AGA 2: Verifying Nuclear Disarmament

Time: Thursday 10:30–12:30 Location: U HS 3 Parkstr. 6

Invited Talk AGA 2.1 Thu 10:30 U HS 3 Parkstr. 6
Technological Demands and Institutional Arrangements for Verifying Nuclear Disarmament — •Thomas E. Shea — Federation of American Scientists

As proposed in my book, Verifying Nuclear Disarmament, the future nuclear disarmament regime should address the seven risks arising from the standing arsenals through eleven verification missions, addressing a) the phased elimination of existing weapons, b) the elimination or irreversible conversion of mission critical nuclear weapon production, testing and support facilities, and c) providing assurances against possible future rearmament. Each nuclear-armed State must protect its nuclear weapon design and manufacturing secrets, while the verification authorities must be able to apply sound scientific methods so as to obtain independent and authentic verification results, especially while considering cyber threats that might enable espionage or invalidate verification findings. Finding pragmatic solutions will determine the future of nuclear disarmament, and future success at preventing proliferation and nuclear terrorism.

Invited Talk AGA 2.2 Thu 11:30 U HS 3 Parkstr. 6
New approaches to verification in nuclear disarmament — •Pavel Podvig — UN Institute for Disarmament Research

Robust verification is an essential element of nuclear disarmament and nuclear nonproliferation. Elimination of nuclear weapons will require a sustained effort aimed at creating political conditions for disarmament and reducing the role of war in international security. As states will assume obligations to reduce their nuclear arsenals and stocks of weapon-usable fissile materials, it will be extremely important to ensure that these steps are done in a verifiable and irreversible manner. Every step of the way, effective verification arrangements will help build trust and confidence that are essential for making further progress toward nuclear disarmament possible. Also, innovative approaches to verification could open way for bold political disarmament initiatives. This presentation describes approaches to nuclear disarmament verification that are designed to avoid having to deal with sensitive information about nuclear weapons or weapon-related fissile materials. Protection of sensitive information emerged as one of the most difficult issues in verification and is currently seen as a serious obstacle on the way toward practical nuclear disarmament steps. To address this problem, UNIDIR developed an approach to verification of nuclear disarmament that relies on verifying the absence of nuclear weapons attached to delivery vehicles or stored at operational bases. This approach could be used in a variety of situations, from removal of non-strategic nuclear weapons from Europe to denuclearization of the Korean Peninsula. Another concept deals with weapon-usable fissile materials. The deferred verification arrangement developed at UNIDIR proposes a mechanism that would allow nuclear-armed states to declare the amount of fissile material that they possess and, most importantly, do it in a verifiable way. This arrangement could be an important element of comprehensive nuclear disarmament, which would require placing all weapon-usable fissile materials under international control.