AGA 1: Arms Control, Missiles and Outer Space

Time: Wednesday 15:00–17:00 Location: PTB HS HvHB

Invited Talk AGA 1.1 Wed 15:00 PTB HS HvHB

Not A Bluff! - North Korea's "combat proven" missile program — •Markus Schiller — ST Analytics, München

Just around New Year's, North Korean ballistic missiles were used for the first time in combat, namely in the Russian invasion of Ukraine. With this, North Korean missiles are now "combat proven", clearly showing that they are more than just a bluff. The presentation will look at this development, as well as at other developments in the North Korean program over the past year, trying to figure out what else to expect in the near future.

AGA 1.2 Wed 16:00 PTB HS HvHB

Uncrewed Armed Vehicles and Missiles in the Russian War Against Ukraine — •Jürgen Altmann — Experimentelle Physik III, TU Dortmund

In the Russian war against Ukraine uncrewed armed vehicles (mainly in the air, UAVs) and missiles (tactical, ballistic and cruise) are being employed at unprecedented levels by both sides. Commercial UAVs are being armed, and new armed UAV types are being developed. Imports from other countries play a significant role. Autonomous targeting seems to have begun. Russia has also used hypersonic missiles. In parallel, efforts for UAV and missile defence have increased. Many armed forces are studying the war and draw conclusions for their own armaments. The talk will give an overview of various systems and their properties, including imported types, and will discuss effects on international security.

AGA 1.3 Wed 16:30 PTB HS HvHB

Critical infrastructure and conflict in outer space: vulnerability, risk reduction and arms control — •Jürgen Scheffran — Institute of Geography, University of Hamburg, Germany

Outer space is considered as part of the critical infrastructures in the civilian and security sector. Satellites conduct numerous tasks, often dual-use, for reconnaissance, early warning, monitoring, weather observation, communication, navigation, environmental protection and research. They support infrastructures on earth, e.g. for the economy and society, energy and resources, political stability and security, health and climate. While space-related activities and investments are increasing, security risks and conflicts are multiplying. The space infrastructure is becoming more vulnerable to multiple risks: interruption of communication by accidents, jamming or ground attacks; collision with other space objects and space debris; physical attack by explosive devices, cyber, nuclear, kinetic or directed energy weapons; sensor blinding; hacking, deception or hijacking. The survivability of space objects can be improved by protection and risk reduction measures, including hardening and shielding, manoeuvring capability, dummies, or active countermeasures. A code of conduct for responsible space behaviour can contribute to confidence-building, rules of the road, risk reduction and stabilization. With the proliferation of space launchers and missiles, missile defense and anti-satellite weapons, threats to space infrastructure would increase, jeopardizing international stability. A space arms race can be avoided through preventive arms control and disarmament, reducing risks to space infrastructure.