

## AGA 10: Nuclear Disarmament

Time: Thursday 11:00–12:00

Location: EMH 225

**Invited Talk** AGA 10.1 Thu 11:00 EMH 225  
**Fissile Materials and Nuclear Disarmament: A Bottom-up / Top-Down Approach** — ●THOMAS SHEA — Tom Shea Consulting Services, Vienna

Two approaches for future nuclear disarmament are presented and discussed in details. In the Bottom-Up approach fissile material controls could \* in principle \* be applied at any functional element of a nuclear arsenal if a verification method was acceptable to the nuclear-armed states and to the verification authority, and if appropriate chain-of-custody methods were applied. Details of the Trilateral Initiative carried out by the Russia, the US and the IAEA are important precedents and are presented. A bottom-up approach to encouraging progress would involve developing a model IAEA safeguards agreement for fis-

sile material in nuclear-armed States. Further model agreements could then be considered for other steps related to nuclear disarmament.

The Top-Down approach would include the arsenals of nine De-facto NWS. For most of the nine, their nuclear arsenals provide security against what they might deem as existential threats. The threats arise from a small number of other nuclear-armed States, or from potentially overwhelming conventional forces. A framework that emphasizes conflict resolution among adversarial pairings, and that provides encouragement for unilateral arms reductions, or paired reductions in the arsenals of two or more nuclear-armed States may one day present the conundrum of managing the final elimination. Both top-down and bottom-up mechanisms could be combined to form an international nuclear disarmament regime, somewhat parallel to the nonproliferation regime.