contribution to the protection of Allies from long-range ballistic missiles to be provided by the planned deployment of European-based United States missile defence assets". On the other hand, the Russian government claims that such a system undermines strategic stability. A technical analysis shows that the planned Ground-based Midcourse Ballistic Missile Defense system in Europe has very limited defense capabilities. It is clear that the GMD system cannot match countermeasures (such as decoys, warhead replica balloons etc.) thus creating an illusionary protection. The talk explains the short-term as well as long-term consequences in the light of future disarmament and non-proliferation.

AGA 2.2 Mi 17:30 VMP 9 HS  
**Consistency - the decisive factor for realistic threat assessment** — ●ROBERT SCHMUCKER and MARKUS SCHILLER — Schmucker Technologie, 80469 München, Klenzestrasse 14

Disarmament and verification are closely linked to threat situation analysis. The assumed threat potential of a country should be based on the two factors "intention" and "capability", where capability can be derived by an engineering approach with technical and physical analysis methods.

Usual threat analysis concentrates on single topics without regarding other assessments and facts. If all the independent assessments are connected, a big picture is created that is often contradictory in many ways, which means that some assessments must be wrong.

A sense of consistency must be established in the community of analysts to become aware of this problem and to critically question some of the established truths. The lecture gives comprehensible examples of inconsistencies concerning various countries of interest (Syria, Iran, North Korea, Pakistan,...) that might contribute to establish this requested sense of consistency.

AGA 2.3 Mi 18:00 VMP 9 HS

**Modelling of Missile Trajectories and their Application** — ●HANS CHRISTIAN GILS — Institut für Friedensforschung und Sicherheitspolitik an der Universität Hamburg (IFSH)

A detailed model for the simulation of flight trajectories of different kinds of ballistic missiles is introduced. The model includes the Earth's shape and rotation as well as atmospheric aspects and missile characteristics. It can further be used to calculate a missile's maximum range and its possible trajectories to a target point on Earth. For a given trajectory of an approaching missile, the feasibility of an interception in space can be determined. The missile's coordinates during the flight are saved and can be visualized in a virtual-globe program. The model allows the investigation of various scenarios, taking into account existent and prospective ballistic missile threats and defense systems. The results of some scenarios will be presented in the talk.

AGA 2.4 Mi 18:30 VMP 9 HS  
**Gefahren-Szenarien der Freisetzung von Plutonium durch einen erfolgten Abschuss mit einem Raketenabwehrsystem** — ●WIEBKE PLENKERS und MARTIN KALINOWSKI — Carl Friedrich von Weizsäcker-Zentrum für Naturwissenschaft und Friedensforschung (ZNF), Universität Hamburg

Besonders seit die USA im Jahre 2002 den ABM-Vertrag kündigten und ihr Ballistic Missile Defense System neu verstärkten mit dem Ziel, die USA von aller Art Raketen zu beschützen, gibt es erneut kontroverse Diskussionen über den Sinn von Raketenabwehrsystemen, sowie die Wahrscheinlichkeit künftiger nuklearer Bedrohungen.

Um mögliche Gefahren für die Zivilbevölkerung bei Raketenabwehr aufzuzeigen, wurden am ZNF verschiedene Szenarien eines versuchten Abschusses einer Trägerrakete mit nuklearem Sprengkopf untersucht. Der Schwerpunkt lag auf einer Folgenabschätzung der nuklearen Strahlung bei Freisetzung und Verteilung von Plutonium in der Atmosphäre. Ebenso wurden Risiken bei verschiedenen Flugphasen bedacht, darunter besonders der willkürliche Herabsturz ("shortfall") des Gefechtskopfes.

Die Analyse basierte auf eine umfangreiche Literaturrecherche der bisherigen Forschung zu Raketenabwehrsystemen, der Sicherheit von nuklearen Sprengköpfen und der Strahlengefahren von Plutonium. Die Arbeit wurde im Rahmen einer studentischen Hilfskraft durchgeführt.